				Lecture Plan				
Name of the college: Government College of Arts Science & Commerce, Sanguelim, Goa								
Name of Faculty: Deepak Bandiwadekar & Nirmiti S. Naik Subject: Analytical 2D Geometry								
Paper code: MA	Г 205			Program: S.Y.B.Sc.		Division:		
Academic year: 20	024-25			Semester: IV		Total Lectures: 30		
 Onderstand metric properties in a plane, and the different forms of lines and circles in a plane. Classify various conics in a plane and establish results concerning them. Develop analytical skills in solving geometric problems. 								
 Expected Course Outcome: 1. Knowledge acquired: Students will have knowledge of coordinate geometry, focusing on points, lines, circles and conic sections. 2. Competency developed: Students will be able to apply various concepts to solve geometry problems. 3. Skill gained: Students will be able to analyse and solve different parametric equations. 								
 Student Learning Outcome: Students will be able to analyse various geometric structures and their mathematical representation Students will be able to solve different geometric problems 								
Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books	
December			01	Fundamental notations: Distance			P K JAIN KHALIL AHMAD,Textbook of	

	09/12/24	14/12/24		formula, section ratio and examples		Analytical Geometry of Two Dimensions
December	16/12/24	21/12/24	02 Liberation Day	 Slope or gradients Introduction revision of Geometry 		Chatterjee, D. (2009). Analytical Geometry Two and Three Dimensions. Narosa Publishing House Pvt. Ltd., New Delhi.
January	02/01/25	04/01/25	01	Conic section	Exercises	Chatterjee, D. (2009). Analytical Geometry Two and Three Dimensions. Narosa Publishing House Pvt. Ltd., New Delhi.
January	06/01/25	11/01/25	02	 Locus and exercises Parabola : general equation and example 	Problem solving	P K JAIN KHALIL AHMAD,Textbook of Analytical Geometry of Two Dimensions Chatterjee, D. (2009). Analytical Geometry Two and Three Dimensions. Narosa Publishing House Pvt. Ltd., New Delhi.
January	13/01/25	18/01/25	02	 Area of plane figures Standard equation of Parabola and example 	Exercises	
January	20/01/25	25/01/25	02	 Transformation and Invariants :Translation & exercises Tangents, chord, pole & polar parabola. 	Assignmen t	P K JAIN KHALIL AHMAD, Textbook of Analytical Geometry of Two Dimensions Chatterjee, D. (2009). Analytical Geometry Two and Three Dimensions. Narosa Publishing House Pvt. Ltd., New Delhi.

January-February	27/01/25	01/02/25	02	Rotation; InvariantsEquation of Ellipse		Graphical representatio ns (geogebra)	P K JAIN KHALIL AHMAD, Textbook of Analytical Geometry of Two Dimensions Chatterjee, D. (2009). Analytical Geometry Two and Three Dimensions. Narosa Publishing House Pvt. Ltd., New Delhi.
February	03/02/25	08/02/25	02	 Straight lines in Plane, Gradient form Tangent, chord of Ellipse 	Problem solving		
February	10/02/25	15/02/25	02	 Point-gradient form; symmetric form; Two Point Form Pole and polar of ellipse 	Exercises		
February	17/02/25	22/02/25	02	 Intercept Form; Normal Form; Algebraic Form. Equation of hyperbola and exercises 	Exercises	Geogebra	
February-March	24/02/25	01/03/25	02	 A Point in Relation to a Straight Line Asymptotes of Hyperbola 			
March	03/03/25	08/03/25	02	 Perpendicular Distance of a Point from a Straight Line. Metric Classification of Conics 	Problem solving		
March	10/03/25	15/03/25	02 Holi	 Pair of Straight Lines. Polar coordinates & relation between Cartesian and Polar 			

				Coordinates			
March	17/03/25	22/03/25	02	 Centre Radius Form; Diametral form Distance Between Two Points; Area of a Triangle 	Problem solving	Smarboard , Geogebra	
March	24/03/25	29/03/25	02	 Three Point Form; A Point in Relation to a Circle Equation of Straight line and Equation of circle 	Exercises		
March-April	31/03/25	05/04/25	01 Gudi Padva, Id	• Equation of a Conic	Exercises		
April	07/04/25	11/04/25	01	 A line in Relation to a Circle; Tangents and Normals. 			

* Assessment Rubrics

Component	Max Marks
ISA 1	5
ISA 2	5
ISA 3	5
Practical	Nil
Project	Nil
Semester End	
Exam	40