MATHEMATICS (MAT)

MAT 025 | Algebraic Literacy Lab
Lab Credit: 1
Supports skill development for students registered in MAT 055 Algebraic Literacy. Topics covered in this course include those defined in MAT 055 and/or any prerequisite skills needed by the student. For students with Accuplacer score EA 45-59, this course is a required corequisite with MAT 055 Algebraic Literacy.
Corequisite: Students must co-enroll in a corresponding section of MAT055.
MAT 025 is a structured study experience for MAT 055 students.

MAT 050 | Quantitative Literacy
Lecture Credit: 4
Develops number sense and critical thinking strategies, introduce algebraic thinking, and connect mathematics to real world applications. Topics in the course include ratios, proportions, percents, measurement, linear relationships, properties of exponents, polynomials, factoring, and math learning strategies. This course prepares students for Math for Liberal Arts, Statistics, Integrated Math, and college level career math courses.

MAT 055 | Algebraic Literacy
Lecture Credit: 4
Develops algebraic skills necessary for manipulating expressions and solving equations. Topics in the course include radicals, complex numbers, polynomials, factoring, rational expressions, quadratic equations, absolute value equations, systems of linear equations in two variables, related applications, and linear inequalities. This course prepares students for MAT 121 College Algebra and MAT 123 Finite Math.
Prerequisite: Accuplacer score of EA 60+. Students with Accuplacer scores below EA 60 are required to co-enroll in MAT 025, a structured study experience for MAT 055 students.

MAT 091 | Applied Quantitative Lab
Lab Credit: 1
Supports skill development for students registered in MAT 103, MAT 107, MAT 108, MAT 109, or MAT 112. Topics covered in the course include those defined in MAT 103/107/108/109/112 and/or any pre-requisite skills needed by the student. Students with NGAccuplacer AR scores 255-264 or TradAccuplacer scores EA 30-59 or AR 40+, who are advised into MAT 103/107/108/109/112, are required to co-enroll in this course.
Corequisite: Students must co-enroll in a corresponding section of MAT 103, 107, MAT 108 or MAT 112. MAT 091 is a structured study experience for MAT 103, 107, MAT 108 or MAT 112 students.

MAT 092 | Quant Lab
Lab Credit: 1
Supports skill development for students registered in MAT 120, MAT 135, MAT 155, or MAT 156. Topics covered in this course include those defined in MAT 120/135/155/156 and/or any pre-requisite skills needed by the student. Students with NGAccuplacer scores QAS 235-244 or TradAccuplacer scores QAS 235-244 are advised into MAT 120, MAT 135, MAT 155, or MAT 156, are required to co-enroll in this course.
Corequisite: Students must co-enroll in a corresponding section of MAT 120, MAT 135, or MAT 155. MAT 092 is a structured study experience for MAT 120, MAT 135, or MAT 155 students.

MAT 093 | Algebra Lab
Lab Credit: 1
Supports skill development in students registered in MAT 121 College Algebra or MAT 123 Finite Math. Topics covered in this course include those defined in MAT 121/123 and/or any prerequisite skills needed by the student. Students with NGAccuplacer AAF scores 235 to 244 who are advised into MAT 121 or 123 are required to co-enroll in this course.
Corequisite: Students must co-enroll in a corresponding section of MAT 121 or MAT 123. MAT 093 is a structured study experience for MAT 121 or MAT 123 students.

MAT 103 | Math for Clinical Calculations
Lecture Credit: 3
Covers the mathematical calculations needed for enteral and parenteral medication administration. It is designed for students in the health disciplines. Topics include measurements, conversion between various systems of measurements, and methods of solving problems related to drug dosage and medication administration.
Prerequisite: Demonstrated college readiness in math or co-requisite of support lab (CCD.edu/CollegeReady)

MAT 107 | Career Math
Lecture Credit: 3
Covers material designed for career and technical students who need to study particular mathematical topics. Topics include measurement, algebra, geometry, statistics, and graphs. These are presented at an introductory level and the emphasis is on applications.
Prerequisite: Demonstrated college readiness in math or co-requisite of support lab (CCD.edu/CollegeReady)

MAT 108 | Technical Mathematics
Lecture Credit: 4
Covers mathematical material designed for career and technical students. Topics include measurement, algebra, geometry, trigonometry, vectors. These are presented at an introductory level and the emphasis is on applications.
Prerequisite: Demonstrated college readiness in math or co-requisite of support lab (CCD.edu/CollegeReady)

MAT 112 | Financial Mathematics
Lecture Credit: 3
Covers the fundamentals of financial mathematics. Topics include pricing, taxes, insurance, interest, annuities, amortization, and investments.
Prerequisite: Demonstrated college readiness in math or corequisite of support lab (CCD.edu/CollegeReady)

MAT 120 | Math for Liberal Arts: GT-MA1
Lecture Credit: 4
Highlights connections between mathematics and the society in which we live and is intended for liberal arts majors. Topics include set theory and logic, mathematical modeling, probability and statistical methods, and consumer mathematics. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Demonstrated college readiness in math or corequisite of support lab (CCD.edu/CollegeReady)

MAT 121 | College Algebra: GT-MA1
Lecture Credit: 4
Focuses on a variety of functions and the exploration of their graphs. Topics include: equations and inequalities, operations on functions, exponential and logarithmic functions, linear and non-linear systems, and an introduction to conic sections. This course provides essential skills for Science, Technology, Engineering, and Math (STEM) pathways. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Demonstrated college readiness in math or corequisite of support lab (CCD.edu/CollegeReady)

