

Subject Code: 1ET4000103	Subject Title: Mathematics-I
Pre-Requisite	--

RATIONALE:

The subject is classified under Basic Sciences and students are intended to know about the basic concepts and principles of Mathematics as a tool to analyze the Engineering problems. Mathematics has the potential to understand the Core Technological studies. The course content should be taught so as to understand and perform the Engineering concepts and computations. Aim to develop the different types of Mathematical skills leading to the achievement of the following competencies

COURSE OBJECTIVE:

1. Understand the concepts of Logarithm.
2. Learn the concepts of Trigonometry.
3. Calculate the problem of function using the concept of Limit.
4. Determinants Matrix and Determinants
5. Relative with Co-ordinate Geometry.
6. Identify the Mensuration.

TEACHING AND EVALUATION SCHEME:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				Total (Marks)
Lecture	Tutorial	Practical	Credit	Theory		Practical		
				University Assessment	Continuous Assessment	University Assessment	Continuous assessment	
2	1	-	3	60	40	-	50	150

DETAILS OF COURSE CONTENTS:

SR. NO.	TOPIC	TOTAL HOURS	WEIGHTAGE
UNIT-1	Logarithms 1.1 Concept 1.2 Rules 1.3 Related Examples	4	14
UNIT-2	Trigonometry 2.1 Units of Angles(degree and radian)	6	22

	2.2 Allied & Compound Angles 2.3 Multiple –Submultiples angles 2.4 Graph of Sine and Cosine 2.5 Periodic function 2.6 Sum and factor formulae 2.7 Inverse trigonometric function		
UNIT-3	Function & Limit 3.1 Function Concept 3.2 Examples 3.3 Concept of Limit 3.4 Standard Formulas 3.5 Related Examples	5	18
UNIT-4	Determinants and Matrices 4.1 Idea of Determinant and Matrix 4.2 Addition/Subtraction of Matrix 4.3 Product of Matrix 4.4 Transpose of Matrix	4	16
UNIT-5	Co-Ordinate Geometry 5.1 Point : 5.1.1 Distance Formula 5.1.2 Mid-point 5.1.3 Locus of a point 5.2 Straight Line : 5.2.1 Forms of Equation of Straight Lines 5.2.2 Slope of line (Point Form) 5.2.3 Parallel and Perpendicular lines	5	18
UNIT-6	Mensuration 6.1 Area of Triangle, Square, Rectangle, Trapezium, Parallelogram, Rhombus and Circle. 6.2 Surface & Volume of Cuboids, Cone, Cylinder And Sphere	4	12

COURSE OUTCOME:

The students will be able to

1. Solve simple problems using concepts of Logarithm.
2. Calculate simple problems using concepts of Trigonometry.
3. Understand and solve the problem of functions.
4. Solve the problem of function using the concept of Limit.
5. Determinants, Simple Examples on Matrix Addition/Subtraction and Product.
6. Find the distance between two points, use Mid-Point formula for quadrilateral.
7. Calculate the example of equation of line.
8. Solve the problem of circle.

9. Able to find Volume of Cuboids, Cone, Cylinder and Sphere.

LIST OF REFERENCES:

1. Engineering Mathematics by Anthony Croft
2. Applied Mathematics-I by W R Neelkanth
3. Polytechnic Mathematics by S P Deshpande
4. Polytechnic Mathematics by Prakash D S