Mathematics

Most Mathematics courses have prerequisites that are listed as part of the course description. For transfer-level courses, you can meet the prerequisite by taking the designated class or by demonstrating that you have taken an equivalent course somewhere else (including high school). For pre-transfer level courses, you may be eligible to enroll in a course even if you do not satisfy the prerequisites: you may be given a default recommendation to take a corequisite support course, but have the option of declining this recommendation through the assessment office or with a counselor.

If it is unclear that you have met the prerequisite for the class in which you wish to enroll, you might be blocked by the system. For more information about how prerequisites work please visit us at the college website: https://canadacollege.edu/registration/

To inquire about default recommendations and the assessment process please visit us here: https://canadacollege.edu/assessment/index.php You may also contact the Cañada College Welcome Center (located on the First Floor of Building 9, and at (650) 306-3452) for assistance.

MATH 120 INTERMEDIATE ALGEBRA

This is the second course in a 2-part series covering elementary and intermediate algebra and is a continuation of MATH 110. Topics include a review of equations, absolute value, lines and graphs, functions, rational exponents, radical expressions and equations, quadratic equations and graphs, exponential functions, and logarithmic functions. Additional topics may include conic sections and systems of equations. *Letter Grade Only. Degree Credit.*

Units: 5

Hours/semester: 80-90 Lecture; 160-180 Homework

Prerequisites: Successful completion of Elementary Algebra or equivalent, or placement by other measures as applicable.

MATH 125 ELEMENTARY FINITE MATHEMATICS

Topics include linear functions, system of linear equations, inequalities, matrices, mathematics of finance, linear programming, set theory, counting theory, and probability. *Letter Grade Only. Degree Credit.*

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: Successful completion of Intermediate Algebra or equivalent, or placement by other measures as applicable.

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 130

MATH 130 ANALYTICAL TRIGONOMETRY

Covers trigonometric functions of angles and real numbers, graphs of the trigonometric functions, trigonometric equations, the proof and uses of trigonometric identities, solving triangles, inverse functions, and complex numbers. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 64-72 Lecture; 128-144 Homework

Prerequisites: Successful completion of Intermediate Algebra or equivalent, or placement by other measures as applicable.

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU

C-ID: MATH 851

MATH 145 LIBERAL ARTS MATHEMATICS

This course is designed for majors with no specific math requirement. The goal is to develop in students an appreciation for the beauty and utility of mathematics. Topics include logic, problem solving, probability, statistics, geometry, mathematics of finance, systems of numeration, mathematical modeling, and computers. *Letter Grade Only. Degree Credit.*

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: Successful completion of Intermediate Algebra or equivalent, or placement by other measures as applicable.

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

MATH 150 MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS

Intended for future elementary school teachers. Topics covered include elementary set theory, numeration, number systems and operations, and elementary number theory, with emphasis on problem solving. This is the first of a two- or three-course math content sequence that most universities now require for teachers. *Letter Grade Only. Degree Credit.*

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: Successful completion of Intermediate Algebra or equivalent, or placement by other measures as applicable.

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC

C-ID: MATH 120

MATH 225 PATH TO CALCULUS

Equivalent to MATH 130 and 222. This course combines the topics of trigonometry and pre-calculus and is designed to fulfill the requirements of both courses in a single course. Topics include a study of functions, function families, their properties and transformations, compositions, inverses and combinations, complex numbers, and vectors. Function families include linear, trigonometric, logarithmic, exponential, polynomial, power, and rational. Multiple representations of functions are emphasized. *Letter Grade Only. Degree Credit.*

Units: 6

Hours/semester: 96-108 Lecture; 192-216 Homework

Prerequisites: Successful completion of Intermediate Algebra or equivalent, or placement by other measures as applicable.

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 955

MATH 241 BUSINESS CALCULUS I

The first class in a two semester calculus sequence designed for business majors. Topics include a review of functions, the derivative, applications of the derivative, and an introduction to the integral. *Letter Grade Only. Degree Credit.*

Units: 5

Hours/semester: 80-90 Lecture; 160-180 Homework

Prerequisites: Successful completion of Intermediate Algebra or equivalent, or placement by other measures as applicable.

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 140

MATH 243 BUSINESS CALCULUS II WITH TRIGONOMETRY

The second half of a two-semester calculus sequence designed for business majors. Topics include the integral, techniques of integration, an introduction to trigonometry, multivariable calculus, and differential equations. Equivalent to MATH 242. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 64-72 Lecture; 128-144 Homework

Prerequisites: MATH 241

Recommended: Eligibility for ENGL C1000 (Formerly ENGL 100).

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

MATH 251 ANALYTICAL GEOMETRY AND CALCULUS I

This course is an introduction to calculus and analytic geometry including limits, continuity of functions, definition of differentiation, derivation of formulas, applications, anti-differentiation and the fundamental theorem of calculus. *Letter Grade Only. Degree Credit.*

Units: 5

Hours/semester: 80-90 Lecture; 160-180 Homework

Prerequisites: MATH 222 (offered at CSM or Skyline) or MATH 225 or appropriate score on the College Placement Test or other multiple measures assessment.

