

SYLLABUS

Faculty	: MIPA
Study Program	: Mathematics Education
Course & Code	: Analytic Geometry,
Credit Hours	: Theory : 2 credits, practicum : 1 credit
Semester	: 4
Prerequisites & Code	: Plane Geometry, Solid Geometry
Lecturer	: Himmawati P.L, M.Si.

FRM/FMIPA/065-00

5 September 2008

I. COURSE DESCRIPTION

The study of Analytic Geometry includes Plane Analytic geometry : Coordinate systems, lines, circle, ellipse, hyperbola, parabola, general quadratic equations in two variables; Space Analytic Geometry : Three dimensional coordinate systems, plane, lines, sphere, surface of revolution, equation of general surface

II. COURSE BASED COMPETENCY

The students will be able to explain coordinate systems in plane and solid, determine the equation of geometric figures in plane and solid and solve problems related to them, and use them to solve problems either in mathematics or in other courses.

III. ACTIVITY PLAN

meeting	Based Competency	Main Materials	Lecturer Strategy	References
1	Coordinate system in plane	Coordinate system, distance of two points, coordinate of point on a segment, polar coordinate	Explanation, Discussion, Exercises	A, B
2	Line	Special lines, equations of line,	Explanation, Discussion, Exercises	A, B
3	Line	equations of line	Explanation, Discussion, Exercises	A, B
4	Line	relation of two/more lines,	Explanation, Discussion, Exercises	A, B
5	Line	pencil of lines, angle formed by two lines	Explanation, Discussion, Exercises	A, B
6	Circle	Equations of a circle	Explanation, Discussion, Exercises	A, B
7	Circle	Point, line, and circle	Explanation, Discussion,	A, B

			Exercises	
8	Circle	Point, line, and circle	Explanation, Discussion, Exercises	A, B
9	Circle	Relation of two/more circles, pencil of circles	Explanation, Discussion, Exercises	A, B
10	Ellipse	Equation of ellipse and its elements	Explanation, Discussion, Exercises	A, B
11	Ellipse	Point, line and ellipse	Explanation, Discussion, Exercises	A, B
12	Parabola	Equation of parabola and its elements	Explanation, Discussion, Exercises	A, B
13	Parabola	Point, line and parabola	Explanation, Discussion, Exercises	A, B
14	Hyperbola	Equation of ellipse and its elements	Explanation, Discussion, Exercises	A, B
15	Hyperbola	Point, line and hyperbola	Explanation, Discussion, Exercises	A, B
16	general quadratic equations in two variables	general quadratic equations in two variables	Explanation, Discussion, Exercises	A, B
17	general quadratic equations in two variables	Characteristics of quadratic equations in two variables	Explanation, Discussion, Exercises	A, B
18	1 st MIDTERM			
19	Coordinate system in space	Coordinate system in space, distance between two points	Explanation, Discussion, Exercises	A, B
20	Plane	Equation of a plane	Explanation, Discussion, Exercises	A, B
21	Plane	Two/more planes	Explanation, Discussion, Exercises	A, B
22	Plane	Angle and distance in space	Explanation, Discussion, Exercises	A, B
23	Plane	Plane and line	Explanation, Discussion, Exercises	

24	Line	Equation of line	Explanation, Discussion, Exercises	A, B
25	Line	Two/more lines	Explanation, Discussion, Exercises	A, B
26	Sphere	Equation of sphere	Explanation, Discussion, Exercises	A, B
27	Sphere	Two/more spheres	Explanation, Discussion, Exercises	A, B
28	Sphere	Point, line, plane and sphere	Explanation, Discussion, Exercises	A, B
29	Surface of revolution	Surface of revolution	Explanation, Discussion, Exercises	A, B
30	equation of general surface	equation of general surface	Explanation, Discussion, Exercises	A, B
31	equation of general surface	Characteristic of general surface	Explanation, Discussion, Exercises	A, B
32	2 nd MIDTERM			

IV. REFERENCES

- A. Kletenic C, D. Problems in Analytic Geometry. Moscow : Peace Publishers
 B. Morrill, W.K. 1969. Analytic Geometry. Scranton, Pennsylvania : International textbook Company

V. EVALUATION

No.	Component	Weight (%)
1.	Tasks	10
2.	Quiz	10
3.	Performance in the class	10
4.	Midterm	30
5.	Final Test	40
Total		100%