

Mathematics

AP CALCULUS AB (FALL)

Offered: Semester Course. Required Textbook: Finney, Demana, Waits, & Kennedy (2009) AP Calculus Pearson/Prentice Hall 3rd Edition The Honors section carries an Honor Point In this course, students will prepare for college mathematics and for the Advanced Placement AB exam. The content includes differentiation and integration of polynomial functions, circular functions, logarithmic functions and exponential functions. A graphing calculator is highly recommended; the type of graphing calculator is to be determined by the teacher. Students are required to take the AP exam in May. The test will require an additional fee.

CREDIT: 0.5 **TYPE:** Advanced Placement **GRADE:** 11-12

PREREQUISITE: Earned Credit in Pre-Calculus—Honors.

COREQUISITES: If you take AP CALCULUS AB (FALL), you must also take AP CALCULUS AB (SPRING).

FEES: \$15.00

AP CALCULUS AB (SPRING)

Offered: Semester Course. Required Textbook: Finney, Demana, Waits, & Kennedy (2009) AP Calculus Pearson/Prentice Hall 3rd Edition The Honors section carries an Honor Point In this course, students will prepare for college mathematics and for the Advanced Placement AB exam. The content includes differentiation and integration of polynomial functions, circular functions, logarithmic functions and exponential functions. A graphing calculator is highly recommended; the type of graphing calculator is to be determined by the teacher. Students are required to take the AP exam in May. The test will require an additional fee.

CREDIT: 0.5 **TYPE:** Advanced Placement **GRADE:** 11-12

PREREQUISITE: Earned Credit in Pre-Calculus—Honors.

COREQUISITES: If you take AP CALCULUS AB (SPRING), you must also take AP CALCULUS AB (FALL).

FEES: \$15.00

AP CALCULUS BC (FALL)

Offered: Semester Course. Required Textbook: Finney, Demana, Waits, & Kennedy (2009) AP Calculus Pearson/Prentice Hall 3rd Edition The Honors section carries an Honor Point **This course deals with the BC content of the Advanced Placement Curriculum beyond that of the Calculus AB sequence. Additional topics include sequences, infinite series,**

solutions of differential equations, advanced techniques of integration, as well as parametric and polar equations. Students are required to take the AP exam in May. The test will require an additional fee.

CREDIT: 0.5 **TYPE:** Advanced Placement **GRADE:** 11-12

PREREQUISITE: Earned Credit in Pre-Calculus—Honors.

COREQUISITES: If you take AP CALCULUS BC (FALL), you must also take AP CALCULUS BC (SPRING).

FEES: \$15.00

AP CALCULUS BC (SPRING)

Offered: Semester Course. Required Textbook: Finney, Demana, Waits, & Kennedy (2009) AP Calculus Pearson/Prentice Hall 3rd Edition The Honors section carries an Honor Point **This course deals with the BC content of the Advanced Placement Curriculum beyond that of the Calculus AB sequence. Additional topics include sequences, infinite series, solutions of differential equations, advanced techniques of integration, as well as parametric and polar equations. Students are required to take the AP exam in May. The test will require an additional fee.**

CREDIT: 0.5 **TYPE:** Advanced Placement **GRADE:** 11-12

PREREQUISITE: Earned Credit in Pre-Calculus—Honors.

COREQUISITES: If you take AP CALCULUS BC (SPRING), you must also take AP CALCULUS BC (FALL).

FEES: \$15.00

AP STATISTICS (FALL)

Offered: Semester Course. Required Textbook: Yates, Moore, Starnes (2008) Practice of Statistics Freeman AP Statistics introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are required to take the AP Exam. 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

CREDIT: 0.5 **TYPE:** Advanced Placement **GRADE:** 11-12

PREREQUISITE: Advanced Algebra/Integrated Mathematics 3.

COREQUISITES: If you take AP STATISTICS (FALL), you must also take AP STATISTICS (SPRING).

FEES: \$15.00

AP STATISTICS (SPRING)

Offered: Semester Course. Required Textbook: Yates, Moore, Starnes (2008) Practice of Statistics Freeman AP Statistics introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are required to take the AP Exam. 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

CREDIT: 0.5 **TYPE:** Advanced Placement **GRADE:** 11-12

PREREQUISITE: Advanced Algebra/Integrated Mathematics 3.

