MATHEMATICS (MAT)

MAT 001 Math Skills Support 2/1
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student’s co-requisite math course.
Prerequisite: None
Corequisite: Take MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171;

MAT 003 Transition Math 6/3
This course provides an opportunity to customize foundational math content in specific math areas and will include developing a growth mindset. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in their gateway level math courses by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.
Prerequisite: None
Corequisite: None

MAT 010 Math Measurement & Literacy Support 2/1
This course provides an opportunity to customize foundational math content specific to Math Measurement & Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Math Measurement & Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.
Prerequisite: None
Corequisite: None

MAT 021 Algebra/Trigonometry I Support 3/2
This course provides an opportunity to customize foundational math content specific to Algebra and Trigonometry I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Algebra/Trigonometry I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.
Prerequisite: None
Corequisite: None

MAT 043 Quantitative Literacy Support Class 3/2
This course provides an opportunity to customize foundational math content specific to Quantitative Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Quantitative Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.
Prerequisite: None
Corequisite: None

MAT 052 Statistical Methods I Support 3/2
This course provides an opportunity to customize foundational math content specific to Statistical Methods I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Statistical Methods I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.
Prerequisite: None
Corequisite: None

MAT 071 Precalculus Algebra Support 4/2
This course provides an opportunity to customize foundational math content specific to Precalculus Algebra. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Precalculus Algebra by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.
Prerequisite: None
Corequisite: None

MAT 110 Mathematical Measurement and Literacy 4/3
This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.
Prerequisite: Take 1 group; # Take DMA 010 DMA 020 DMA 030; # Take MAT 060; # Take DMA 025; # Take MAT 003
Corequisite: None

MAT 121 Algebra/Trigonometry II 4/3
This course provides an integrated approach to technology and the skills necessary to master student learning outcomes of the co-requisite math course. Emphasis is placed on the most essential prerequisite knowledge.
Prerequisite: Take 1 group; # Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060; # Take MAT 060 MAT 070; # Take MAT 060 MAT 080; # Take MAT 060 MAT 090; # Take MAT 095; # Take DMA 025 DMA 040 DMA 050 DMA 060; # Take DMA 025 DMA 045 DMA 060; # Take DMA 010 DMA 020 DMA 030 DMA 045 DMA 060; # Take MAT 003
Corequisite: None

MAT 122 Algebra/Trigonometry III 4/3
This course is designed to cover concepts in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.
Prerequisite: Take MAT 121
Corequisite: None
MAT 143  Quantitative Literacy  4/3
This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life.
Prerequisite: Take 1 group; # Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DRE 098; # Take MAT 060 MAT 070 DRE 098; # Take MAT 060 MAT 070 ENG 090 RED 090; # Take DMA 025 DMA 040 DMA 050 DRE 098; # Take DMA 025 DMA 045 DRE 098; # Take DMA 010 DMA 020 DMA 030 DMA 045 DRE 098; # Take MAT 003 ENG 002; # Take MAT 003 ENG 111;
Corequisite: None
Transferable

MAT 152  Statistical Methods I  5/4
This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results.
Prerequisite: Take 1 group; # Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DRE 098; # Take MAT 060 MAT 070 DRE 098; # Take DMA 025 DMA 040 DMA 050 DRE 098; # Take DMA 025 DMA 045 DRE 098; # Take DMA 010 DMA 020 DMA 030 DMA 045 DRE 098; # Take MAT 003 ENG 002; # Take MAT 003 ENG 111;
Corequisite: None
Transferable

MAT 171  Precalculus Algebra  5/4
This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra-related problems with and without technology.
Prerequisite: Take 1 group; # Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080; # Take MAT 121; # Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 065; # Take MAT 060 MAT 080; # Take MAT 060 MAT 090; # Take MAT 095; # Take DMA 025 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080; # Take DMA 025 DMA 045 DMA 060 DMA 070 DMA 080; # Take DMA 010 DMA 020 DMA 030 DMA 045 DMA 040 DMA 060 DMA 070 DMA 080; # Take DMA 025 DMA 040 DMA 050 DMA 065; # Take DMA 010 DMA 020 DMA 030 DMA 045 DMA 065; # Take DMA 025 DMA 045 DMA 065; # Take MAT 003;
Corequisite: None
Transferable

MAT 172  Precalculus Trigonometry  5/4
This course is designed to develop an understanding of topics which are fundamental to the study of Calculus. Emphasis is placed on the analysis of trigonometric functions in multiple representations, right and oblique triangles, vectors, polar coordinates, conic sections, and parametric equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to trigonometry-related problems with and without technology.
Prerequisite: Take MAT 171;
Corequisite: None
Transferable

MAT 263  Brief Calculus  5/4
This course is designed to introduce concepts of differentiation and integration and their applications to solving problems. Topics include graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results.
Prerequisite: Take MAT 171;
Corequisite: None
Transferable

MAT 271  Calculus I  5/4
This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative-related problems with and without technology.
Prerequisite: Take MAT 172;
Corequisite: None
Transferable

MAT 272  Calculus II  5/4
This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology.
Prerequisite: Take MAT 271;
Corequisite: None
Transferable

MAT 273  Calculus III  5/4
This course is designed to develop the topics of multivariate calculus. Emphasis is placed on multivariate functions, partial derivatives, multiple integration, solid analytical geometry, vector valued functions, and line and surface integrals. Upon completion, students should be able to select and use appropriate models and techniques for finding the solution to multivariate-related problems with and without technology.
Prerequisite: Take MAT 272;
Corequisite: None
Transferable