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 210; MATH 900S (both MATH 251 + 252)

MATH 252 ANALYTICAL GEOMETRY AND CALCULUS II

This course is the second in a series of calculus and analytic geometry. This course covers the Fundamental Theorem of Calculus, antiderivatives, integral applications and techniques, power series and infinite series topics such as series testing and analysis of Taylor and power series. *Letter Grade Only. Degree Credit.*

Units: 5

Hours/semester: 80-90 Lecture; 160-180 Homework

Prerequisites: MATH 251

Recommended: Eligibility for ENGL C1000 (Formerly ENGL 100).

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 220; MATH 900S (both MATH 251 + 252)

MATH 253 ANALYTIC GEOMETRY AND CALCULUS III

This course is the third in a series of calculus and analytic geometry. This is the calculus of multivariable functions. The course covers topics in vectors, partial derivatives, double and triple integrals, line integrals and vector analysis theory such as Green's, Stokes', and Gauss' Theorems. *Letter Grade Only. Degree Credit.*

Units: 5

Hours/semester: 80-90 Lecture; 160-180 Homework

Prerequisites: MATH 252

Recommended: Eligibility for ENGL C1000 (Formerly ENGL 100).

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 230

MATH 270 LINEAR ALGEBRA

Application of vectors and matrices to systems of linear equations, linear transformations, eigenvectors and eigenvalues, vector spaces and inner products. *Letter Grade Only. Degree Credit.*

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: MATH 252

Recommended: Eligibility for ENGL C1000 (Formerly ENGL 100).

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 250; MATH 910S (both MATH 270 + 275)

MATH 275 ORDINARY DIFFERENTIAL EQUATIONS

An introduction to ordinary differential equations including quantitative and qualitative methods of solving them; the use of differential equations in various fields; theoretical aspects of differential equations such as establishing when solutions exist; and techniques for obtaining solutions including series solutions, singular points, Laplace transforms, and linear systems. *Letter Grade Only. Degree Credit.*

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: MATH 253

Recommended: Eligibility for ENGL C1000 (Formerly ENGL 100).

AA/AS Degree Requirements: Area 2

Transfer Credit: CSU, UC, (Cal-GETC Area 2)

C-ID: MATH 240; MATH 910S (both MATH 270 + 275)

MATH 695 INDEPENDENT STUDY

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

Units: 0.5 - 3

Hours/semester: 24-162 Lab

Transfer Credit: CSU

MATH 825 JUST-IN-TIME SUPPORT FOR PATH TO CALCULUS

A review of the core prerequisite skills, competencies, and concepts needed in pre-calculus. Intended for majors in science, technology, engineering, and mathematics who are concurrently enrolled in MATH 225, Path to Calculus, at Cañada College. Topics include: a review of computational skills developed in intermediate algebra, factoring, operations on rational and radical expressions, absolute value equations and inequalities, exponential and logarithmic expressions and equations, conic sections, functions including composition and inverses, an in-depth focus on quadratic functions, and a review of topics from geometry. *Pass/No Pass Only. Units do not apply toward AA/AS degree.*

Units: 2

Hours/semester: 32-36 Lecture; 64-72 Homework

Prerequisites: Appropriate score on the College Placement Test or other multiple measures assessment.

Corequisites: Concurrent enrollment in MATH 225

MATH 841 JUST-IN-TIME SUPPORT FOR BUSINESS CALCULUS I

A review of the core prerequisite skills, competencies, and concepts needed in college algebra. Intended for business or other majors who are concurrently enrolled in MATH 241, Business Calculus I, at Cañada College. Topics include: a review of computational skills developed in intermediate algebra, factoring, exponential and logarithmic expressions and equations, and an in-depth focus on

quadratic functions. A graphing calculator is required. *Pass/No Pass Only. Units do not apply toward AA/AS degree.*

Units: 1

Hours/semester: 16-18 Lecture; 32-36 Homework

Prerequisites: Appropriate score on the College Placement Test or other multiple measures assessment.

Corequisites: Concurrent enrollment in, MATH 241

MATH 851 JUST IN TIME SUPPORT FOR CALCULUS I

This support course for Calculus I reviews the core prerequisite skills, competencies, and concepts needed in calculus. It is intended for majors in science, technology, engineering, and mathematics who are concurrently enrolled in Calculus 1. Topics include computational skills developed in intermediate algebra, trigonometry, and precalculus, as well as strategies for succeeding in math courses. *Pass/No Pass Only. Units do not apply toward AA/AS degree.*

Units: 2

Hours/semester: 32-36 Lecture; 64-72 Homework

Corequisites: MATH 251