MATHEMATICS (MATH)

MATH 111 - Basic College Mathematics (3 Credits)
Basic college algebra; linear and quadratic equations, inequalities, functions and graphs of functions, exponential and logarithm functions, systems of equations.
Prerequisites: placement through the Math Assessment of Prerequisites (MAP).

MATH 111I - Intensive Basic College Mathematics (4 Credits)
An intensive treatment of the topics covered in MATH 111.
Prerequisites: placement through the Math Assessment of Prerequisites (MAP).

MATH 115 - Precalculus Mathematics (4 Credits)
Topics in algebra and trigonometry specifically needed for MATH 141, MATH 142, MATH 241. Subsets of the real line, absolute value; polynomial, rational, inverse, logarithmic, exponential functions; circular functions; analytic trigonometry.
Prerequisites: C or better in MATH 111or MATH 111I, or placement through the Math Assessment of Prerequisites (MAP).

MATH 122 - Calculus for Business Administration and Social Sciences (3 Credits)
Derivatives and integrals of elementary algebraic, exponential, and logarithmic functions. Maxima, minima, rate of change, motion, work, area under a curve, and volume.
Prerequisites: C or better in MATH 111, MATH 111I or MATH 115 or placement through the Math Assessment of Prerequisites (MAP).

Carolina Core: ARP

MATH 141 - Calculus I (4 Credits)
Functions, limits, derivatives, introduction to integrals, the Fundamental Theorem of Calculus, applications of derivatives and integrals. Four classroom hours and one laboratory hour per week.
Prerequisites: C or better in MATH 112, MATH 115, or MATH 116, or placement through the Math Assessment of Prerequisites (MAP).

Carolina Core: ARP

MATH 142 - Calculus II (4 Credits)
Methods of integration, sequences and series, approximations. Four classroom hours and one laboratory hour per week.
Prerequisites: C or better in MATH 141.

Carolina Core: ARP

MATH 170 - Finite Mathematics (3 Credits)
Elementary matrix theory; systems of linear equations; permutations and combinations; probability and Markov chains; linear programming and game theory.
Prerequisites: C or better in MATH 111 or MATH 111I or MATH 122, or placement through the Math Assessment of Prerequisites (MAP).

Carolina Core: ARP

MATH 221 - Basic Concepts of Elementary Mathematics I (3 Credits)
The meaning of number, fundamental operations of arithmetic, the structure of the real number system and its subsystems, elementary number theory. Open only to students in elementary or early childhood teacher certification.
Prerequisites: C or better in MATH 111 or MATH 111I or placement through the Math Assessment of Prerequisites (MAP).

MATH 222 - Basic Concepts of Elementary Mathematics II (3 Credits)
Informal geometry and basic concepts of algebra. Open only to students in elementary or early childhood teacher certification.
Prerequisites: C or better in MATH 221.

MATH 241 - Vector Calculus (3 Credits)
Vector algebra, geometry of three-dimensional space; lines, planes, and curves in space; polar, cylindrical, and spherical coordinate systems; partial differentiation, max-min theory; multiple and iterated integration, line integrals, and Green's theorem in the plane.
Prerequisites: C or better in MATH 142.

MATH 242 - Elementary Differential Equations (3 Credits)
Ordinary differential equations of first order, higher order linear equations, Laplace transform methods, series methods; numerical solution of differential equations. Applications to physical sciences and engineering.
Prerequisites: C or better in MATH 142.

MATH 399 - Independent Study (3-9 Credits)
Contract approved by instructor, advisor, and department chair is required for undergraduate students.
Graduation with Leadership Distinction: GLD: Research