PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH

LESSON PLAN
Session-2023-2024

Discipline: Civil/Electrical/Mechanical/Comp. Sc./Metallurgy Engg.

Semester: 2nd   Subject: Engg. Mathematics-II

Name of the Teaching Faculty: Mr. RAJARAM SAHU

Subject: ___Eng.Math-II_____ No. of Days/per week class allotted : ___2__

Semester From Date :01-02-2024 To   Date :14-05-2024   No. of Weeks : ___14___

Week	Class Day	Theory
1st	1	Introduction, Definition of Vector quantity with Examples
	2	Types of Vectors: Null , Unit , Parallel and Collinear Vector
2nd	1	Representation of a Vector, Magnitude and Direction of Vector
	2	Co-initial , Like and Unlike , Equal Vectors
3rd	1	Operation on Vectors, Parallelogram law of Vector Addition , Addition
	2	Commutative Law , Associative law with respect to Addition. Subtraction
4th	1	Multiplication of a Vector by Scalar, Parallel vector, Properties of scalar multiplication
	2	Position Vector , Vector with respect to P.V. , Component Vector
5th	1	Position vector of a point in Space, Magnitude and Unit vector of such Vector
	2	Addition , Subtraction , Scalar multiplication of a Component Vector
6th	1	Scalar or Dot product of two vectors , Angle between two vectors
	2	Condition of Perpendicular and Parallel vector related to Dot product

Signature of the Faculty

30.1.2024

Subject: _Eng.Math-II_____ No. of Days/per week class allotted : ___2__

Semester From Date :01-02-2024 To   Date :14-05-2024   No. of Weeks : _14_____

Week	Class Day	Theory
7th	1	Geometrical Meaning of Dot product, Scalar and Vector projection
	2	Vector Product or Crossed product , Angle between two vectors, Condition of Perpendicular and Parallel vectors
8th	1	Properties of Vector Product, Geometrical meaning of Vector Product
	2	Area of Triangle and Parallelogram
9th	1	Definition of differential equation, Types of diff. equations , Formation of differential equations
	2	Initial condition , Initial value problem of differential equation
10th	1	Order and Degree of differential equation
	2	Solution of a differential equation , General and Particular solution of a differential Equation.
11th	1	General and Particular solution of 1st order and 1st degree differential equation by Variable separable Method
	2	Initial value Problem , Particular solution of a differential equation.
12th	1	Linear and Non- linear Differential equation (Definition, Examples)
	2	General solution of 1st order Linear differential equations

Signature of the Faculty . 2024

Subject: _____Eng Math-II_____ No. of Days/per week class allotted : _2____

Semester From Date :01-02-2024 To Date :14-05-2024   No. of Weeks : _14_____

Week	Class Day	Theory
13th	1	Particular solution of Linear differential equations
	2	Bernoulli's Differential equation and its reduction to 1st order Linear differential equation
14th	1	General solution of Bernoulli' Differential equation
	2	General solution of Simple 2nd order ordinary differential equation

Signature of the Faculty

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH

LESSON PLAN
Session-2023-2024

Discipline: Civil/Electrical/Mechanical/Comp. Sc./Metallurgy Engg.

Semester: 2nd   Subject: Engg. Mathematics-II

Name of the Teaching Faculty: Mr. SUKRU MEHER

Week	Class Day	Theory
1st	1	Introduction to Function based Set Theory
	2	Types of Functions: Constant and Identity function
2nd	1	Absolute Value Function
	2	Greatest Integer Function
3rd	1	Trigonometric Functions
	2	Continued…………..
4th	1	Exponential Function
	2	Logarithm Function
5th	1	Introduction to Limit Of a Function
	2	Methods of Evaluation of Limit
6th	1	Some Standard Formulae on Limits
	2	Continued …………..

S. meher
30-01-2024
Signature of the Faculty

Subject: _Eng.Math-II_____ No. of Days/per week class allotted : ___2___

Semester From Date :01-02-2024 To Date :14-05-2024   No. of Weeks : _14_____

Week	Class Day	Theory
7th	1	Definition of Continuous Function
	2	Exercises to be solved On Continuity
8th	1	Introduction To Integration
	2	Some Standard Formulae on Integration
9th	1	Integration of Function by Substitution Method
	2	Integration of Trigonometric Functions
10th	1	Integration by Trigonometric Substitution
	2	Integration By Parts
11th	1	Integration Of Rational Function Using Partial Fraction
	2	Definite Integral
12th	1	Fundamental theorem on Integral Calculus
	2	Properties of Definite Integral

S. meher
30-01-2024
Signature of the Faculty

Subject: _____ Eng .Math-II _____ No. of Days/per week class allotted : _2____

Semester From Date :01-02-2024 To   Date :14-05-2024   No. of Weeks : _14_____

Week	Class Day	Theory
13th	1	Area of a Curve (Definition)
	2	Area bounded by Curve and X- Axis
14th	1	Area bounded by Curve and Y-Axis
	2	Area bounded by two Curves

S. meher
30-01-2024
Signature of the Faculty

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH

LESSON PLAN
Session-2023-2024

Discipline: Civil/Electrical/Mechanical/Comp. Sc./Metallurgy Engg.

Semester: 2nd   Subject: Engg. Mathematics-II

Name of the Teaching Faculty: Mr SHUBHRANSHU KUMAR SAHU

Subject: ___Eng.Math-II_____ No. of Days/per week class allotted : ___01/02__

Semester From Date :01-02-2024 To   Date :14-05-2024   No. of Weeks : ___14___

Week	Class Day	Theory
1st	1	Introduction to Derivatives of a Function
2nd	1	Derivative of a Function at a Proof
3rd	1	Derivative of aFunction:$x^n, a^x, \log x, e^x$
4th	1	Derivative of Trigonometric Functions: Sinx , Cosx , Tanx,Cotx, Secx , Cosecx
5th	1	Algebra of Derivatives : Addition Rule, Subtraction Rule ,Product Rule, Division Rule
6th	1	Some Exercise On derivatives to be Solved
7th	1	Derivatives by Substitution
8th	1	Derivatives of Composite function, Chain Rule
9th	1	Derivative of Trigonometric function, Exponential function , Logarithm function using Chain rule
	2	Derivative of Inverse Trigonometric Function

Signature of the Faculty
Dt.

Subject: _Eng.Math-II_____ No. of Days/per week class allotted :01/02_____

Semester From Date :01-02-2024 To Date :14-05-2024 No. of Weeks : _14_____

Week	Class Day	Theory
10th	1	Derivative of Inverse Trigonometric function using chain rule
	2	Derivative of Implicit Function
11th	1	Derivative of Logarithmic function
	2	Derivative of product of different function using Logarithm
12th	1	Derivative of a function with respect to another function
	2	Parametric Differentiation of function
13th	1	Application of derivative to find Slope of a Curve
	2	Successive differentiation up to 2nd Order
14th	1	Partial Derivatives of function of two Variables
	2	2nd Order Partial derivative of function of two variables .

Signature of the Faculty
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