

MATH – Mathematics

MATH 0090 - QEP Summit Math

3 Credits 6 Contact Hours

Uses the modular approach to emphasize in-depth arithmetic skills and basic/intermediate algebra skills. Topics include number theory, whole numbers, fractions, decimals, percents, ratio/proportion, measurement, geometry, application problems, introduction to real numbers, algebraic expressions, solving linear equations, graphs of linear equations, polynomial operations, polynomial factoring, inequalities, rational expressions/equations, slope, systems of equations, radical expressions/equations, quadratic equations, and applications involving previously listed topics.

MATH 0999 – Support for College Algebra

1 Credits 2 Contact Hours

Corequisites: MATH 1111

This course is to be taken concurrently with MATH 1111. Background topics which are necessary for a student to successfully complete MATH 1111 will be covered, with an emphasis on fractions, exponents, fundamental concepts of algebra, equations, and functions.

MATH 1011 - Business Math

3 Credits 3 Contact Hours

Prerequisites: MATH 0090 with a minimum grade of C or diploma program admission level algebra competency

Emphasizes mathematical concepts found in business situations. Topics include basic mathematical skills, mathematical skills in business-related problem solving, mathematical information for documents, graphs, and mathematical problems.

MATH 1012 - Foundations of Mathematics

3 Credits 3 Contact Hours

Prerequisites: MATH 0090 with a minimum grade of C or diploma program admission level math competency

Emphasizes the application of basic mathematical skills used in the solution of occupational and technical problems. Topics include fractions, decimals, percents, ratios and proportions, measurement and conversion, formula manipulation, technical applications, and basic statistics.

MATH 1013 – Algebraic Concepts

3 Credits 3 Contact Hours

Prerequisites: MATH 0090 with a minimum grade of C or diploma program admission level math competency

Emphasizes concepts and operations which are applied to the study of algebra. Topics include basic mathematical concepts, basic algebraic concepts, and intermediate algebraic concepts.

MATH 1015 – Geometry and Trigonometry

3 Credits 3 Contact Hours

Prerequisites: MATH 1013 with a minimum grade of C

Emphasizes basic geometric and trigonometric concepts. Topics include measurement conversion, geometric terminology and measurements, and trigonometric terminology and functions.

MATH 1101 - Mathematical Modeling

3 Credits 3 Contact Hours

Prerequisites: MATH 0090 with a minimum grade of C or degree program admission level math competency

Emphasizes functions using real-world applications as models. Topics include fundamental concepts of algebra; functions and graphs; linear, quadratic, polynomial, exponential, and logarithmic functions and models; systems of equations; and optional topics in algebra. *This course does not fulfill the math requirement for some*

Health Sciences programs. Consult an advisor and the specific program information pages of this catalog for required course(s).

MATH 1103 – Quantitative Skills and Reasoning

3 Credits 3 Contact Hours

Prerequisites: MATH 0090 with a minimum grade of C or degree program admission level math competency

Focuses on quantitative skills and reasoning in the context of experiences that students will be likely to encounter. The course emphasizes processing information in context from a variety of representations, understanding of both the information and the processing, and understanding which conclusions can be reasonably determined. Students will use appropriate technology to enhance mathematical thinking and understanding. Topics covered in this course include: sets and set operations, logic, basic probability, data analysis, linear models, quadratic models, exponential and logarithmic models, geometry, and financial management. *This course does not fulfill the math requirement for some Health Sciences programs. Consult an advisor and the specific program information pages of this catalog for required course(s). Students wishing to transfer to a four-year institution should note that this course is to be used in lieu of MATH 1100 and 1101 for non-science, non-math, and non-engineering majors and will be articulated to USG institutions in Area A for appropriate majors. Science, math, and engineering majors must take MATH 1111 or higher.*

MATH 1111 - College Algebra

3 Credits 3 Contact Hours

Prerequisites: MATH 0090 with a minimum grade of C or degree program admission level algebra competency

Emphasizes techniques of problem solving using algebraic concepts. Topics include fundamental concepts of algebra, exponential and logarithmic functions, equations and inequalities, functions and graphs, and systems of equations; optional topics include sequences, series, and probability or analytic geometry.

MATH 1112 - College Trigonometry

3 Credits 3 Contact Hours

Prerequisites: MATH 1111 with a minimum grade of C

Emphasizes techniques of problem solving using trigonometric concepts. Topics include trigonometric functions, properties of trigonometric functions, vectors and triangles, inverse of trigonometric functions and graphing of trigonometric functions, and complex numbers.

MATH 1113 - Precalculus

3 Credits 3 Contact Hours

Prerequisites: MATH 1111 with a minimum grade of C or appropriate admission-level college algebra and trigonometry competency

Prepares students for calculus. The topics discussed include an intensive study of polynomial, rational, exponential, logarithmic, and trigonometric functions and their graphs. Applications include simple maximum and minimum problems, exponential growth and decay.

MATH 1127 - Introduction to Statistics

3 Credits 3 Contact Hours

Prerequisites: MATH 0090 with a minimum grade of C or degree program admission level algebra competency

Emphasizes the concepts and methods fundamental to utilizing and interpreting commonly used statistics. Topics include descriptive statistics, basic probability, discrete and continuous distributions, sampling distributions, hypothesis testing, chi square tests, and linear regression. *This course does not fulfill the math requirement for any Health Sciences program. Consult an advisor and the specific program information pages of this catalog for required course(s).*

MATH 1131 - Calculus I

4 Credits 4 Contact Hours

Prerequisites: Regular Status; MATH 1113 with a minimum grade of C or appropriate admission-level college algebra and trigonometry competency

Topics include the study of limits and continuity, derivatives, and integrals of functions of one variable. Applications are incorporated from a variety of disciplines. Algebraic, trigonometric, exponential, and logarithmic functions are studied.

MATH 1132 - Calculus II

4 Credits 4 Contact Hours

Prerequisites: Regular Status; MATH 1131 with a minimum grade of C or appropriate admission-level college algebra and trigonometry competency

Includes the study of techniques of integration, application of the definite integral, an introduction to differential equations, improper integrals, sequences, and series.