MATHEMATICS (MATH)

MATH-081 QUANTITATIVE REASONING FUNDAMENTALS
2 credit hours, 2 contact hours (2 Lecture Hours Per Week)
This course provides extra support for students concurrently enrolled in MATH-101 through a review of mathematical topics needed to be successful in quantitative reasoning, and will offer students the opportunity to review, ask questions and receive additional help with the content of MATH-101.
Requisite(s): Students must take MATH 081 concurrently with MATH-101. Grade of 2.0 or better required.
Fee: $0.00

MATH-084 BEGINNING ALGEBRA
4 credit hours
This course provides extra support for students concurrently enrolled in MATH-104 by building algebraic skills through working with expressions and linear and quadratic equations. The course particularly emphasizes graphs and equations of lines, factoring techniques, methods of solving quadratic equations and linear and quadratic modeling.
Requisite(s): Students must take concurrently with MATH-104, Intermediate Algebra.
Fee: $0.00

MATH-091 ALGEBRA FOR STATISTICS
2 credit hours, 2 contact hours (2 Lecture Hours Per Week)
This course provides extra support for students concurrently enrolled in MATH-201 by introducing fundamental algebraic concepts within an underlying framework of statistics and mathematical modeling based on real-world data. Major concepts and themes include: problem solving and experimental design; unit analysis and error in measurement; dimensional analysis and scientific notation; representing data and coordinate graphing; introduction to basic descriptive statistics and probability theorems; basic geometric principles (area, volume, perimeter); arithmetic operations on numbers, ratios, summations, and percents; solution of formulas; modeling relationships (linear regression); solving equations and inequalities; and function arithmetic and graphing.
Requisite(s): Students must complete MATH-201 concurrently.
Fee: $0.00

MATH-101 QUANTITATIVE REASONING
4 credit hours, 4 contact hours (4 Lecture Hours Per Week)
This course develops student skills in analyzing, synthesizing and communicating quantitative information, cultivates algebraic reasoning and modeling skills through a quantitative literacy lens and emphasizes critical thinking and the use of multiple strategies in applied contexts. Topics include proportional and statistical reasoning, probability and evaluation of bias and validity.
Requisite(s): Students must take MATH-081 concurrently or complete MATH-081 with a 2.0 grade or better. Students may also place into MATH-101 with placement test scores.
Fee: $0.00

MATH-104 INTERMEDIATE ALGEBRA
4 credit hours, 4 contact hours (4 Lecture Hours Per Week)
This course is an extension of Introductory Algebra and prepares students for College Algebra, Finite Math, Statistics and Calculus. Topics include operations with polynomials and rational algebraic expressions, graphs, rational exponents and radicals, equations and inequalities of the first and second degree, systems of linear and second-degree equations and inequalities, equations and inequalities with absolute values and functions.
Requisite(s): Placement into MATH-104 or take MATH 084 concurrently.
Fee: $0.00

MATH-109 MATH FOR TECHNICIANS I
3 credit hours, 3 contact hours (3 Lecture Hours Per Week)
This course is intended for technology students or business and industry employees who seek to acquire a basic knowledge of mathematics including arithmetic review, applied algebra and use of simple calculators.
Fee: $0.00

MATH-117 FINITE MATHEMATICS
3 credit hours, 3 contact hours (3 Lecture Hours Per Week)
Non-calculus background for business, management and the life and social sciences. Topics include set theory, systems of linear equations and inequalities, vectors and matrices, probability and statistics, financial calculations, and linear programming. Emphasis throughout is to enhance students' understanding of the modeling process and how mathematics is used in real-world applications.
Requisite(s): Students must successfully complete MATH-104.
Fee: $0.00

MATH-119 MATH FOR TECHNICIANS II
3 credit hours, 3 contact hours (3 Lecture Hours Per Week)
This course is intended for those students seeking an advanced knowledge of mathematics for work in their specific field. The areas of instruction include selected topics from geometry and trigonometry.
Requisite(s): Must complete MATH-109
Fee: $0.00

MATH-151 COLLEGE ALGEBRA
4 credit hours, 4 contact hours (4 Lecture Hours Per Week)
Intended to prepare students for further science and business courses. A study of functions and their graphs, including linear, exponential, logarithmic, trigonometric, and power functions. Emphasis on applications, problem solving and using graphic, numeric and symbolic methods to solve equations. Regression is used to construct linear, exponential, power, and quadratic functions from data. Additional topics include exponents, radicals, complex numbers, conic sections, and systems of equations.
Requisite(s): Must complete MATH-104 or placement into MATH-151
Fee: $0.00

MATH-161 CALCULUS I & ANALYTIC GEOMETRY
4 credit hours, 4 contact hours (4 Lecture Hours Per Week)
This course is designed to provide an introduction to calculus for students majoring in mathematics, engineering, and physical sciences, or the social sciences. Topics include limits, continuity, derivatives, differentials, areas, definite and indefinite integrals.
Requisite(s): Must complete MATH-151 or placement into MATH-161
Fee: $0.00

MATH-162 CALCULUS II & ANALYTIC GEOM
4 credit hours, 4 contact hours (4 Lecture Hours Per Week)
This course is designed to follow NSM 161 Calculus I, providing mathematics and science majors with further background in analytic geometry and in differential and integral calculus. Topics include applications of the definite integral (e.g. volumes, arc length, areas and moments), hyperbolic functions, integration techniques, infinite sequences and series, parametric equations and polar coordinates.
Requisite(s): Must complete MATH-161
Fee: $0.00

MATH-201 INTRO TO STATISTICS
4 credit hours, 4 contact hours (4 Lecture Hours Per Week)
An introductory course in statistics to include: probability, descriptive statistics, probability distributions and hypothesis testing.
Requisite(s): Must place into MATH 201 or take MATH 091 concurrently.
Fee: $10.00