MATH2306 - Analytic Geometry

**MATH 2306** Analytic Geometry (3 semester credit hours) Similarity, congruence, proofs (similarity transformations, rigid motions in the plane, proving geometric theorems, geometric constructions); Linear, quadratic, and other basic functions; Circles and basic areas; Right triangle trigonometry; Addition formulas; Modeling geometry in the plane; Rectangular and polar coordinates; Conics; The principal axes theorem; Three dimensional space: lines and planes; Vectors in plane and space; Dot and cross product; Rectangular, cylindrical, and spherical coordinates; Parameterization of basic curves in plane and space; Elementary surfaces; Intersections of surfaces; Visualization; Examples of rigid motions in space; Volume formulas. Prerequisite: ALEKS score required or a grade of at least a C- in **MATH 1314** and **MATH 1316**. (3-0) S