

MAT—Math

MAT 101 Beginning Algebra 3-0-3

This course includes the study of rational numbers and their applications, operations with algebraic expressions, linear equations and applications, linear inequalities, graphs of linear equations, operations with exponents and polynomials, and factoring.

MAT 102 Intermediate Algebra 3-0-3

This course includes the study of linear systems and applications; quadratic expressions, equations, functions and graphs; and rational and radical expressions and functions.

MAT 110 College Algebra 3-0-3

This course includes the following topics: polynomial, rational, logarithmic, and exponential functions; inequalities; systems of equations and inequalities; matrices; determinants; and solutions of higher degree polynomials.

MAT 111 College Trigonometry 3-0-3

This course includes the following topics: trigonometric functions; trigonometric identities; solution of right and oblique triangles; solution of trigonometric equations; polar coordinates; complex numbers, including DeMoivre's Theorem; vectors; conic sections; and parametric equations. (Prerequisite: College Algebra)

MAT 120 Probability and Statistics 3-0-3

This course includes the following topics: introductory probability and statistics, including organization of data, sample space concepts, random variables, counting problems, binomial and normal distributions, central limit theorem, confidence intervals, and test hypothesis for large and small samples; types I and II errors; linear regression; and correlation.

MAT 122 Finite College Mathematics 3-0-3

This course includes the following topics: logic; sets; Venn Diagrams; counting problems; probability; matrices; systems of equations; linear programming, including the simplex method and applications; graphs; and networks. (Prerequisite: a college algebra course)

MAT 130 Elementary Calculus 3-0-3

This course includes the following topics: differentiation and integration of polynomials, rational, logarithmic, and exponential functions; and interpretation and application of these processes. (Prerequisite: College Algebra)

MAT 140 Analytical Geometry and Calc I 4-0-4

Prerequisites: MAT 111

This course includes the following topics: derivatives and integrals of polynomial, rational, logarithmic, exponential, trigonometric, and inverse trigonometric functions; curve sketching; maxima and minima of functions; related rates; work; and analytic geometry. (Prerequisite: a college algebra course and a college trigonometry course or pre-calculus)

MAT 141 Analytical Geometry & Calc II 4-0-4

Prerequisites: MAT 140

This course includes the following topics: continuation of calculus of one variable, including analytic geometry, techniques of integration, volumes by integration, and other applications; infinite series, including Taylor series and improper integrals. (Prerequisite: Analytical Geometry and Calculus I)

MAT 155 Contemporary Mathematics 3-0-3

This course includes techniques and applications of the following topics: properties of and operations with real numbers, elementary algebra, consumer mathematics, applied geometry, measurement, graph sketching and interpretations, and descriptive statistics.

MAT 170 Algebra Geometry and Trig I 3-0-3

This course includes the following topics: elementary algebra, geometry, trigonometry, and applications.

MAT 175 Algebra and Trigonometry I 3-0-3

This course includes the following topics: basic laws and operations of algebra, linear and quadratic equations, systems of equations, introduction to trigonometry and vectors, concepts of functions, and graphs of functions.

MAT 176 Algebra and Trigonometry II 3-0-3

Prerequisites: MAT 175

This course includes the following topics: advanced algebra, exponential and logarithmic functions, complex numbers, trigonometric identities, and graphs of trigonometric functions. Additional topics may include statistics and discrete mathematics.

MAT 240 Analy Geometry and Calc III 4-0-4

Prerequisites: MAT 141

This course includes the following topics: multivariable calculus, including vectors; partial derivatives and their applications to maximum and minimum problems with and without constraints; line integrals; multiple integrals in rectangular and other coordinates; and Stokes' and Green's theorems. (Prerequisite: Analytical Geometry and Calculus II)

MAT 242 Differential Equations 4-0-4

Prerequisites: MAT 240

This course includes the following topics: solution of linear and elementary non-linear differential equations by standard methods with sufficient linear algebra to solve systems; applications; series; Laplace transform; and numerical methods.

MAT 250 Elementary Mathematics 3-0-3

Course provides students with an understanding of the meaning of numbers, fundamental operations of arithmetic, structure of the real number system & its subsystems, & elementary numbers theory. Within the parameters of an approved articulation agreement, this course may transfer to an accredited Education program at a comprehensive four-year college or university.

MAT 251 Elementary Mathematics II 3-0-3

Prerequisites: MAT 250

This course provides students with an understanding of informal geometry and basic concepts of algebra. Within the parameters of an approved articulation agreement, this course may transfer to an accredited Education program at a comprehensive four-year college or university.