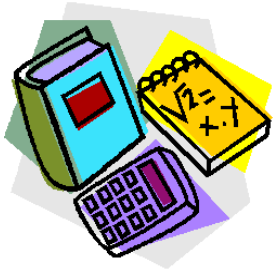
MATHEMATICS
ELECTIVES

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



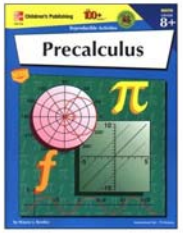
more courses

MATHEMATICS

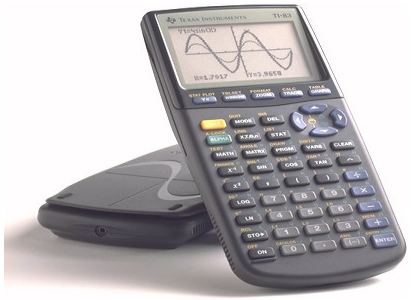
AP COURSES & BEYOND

COURSE	*PRE-REQUISITE*
AP CALCULUS AB	TRIG & MATH ANALYSIS
AP CALCULUS BC	PRECALCULUS HONORS
AP COMPUTER SCIENCE	ALGEBRA 1 & GEOMETRY
AP STATISTICS	GEOMETRY & ALGEBRA 2
MULTIVARIABLE CALCULUS	AP CALCULUS BC
MATRIX ALGEBRA	AP CALCULUS BC or AB

back



PRECALCULUS with TRIG

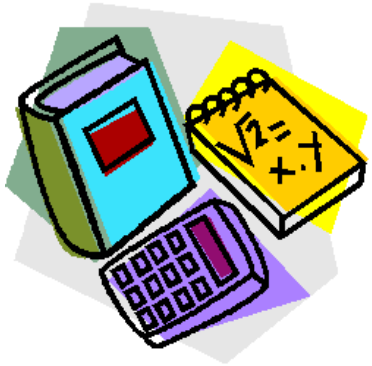


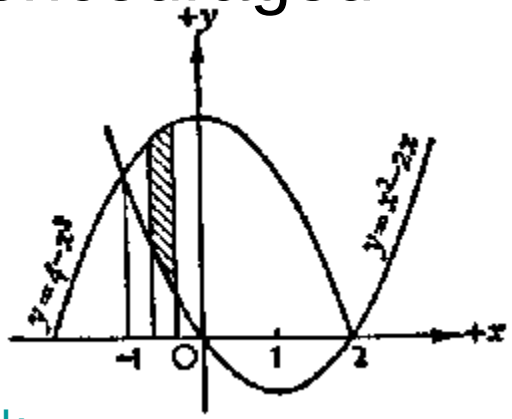
- Prerequisite: Geometry and Algebra II
- Next course: Calculus AB or AP Stat
- Course Credit: 1

next slide

PRECALCULUS
with TRIG

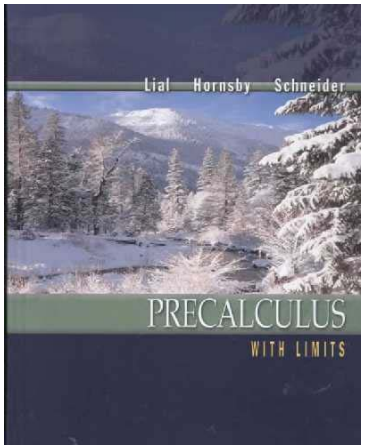
Objectives: Precalculus includes all the topics of trigonometry and the study of polynomials, logarithmic, exponential, and inverse functions. Emphasis will be placed on problem solving techniques. Graphing calculators are used extensively throughout this course. A firm background in algebra is **strongly**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





back

Precalculus Honors



Prerequisites:

Algebra 2 Honors or
Algebra 2 (A is recommended)

Credit: one

This course is a prerequisite for AP Calculus BC.

