

Mathematics

Suggested Course of Study for University Transfer Students (66-69 Credit Hours)

Freshman Year	Sophomore Year
ENGL 1301	Elective (3 Credit Hours)
ENGL 1302	GOVT 2305
HIST 1301	GOVT 2306
HIST 1302	Literature (3-6 Credit Hours)*
Lab Science (8 Credit Hours)	MATH 2320
(MATH 1314)**	MATH 2415
(MATH 1316)**	PHYS 2425
MATH 2413	Visual/Fine Arts (3 Credit Hours)
MATH 2414	Social/Behavioral Science (3 Credit Hours)
PHED 1134	Computer (3-4 Credit Hours)
PHED - Activity (1 Credit Hour)	
SPCH 1315 or 1321	

*Twelve semester hours of English are required for the Associate of Arts degree: nine semester hours of English are required for the Associate of Science degree. **Students who have not had two years of high school algebra or trigonometry must take MATH 1314 and 1316. **Note:** BIOL 1406/1407 or CHEM 1411/1412 is recommended for the core curriculum requirement.

MATH 0300 Elementary Algebra 3.3.0

Topics covered normally include real numbers, linear equations and inequalities, application of linear equations, ratio and proportion, multiplication and division of polynomials, and factoring. May not be used to satisfy degree requirements. MUST take LSKL 0103 as required lab. (Students taking this course on the Texas A&M University-Commerce campus are excluded from this requirement.) Prerequisite: LSKL 0306 or satisfactory score on placement test.

MATH 0301 Intermediate Algebra 3.3.0

Topics covered normally include factoring, exponents, roots, radicals, complex numbers, linear equations and their graphs, introduction into functions, rational expressions, and fractional equations. May not be used to satisfy degree requirements. Prerequisite MATH 0300 or satisfactory score on placement test. MUST take LSKL 0106 as required lab.

MATH 1314 College Algebra 3.3.0

Topics covered normally include quadratics; polynomial, rational, logarithmic, and exponential functions; systems of equations, progressions, sequences and series, and matrices and determinants. Prerequisite: MATH 0301 or two years high school algebra and appropriate placement test.

- MATH 1316 Trigonometry** 3.3.0
Topics covered normally include degree and radian measure, the use of scientific calculator, the trigonometric functions, solution of right triangles and oblique triangles, vectors, graphs of trigonometric and inverse trigonometric functions, identities, solutions of trigonometric equations, and complex numbers. Prerequisite: Two years of high school algebra, MATH 1314 or concurrent enrollment in MATH 1314. Core Curriculum satisfied for Mathematics.
- MATH 1324 Mathematics for Business and Economics Analysis I** 3.3.0
A study of topics from algebra, linear programming, probability, and statistics with business applications. Topics covered will normally include: linear equations, graphs of linear equations, slope, matrices, systems of equations, the simplex method, quadratic equations and functions, exponential and logarithmic functions, sequences and mathematics of finance, and an introduction to probability and statistics. Core Curriculum satisfied for Mathematics.
- MATH 1325 Mathematics for Business and Economical Analysis II** 3.3.0
A study of topics from calculus with business applications. Topics covered will normally include: limits and continuity, derivatives, maximizing and minimizing non-linear functions, higher order derivatives, implicit differentiation, derivatives of exponential and logarithmic functions, integration, and introduction to multivariable calculus. Prerequisite: MATH 1314 or 1324. Core Curriculum satisfied for Mathematics.
- MATH 1342 Statistics** 3.3.0
Presentation and interpretation of data through the collection, tabulation, and analysis of data, probability, discrete and continuous distributions, sampling, testing of hypothesis, correlation and linear regression, analysis of variance, and the use of statistical software. Prerequisite: Consent of instructor.
- MATH 1348 Analytic Geometry** 3.3.0
Lines, circles, and other conic sections; transformation of coordinates; polar coordinates; parametric equations are covered. Prerequisite: MATH 1314 and 1316; or two years of high school algebra and high school trigonometry.
- MATH 1350 Fundamentals of Mathematics I** 3.3.0
Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4 though 8) teacher certification. Prerequisite: MATH 1314 or the equivalent.
- MATH 1351 Fundamentals of Mathematics II** 3.3.0
Concepts of geometry, probability, and statistics, as well as applications

of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4 through 8) teacher certification. Prerequisite: MATH 1350 AND Math 1314 or the equivalent.

- MATH 2320 Differential Equations** 3.3.0
Equations of the first order, applications of first order equations; second order equations, series solutions; higher order equations; Laplace Transforms; systems of differential equations. Prerequisite: MATH 2414.
- MATH 2413 Analytic Geometry and Calculus I** 4.3.3
An integrated study of analytic geometry and calculus. Topics will include: the Cartesian plane, functions, limits, differentiation and applications; integration, inverse functions, transcendental functions. Prerequisite: MATH 1314 and 1316; or two years of high school algebra and high school trigonometry.
- MATH 2414 Analytic Geometry and Calculus II** 4.3.3
A continuation of the integrated study of analytic geometry and calculus. Topics will normally include: applications of integration, integration techniques, sequences and series, conics, parametric equations and polar coordinates. Prerequisite: MATH 2413.
- MATH 2415 Analytic Geometry and Calculus III** 4.3.3
A continuation of the integrated study of analytic geometry and calculus. Topics will normally include: vectors, vector-valued functions, functions of several variables, multiple integration, and vector analysis. Prerequisite: MATH 2414.