

Course Code	Course Title	C	H	I	E	T
17U2MMC3	Analytical Geometry of three dimension and Vector Calculus	4	4	25	75	100

Unit I Planes **12 Hrs**

Equation of a plane - Angle between two planes - Angle bisectors of two planes.

Unit II Straight Lines **12 Hrs**

Equation of a straight line - A plane and a straight line -Equation of two skew lines in a simple form.

Unit III The Sphere **12 Hrs**

Equation of a sphere - Tangent line and tangent plane – Section of a sphere.

Unit IV Vector Differentiation **12 Hrs**

Differentiation of vectors - Gradient - Divergence and curl.

Unit V Vector Integration **12 Hrs**

Line integrals - Surface integrals - Green's, Gauss and Stoke's theorems (without proof) - Problems.

Text Book:

1. S. Arumugam&A.ThangapandiIssac, Analytical Geometry (3D) and Vector Calculus, Edition 2011, New Gamma Publishing House.

Chapters: 2 (2.1 - 2.3), 3 (3.1 - 3.3), 4 (4.1 - 4.3), 5 (5.2 - 5.4), 7 (7.1 - 7.3).

Reference Books:

1. T. K. ManickavachagomPillai and T. Natarajan, Analytical Geometry (3D), Edition 2011, S. Viswanathan (Printers & Publishers) Pvt. Ltd.
2. M. K.Venkataraman and Manorama Sridhar, Vector calculus and Fourier series, 2002 Edition, The National Publishing Company.