MATH (MATH1-UC)

MATH1-UC 1101 Math I (2 Credits)
Typically offered Fall, Spring, and Summer terms
This is the first of a two-course sequence in elementary and intermediate algebra. Topics include signed numbers, linear equations, linear inequalities; absolute value equations and inequalities; laws of exponents; polynomials; factoring; rational algebraic expressions; and graphs of linear equations and inequalities. Students may seek exemption from the course through testing. Credit is not awarded if Mathematical Reasoning has been successfully completed.
Grading: UC SPS Graded
Repeatable for additional credit: No

MATH1-UC 1105 Mathematical Reasoning (4 Credits)
Typically offered occasionally
This college-level algebra course prepares students for precalculus with an emphasis on applications related to future academic and professional skills. Particular emphasis is placed on the application of algebraic techniques to a range of problems drawn from disciplines in the humanities, social sciences, general sciences, computer science, and business. The objective of the course is to develop proficiency with these quantitative techniques and explore the use of these techniques in problem solving. Covers the same quantitative skill sets as Math I and Math II.
Grading: UC SPS Graded
Repeatable for additional credit: No

MATH1-UC 1141 Math II (2 Credits)
Typically offered Fall, Spring, and Summer terms
This is the second in a two-course sequence in algebra. Topics include line equations, systems of two linear equations, rational exponents, radical expressions, radical equations, complex numbers and quadratic equations, graphs of quadratic functions, and quadratic inequalities. Students may seek exemption from the course through testing. Credit is not awarded if Mathematical Reasoning has been successfully completed.
Grading: UC SPS Graded
Repeatable for additional credit: No

MATH1-UC 1171 Precalculus (4 Credits)
Typically offered occasionally
The course uses the framework of functions (linear, polynomial, exponential, and trigonometric) to analyze and draw conclusions about real life situations involving quantitative concepts. Mathematical ideas are presented in multiple ways (through graphs, formulas, and verbal descriptions). Classes are interactive and participatory.
Grading: UC SPS Graded
Repeatable for additional credit: No

MATH1-UC 1172 Statistical Methods (4 Credits)
Typically offered occasionally
The course topics include an introduction to statistics terminology; methods of organizing data; measures of central tendency and measures of variation; elementary probability theory; normal distributions; areas under the standard normal distribution; sampling distributions; the Central Limit Theorem; estimation; hypothesis testing; and correlation and regression.
Grading: UC SPS Graded
Repeatable for additional credit: No
Prerequisites: Math II or Mathematical Reasoning.

MATH1-UC 1174 Calculus W/Applications to Business & Economics (4 Credits)
Typically offered occasionally
The course emphasizes the analysis of real-life situations using the tools of single-variable calculus (limits, derivatives, anti-derivatives, graphing, optimization). Classes are participatory and interactive, with lectures supplemented by in-class individual and group work. Students give oral presentations, both individually and in groups.
Grading: UC SPS Graded
Repeatable for additional credit: No
Prerequisites: MATH1-UC 1171.

MATH1-UC 1180 Linear Algebra (4 Credits)
Typically offered occasionally
Linear algebra is, together with calculus, one of the most important fields of mathematics for computations and applications. For example, it is a major tool in data mining, the set of methods and processes to identify patterns in large sets of data. In many applications, the problem is formulated mathematically; it is then converted to a linear algebra problem; the linear algebra problem is solved, and the results are interpreted. In this course, students learn the theoretical concepts and some of the computational methods of linear algebra.
Grading: UC SPS Graded
Repeatable for additional credit: No
Prerequisites: MATH1-UC 1174.