COREQUISITES: If you take AP STATISTICS (SPRING), you must also take AP STATISTICS (FALL).

FEES: \$15.00

COLLEGE ALGEBRA/TRIGONOMETRY (FALL)

Offered: Semester Course. Required Textbook: East—Stewart, Redlin, Watson (2001) Algebra & Trigonometry Brooks & Cole West—Brown (1997) Advanced Math—Precalculus w/ Discrete Math & Data Students study advanced topics in algebra and trigonometry. Content includes simultaneous equations, matrices, inequalities, relations, algebra functions, polynomial equations, transcendental functions, trig functions of acute angles, trig functions and identities, solutions of triangles, graphing and complex numbers. Emphasis on stats and data is supported with the graphing calculator. **Students earning credit in Pre-Calculus cannot take this course for credit as well.**

CREDIT: 0.5 **TYPE:** Regular **GRADE:** 11-12

PREREQUISITE: Previous enrollment in Advanced Algebra or Integrated Mathematic 3.

COREQUISITES: If you take COLLEGE ALGEBRA/TRIGONOMETRY (FALL), you must also take COLLEGE ALGEBRA/TRIGONOMETRY (SPRING).

FEES: None

COLLEGE ALGEBRA/TRIGONOMETRY (SPRING)

Offered: Semester Course. Required Textbook: East—Stewart, Redlin, Watson (2001) Algebra & Trigonometry Brooks & Cole West—Brown (1997) Advanced Math—Precalculus w/ Discrete Math & Data Students study advanced topics in algebra and trigonometry. Content includes simultaneous equations, matrices, inequalities, relations, algebra functions, polynomial

equations, transcendental functions, trig functions of acute angles, trig functions and identities, solutions of triangles, graphing and complex numbers. Emphasis on stats and data is supported with the graphing calculator. **Students earning credit in Pre-Calculus cannot take this course for credit as well.**

CREDIT: 0.5 **TYPE:** Regular **GRADE:** 11-12

PREREQUISITE: Previous enrollment in Advanced Algebra OR Integrated Mathematics 3.

COREQUISITES: If you take COLLEGE ALGEBRA/TRIGONOMETRY (SPRING), you must also take COLLEGE ALGEBRA/TRIGONOMETRY (FALL).

FEES: None

INTEGRATED MATHEMATICS 1 (FALL)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 1 (2014). Students in this course study; expressions, introduction to functions and interpreting functions, linear relationships and modeling linear functions, congruence of geometry, systems of equations, inferential statistics, exponential functions, and comparing exponential functions and linear functions by modeling

CREDIT: 0.5 **TYPE:** Core **GRADE:** 9

PREREQUISITE: None

COREQUISITES: If you take INTEGRATED MATHEMATICS 1 (FALL), you must also take INTEGRATED MATHEMATICS 1 (SPRING).

FEES: None

INTEGRATED MATHEMATICS 1 (SPRING)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 1 (2014). Students in this course study; expressions, introduction to functions and interpreting functions, linear relationships and modeling linear functions, congruence of geometry, systems of equations, inferential statistics, exponential functions, and comparing exponential functions and linear functions by modeling

CREDIT: 0.5 **TYPE:** Core **GRADE:** 9

PREREQUISITE: None

COREQUISITES: If you take INTEGRATED MATHEMATICS 1 (SPRING), you must also take INTEGRATED MATHEMATICS 1 (FALL).

FEES: None

INTEGRATED MATHEMATICS 1 HONORS (FALL)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 1 (2014). Students in this course study; expressions,

introduction to functions and interpreting functions, linear relationships and modeling linear functions, congruence of geometry, systems of equations, inferential statistics, exponential functions, and comparing exponential functions and linear functions by modeling. Students in this course will study the same materials as in Integrated Mathematics 1 CORE, but at a faster pace. Acceleration and depth-of-study are characteristics of this program.

<The HONORS section carries an Honor Point>

CREDIT: 0.5 **TYPE:** Honors **GRADE:** 9

PREREQUISITE: Completion of 8th Grade Algebra, Appropriate EXPLORE Exam Score, and 8th Grade Teacher Recommendation.

COREQUISITES: If you take INTEGRATED MATHEMATICS 1 HONORS (FALL), you must also take INTEGRATED MATHEMATICS 1 HONORS (SPRING).

