Curriculum Plan: B.A.(P), I Year (Semester II)
Analytic Geometry

Ms. Garima Gaur
Assistant Professor
Department of Mathematics
Kalindi College (University of Delhi)
Delhi-110008

Marks Distribution	Theory: 90 Marks Internal Assessment: 30 Marks Continuous Assessment: 40 Marks
Classes Assigned	Lectures: 3 per week Tutorials: 1 per week

Week-wise Teaching Plan

Week	Topics
Week 1 (2–3 Jan)	Introduction; Classification of quadratic equations
Week 2 (5–10 Jan)	Parabola: standard equations, sketching techniques
Week 3 (12–17 Jan)	Ellipse: standard equations, sketching
Week 4 (19–24 Jan)	Hyperbola: standard equations, sketching
Week 5 (26–31 Jan)	Rotation of axes; Second degree equations
Week 6 (2–7 Feb)	Rectangular coordinates in 3-dimensional space, vectors viewed geometrically
Week 7 (9–14 Feb)	Vectors in coordinate systems and vectors determined by length and angle;
Week 8 (16–21 Feb)	Dot product, projections
Week 9 (23–28 Feb)	Cross product, scalar & vector triple products
Week 10 (9–14 Mar)	Parametric equations of lines, direction cosines and direction ratios of a line
Week 11 (16–21 Mar)	Vector and symmetric equations of lines, angle between two lines
Week 12 (23–28 Mar)	Planes in 3-dimensional space, coplanarity of two lines, angle between two planes

Week 13 (30–4 Apr)	Distance of a point from a plane, angle between a line and a plane, distance between parallel planes
Week 14 (6–11 Apr)	Equation of a sphere, plane section of sphere
Week 15 (13–18 Apr)	Tangent and tangent planes
Week 16 (20-25 Apr)	Equation of a cone, enveloping cone of a sphere
Week 17 (27-30 Apr)	Equation of a cylinder, enveloping cylinder and right circular cylinder
1-8 March: Semester Break	

References

1. Anton, Howard; Bivens, Irl & Davis, Stephen (2013). Calculus (10th ed.), Wiley India.
2. Narayan, Shanti & Mittal, P.K. (2007). Analytical Solid Geometry, S. Chand & Company.