


LESSON PLAN OF APPLIED MATHEMATICS-II

DISCIPLINE : All Branches	SEMESTER : 2nd	NAME OF THE TEACHING FACULTY : SATABDIKA NAYAK & SATYAJIT PRADHAN
SUBJECT : APPLIED MATHEMATICS-II	NO. OF DAYS/PER WEEK CLASS ALLOTTED:05	SEMESTER FROM DATE : 04/022025 TO DATE: 17/052025 NO. OF WEEKS : 15
WEEK :	CLASS DAY :	THEORY TOPIC :
1ST	1 ST	Introduction to Determinants (up to 2nd order)
	2 ND	Determinants up to 3rd order
	3 RD	Properties of Determinants
	4 TH	Consistency of equations
2ND	1 ST	Cramer's Rule
	2 ND	Algebra of Matrices
	3 RD	Inverse of a Matrix
	4 TH	Matrix Inverse Method
3RD	1 ST	System of Linear Equations (3 variables)
	2 ND	Solving examples
	3 RD	Doubt clearing + worksheet
	4 TH	Doubt clearing + worksheet
4TH	1 ST	Integration as inverse of differentiation
	2 ND	Simple integration
	3 RD	Integration by substitution
	4 TH	Integration by parts
5TH	1 ST	Integration using partial fractions
	2 ND	Integrals $\sin x \cos x$ dx formulas
	3 RD	More on trigonometric integrals
	4 TH	Applications - Area under a curve
6TH	1 ST	Area bounded by curves and axes
	2 ND	Volume of revolution (basic)
	3 RD	Solving simple volume problems
	4 TH	Quiz/Assessment 2
7TH	1 ST	Straight line equations and forms
	2 ND	Intersection and angle between lines
	3 RD	Parallel and perpendicular lines
	4 TH	Distance formula, INTERNAL AND EXTERNAL DIVISION
8TH	1 ST	General equation of circle
	2 ND	Centre and radius
	3 RD	Equation from 3 points
	4 TH	Equation from diameter endpoints
9TH	1 ST	Conics - Parabola, Ellipse, Hyperbola (standard forms)
	2 ND	Foci, Directrices, Vertices (concepts only)
	3 RD	Simple problems on conics
	4 TH	Quiz/Assessment 3

10TH	1 st	Basics - definition and notation
	2 nd	Rectangular resolution
	3 rd	Addition and subtraction
	4 th	Scalar product
11TH	1 st	Vector product
	2 nd	Problems on work
	3 rd	Problems on moment
	4 th	Angular velocity problems
12TH	1 st	Mixed problems and revision
	2 nd	Quiz/Assessment 4
	3 rd	First-order differential equations
	4 th	Variable separation method
13TH	1 st	Solving simple examples
	2 nd	First-degree equations
	3 rd	More examples on variable separable
	4 th	MATLAB - Introduction
14TH	1ST	MATLAB - Application overview
	2nd	Mixed problems
	3rd	Comprehensive Review (All Units)
	4th	Review problems (Determinants + Calculus)
15TH	1st	Review problems (Geometry + Vectors)
	2nd	Review problems (Diff Eqns)
	3rd	Final Q&A session
	4th	Final Assessment

Satabdika Nayak
 Satyajit Pradhan.
 Signature of Faculty


 Principal
 Govt. polytechnic, Dhenkanal