### MATH V05 - PLANE TRIGONOMETRY                    3 Units
*Prerequisite: MATH V03 or MATH V13B; or placement as measured by the college assessment process*
*Recommended preparation: MATH V02 or knowledge of plane geometry*
*Hours: 3 lecture weekly*
This course examines the six basic trigonometric functions, their definitions, relationships, and uses as they apply to: radian measure, right triangle solution, identities, trigonometric equations, graphs, inverse functions, and complex numbers.
*Formerly Math 5. Transfer credit: CSU.*

### MATH V06 - MATH SUMMER BRIDGE                    1 Unit
*Recommended preparation: MATH V09 or MATH V09C or MATH V10 or MATH V10C or MATH V01 or MATH V01E or MATH V11B*
*Hours: .5 lecture, 1.5 laboratory weekly*
This course introduces the skills necessary to succeed in college mathematics and a short "refresher" of the prerequisites to algebra courses. It is designed for students taking their first community college math course or having difficulty passing algebra. Based on math placement at the first class, students will be divided into three groups (prealgebra, elementary algebra, or intermediate algebra). The course will include short lectures given by the instructor, and group work organized by tutors. Students will participate in math games, applications, and skill-building exercises.
*Offered on a pass/no pass basis only.*

### MATH V09 - BEGINNING MATHEMATICS                 3 Units
*Recommended preparation: LS V07 or placement as measured by the college assessment process*
*Hours: 3 lecture weekly*
This course is a review of the basic mathematical skills and fundamental operations as applied to integers, fractions, and percentages. It provides an introduction to algebra, simple geometric figures, the metric system, and the use of formulas. Students receiving credit in MATH V09 will not receive credit in MATH V09A-V09C.
*Formerly Math 9. Not applicable for degree credit.*

### MATH V10 - PREALGEBRA                            3 Units
*Recommended preparation: MATH V09 or MATH V09A-V09C or placement as measured by the college assessment process*
*Hours: 3 lecture weekly*
This course bridges the gap between arithmetic and elementary algebra. It reviews fundamental operations using a formalized approach and includes an introduction to the following algebraic topics: number systems, properties of real numbers, exponents, algebraic expressions, linear equations and inequalities, application problems, and introduction to graphing. Students receiving credit in MATH V10 will not receive credit in MATH V10A-V10C.
*Formerly Math 10. Not applicable for degree credit.*

### MATH V11A - ELEMENTARY ALGEBRA: FIRST HALF       3 Units
*Prerequisite: MATH V10 or MATH V10C; or placement as measured by the college assessment process*
*Hours: 2.5 lecture, 1.5 laboratory weekly*
This course is the first half of Elementary Algebra. It covers number sets, operations with signed numbers, linear equations and inequalities, polynomials and factoring, and introduction to quadratic equations. Students receiving credit in MATH V11A-V11B will not receive credit in MATH V01 or MATH V01A-V01E.
*Formerly Math 11A.*

### MATH V11B - ELEMENTARY ALGEBRA: SECOND HALF      3 Units
*Prerequisite: MATH V11A*
*Hours: 2.5 lecture, 1.5 laboratory weekly*
This course is the second half of Elementary Algebra. It covers rational expressions, further study of quadratic equations, graphing of equations and inequalities, systems of equations, and roots and radicals. Students receiving credit in MATH V11A-V11B will not receive credit in MATH V01 or MATH V01A-V01E.
*Formerly Math 11B.*

### MATH V12 - INTERMEDIATE ALGEBRA FOR NON-STEM MAJORS                            3 Units
*Prerequisite: MATH V01 or MATH V01E or MATH V11B; or placement as measured by the college assessment process.*
*Hours: 3 lecture weekly*
This course is designed for students who will not be pursuing a major in science, technology, engineering, or mathematics. It is designed to meet AA/AS competency in mathematics, and to satisfy the prerequisite for transfer-level courses in non-STEM fields. The course will cover solving equations and inequalities, exponents and radicals, functions and graphs, and quadratic, logarithmic, and exponential functions.

### MATH V13A - INTERMEDIATE ALGEBRA: FIRST HALF     3 Units
*Prerequisite: MATH V01 with grade of C or better or MATH V01E with grade of CR or P or MATH V11B with grade of C or better; or 1 year of high school beginning algebra (Algebra I) with grade of C or better; or placement as measured by the college assessment process.*
*Hours: 3 lecture weekly*
This course is the first half of Intermediate Algebra. Completion of both MATH V13A and MATH V13B is equivalent to MATH V03. This course covers equations and inequalities, systems of equations using matrices, exponents and radicals, and complex numbers. Students receiving credit in MATH V13A will not receive credit in MATH V03A-V03C.

### MATH V13B - INTERMEDIATE ALGEBRA: SECOND HALF    3 Units
*Prerequisite: MATH V03C with grade of CR or P or MATH V13A with grade of C or better.*
*Hours: 3 lecture weekly*
This course is the second half of Intermediate Algebra. Completion of both MATH V13A and MATH V13B is equivalent to MATH V03. This course covers functions and graphs, quadratic equations, conic sections, and exponential and logarithmic functions. Students receiving credit in MATH V13B will not receive credit in MATH V03D-V03E.

### MATH V20 - PRECALCULUS MATHEMATICS              5 Units
*Prerequisite: MATH V05; or placement as measured by the college assessment process*
*Hours: 5 lecture weekly*
This course serves as a preparation for calculus. Topics include polynomial, absolute value, rational, radical, exponential, logarithmic, and trigonometric functions and their graphs; analytic geometry; matrices; series; and polar coordinates. The approach is designed to unify the concepts of mathematics at the precalculus level.
*Formerly Math 20. Transfer credit: CSU; UC; credit limitations - see counselor.*

### MATH V21A - CALCULUS WITH ANALYTIC GEOMETRY I    5 Units
*Prerequisite: both MATH V04 and MATH V05 with grades of C or better; or MATH V20 with grade of C or better; or the fourth year of high school mathematics (advanced mathematics) with grade of C or better; or placement as measured by the college assessment process*
*Hours: 5 lecture weekly*
This is a first course in differential and integral calculus of a single variable which covers the elements of calculus. Topics include functions; limits; continuity; techniques and applications of differentiation and integration of algebraic, logarithmic and trigonometric functions; the Fundamental Theorem of Calculus; and L'Hospital's rule. The course is suitable for science, technology, engineering, and mathematics majors.
*Formerly Math 21A. Transfer credit: CSU; UC; credit limitations - see counselor.*

### MATH V21B - CALCULUS WITH ANALYTIC GEOMETRY II   5 Units
*Prerequisite: MATH V21A or equivalent with grade of C or better*
*Hours: 5 lecture weekly*
This is a second course in differential and integral calculus. It includes applications and techniques of integration (including improper integrals), parametric and polar equations, sequences and series, and an introduction to vectors. The course will also introduce applications to conic sections, and a variety of topics from other STEM disciplines.
*Formerly Math 21B. Transfer credit: CSU; UC; credit limitations - see counselor.*