MATH 0100
Developmental Mathematics I
CRT HRS: 4 LEC HRS: 3 LAB HRS: 2 OTH HRS: 0
This course is a study of fundamental mathematics principles and concepts. Topics include performing basic arithmetic operations on integers, fractions, and decimals; performing calculations involving exponents and order of operations; solving application problems involving proportions, percent, and fractions; simplifying algebraic expressions and solving linear equations; application problems involving linear models; graphs of linear equations in two variables; applying rules of exponents, operations on polynomials, and factoring polynomial expressions. The focus of lab instruction is content reinforcement.
Prerequisite: Placement based on assessment scores or TSI score 336-341; Students should see an advisor for special assessment if the TSI score is below 336.

MATH 0200
Developmental Mathematics II
CRT HRS: 4 LEC HRS: 3 LAB HRS: 2 OTH HRS: 0
This course is a study of introductory and intermediate algebra concepts. Topics include factorization of polynomials, operations on rational and radical expressions, operations on real and complex numbers, solving rational equations, radical equations, absolute value equations and inequalities, quadratic equations with real and non-real solutions and their graphs, application problems involving quadratic models and features of functions. The focus of lab instruction is content reinforcement.
Prerequisite: Placement based on assessment scores or TSI score 342-349 or completion of MATH 0100 or NCBM 0010 with a grade of "C" or better equivalent.

MATH 0442
Foundations for Mathematical Reasoning
CRT HRS: 4 LEC HRS: 3 LAB HRS: 2 OTH HRS: 0
This course is a study of the basic concepts necessary for success in a college level Statistics or Quantitative Reasoning course. Topics include: numeracy and rounding, ratios and proportional reasoning, percentages, order of operations, evaluating expressions and formulas, introduction to sets and Venn diagrams, data interpretations including graphs and tables, measures of central tendency and position, introduction to probability and the counting principle, and linear models. This course is not for college-level credit.
Prerequisite: None.

MATH 1316
Plane Trigonometry
CRT HRS: 3 LEC HRS: 3 LAB HRS: 0 OTH HRS: 0
This course covers trigonometric functions, identities, equations and applications. Prerequisite: MATH 1414 with a grade of "C" or better; or a score of 350+ on the Math portion of the TSI exam.

MATH 1324
Mathematics for Business & Social Sciences
CRT HRS: 3 LEC HRS: 3 LAB HRS: 1 OTH HRS: 0
This course covers the application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value.
Prerequisite: Meet TSI college-readiness standard for Mathematics; or completion of MATH 0200 or MATL 0020 with a grade of "P" or "C" or better or equivalent.

MATH 1325
Calculus for Business & Social Sciences
CRT HRS: 3 LEC HRS: 3 LAB HRS: 1 OTH HRS: 0
This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. This course is not a substitute for MATH 2413, Calculus I. Prerequisite: MATH 1414 or MATH 1324, with a grade of "C" or better.

MATH 1332
Contemporary Mathematics
CRT HRS: 3 LEC HRS: 3 LAB HRS: 1 OTH HRS: 0
Intended for Non-STEM (Science, Technology, Engineering and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics and appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered.
Prerequisite: Completion of MATH 0100, or MATL 0032, or MATH 0442 with a grade of "C" or "P" or better or TSI score of 350+.

MATH 1350
Mathematics for Teachers I
CRT HRS: 3 LEC HRS: 3 LAB HRS: 1 OTH HRS: 0
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes conceptual development of the following: sets, functions, numeration systems, number theory, and properties of the various number systems with an emphasis on problem solving and critical thinking.
Prerequisite: MATH 1414 with a grade of "C" or better.

MATH 1351
Mathematics for Teachers II
CRT HRS: 3 LEC HRS: 3 LAB HRS: 1 OTH HRS: 0
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the concepts of geometry, measurement, probability, and statistics with an emphasis on problem solving and critical thinking.
Prerequisite: MATH 1414 with a "C" or better.

MATH 1414
College Algebra
CRT HRS: 4 LEC HRS: 4 LAB HRS: 0 OTH HRS: 0
This course is the study of quadratic, polynomial, rational, logarithmic and exponential functions and includes the study of systems of equations and matrices. The focus of the course is the discovery and application of algebraic techniques, including graphing, to solve related equations. Additional topics may include sequences and series. Prerequisite: TSI score of 350+ or completion of MATH 0200 or MATL 0020 with a grade of "C" or "P" or better.

MATH 1442
Elementary Statistical Methods
CRT HRS: 4 LEC HRS: 4 LAB HRS: 0 OTH HRS: 0
This course is a presentation and interpretation of data, probability, sampling, correlation and regression, analysis of variance, and use of statistical software. Prerequisite: Meet TSI college-readiness standard for Mathematics; or completion of MATH 0200 or MATL 0020 or MATL 0042 or MATH 0442 with a grade of "P" or "C" or better, or equivalent.
MATH 2305  
Discrete Mathematics  
CRT HRS:3   LEC HRS:3   LAB HRS:1   OTH HRS:0  
This course is designed to prepare math, computer science, and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, countability and counting arguments, proof techniques, mathematical induction, combinatorics, discrete probability, recursion, sequence and recurrence, elementary number theory, graph theory, and mathematical proof techniques.  
Prerequisite: Completion of MATH 2413 with a grade of C or higher.

MATH 2412  
Pre-Calculus Math  
CRT HRS:4   LEC HRS:4   LAB HRS:1   OTH HRS:0  
This course is an in-depth combined study of algebra, trigonometry, and other topics for calculus readiness.  
Prerequisite: MATH 1414 or MATH 1324 with a grade of "C" or better.

MATH 2413  
Calculus I  
CRT HRS:4   LEC HRS:4   LAB HRS:1   OTH HRS:0  
This course covers functions, limits, continuity, differentiation, anti-derivatives, and the definite integral and its applications.  
Prerequisite: MATH 1316 or MATH 2412 with a grade of "C" or better; or a 100+ on the College Level Mathematics ACCUPLACER.

MATH 2414  
Calculus II  
CRT HRS:4   LEC HRS:4   LAB HRS:1   OTH HRS:0  
This course covers derivatives and integrals of transcendental functions, integration methods and applications, infinite sequences and series.  
Prerequisite: MATH 2413 with a grade of "C" or better.

MATH 2415  
Calculus III  
CRT HRS:4   LEC HRS:4   LAB HRS:1   OTH HRS:0  
This course covers the study of vectors, calculus of several variables, partial derivatives, multiple integrals and vector calculus, Divergence Theorem and Stoke's Theorem.  
Prerequisite: MATH 2413 with a grade of "C" or better.

MATH 2418  
Linear Algebra  
CRT HRS:4   LEC HRS:4   LAB HRS:0   OTH HRS:0  
This course introduces and provides models for application of the concepts of vector algebra. Topics include finite dimensional vector spaces and their geometric significance; representing and solving systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion; matrices; determinants; linear transformations; quadratic forms; eigenvalues and eigenvector; and applications in science and engineering.  
Prerequisite: MATH 2414 with a grade of "C" or better.

MATH 2420  
Differential Equations  
CRT HRS:4   LEC HRS:4   LAB HRS:0   OTH HRS:0  
This course is an introduction to ordinary differential equations, emphasizing solution techniques to first order and special higher order differential equations, initial value problems, boundary value problems, Laplace transforms, series solutions, and applications.  
Prerequisite: MATH 2414 with a grade of "C" or better.