



| Code | Subject Title | Cr. Hrs | Semester |
|----------|---------------------|---------|----------|
| MATH-124 | Analytical Geometry | 3 | II |
| Year | Discipline | | |
| 1 | Physics | | |

Analytical geometry of three dimensions, rectangular, spherical polar and cylindrical polar, direction cosines, direction components, projections, angle between two lines, perpendicular lines, equations of a plane in various forms, perpendicular line to a plane, parallel planes, perpendicular planes, equations of st. Line in various forms, plane through a line, perpendicularity and parallelism of lines and planes, perpendicular distance of a point from a line or a plane. Shortest distance between two lines.

Surfaces: Definition of a surface (Parametric form), Examples of surfaces, intercepts, traces, symmetry, sketching by parallel plane sections, surfaces of revolution, quadric surfaces, spheres, ellipsoids, paraboloids, hyperboloids, cylinders, cones.

Books Recommended:

1. *Calculus and Analytic Geometry* by G. B. Thomas and R. L. Finney, Addison-Wesley Publishing Company, 1996.
2. *Calculus* by E. W. Swokowski, M. Olinick, D. Pence, J.A. Cole, PWS Publishing Co., USA, 1994.
3. *Calculus* by J. Stewart, Books/Cole Publishing Co., USA, 1999.