

DEPARTMENT OF MATHEMATICS
SYLLABUS

Course # & Name: Math 116: Differential Geometry

Recommended Text(s) & Price: Millman & Parker, Elements of Differential Geometry, Prentice Hall, 1977, \$72.00
Other references recommended:
M. Do Carmo, Differential Geometry of Curves & Surfaces, Prentice Hall, \$98.00
Schaum's Online Series, Differential Geometry, Martin Lipschultz, \$15.95

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Lecture(s)	Sections	Comments/Topics
1-2	Chapter 1	Review of vector algebra and elementary vector analysis
3-10	Chapter 2.1-2.5	Local curve theory, Frenet-Serret formulas and applications
11-25	Chapter 4.1, 4.2, 4.3, 4.4, 4.5, 4.7, 4.8	Local surface theory, Geodesics, Gaussian curvature.
As time allows	Chapter 6 Or Chapter 3 Or	Gauss-Bonnet Theorem or Isoperimetric inequalities or Introduction to manifolds, tensors, convention/covariance/contravariance