FEES: None

INTEGRATED MATHEMATICS 1 HONORS (SPRING)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 1 (2014). Students in this course study; expressions, introduction to functions and interpreting functions, linear relationships and modeling linear functions, congruence of geometry, systems of equations, inferential statistics, exponential functions, and comparing exponential functions and linear functions by modeling. Students in this course will study the same materials as in Integrated Mathematics 1 CORE, but at a faster pace. Acceleration and depth-of-study are characteristics of this program.

<The HONORS section carries an Honor Point>

CREDIT: 0.5 **TYPE:** Honors **GRADE:** 9

PREREQUISITE: Completion of 8th Grade Algebra, Appropriate EXPLORE Exam Score, and 8th Grade Teacher Recommendation.

COREQUISITES: If you take INTEGRATED MATHEMATICS 1 HONORS (SPRING), you must also take INTEGRATED MATHEMATICS 1 HONORS (FALL).

FEES: None

INTEGRATED MATHEMATICS 2 (FALL)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 2 (2014). Students in this course study; extending the number system, working with quadratic equations representations of quadratic equations, quadratic functions and modeling, geometric similarities, right triangles and trigonometry, probability, and circles. Integrated 2 is generally required for college admission.

CREDIT: 0.5 **TYPE:** Core **GRADE:** 10

PREREQUISITE: (1) Previous enrollment in Algebra/Integrated

Mathematics 1 **or** (2) Completion of 8th Grade Algebra, Appropriate EXPLORE Exam Score, and 8th Grade Teacher Recommendation.

COREQUISITES: If you take INTEGRATED MATHEMATICS 2 (FALL), you must also take INTEGRATED MATHEMATICS 2 (SPRING).

FEES: None

INTEGRATED MATHEMATICS 2 (SPRING)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 2 (2014). Students in this course study; extending the number system, working with quadratic equations representations of quadratic equations, quadratic functions and modeling, geometric similarities, right triangles and trigonometry, probability, and circles. Integrated 2 is generally required for college admission.

CREDIT: 0.5 **TYPE:** Core **GRADE:** 10

PREREQUISITE: (1) Previous enrollment in Algebra/Integrated Mathematics 1 **or** (2) Completion of 8th Grade Algebra, Appropriate EXPLORE Exam Score, and 8th Grade Teacher Recommendation.

COREQUISITES: If you take INTEGRATED MATHEMATICS 2 (SPRING), you must also take INTEGRATED MATHEMATICS 2 (FALL).

FEES: None

INTEGRATED MATHEMATICS 2 HONORS (FALL)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 2 (2014). Students in this course study; extending the number system, working with quadratic equations representations of quadratic equations, quadratic functions and modeling, geometric similarities, right triangles and trigonometry, probability, and circles. Students in this course will study the same materials as in Integrated Mathematics 2 CORE, but at a faster pace. Acceleration and depth-of-study are characteristics of this program. Integrated Mathematics 2 is generally required for college admission.

<The HONORS section carries an Honor Point>

CREDIT: 0.5 **TYPE:** Honors **GRADE:** 9-10

PREREQUISITE: (1) Algebra—Honors/Integrated Mathematics 1 & Teacher Recommendation **or** (2) Qualifying Grades in Algebra—Core, Teacher Recommendation and Administrative Approval (3) Completion of 8th Grade Algebra, Appropriate EXPLORE Exam Score, and 8th Grade Teacher Recommendation.

COREQUISITES: If you take INTEGRATED MATHEMATICS 2 HONORS (FALL), you must also take INTEGRATED MATHEMATICS 2 HONORS (SPRING).

FEES: None

INTEGRATED MATHEMATICS 2 HONORS (SPRING)

Offered: Semester Course. Required Textbook: Pearson Integrated Mathematics 2 (2014). Students in this course study; extending the number system, working with quadratic equations representations of quadratic equations, quadratic functions and modeling, geometric similarities, right triangles and trigonometry, probability, and circles. Students in this course will study the same materials as in Integrated 2 CORE, but at a faster pace. Acceleration and depth-of-study are characteristics of this program.