next slide

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

back

Probability and Statistics/ Discrete Math

Prerequisite: Geometry and Algebra 2

Credit: Prob/Stat - .5 credits
Discrete Math - .5 credits

next slide

Course Content

Prob/Stat

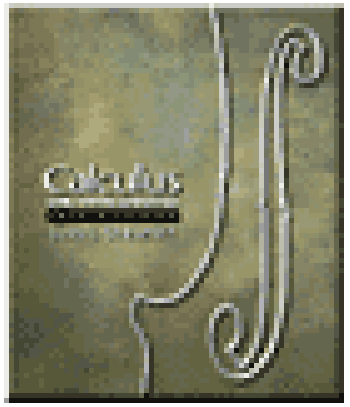
- Probability Theory
- Statistical Measurements
- Probability Distribution
- Statistical Inference

Discrete Math

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

back

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.)

next slide

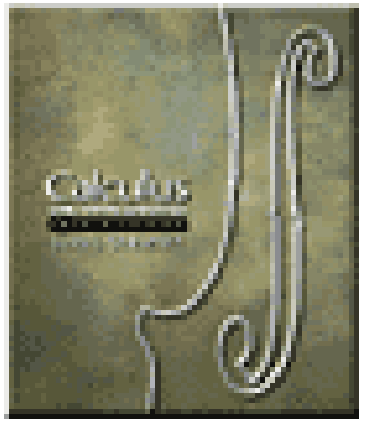
Course Content

(AP Calculus AB)

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

back

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.)

next slide

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

back

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 can 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?

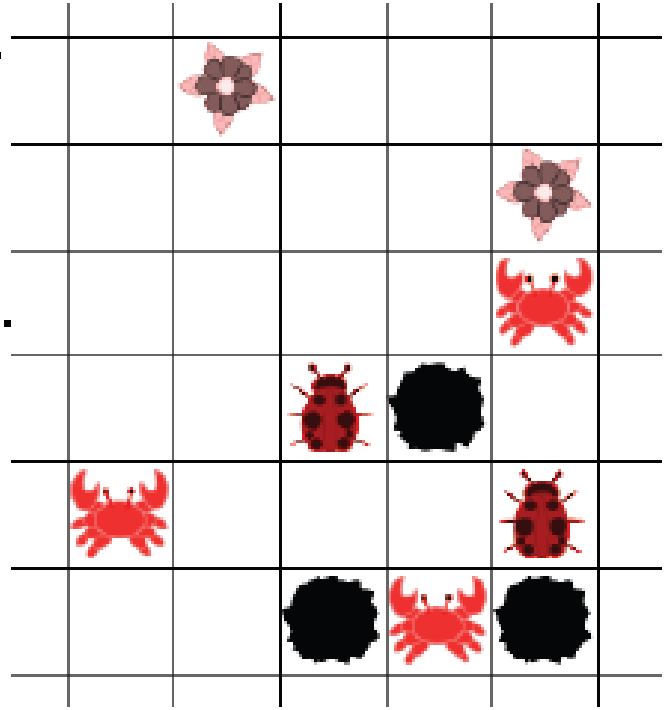
Then *AP CS* is the class for you!

next slide

AP Computer Science is a math elective.

AP CS can be taken with no prior computer programming experience, or, as a follow up to Intro Computer Science.

We learn the Java programming language. Java is the same 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.

back

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

AP STATISTICS

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

1. Exploring Data: Describing patterns and departures from patterns
2. Sampling and Experimentation: Planning and conducting a study
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses

Students who successfully complete the course and exam may receive credit, advanced placement, or both for a one-semester introductory college statistics course. This does not necessarily imply that the high school course should be one semester long. Each high school needs to determine the length of its AP Statistics course to best serve the needs of its students. Statistics, like some other AP courses, could be effectively studied in a one-semester, a two-trimester, or a one-year course. Most schools, however, offer it as a one-year course.

next slide

Why YOU should take AP STATISTICS!!

- Its Fun!
- Many colleges now require you to have at least ONE semester of statistics to graduate no matter what your major.
- Its Fun!
- 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!

back

Multivariable Calculus
Matrix Algebra
Post AP Course

Prerequisite:
Multivariable-BC Calculus
Matrix Algebra-AB or BC Calculus
Credits: Half credit each

next slide

Multivarable 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.

back