MATH - Mathematics Courses

MATH B1A Precalculus I
4 units
Prerequisites: BC placement into math level 04 or successful completion of MATH B70 or equivalent with a grade of C or better.
Description: Preparation for calculus; the algebraic and graphical analysis of polynomial, rational, logarithmic and exponential functions and their applications; systems of linear and nonlinear equations, graphing, inequalities, absolute value, and complex numbers.
Hours: 72 lecture
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B1B Precalculus II
4 units
Prerequisites: BC placement into math level 05 or successful completion of MATH B1A or equivalent with a grade of C or better.
Description: Definitions of trigonometric functions, graphs of trigonometric functions, use of trigonometric functions in problem solving, derivation of trigonometric identities, verification of trigonometric identities, solution of conditional trigonometric equations, study of inverse trigonometric functions, trigonometric form of complex numbers and DeMoivre's Theorem; analytic geometry, mathematical induction, and introduction to sequences and series.
Hours: 72 lecture
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B2 Basic Functions and Calculus for Business
4 units
Prerequisites: BC placement into Math level 05 or successful completion of B1A or equivalent with a grade of C or better.
Description: Modern concepts in mathematics emphasizing applications to business. Functions and the basic concepts of differential calculus with introductions to integral calculus and multivariable calculus.
C-ID: MATH 140
Hours: 72 lecture
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B4A Mathematics for Elementary School Teaching
4 units
Prerequisites: BC placement into math level 04 or successful completion of MATH B70 or equivalent with a grade of C or better.
Description: Focuses on the development of quantitative reasoning skills through in-depth, integrated explorations of topics in mathematics, including real number systems and subsystems. Emphasizes the comprehension and analysis of mathematical concepts and applications of logical reasoning. Designed for students intending to teach in K-8. Not recommended for majors in physical sciences nor mathematics.
C-ID: MATH 120
Hours: 72 lecture
Transferable: CSU, UC, and private colleges; CSU GE B.4; BC GE B.2

MATH B6A Analytic Geometry/Calculus I
4 units
Prerequisites: BC placement into math level 06 or successful completion of MATH B1B or equivalent with a grade of C or better.
Description: Limits and differential calculus with an introduction to antiderivatives and integration. Includes analytic geometry and applications.
C-ID: MATH 211
Hours: 72 lecture
Transferable: Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B6B Analytic Geometry/Calculus II
4 units
Prerequisites: Successful completion of MATH B6A or equivalent with a grade of C or better.
Description: Transcendental functions, polar functions, sequences, infinite series and methods of integration. Further exposure to techniques and applications of differential and integral calculus.
C-ID: MATH 221
Hours: 72 lecture
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B6C Calculus III
4 units
Prerequisites: Successful completion of MATH B6B or equivalent with a grade of C or better.
Description: Continuation of Calculus II. Vectors and parametric equations, vector-valued functions, partial differentiation, multiple integrals, vector analysis, including theorems of Green, Gauss and Stokes.
C-ID: MATH 230
Hours: 72 lecture
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B6D Ordinary Differential Equations
3 units
Prerequisites: Successful completion of MATH B6C or equivalent with a grade of C or better.
Description: Vector spaces and linear transformations; elementary differential equations; Laplace transforms; series solutions and systems of differential equations; matrices; eigenvalues and eigenvectors.
Hours: 54 lecture
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4

MATH B6E Elementary Linear Algebra
3 units
Prerequisites: Successful completion of MATH B6C or equivalent with a grade of C or better.
Description: Real and complex number fields, vector spaces, linear transformation, matrices, systems of equations and matrix inversion, determinants, eigenvalues and eigenvectors.
Hours: 54 lecture
C-ID: MATH 250
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4

MATH B21 Special Projects in Mathematics
1-2 units
Description: Individually directed work in mathematics in preparation for intercollegiate math competitions, including advanced topics, research projects, special problems and

applications of mathematics to specific subject areas. Interested students should talk with their math instructors for an evaluation of their math skills. Field trips may be required.
Hours: 18 lecture hours for each unit (18-36)
Transferable: CSU and private colleges.

MATH B22 Elementary Probability and Statistics
4 units
Prerequisites: BC placement into math level 04 or successful completion of MATH B65 or MATH B70 or equivalent with a grade of C or better.
Description: Tabular, graphical, and numerical methods of summarizing data, finite probability, discrete and continuous random variables, binomial probability distribution, normal probability distribution, sampling distributions, point and interval estimation, one and two sample hypothesis testing procedures, analysis of variance, chi-square analysis, linear regression and correlation, and if time allows, nonparametric methods.
Hours: 72 lecture
C-ID: MATH 110
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B23 Finite Mathematics
3 units
Prerequisites: BC placement into math level 04 or successful completion of MATH B70 or equivalent with a grade of C or better.
Description: Solving equations and inequalities in one variable, relations and functions, matrices, linear inequalities in two variables, linear programming, mathematics of finance including simple and compound interest, annuities, sets and counting, and Venn Diagrams.
C-ID: MATH 130
Hours: 54 lecture
Transferable: CSU, UC, and private colleges; IGETC 2.A; CSU GE B.4; BC GE B.2

MATH B50 Modern College Arithmetic and Pre-Algebra
4 units
Prerequisites: BC placement into math level 01.
Description: A general review of basic arithmetic including the fundamental operations of addition, subtraction, multiplication and division of whole numbers, fractions and decimals. Emphasis is placed on real life applications, including percents, ratios, proportions, exponents, averages, estimation, graphs and measurement. The introduction to algebra includes operations with signed numbers and solving simple equations.
Hours: 72 lecture
Transferable: Not transferable. Not degree applicable.

MATH B60 Beginning Algebra
5 units
Prerequisites: BC placement into math level 02 or successful completion of ACDV B72 or equivalent with a grade of C or better.
Description: Fundamental concepts and mathematical processes first degree equations, polynomials, special products and factoring, rational expressions and equations, ratios, proportions, exponents, graphs, simultaneous linear equations.
Hours: 90 lecture
Transferable: Not transferable. Not degree applicable.

MATH B65 Intermediate Algebra for Statistics
4 units
Prerequisites: BC placement into math level 02 or successful completion of ACDV B72 or equivalent with a grade of C or better.
Description: An accelerated algebra course for non-STEM majors. Topics include simplifying algebraic expressions, manipulating and applying formulas, solving equations and inequalities in one and two variables, polynomials, and modeling with linear, exponential, and logarithmic functions.
Note: This course will only satisfy the prerequisite for MATH B22 and PSYC B5. This course should not be taken by Business majors and Elementary Teacher Education majors.
Hours: 54 lecture 54 lab
Transferable: Not transferable. Not degree applicable.

MATH B70 Intermediate Algebra
5 units
Prerequisites: BC placement into math level 03 or successful completion of MATH B60 or equivalent with a grade of C or better.
Description: Topics for the course are functions and operations on functions; system of linear equations, linear, and absolute value inequalities; linear, absolute value, and quadratic equations; radicals and operations with radicals; equations involving radicals, exponential, and logarithmic equations; and conic sections.
Hours: 90 lecture
Transferable: Not transferable. Degree applicable. BC GE B.2