

Branch Name:	Electrical Engineering, Civil Engineering, Computer Engineering, IT Engineering, Mechanical Engineering, Automobile Engineering
Program Code	ET408
Course Name:	Mathematics-II
Course Code:	2ET4000202
Pre-requisiteCourse:	

COURSE OBJECTIVE:

1. Measure Statistical Tendency in given data.
2. Solve simple problems using concepts of Vectors.
3. Differentiate the various functions.
4. Integrate the various function.
5. Simplify Complex expressions.

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	150
4	0	-	4	60	40	-	50	

DETAILS OF COURSE CONTENTS:

SR. NO.	TOPIC	TOTAL HOURS	WEIGHTAGE
UNIT-1	Advance Trigonometry 1.1 Multiple –Submultiples angles 1.2 Sum and factor formulae 1.3 Inverse trigonometric function	8	20
UNIT-2	Vectors 2.1 Basic concept of Vector and Scalar 2.2 Addition & subtraction, Product of Vectors 2.3 Geometric meaning of Scalar and Vector Product 2.4 Angle between two vectors 2.5 Applications of Dot (scalar) and Cross (vector) Product 2.6 Work Done calculation	7	22
UNIT-3	Differentiation & its Applications 3.1 Differentiation: Definition, Rules of Sum and Product 3.2 Quotient of Functions 3.3 Chain Rule 3.4 Derivative of Implicit functions and Parametric functions 3.5 Logarithmic Differentiation 3.6 Application: Velocity, Acceleration 3.7 Application Maxima & Minima	10	24

UNIT-4	Integration & its application 4.1 Integration: Concept 4.2 Integral of Standard Functions 4.3 Application: Area	10	20
UNIT-5	Complex Number 5.1 Concept 5.2 Modules and Amplitude form 5.3 Square Root of Complex Number 5.4 Polar form	7	14

LIST OF REFERENCES:

1. Engineering Mathematics by Anthony Croft
2. Advanced Mathematics for Polytechnic by Pandya N R
3. Polytechnic Mathematics by S P Deshpande
4. Polytechnic Mathematics by Prakash D S
5. Advance 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 And Explain the example of: Mean, Median and Mode.	L -1 Remember L -2 Understand
CLO2	Learn, Explain And Calculate Of Derivative of Implicit, Parametric & Logarithmic functions.	L -1 Remember L -2 Understand L -3 Apply
CLO3	Explain Of Applications of Dot (scalar) and Cross (vector) Production problem And Summarise Of Example.	L -2 Understand L -4 Analyze
CLO4	Find the Work Done and Moment of Force	L- 2 Understand L -5 Evaluate
CLO5	Integral of Standard Functions, Working Rules of Integration	L -1 Remember L -2 Understand L -6 Create
CLO6	Find Modulus and Amplitude of given complex expressions.	L -2 Understanding 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	H			M							L			
CLO2	H	H			H										
CLO3	H	H			M										
CLO4	M	M			M							M			
CLO5	H	M	L		H										
CLO6	L	L	L		L										

H: High, M: Medium, L: Low