Algebra I PSP   0104

A good understanding of Algebra I is necessary for a successful math sequence. Algebra I includes the knowledge and skills relation to the concept of a variable, algebraic manipulations necessary in problem solving, exploring the graphs of linear and quadratic functions, real world applications of linear and quadratic functions, the solution of equations and inequalities, data analysis, and performing operations involving radicals. The use of manipulative and technology, which includes the use of a graphing calculator, is an integral part of this course.

CREDIT: 1   **TYPE:** Standard   **GRADE:** 9-12

Geometry PSP   0108

Geometry is a course designed to develop critical thinking skills involving proportional thinking and visualization. Connections are made to algebra throughout the course and to the world outside of school through a variety of applications. Students in geometry use calculators that assist with geometric constructions, coordinate graphing, algebraic analysis, and computation. In addition, students use formulas and relationships involving geometric figures with algebraic applications. The essential knowledge and skills of this course include geometric structure and patterns, dimensionality and the geometry of location, congruence, size, similarity and shape.

CREDIT: 1   **TYPE:** Standard   **GRADE:** 9-12
PREREQUISITE: 0104 - Algebra I PSP

Geometry CP   1108

This course is designed for students showing superior skills and advanced aptitude in mathematics. Geometry - Honors includes the knowledge and skills of Geometry and goes beyond the regular course in both depth and content. Students complete more difficult assignments and go at a faster pace. ***Prerequisite and instructor approval required.

CREDIT: 1   **TYPE:** Honors   **GRADE:** 9-12
PREREQUISITE: 0104 - Algebra I PSP

Algebra II PSP   0112

Algebra II is designed to develop process and problem solving skills and is a continuation and extension of concepts learned in Algebra I. The study of functions includes the domain and range, function notation, inverses of functions, and graphs of parent functions. Attention is given to quadratic, square root, rational, exponential, and logarithmic functions and their applications. Included in Algebra II are knowledge and skills relating to the complex number system, conic sections and their graphs, data, analysis, and matrix algebra. The use of graphing calculators allows coordinate graphing, algebraic analysis, and complicated computation.

CREDIT: 1   **TYPE:** Standard   **GRADE:** 10-12
PREREQUISITE: 0108 - Geometry PSP **or** 1108 - Geometry CP

Algebra II CP   1110

This course is designed for students showing superior skills and advanced aptitude in mathematics. Algebra II - Honors includes the knowledge and skills of Algebra II and goes beyond the regular course in both depth and content to prepare students for AP Calculus and AP Statistics. Students complete more difficult assignments and go at a faster pace. ***Prerequisite and instructor approval required.

CREDIT: 1   **TYPE:** Honors   **GRADE:** 10-12
PREREQUISITE: 0108 - Geometry PSP **or** 1108 - Geometry CP

Financial Mathematics   2113

Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors. This course will integrate career and postsecondary education planning into financial decision making.

CREDIT: 1   **TYPE:** Standard   **GRADE:** 10-12

PREREQUISITE: 0104 - Algebra I PSP

AP Computer Science   2303

This course is a second year course in computer science. This course uses the programming language Java to solve problems, and focuses on algorithm design and analysis, and correct coding techniques. This class counts as a 4th math credit due to the heavy use of logic and mathematical process after students complete Algebra I, Geometry, and Algebra II.

CREDIT: 1   **TYPE:** Advanced Placement   **GRADE:** 10-12

PREREQUISITE: 0303 - Computer Programming I

Pre-Calculus CP   0110

Pre-calculus is a course designed for preparing students for advanced mathematics courses including AP Calculus, AP Statistics, and college mathematics. It involves the use of in-depth geometrical and algebraic skills developed in previous math classes. In addition to an advanced study of functions and their graphs, there is a study of both right triangle trigonometry and circular trigonometry. Pre-calculus includes the knowledge and skills relating to series and sequences, probability and statistics, vector analysis, and conic sections. Students use graphing calculators to develop advanced graphing techniques, explore patterns, analyze data, perform complicated computations, and evaluate trig functions. Scientific and business applications of pre-calculus are an important part of this course.

CREDIT: 1   **TYPE:** Honors   **GRADE:** 11-12

PREREQUISITE: Algebra I, II, and Geometry

AP Calculus   2110

The main objective of this course is to give students a rigorous and academically challenging mathematics course. The skills of interpreting calculus on a graphical, analytical, verbal, and numerical basis are developed.
The course involves the use of derivatives, integrals, limits, approximations, applications, and modeling. Before studying calculus, all students should have taken algebra, geometry, and pre-calculus, and should be familiar with the properties of functions.

CREDIT: 1   **TYPE:** Advanced Placement   **GRADE:** 12

Statistics PSP   4302

In Statistics, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I. Students will broaden their knowledge of variability and statistical processes. Students will study sampling and experimentation, categorical and quantitative data, probability and random variables, inference, and bivariate data. Students will connect data and statistical processes to real-world situations. In addition, students will extend their knowledge of data analysis.

CREDIT: 1   **TYPE:** Standard   **GRADE:** 12

AP Statistics   4303

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.

COURSE NOTE: Algebra II CP is strongly recommended as a prerequisite for this class.

CREDIT: 1   **TYPE:** Advanced Placement   **GRADE:** 12

PREREQUISITE: 0112 - Algebra II PSP **or** 1110 - Algebra II CP

College Algebra   9110

This course satisfies the PJC course Math 1314.

COURSE NOTE: Meet all admission requirements to Paris Junior College. Tuition is to be paid to PJC.

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

COREQUISITES: If you take this course, you must also take 9112 - College Statistics

College Statistics   9112

This course will satisfy PJC Math 1342 course.

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

COREQUISITES: If you take this course, you must also take 9110 - College Algebra