

Math  
Matters

[COURSES](#)

# MATHEMATICS

## *ELECTIVES*

- COURSE PRE-REQUISITE
- PRECALCULUS with TRIG GEOMETRY & ALGEBRA 2
- PRECALCULUS HONORS GEOMETRY *H* & ALGEBRA 2 *H*
- PROBABILITY & STATISTICS GEOMETRY & ALGEBRA 2
- DISCRETE MATHEMATICS GEOMETRY & ALGEBRA 2
- CALCULUS PRECALCULUS w/ TRIG



[more courses](#)

# MATHEMATICS

## *AP COURSES & BEYOND*

### COURSE

### PRE-REQUISITE

AP CALCULUS AB

AP CALCULUS BC

AP COMPUTER SCIENCE

AP STATISTICS

MULTIVARIABLE CALCULUS

MATRIX ALGEBRA

PRECALCULUS w/ TRIG

PRECALCULUS HONORS

ALGEBRA 1 & GEOMETRY

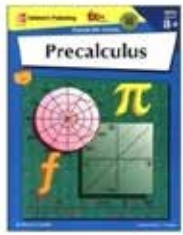
GEOMETRY & ALGEBRA 2

AP CALCULUS BC

AP CALCULUS BC or AB



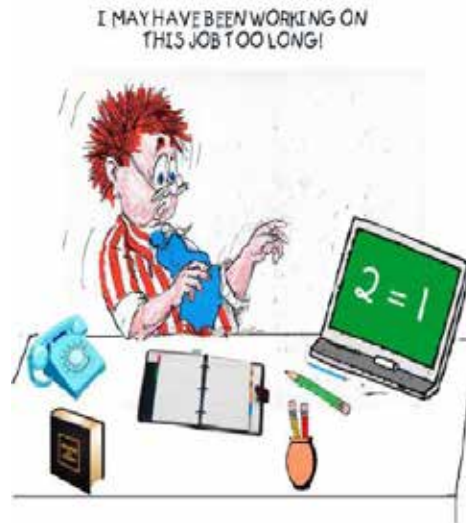
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# PRECALCULUS with TRIG



- Prerequisite: Geometry and Algebra II
- Next course: AP Calculus AB or AP Stat
- Course Credit: 1

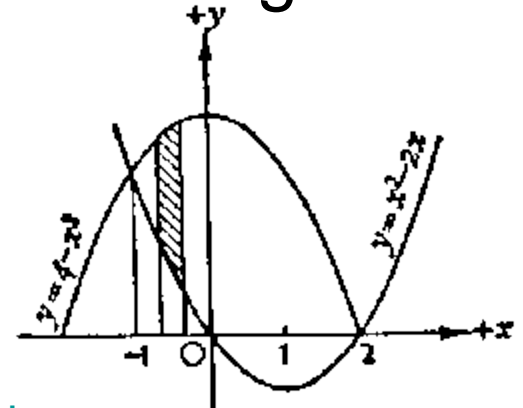
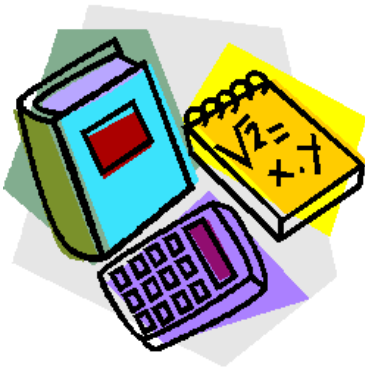


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# PRECALCULUS

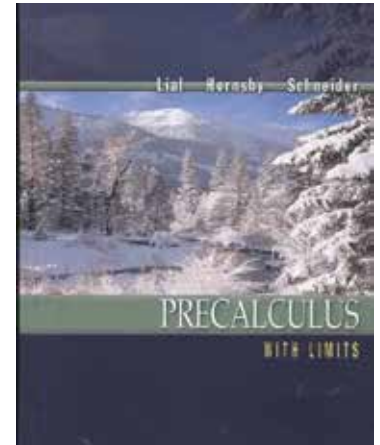
## with TRIG

Objectives: Precalculus includes all the topics of trigonometry and the study of polynomials, logarithmic, exponential, and inverse functions. Emphasis will be placed on problem solving techniques. Graphing calculators are used extensively throughout this course. A firm background in algebra is **strongly** encouraged.



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# Precalculus Honors



## Prerequisites:

Algebra 2 Honors or  
Algebra 2 (A is recommended)

**Credit:** one

This course is a prerequisite for  
AP Calculus BC.

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# Course Content

(Precalculus Honors)

- Trigonometry
- Polynomials
- Transformations
- Rational Functions
- Exponential Functions
- Logarithmic Functions
- Inverses
- Polar Equations
- Parametric Equations
- Two-dimensional Vectors
- Topics in Discrete Math
- Limits
- Continuity
- Max and Min Points
- Derivatives
- Rules of Differentiation
- Infinite Limits
- Partial Fractions

# Probability and Statistics/ Discrete Math

**Prerequisite:** Geometry and Algebra 2

**Credit:** Prob/Stat - .5 credits

Discrete Math - .5 credits

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# Course Content

## Prob/Stat

- Probability Theory
- Statistical Measurements
- Probability Distribution
- Statistical Inference

## Discrete Math

- Management Science
- Matrix Operations and Applications
- Recursion
- Apportionment
- Applications in Natural and Social Sciences

# CALCULUS

**Prerequisites:** PRECALCULUS with TRIG

**Credit:** one

This course includes a review of Algebra and Trig topics needed for Calculus and an introduction to differential and integral Calculus topics.