Integrated 2 is generally required for college admission. <**The HONORS section carries an Honor Point**>

CREDIT: 0.5 **TYPE:** Honors **GRADE:** 9-10

PREREQUISITE: (1) Algebra—Honors/Integrated Mathematics 1 & Teacher Recommendation **or** (2) Qualifying Grades in Algebra—Core, Teacher Recommendation and Administrative Approval (3) Completion of 8th Grade Algebra, Appropriate EXPLORE Exam Score, and 8th Grade Teacher Recommendation.

COREQUISITES: If you take INTEGRATED MATHEMATICS 2 HONORS (SPRING), you must also take INTEGRATED MATHEMATICS 2 HONORS (FALL).

FEES: None

INTEGRATED MATHEMATICS 3 (FALL)

Offered: Semester Course. Required Textbook: Integrated Mathematics 3 Pearson (2014). Students in this course will study; Statistics, Geometric Proofs, Geometric Modeling, Polynomial Functions, Rational Functions, Radicals and Rational Exponents, Exponential and Logarithmic Functions, Trigonometric Functions, and Systems and Comparing Functions. ACT Preparation activities are included. A TI-Nspire calculator is required.

CREDIT: 0.5 **TYPE:** Core **GRADE:** 11-12

PREREQUISITE: Previous Enrollment in Geometry—Core or Integrated Mathematics 2-Core or Honors.

COREQUISITES: If you take INTEGRATED MATHEMATICS 3 (FALL), you must also take INTEGRATED MATHEMATICS 3 (SPRING).

FEES: None

INTEGRATED MATHEMATICS 3 (SPRING)

Offered: Semester Course. Required Textbook: Integrated Mathematics 3 Pearson (2014). Students in this course will study; Statistics, Geometric Proofs, Geometric Modeling, Polynomial Functions, Rational Functions, Radicals and Rational Exponents, Exponential and Logarithmic Functions, Trigonometric Functions, and Systems and Comparing Functions. ACT

Preparation activities are included. A TI-Nspire calculator is required.

CREDIT: 0.5 **TYPE:** Core **GRADE:** 11-12

PREREQUISITE: Previous Enrollment in Geometry—Core or Integrated Mathematics 2-Core or Honors.

COREQUISITES: If you take INTEGRATED MATHEMATICS 3 (SPRING), you must also take INTEGRATED MATHEMATICS 3 (FALL).

FEES: None

PRE-CALCULUS HONORS (FALL)

Offered: Semester Course. Required Textbook: East—Demana, Waits, Foley, Kennedy (2004) Pre-Calculus: Graphical, Numerical, Algebraic Pearson Addison-Wesley West—Larson, Edwards, Hostetler (2001) Pre-Calculus with Limits Houghton-Mifflin **The Honors section carries an Honor Point.**

Students are introduced to selected topics to include polynomial, rational, radical, exponential, logarithmic and trigonometric functions, rectangular, polar and complex numbers; matrices, limits, vectors, probability and statistics. This course will prepare students for Calculus in high school or college. A graphing calculator is integral to success in this course. Students who earned credit in College Algebra/Trigonometry cannot earn credit for this course as well.

CREDIT: 0.5 **TYPE:** Honors **GRADE:** 11-12

PREREQUISITE: Earned Credit in Geometry—Honors and Advanced Algebra—Honors.

COREQUISITES: If you take PRE-CALCULUS HONORS (FALL), you must also take PRE-CALCULUS HONORS (SPRING).

FEES: None

PRE-CALCULUS HONORS (SPRING)

Offered: Semester Course. Required Textbook: East—Demana, Waits, Foley, Kennedy (2004) Pre-Calculus: Graphical, Numerical, Algebraic Pearson Addison-Wesley West—Larson, Edwards, Hostetler (2001) Pre-Calculus with Limits Houghton-Mifflin **The Honors section carries an Honor Point.**

Students are introduced to selected topics to include polynomial, rational, radical, exponential, logarithmic and trigonometric functions, rectangular, polar and complex numbers; matrices, limits, vectors, probability and statistics. This course will prepare students for Calculus in high school or college. A graphing calculator is integral to success in this course. Students who earned credit in College Algebra/Trigonometry cannot earn credit for this course as well.

CREDIT: 0.5 **TYPE:** Honors **GRADE:** 11-12

PREREQUISITE: Earned Credit in Geometry—Honors and Advanced Algebra—Honors.

COREQUISITES: If you take PRE-CALCULUS HONORS (SPRING), you must also take PRE-CALCULUS HONORS (FALL).

FEES: None