MAT-121 Algebra/Trigonometry I 3 (2-2) Spring Summer

Prerequisites: MAT-003^{S} or BSP-4003^{S}, minimum grade P2S

Corequisites: MAT-021^{S}

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications simplification, evaluation, and solving of algebraic equations and inequalities and radical functions complex numbers right triangle trigonometry and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.(2020 FA) This course has been approved to satisfy the following requirement(s):

- Mathematics Gen. Ed. course for A.A.S. and A.G.E.

MAT-143 Quantitative Literacy 3 (2-2) Fall Spring Summer

Prerequisites: MAT-003^{S} or BSP-4003^{S}; ENG-002^{S} or BSP-4002^{S}

Corequisites: MAT-043^{S}

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.(2020 FA) This course has been approved to satisfy the following requirement(s):

- UGETC course for A.A., A.A. Teacher Preparation, and A.F.A.
- Mathematics Gen. Ed. course for A.S. and A.S. Teacher Preparation
- Mathematics Gen. Ed. course for A.A.S. and A.G.E.

MAT-152 Statistical Methods I 4 (3-2) Fall Spring Summer

Prerequisites: MAT-003^{S} or BSP-4003^{S}; ENG-002^{S} or BSP-4002^{S}

Corequisites: MAT-052^{S}

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.(2020 FA) This course has been approved to satisfy the following requirement(s):

- UGETC course for A.A., A.A. Teacher Preparation and A.F.A. (visual arts and theatre)
- Mathematics Gen. Ed. course for A.S. and A.S. Teacher Preparation
- Mathematics Gen. Ed. course for A.A.S. and A.G.E.

MAT-171	Precalculus Algebra	4 (3-2)	Fall Spring Summer

Prerequisites: MAT-003[S] or BSP-4003[S], minimum grade P2S or MAT-121, minimum grade CS

Corequisites: MAT-071[S]

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.(2020 FA) This course has been approved to satisfy the following

MAT-271	Calculus I	4 (3-2)	Fall Spring Summer

Prerequisites: MAT-172^{S}, minimum grade CL

Corequisites: None

This course is designed [illegible] differentiation [illegible] 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.(2014 FA) This course has been approved to satisfy the following recipient [illegible]

MAT-272 Calculus II 4 (3-2) Fall Spring

Prerequisites: MAT-271[S], minimum grade CL
Corequisites: None
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.(2014 FA) This course has been approved to satisfy the following requirement(s):

- UGETC course for A.E., A.S. and A.S. Teacher Preparation
- Mathematics Gen. Ed. course for A.A. and A.A. Teacher Preparation

MAT-273 Calculus III 4 (3-2) Spring

Prerequisites: MAT-272[S], minimum grade CL
Corequisites: None
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.(2014 FA) This course has been approved to satisfy the following requirement(s):

- Mathematics Gen. Ed. course for A.A., A.A. Teacher Preparation, A.E., A.S. and A.S. Teacher Preparation

MAT-285 Differential Equations 3 (2-2) Spring

Prerequisites: MAT-272[S], minimum grade CL
Corequisites: None
This course provides an introduction to topics involving ordinary differential equations. Emphasis is placed on the development of abstract concepts and applications for first-order and linear higher-order differential equations, systems of differential equations, numerical methods, series solutions, eigenvalues and eigenvectors, and LaPlace transforms. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to differential equations-related problems with and without technology.(2014 FA) This course has been approved to satisfy the following requirement(s):

- Premajor and/or Elective course for A.A. and A.S.
- Other Gen. Ed. and Premajor Elective Hour course for A.E.