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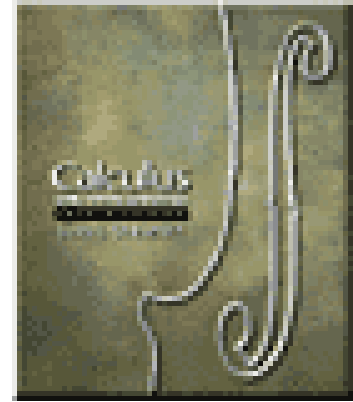
# COURSE CONTENT

(CALCULUS)

- Algebra and Trig review
- Functions & graphs
- Limits and Continuity
- Derivatives
- Derivative Applications
- Integrals
- Integral Applications

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# AP CALCULUS AB



## Prerequisites: PRECALCULUS

(A grade of B or higher is recommended.)

A thorough knowledge of algebra, geometry, and trigonometry is needed. A student must also know how to use a graphing calculator.

**Credit: one**

(The AP exam must be taken.)

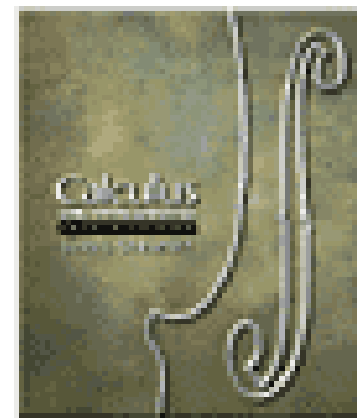
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# Course Content

(AP Calculus AB)

- Functions & graphs
- Limits and Continuity
- Derivatives
- Derivative Applications
- Integrals
- Integral Applications
- Differential Equations

# AP CALCULUS BC



## Prerequisite: PRECALCULUS HONORS

(A grade of B or higher is recommended)

A thorough knowledge of algebra, geometry, and trigonometry is needed. A student must know how to use a graphing calculator.

**Credit: one**

(The AP exam must be taken.)

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# Course Content

(AP Calculus BC)

- Limits & Continuity
- Derivatives
- Applications of Derivatives
- Integration
- Applications of Integration
- Techniques of Integration
- Differential Equations
- Infinite Series
- Parametric Equations
- Polar Equations
- Vectors

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# Advanced Placement Computer Science

Looking for a math elective?

Are you Interested in computers?

Do you enjoy creative problem solving, and thinking outside the box?

Looking for an AP class that may get you one semester of college level computer science credit?

Do you want to make little imaginary critters run around and eat flowers and rocks?

Then *AP CS* is the class for you!

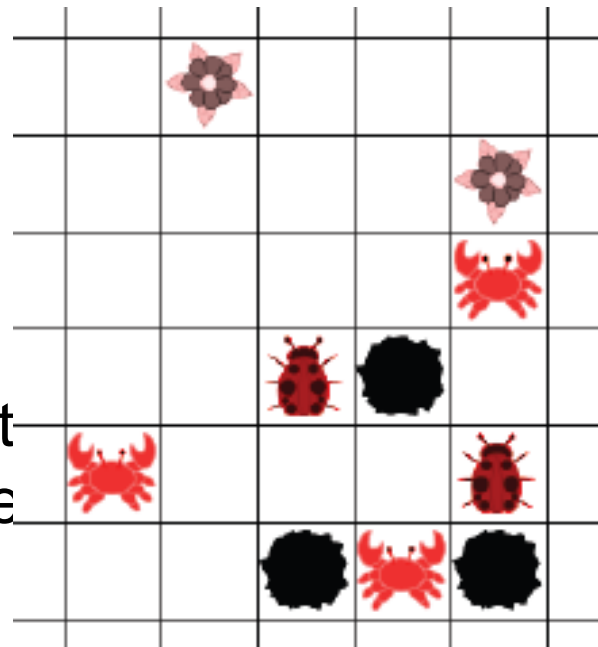


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AP Computer Science is a math elective.

AP CS can be taken with no prior computer programming experience.

We learn the Java programming language. Java is the language that most colleges and many professional fields are currently using.



In this class you will learn the basics of computer programming, and how to use Java to solve complex and interesting problems. We will also prepare for the College Board Advanced Placement Computer Science A test in May. This test can get you one semester of college credit at many schools.

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Excellent health statistics - smokers are less likely to die of age related illnesses.'

# AP STATISTICS

**PURPOSE:** To introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The course includes these conceptual themes:

- 1) Exploring Data
- 2) Sampling and Experimentation
- 3) Anticipating Patterns
- 4) Statistical Inference

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# WHY *YOU* SHOULD TAKE AP STATISTICS!!

- Many colleges now require you to have at least ONE semester of statistics to graduate no matter what your major.
- Everyday you are given statistics in newspaper articles or on television. Many times these have been crafted to say what the author wants them to say, not necessarily what is true. Through this course you will be more discriminating about what you believe.
- Its Fun!

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# Multivariable Calculus

## Matrix Algebra

### Post AP Course

Prerequisite:

Multivariable-BC Calculus

Matrix Algebra-AB or BC Calculus

Credits: Half credit each

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**Multivariable Calculus:** Differential and integral calculus of several variables are the focal points of this college-level course which extends the advanced placement calculus experience to three dimensions, culminating in the calculus applications to physics

**Matrix Algebra:** This course will investigate systems of linear equations, vector spaces, linear dependence, linear transformations and matrix representation, determinants, eigenvectors and eigenvalues, and a variety of applications.