Calculus 3

Course Number	Course	Prerequisite	Credit hours
0301201	Calculus 3	0300102	3

Vectors and analytic Geometry in the plane and in the 3D-space, Dot product and cross product, lines and planes in the 3D-space, Quadratic surfaces, Polar coordinates in the plane, cylindrical and spherical coordinates in the 3D-space, Functions of several variables, Level curves and level surfaces, limits and continuity, Partial differentiation, Chain Rule, Implicit differentiation, directional derivatives Tangent planes and normal lines, Extreme values and Lagrange multipliers, Multiple Integrals: double integral, Areas and volumes, double integrals using polar coordinates, Triple integrals.