MATHEMATICS COURSES

Section: MTH009		Math Lab
Grade: 9-12	Semester	Course offered at: AHS CDO IRHS
Prerequisites: ***Teacher recommendation only***		
This is a self-paced, computer-based course focusing on credit recovery and/or intervention.		

Section: MTH002		Algebra I
Grade: 9-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***none***		
This standards-based course covers the fundamentals of algebra, with a focus on multiple representations of functions and problem-solving. Topics include linear, exponential, absolute value, quadratic functions, sequences, systems, inequalities, and polynomials.		

Section: MTH012		Geometry
Grade: 9-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Algebra I***		
This standards-based course in Euclidean Geometry covers topics such as proofs, congruence and similarity of polygons, circles, areas or plane figures, surface area and volume of three-dimensional objects, and coordinate geometry. Basic elements of algebra are also reviewed.		

Section: MTH013		Advanced Geometry
Grade: 9-12	All Year	Course offered at: CDO IRHS
Prerequisites: ***Grade of A/B in Algebra I and teacher recommendation. 9th graders must have an "A" in Algebra and a recommendation from an 8th grade teacher***		
This is an accelerated standards-based college-prep course in Euclidean Geometry. Topics include proofs, congruence, similarity, circles, plane and solid geometry, coordinate geometry and some basic trigonometry with greater depth than the Geometry class and at an accelerated rate. Algebra skills are applied and reviewed throughout the year. This course is intended for most college-bound students planning on taking upper-level mathematics classes.		

Section: MTH010		Intermediate Algebra
Grade: 11-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Credit in Algebra I and Geometry or teacher recommendation***		
This course is designed to provide students with a foundation of entry level algebraic applications. It is a bridge between Algebra I and Algebra II for students who need further development in the concepts of critical algebra skills necessary for success in applying mathematical ideas. This course counts as a math requirement for graduation, but does not meet the upper-level math requirement for state universities.		

Section: MTH040		Financial Algebra
Grade: 9-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Geometry, Counselor and/or teacher recommendation – this course will satisfy the 4th year state math requirement and will be an Algebra II equivalent***		
This course will enable students to implement the decision-making skills they must apply and use to become knowledgeable consumers, savers, investors, users of credit, money managers, citizens, and members of a 21st century global community. Students will incorporate concepts, skills, and critical thinking from mathematics, language arts, social studies, and applied technology. Students will explore the real number system, linear, quadratic, exponential functions and polynomials, concepts of growth and decay, exponential and logarithmic equations, regression models through the use of spreadsheets, bar graphs, scatter plots, and much more, all while applying these to real-world financial situations including investing, banking, credit, income taxes, insurance, and financial budgeting.		

Section: MTH003		Algebra II
Grade: 9-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Grade of "C" or better in Algebra I AND Geometry, or credit in Intermediate Algebra, or teacher recommendation***		
This standards-based course extends the concepts in Algebra I. Focus is on functions with topics including polynomials, quadratic, rational, exponential, logarithmic, and trigonometric.		

Section: MTH004		Advanced Algebra II
Grade: 9-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Grade of A/B in Algebra I AND an A/B in Geometry or teacher recommendation***		
This standards-based course extends the concepts in Algebra I. This course is taught at an accelerated rate and in more depth than regular Algebra II. Students are expected to be both responsible and independent learners. Difficult and challenging problems will be used to aid the development of problem-solving skills and critical thinking. This course is intended for most college-bound students planning on taking upper-level mathematics classes.		

Section: MTH024		Statistics
Grade: 11-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Algebra II***		
This course covers four major content areas: exploring data, collecting data, probability, and statistical inference. This course will serve as an excellent preparation for a college-level introductory statistics course and can be taken concurrently with other math courses. This course will satisfy the fourth year math requirement for admission into most colleges and universities.		

Section: MTH018		AP Statistics
Grade: 11-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Grade of "C" or better in Pre-Calculus or Advanced Alg. II or "A" in Alg. II***		
This college-level course covers four major content areas: exploring data, designing studies, probability, and statistical inference and is equivalent to a one-semester college course in statistics. Students may elect to take the AP Statistics Test which may give them one semester of college math credit. This class may be taken concurrently with other math classes. **This course carries a weighted grade.**		

Section: MTH025		Sports Statistics
Grade: 11-12	All Year	Course offered at: CDO IRHS
Prerequisites: ***Geometry and Algebra II***		
This course will introduce students to statistical reasoning in the context of sports. Statistical concepts such as exploratory data analysis, hypothesis testing, experimental design and probability will be developed to answer interesting sports-related questions. The course will serve as an excellent preparation for a college-level introductory statistics course and can be taken concurrently with other math courses. This course will satisfy the fourth year math requirement for admission into most colleges and universities.		

Section: MTH014		Pre-Calculus
Grade: 10-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Grade of "C" or better in Algebra II or teacher recommendation***		
This course covers polynomial, exponential and logarithmic functions. Additionally, there is a large emphasis on extending the students' knowledge in trigonometry. Other advanced algebraic topics covered are vectors, polar coordinates, and matrix algebra.		

Section: MTH015		Introduction to Calculus
Grade: 10-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***Grade of "C" or better in Advanced Algebra II or Pre-Calculus***		
This course will examine functions in depth, including polynomial, rational, exponential, logarithmic, and trigonometric. This course will also introduce students to vectors, limits, continuity, and basic differential calculus, including applications. **This course carries a weighted grade.**		

Section: MTH016		AP Calculus AB
Grade: 11-12	All Year	Course offered at: AHS CDO IRHS
Prerequisites: ***"C" or better in Introduction to Calculus or teacher recommendation***		
This college-level course is intended to provide students with a background in elementary calculus, equivalent to the first semester of college calculus. Topics include the differential and integral calculus of polynomial, rational, trigonometric, exponential and logarithmic functions, with applications. This course culminates with the AP exam (optional), which **may** give one semester of college credit if the college or university of choice permits. **This course carries a weighted grade.**		

Section: MTH017		AP Calculus BC	
Grade: 12	All Year	Course offered at: AHS CDO IRHS	
Prerequisites: ***Credit in AP Calculus AB or teacher recommendation***			
This college-level course is a continuation of AP Calculus AB and equivalent to the second semester of college calculus. This course culminates with the AP exam (optional), which **may** give one semester of college credit if the college or university of choice permits. **This course carries a weighted grade.**			