MAT 122 | College Trigonometry: GT-MA1
Lecture Credit: 3
Explores trigonometric functions, their graphs, inverse functions and identities. Topics include: trigonometric equations, solutions of triangles, trigonometric form of complex numbers, and polar coordinates. This course provides essential skills for Science, Technology, Engineering, and Math (STEM) pathways. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Grade of C or better in MAT 121, math assessment score of 280 (NGAF) or better, or equivalent ACT/SAT scores
MAT 123 | Finite Mathematics: GT-MA1
Lecture Credit: 4
Covers topics including functions, matrix algebra, linear programming, and an introduction to probability and counting techniques. Emphasis is on applications. This course may include other topics such as statistics when time permits. This course is primarily intended for business, life science, or social science majors. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Demonstrated college readiness in math or corequisite of support lab (CCD.edu/CollegeReady)

MAT 125 | Survey of Calculus: GT-MA1
Lecture Credit: 4
Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential, and logarithmic functions for business, life science and/or social science majors. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Grade of C or better in MAT 121 or MAT 123, or math assessment score of 280 (NGAF) or better, or equivalent ACT/SAT scores
Note: This class is for business students, not science/engineering students.

MAT 135 | Intro to Statistics: GT-MA1
Lecture Credit: 3
Introduces descriptive and inferential statistics, with an emphasis on critical thinking and statistical literacy. Topics include methods of data collection, presentation and summarization, introduction to probability concepts and distributions, and statistical inference of one and two populations. This course uses real world data to illustrate applications of a practical nature. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Demonstrated college readiness in English and demonstrated college readiness in Math or corequisite of math support lab (www.ccd.edu/collegeready)

MAT 155 | Integrated Math I
Lecture Credit: 3
Engages students in the concepts of school mathematics, including the recognition of numerical and geometric patterns and their application to a variety of mathematical situations; mathematical problem-solving, reasoning, critical thinking, and communication; algebraic thinking, representation, analysis, manipulation, generalizations and extensions.
Prerequisite: Demonstrated college readiness in math or corequisite of support lab (CCD.edu/CollegeReady)
Note: This course is designed for students who are seeking an A.A. degree with an emphasis in education.

MAT 156 | Integrated Math II
Lecture Credit: 3
Furthers MAT 155 concepts and will include fundamentals of probability, statistics, and Euclidean geometry. Mathematical problem-solving, reasoning, critical thinking and communication will continue to be an integral part of this sequence.
Prerequisite: Grade of C or better in MAT 155
Note: This course is designed for students who are seeking an AA degree with an emphasis in education.

MAT 166 | Pre-Calculus: GT-MA1
Lecture Credit: 5
Extends algebraic concepts and explores the subject of trigonometry. Topics include: polynomial, rational, logarithmic, and exponential functions, trigonometric and inverse trigonometric functions and their graphs, trigonometric identities, and applications. This course provides essential skills for Science, Technology, Engineering, and Math (STEM) pathways. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Grade of C or better in MAT 121, or Math assessment score of 280 (NGAF) or better, or equivalent ACT/SAT scores

MAT 175 | Special Topics
Lecture Credit: 1-12
Provides students with a vehicle to pursue in depth exploration of special topics of interest.
Prerequisite: This course may require prerequisites or permission of instructor

MAT 201 | Calculus I: GT-MA1
Lecture Credit: 5
Introduces single variable calculus and analytic geometry. It includes limits, continuity, derivatives, and applications of derivatives as well as indefinite and definite integrals and some applications. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Grade of C or better in MAT 122 or MAT 166, or math assessment score of 28 (ACMT), or equivalent ACT/SAT scores

MAT 202 | Calculus II: GT-MA1
Lecture Credit: 5
Continues the study of single variable calculus which will include techniques of integration, analytic geometry, improper integrals, convergence of infinite numerical series and power series. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Grade of C or better in MAT 201

MAT 203 | Calculus III: GT-MA1
Lecture Credit: 4
Focuses on the traditional subject matter of the Calculus. Topics include vectors, vector-valued functions, and multivariable calculus including partial derivatives, multiple integrals, line integrals and application. This course is on of the Statewide Guaranteed Transfer courses. GT-MA1
Prerequisite: Grade of C or better in MAT 202

MAT 204 | Calculus III with Engineer Applications: GT-MA1
Lecture Credit: 5
Focuses on the traditional subject matter of multivariable Calculus with an additional emphasis on word problems and problem solving. Topics include vectors, vector-valued functions, partial derivatives, analytic geometry, multiple integrals, line integrals, Stokes’, Divergence Theorems and Green’s Theorems, and applications. This is a statewide Guaranteed Transfer course in the GT-MA1 category.
Prerequisite: Grade of C or better in MAT 202

MAT 255 | Linear Algebra
Lecture Credit: 3
Explores vector spaces, matrices, linear transformations, matrix representation, eigenvalues, and eigenvectors.
Prerequisite: Grade of C or better in MAT 202

MAT 265 | Differential Equations: GT-MA1
Lecture Credit: 3
Explores techniques of problem solving and applications. Topics include first, second, and higher order differential equations, series methods, approximations, systems of differential equations, and Laplace transforms. This course is one of the Statewide Guaranteed Transfer courses. GT-MA1
Prerequisite: Grade of C or better in MAT 202

MAT 266 | Differential Equations with Linear Algebra
Lecture Credit: 4
Prerequisite: Grade of C or better in MAT 202
MAT 275 | Special Topics
Lecture Credit: 1-12
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: This course may require prerequisites or permission of instructor