

MATH DEPARTMENT AP/AICE COURSE OFFERINGS

TITLE: ADVANCED PLACEMENT STATISTICS

LEVEL III: Accelerated GRADE: 11-12 CREDIT: 1 TYPE: R, AS, C

SPECIAL NOTE: Credit in this course precludes credit in Probability and Statistics with Application. Students are required to take the Standardized Advanced Placement examination upon completion of the course.

PREREQUISITE: Trigonometry, Pre-Calculus, or Algebra 2 Honors..

DESCRIPTION: The purpose of this course is to explore the concepts of statistics and data distribution. The content should include, but not be limited to the following: exploring data, including observing patterns and departures from patterns; planning a study, including deciding what and how to measure; anticipating patterns in advance, including producing models using probability and simulation; and statistical inference, including confirming models..

TITLE: ADVANCED PLACEMENT CALCULUS AB

LEVEL: Accelerated GRADE: 10-12 CREDIT: 1 TYPE: R, AS, C

SPECIAL NOTE: Satisfies Calculus requirement for Academic Scholars Program. Students are required to take the Standardized Advanced Placement examination upon completion of the course.

PREREQUISITE: Completion of Trigonometry and Analytic Geometry and/or completion of Mathematical Analysis and/or completion of Pre-Calculus with teacher recommendation.

DESCRIPTION: The purpose of this course is to study algebraic and transcendental functions and the general theory and techniques of calculus. The content should include, but not be limited to the content specified by the Advanced Placement Program.

TITLE: ADVANCED PLACEMENT CALCULUS BC

LEVEL: Accelerated GRADE: 12 CREDIT: 1 TYPE: R, AS, C

SPECIAL NOTE: Students are required to take the Standardized Advanced Placement examination upon completion of the course.

PREREQUISITE:

DESCRIPTION: The purpose of this course is to provide an extensive study of the general theory and techniques of calculus. The content should include, but not be limited to the following: the content specified by the Advanced Placement Program.

TITLE: AICE THINKING SKILLS A LEVEL

LEVEL: Accelerated GRADE: 10-12 CREDIT: 1 TYPE: R, AS, C

CATEGORY: GROUP A OR C (except for class of 2017 students)

SPECIAL NOTE: Students are required to take the Cambridge examination upon completion of the course.

PREREQUISITE: Demonstrated ability and teacher recommendation.

DESCRIPTION: **Thinking Skills** develops a specific set of intellectual skills, independent of subject content, reflecting the need voiced by universities and employers for more mature and sophisticated ways of thinking. The Thinking Skills syllabus also enables students to approach their other subjects with an improved ability to understand, analyze and resolve problems. The Thinking Skills syllabus encourages free and open debate, critical and investigative thinking, and informed and disciplined reasoning.

TITLE: AICE MATHEMATICS

LEVEL: Accelerated GRADE: 10, 11, or 12 CREDIT: 1 TYPE: R, AS, C

CATEGORY: Math/Science Group A

SPECIAL NOTE: Students are required to take the Cambridge examination upon completion of the course.

PREREQUISITE: Demonstrated ability and teacher recommendation.

DESCRIPTION: AICE Mathematics/Calculus Papers 1 and 2. The AICE Calculus course covers both differential and integral Calculus along with some pre-calculus content and vector applications. Topics to be covered include but are not limited to: differentiation using the limit definition, equations of tangent lines, differentiation using the power, product, quotient and chain rules; integration including u-du substitution, applications of calculus to related rate and optimization problems and areas of regions under curves and areas between curves.