

MATH-341. DIFFERENTIAL GEOMETRY

Outline: Tangent vectors, directional derivatives. Differential forms. Frenet's formulas, Congruence of curves. Surfaces in R^3 , Mappings of surfaces. Topological properties of surfaces. Differentiable manifolds. Gaussian and mean curvature. Intrinsic geometry of surfaces in R^3 . Covariant derivative. Gauss - Bonnet Theorem. Surfaces of constant curvature.