

MATHEMATICS (BTS DIVISION)

MTHPT-010 ARITHMETIC /PRE-ALGEBRA (3 cr.) This course is designed to provide students with a solid foundation in those arithmetic operations and processes that are fundamental to the elementary algebraic concepts that will be encountered in MTHPT 012: Language of Math; MTHPT-103: Applied Algebra; or MTHPT-120: Pre-Algebra/Algebra. The development of critical thinking skills and real-world problem solving techniques as well as the why and how of mathematics are paramount in this course. While this course is specifically designed to meet the needs of students enrolled in the Business Technology & Service programs, students in other programs are welcome, space permitting. Major topics include whole numbers; exponents and roots; order of operations; prime factorization; fractions; decimals; ratios and proportions; percents; signed numbers; and an introduction to algebra.

MTHPT-012 LANGUAGE OF MATH (3 cr.) The course is designed to provide students with a solid foundation in those areas of arithmetic and pre-algebra that will be encountered in MTHPT 103: Applied Algebra or MTHPT 120: Pre-Algebra/Algebra. While this course is specifically designed to meet the needs of students enrolled in the Technical & Industrial and Business Technology & Service programs, students in other programs are welcome, space permitting. The course utilizes algebraic concepts to review the basic operations with the learning process adapted to the adult learner. Major topics include a review of arithmetic, fractions, decimals, percents, signed numbers, scientific notation, introduction to unit conversions, and an introduction to algebra. The emphasis will be on working problems that have practical applications in the real workplace.

MTHPT-103 APPLIED ALGEBRA (3 cr.) Provides students with a review of pre-algebra, and includes problem-solving techniques, estimating, measurement, data handling, and the use of algebraic formulas to solve problems in the workplace. Additional mathematical topics include quadratic equations, systems of linear equations, geometry and geometric solids, as well as right and oblique triangle trigonometry. Prerequisite: A grade of 'C' or better in MTHPT 010, MTHPT 012, or MATH 015 or satisfactory math placement. Course fee.

MTHPT-120 PRE-ALGEBRA/ALGEBRA (4 cr.) This course is designed to provide students with a review and a solid foundation in those areas of algebra that support the real world business applications that will be encountered in the core math course entitled MTHPT 130: Math for Business Analysis. The development of critical thinking skills and real-world problem solving techniques as well as the why and how of mathematics are paramount in this course. While this course is specifically designed to meet the needs of students enrolled in Business Technology & Service programs, students in other programs are welcome, space permitting. Major topics include order of operations; signed numbers; prime factorization; unit analysis in both the standard and metric systems; algebraic equations in one and two variables; graphing and construction/analysis of linear equations; and the use of function notations. Pre-requisite: A grade of "C" or better in MTHPT 010, MTHPT 012 or MATH 015 or satisfactory math placement.

MTHPT-130 MATH FOR BUSINESS ANALYSIS (4 cr.) This course fulfills the skills component of the General Education core and is designed to provide students with a solid foundation in those areas of algebra and statistics which are currently pervasive in both business and society. While this course is specifically designed to meet the needs of students enrolled in Business Technology & Service programs, students in other programs are welcome, space permitting. This course is intended to demonstrate the application of algebra and statistics in various areas of business, industry, economics, and life and social

sciences. Major topics include the use of function notation; the construction and interpretation of linear and quadratic business models; the development and application of exponential and logarithmic models used in finance; systems of linear equations, matrices and matrix algebra; set theory, counting techniques, and probability; measures of central tendency and dispersion, and the normal distribution. Pre-requisites: A grade of C or better in MATH 024, MATH 025 or MTHPT 120 or satisfactory math placement. Course Fee. Cross-listed with MATH 130.

MTHPT-137 MATH FOR TECHNOLOGY (4 cr.) This course fulfills the skills component of the General Education core and provides students with a solid foundation in those areas of algebra, geometry, and trigonometry which are currently pervasive in technical and industrial technologies. While this course is specifically designed to meet the needs of students enrolled in Technical and Industrial programs, students in other programs are welcome, space permitting. Mathematical topics include Cartesian coordinate system, representations of lines, and functions of one or more independent variables, polynomial, radical, exponential, and logarithmic equations, matrix algebra, and systems of equations, radian and degree measure, right-angle trigonometry, law of sines and cosines, and vectors in applied settings, probability theory, and statistics. This course will emphasize technical applications. Cross-listed with MATH 137. Pre-requisite: A grade of 'C' or better in MATH 024, MATH 025, MTHPT 103 or MTHPT 120 or satisfactory math placement. Course fee.

MTHPT-138 MATH FOR ELECTRONICS (4 cr.) This course fulfills the skills component of the General Education core. Provides students with a solid foundation in those areas of algebra, geometry, and trigonometry which are currently pervasive in technical and industrial technologies. While this course is specifically designed to meet the needs of students enrolled in Technical and Industrial Technologies programs, students in other programs are welcome, space permitting. This course is intended to reinforce electronic concepts from a practical standpoint. Mathematical topics include the use of phasor and vector analysis for analyzing alternating current circuits, quadratic equations, radicals and exponentials, logarithms, decibels, computer number systems and Boolean algebra. Pre-Requisites: A grade of "C" or better in MTHPT 103, MTHPT 120, MATH 024 or MATH 025 or satisfactory placement. Course fee.

MTHPT-190 DIRECTED STUDY IN MATHEMATICS (1-6 cr.)

MTHPT-191 WORKSHOP IN MATHEMATICS (1-6 cr.)

MTHPT-192 SPECIAL TOPIC IN MATHEMATICS (1-6 cr.)

MTHPT-290 DIRECTED STUDY IN MATHEMATICS (1-6 cr.)

MTHPT-291 WORKSHOP IN MATHEMATICS (1-6 cr.)

MTHPT-292 SPECIAL TOPIC IN MATHEMATICS (1-6 cr.)

MTHPT-390 DIRECTED STUDY IN MATHEMATICS (1-6 cr.)

MTHPT-391 WORKSHOP IN MATHEMATICS (1-6 cr.)

MTHPT-392 SPECIAL TOPIC IN MATHEMATICS (1-6 cr.)

MTHPT-490 DIRECTED STUDY IN MATHEMATICS (1-6 cr.)

MTHPT-491 WORKSHOP IN MATHEMATICS (1-6 cr.)

MTHPT-492 SPECIAL TOPIC IN MATHEMATICS (1-6 cr.)