MATHEMATICS

181001-181002 Intermediate Algebra
Grade(s): 9-12 **Credit:** .5 per semester **Term(s):** 1 & 2 ***AEO***
Students will understand the concept of function and identify its important features. Students will recognize and solve math problems involving linear, quadratic, and exponential functions in mathematical situations and represent functions with tables, graphs and symbols.

181201-181202 Geometry 9 **Prerequisite**: Intermediate Algebra
Grade(s): 9 **Credit:** .5 per semester **Term(s):** 1 & 2
This course is designed for students who have successfully completed Intermediate Algebra in 8th grade. Students will calculate measurements of plane and solid geometric figures, solve geometric problems using algebraic methods, and construct logical arguments, based on axioms, definitions and theorems. Students will also know and apply properties of geometric figures (parallel and perpendicular lines, angles, triangles, quadrilaterals, Pythagorean Theorem, trigonometry, and circles) to solve real-world problems. Additional rigor will be incorporated into the course to extend students' learning.

181401-181402 Geometry **Prerequisite**: Intermediate Algebra
Grade(s): 10-12 **Credit:** .5 per semester **Term(s):** 1 & 2 ***Offered at AEO for students 9-12***
This course is designed for students who have successfully completed Intermediate Algebra. Students will calculate measurements of plane and solid geometric figures, solve geometric problems using algebraic methods, and construct logical arguments, based on axioms, definitions and theorems. Students will also know and apply properties of geometric figures (parallel and perpendicular lines, angles, triangles, and quadrilaterals) to solve real-world problem

181501-181502 Algebra 2 Concepts **Prerequisite**: Intermediate Algebra, Geometry
Grade(s): 11-12 **Credit:** .5 per semester **Term(s):** 1 & 2 ***AEO***
This course is designed for those students that have successfully completed Geometry. It will offer a review of Intermediate Algebra, and incorporate concepts from Algebra 2 such as functions, probability, statistics and graph theory, and will place an emphasis on quadratics.

181601-181602 Algebra 2 **Prerequisite:** Geometry or concurrently with Geometry
Grade(s): 10-12 **Credit:** .5 per semester **Term(s):** 1 & 2 ***AEO***
This course is designed for students who have successfully completed Geometry. Students will solve problems involving linear, quadratic, and exponential functions. Students will generate equivalent algebraic expressions involving polynomials, and radicals. Students are encouraged to purchase their own calculator.

181651-181652 Probability and Statistics **Prerequisite:** Algebra 2 or Algebra 2 Concepts
Grade(s): 11-12 **Credit:** .5 per semester **Term(s):** 1 & 2 ***AEO***
This course is designed for students that have successfully completed Algebra 2 Concepts, Algebra 2, or Precalculus. An introduction to college statistics, students will work with probability, data collection, descriptive and inferential statistics, and technological tools to draw conclusions, identify trends and describe relationships. Students will also study statistical measures of centrality and spread, methods of data collection, methods of determining probability, binomial and normal distributions, hypothesis testing, and confidence intervals. Students will use multiple representations to present data including written descriptions, numerical statistics, formulas, and graphs. Students are encouraged to purchase their own calculator.

181701-181702 (CITS) Precalculus **Prerequisite**: Algebra 2
Grade(s): 11-12 **Credit:** .5 per semester **Term:** 1 & 2 ***AEO, CITS***
This course is designed for students who excelled in Algebra 2 and intend to study in a field requiring higher mathematics. Precalculus serves as the bridge between Algebra and Calculus. Students will solve problems involving algebraic functions, equations, inequalities, absolute value graphing, logarithmic, exponentials, and analytic trigonometry. Students are encouraged to purchase their own TI-84 calculator.

181801-181802 AP (CITS) Calculus **Prerequisite:** Precalculus and Commitment Agreement required
Grade(s): 12 **Credit:** .5 per semester **Term:** 1 & 2 ***AEO, AP, CITS.***
This course is designed for students who excelled in Precalculus and intend to study in a field requiring higher mathematics. Students are strongly encouraged to purchase their own TI-83 calculator and will be expected to take the AP Exam for Calculus in May. Topics of study include: limits, logarithmic, exponential, and other transcendental functions, differentiation and integration.