MATH 3380  Differential Geometry  

MATH 3380 Differential Geometry (3 semester credit hours) Curves and surfaces, multilinear algebra, alternating tensors, tangent vectors, tangent space, vector fields, differential forms; Curvature and torsion of curves, Riemannian metrics, curvature of surfaces, isometries, geodesics, Gauss map, First and Second Fundamental Forms, area on surfaces, Gauss-Bonnet Theorem, surfaces with constant negative curvature and elements of hyperbolic geometry. Prerequisites: MATH 2451 and MATH 2418 and MATH 2420 or equivalent courses. (3-0) Y