

Branch Name:	Electrical Engineering, Civil Engineering, Computer Engineering, IT Engineering, Mechanical Engineering, Automobile Engineering Artificial Intelligence & Machine Learning (AI/ML)
Program Code	ET403, ET401, ET404, ET403, ET407, ET402, ET408, ET409
Course Name:	Mathematics-I
Course Code:	2ET4000103
Pre-requisite Course:	

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	
4	0	-	4	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	6	14
UNIT-2	Basic Trigonometry 2.1 Units of Angles (degree and radian) 2.2 Allied & Compound Angles 2.3 Graph of Sine and Cosine 2.4 Periodic function	8	22
UNIT-3	Function & Limit 3.1 Function Concept 3.2 Examples 3.3 Concept of Limit 3.4 Standard Formulas 3.5 Related Examples	8	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	7	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	7	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	6	12

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.
5. Basic Mathematics by N. L. Yadav

LIST OF OPEN SOURCE SOFTWARE/LEARNING WEBSITE:

1. <https://trialclass.cuemath.com>
2. <https://in.ixl.com>
3. <https://www.khanacademy.org>
4. <https://www.mathworks.com>
5. <https://nptel.ac.in/>

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Learn of concepts of Logarithm And List Of Rules By Logarithm And Discuss The Example	L -1 Remember L -2 Understand
CLO2	Learn And Calculate simple problems using concepts of Trigonometry.	L -1 Remember L -2 Apply
CLO3	Understand and solve the problem of functions And Illustrate.	L -2 Understand L -4 Analyze
CLO4	Solve the problem of function using the concept of Limit And Justify Answer.	L- 2 Understand L -5 Evaluate
CLO5	Learn Of Determinants, Simple Examples on Matrix And Formula Of Addition/Subtraction and Product.	L -1 Remember L -2 Understand L -6 Create
CLO6	Find the distance between two points, use Mid-Point formula for quadrilateral.	L -2 Understand L -6 Create

Mapping of CLO with Pos & PSOs

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CLO1	H	M	L	L							L				
CLO2	H	M	L	M				M			L				
CLO3	H	H	L												
CLO4	M	M	L	L											
CLO5	H	M	L	L								L			
CLO6	L	L	L	M					M			L			

H: High, M: Medium, L: Low