

Subject Code: 1ET4000203	Subject Title: Mathematics-II
Pre-Requisite	--

RATIONALE:

The subject is classified under Advance Mathematics 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 is classified under Advance Mathematics and students are intended to understand the advance concepts and principles of Mathematics such as calculus and statics. This knowledge is required to understand and solve engineering problems

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	
2	1	-	3	60	40	-	50	150

DETAILS OF COURSE CONTENTS:

SR. NO.	TOPIC	TOTAL HOURS	WEIGHTAGE
UNIT-1	Statistics 1.1 Measures of Central Tendency for Ungrouped And Grouped Data : Mean, Median and Mode	5	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	5	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	8	24
UNIT-4	Integration & its application 4.1 Integration: Concept 4.2 Integral of Standard Functions 4.3 Application: Area	7	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	3	14

COURSE OUTCOME:

The students will be able to:

1. Calculate the example of: Mean, Median and Mode.
2. Derivative of Implicit, Parametric & Logarithmic functions.
3. Applications of Dot (scalar) and Cross (vector) Production problem.
4. Find the Work Done and Moment of Force.
5. Integral of Standard Functions, Working Rules of Integration.
6. Find Modulus and Amplitude of given complex expressions.

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