MAC: MATH: CALC/PRE-CALC

Courses

	Credit(s)	Contact	Lab
MAC 1105. COLLEGE ALGEBRA.	3	3	0

COLLEGE ALGEBRA Prerequisite: Minimum grade of C in MAT 1033C or appropriate score on an approved assessment . In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of equations, functions, and their graphs. Emphasis will be placed on quadratic, exponential, and logarithmic functions. Topics will include solving equations and inequalities, definition and properties of a function, domain and range, transformations of graphs, operations on functions, composite and inverse functions, basic polynomial and rational functions, exponential and logarithmic functions, and applications. Minimum grade of C required if MAC 1105 is used to satisfy Gordon Rule and general education requirements.

MAC 1105H. COLLEGE ALGEBRA - HONORS.	3	3	0

COLLEGE ALGEBRA - HONORS Prerequisite: Minimum grade of C in MAT 1033C or appropriate score on an approved assessment. Course based on the study of functions and their role in problem solving. Topics include graphing, the linear, quadratic, and exponential families of functions, and inverse functions. Students will be required to solve applied problems and communicate their findings effectively. Technology tools will be utilized in addition to analytical methods. Minimum grade of C required if MAC 1105H is used to satisfy Gordon Rule and general education requirements.

MAC 1105L. COLLEGE ALGEBRA COREQUISITE SUPPORT LAB.	0	1	1

COLLEGE ALGEBRA COREQUISITE SUPPORT LAB Corequisite: MAC 1105 Corequisite Support for MAC 1105.

MAC 1114. COLLEGE TRIGONOMETRY.	3	3	0

COLLEGE TRIGONOMETRY Prerequisite: Minimum grade of C in MAC 1105 or an appropriate score on an approved assessment. Topics include a symbolical, graphical and numerical analysis of trigonometric functions; solutions of plane triangles and vectors. Applications emphasizing connections with other disciplines and with the real world will be included. Technology tools will be utilized in addition to analytical methods. Minimum grade of C required if MAC 1114 is used to satisfy Gordon Rule and general education requirements. Credit will not be given for both MAC 1114 and any of the following: MAC 1132, MAC 1142, and MAC 1147.

MAC 1114H. COLLEGE TRIGONOMETRY HONORS.	3	3	0

COLLEGE TRIGONOMETRY HONORS Prerequisite: Minimum grade of C in MAC 1105 or appropriate score on an approved assessment. Same as MAC 1114 with Honors content. Honors program permission required.

MAC 1140. PRECALCULUS ALGEBRA.	3	3	0

PRECALCULUS ALGEBRA Prerequisite: Minimum grade of C in MAC 1105 or appropriate score on an approved assessment. Algebra preparation for the calculus sequence. Topics include a symbolical, graphical, and numerical analysis of polynomials, exponential, logarithmic, power, and rational functions; matrices, sequences, induction, binomial theorem and conic sections. Applications emphasizing connections with other disciplines and with the real world will be included. Technology tools will be utilized in addition to analytical methods. Minimum grade of C required if MAC 1140 is used to satisfy Gordon Rule and general education requirements. Credit will not be given for both MAC 1140 and any of the following: MAC 1132, MAC 1142, and MAC 1147.

MAC 1140H. PRECALCULUS ALGEBRA-HONORS.	3	3	0

PRECALCULUS ALGEBRA-HONORS Prerequisite: Minimum grade of C in MAC 1105 or appropriate score on an approved assessment. Same as MAC 1140 with Honors content. Honors program permission required.

MAC 2233. CALCULUS FOR BUSINESS AND SOCIAL SCIENCE.	3	4	0

CALCULUS FOR BUSINESS AND SOCIAL SCIENCE Prerequisite: Minimum grade of C in MAC 1105 or appropriate score on an approved assessment. Introduction to calculus with applications to business and social science. Topics include limit, differentiation and integration of algebraic, exponential and logarithmic functions, rates of change, curve sketching, and applications of the derivative and integration. Minimum grade of C required if MAC 2233 is used to satisfy Gordon Rule and general education requirements.

MAC 2311. CALCULUS WITH ANALYTIC GEOMETRY I.	4	5	0

CALCULUS WITH ANALYTIC GEOMETRY I Prerequisite: Minimum grade of C in MAC 1140 and MAC 1114 or MAC 1147. In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of limits, derivatives, and definite and indefinite integrals of functions of one variable, including algebraic, exponential, logarithmic, and trigonometric functions, and applications. Topics will include limits, continuity, differentiation and rates of change, optimization, curve sketching, and introduction to integration and area. Minimum grade of C required if MAC 2311 is used to satisfy the Gordon Rule and general education requirements.

MAC 2311H. CALCULUS WITH ANALYTIC GEOMETRY I - HONORS.	4	5	0

CALCULUS WITH ANALYTIC GEOMETRY I - HONORS Prerequisites: Minimum grades of C in (MAC 1140 and MAC 1114) or MAC 1147, or appropriate score on an approved assessment. Same as MAC 2311 with honors content. Honors program permission required.

MAC 2312. CALCULUS WITH ANALYTIC GEOMETRY II.	4	5	0

CALCULUS WITH ANALYTIC GEOMETRY II Prerequisite: Minimum grade of C in MAC 2311 Topics include differentiation and integration, techniques of integration, conic sections, and infinite series. Minimum grade of C required if MAC 2312 is used to satisfy the mathematics requirement in general education.

MAC 2312H. CALCULUS WITH ANALYTIC GEOMETRY II - HONORS.	4	5	0

CALCULUS WITH ANALYTIC GEOMETRY II - HONORS Prerequisite: Minimum grade of C in MAC 2311 Same as MAC 2312 with honors content. Honors program permission required.

MAC 2313. CALCULUS WITH ANALYTICAL GEOMETRY III.	4	4	0

CALCULUS WITH ANALYTICAL GEOMETRY III Prerequisite: Minimum grade of C in MAC 2312. Topics include polar coordinates, vectors, three-dimensional three dimensional analytic geometry, parametric equations, partial derivatives, multiple integration, vector calculus.