

RAJAKISHORE CHANDRA ACADEMY OF TECHNOLOGY(RKCAT) NILGIRI,BALASORE			
<u>LESSONPLAN</u>			
SUBJECT:Th3.ENGINEERINGMATHEMATICS–II			

	<u>CHAPTERWISEDISTRIBUTIONOFPERIODS</u>		
Sl.No.	NameofthechapteraspertheSyllabus	No.of Periods asper the Syllabus	No. of periods actually needed
1	DETERMINANT AND MATRIX	4	4
2	INTEGRAL CALCULUS	21	21
3	CO-ORDINATE GEOMETRY	13	13
4	VECTOR ALGEBTRA	18	18
5	DifferentialEquation	4	4
	TOTAL	60	60

Discipline: CO MMONTO ALL	Semester: 2nd	Name of the Teaching Faculty: MISS SUMITRA SAHU
Week	Class Day	Theory/Practical Topics
1ST	1st	DETERMINANT AND MATRIX a)Elementary properties of determinant up to 3 rd order
	2nd	b)consistency of equation c)crammers rule,algebra of matrices
	3rd	d)inverse of matrix, matrix method to solve a system of linear equation
	4th	d)inverse of matrix, matrix method to solve a system of linear equation
	5th	INTEGRATION a)Definition of integration as inverse of differentiation
2ND	1st	INTEGRATION a)Definition of integration as inverse of differentiation
	2nd	b)Integrals of standard functions
	3rd	b)Integrals of standard functions
	4th	b)Integrals of standard functions
	5th	c)Methods of integration i)Integration by substitution ii)Integration by parts
3RD	1st	c)Methods of integration i)Integration by substitution ii)Integration by parts
	2nd	c)Methods of integration i)Integration by substitution ii)Integration by parts
	3rd	c)Methods of integration i)Integration by substitution ii)Integration by parts
	4th	d)Integration of the following forms as per syllabus
	5th	d)Integration of the following forms as per syllabus

4TH	1 st	d)Integrationofthefollowingforms as per syllabus
	2 nd	e)Definiteintegral,propertiesofdefiniteintegrals
	3 rd	e)Definiteintegral,propertiesofdefiniteintegrals
	4 th	e)Definiteintegral,propertiesofdefiniteintegrals
	5 th	e)Definiteintegral,propertiesofdefiniteintegrals
5TH	1 st	f)Applicationof integration i)Areaenclosedbya curve andX–axis ii)Areaofacirclewithcentreat origin
	2 nd	f)Applicationof integration i)Areaenclosedbya curve andX–axis ii)Areaofacirclewithcentreat origin
	3 rd	f)Applicationof integration i)Areaenclosedbya curve andX–axis ii)Areaofacirclewithcentreat origin
	4 th	f)Applicationof integration i)Areaenclosedbya curve andX–axis ii)Areaofacirclewithcentreat origin
	5 th	Problem solved based on intrgration
6TH	1 st	CO-ORDINATE GEOMETRY a)Introductionofgeometryintwodimension b)Distanceformulae,divisionformulae,areaofatriangle (only formulaenoderivation) c)Defineslopeofaline,anglebetweentwolines(onlyF),
	2 nd	d) Different forms of straight lines (only formulae) i) One pointform(ii)twopointform(iii)slopeform(iv)interceptform (v)Perpendicularform
	3 rd	e)Equationofalinepassingthroughapointand(i)paralleltoa line (ii)Perpendicularto a b)Compoundangles,multipleandsub-multipleangles(only formulae)
	4 th	c)Defineinverssecircularfunctionsanditsproperties(no derivation

	5 th	a) Introduction of geometry in two dimensions
7th	1 st	c) Defines slope of a line, angle between two lines (only F),
	2 nd	) Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form (iv) intercept form
	3 rd	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a
	4 th	f) Equation of a line passing through the intersection of two lines
	5 th	g) Distance of a point from a line
8TH	1 st	CIRCLE Equation of a circle
	2 nd	(i) center radius form
	3 rd	(ii) general equation of a circle (iii) endpoint of diameter form
	4 th	VECTOR ALGEBRA a) Introduction
	5 th	b) Types of vectors (null vector, parallel vector, collinear vectors) (in component form)
9TH	1 st	b) Types of vectors (null vector, parallel vector, collinear vectors) (in component form)
	2 nd	c) Representation of vector
	3 rd	c) Representation of vector
	4 th	d) Magnitude and direction of vectors
	5 th	d) Magnitude and direction of vectors
	1 st	e) Addition and subtraction of vectors
	2 nd	e) Addition and subtraction of vectors

10TH	3 rd	h) Geometrical meaning of dot product
	4 th	) Geometrical meaning of dot product
	5 th	i) Angle between two vectors
11TH	1 st	i) Angle between two vectors
	2 nd	j) Scalar and vector projection of two vectors
	3 rd	j) Scalar and vector projection of two vectors
	4 th	j) Scalar and vector projection of two vectors
	5 th	k) Vector product and geometrical meaning (Area of triangle and parallelogram)
12TH	1 st	k) Vector product and geometrical meaning (Area of triangle and parallelogram)
	2 nd	DIFFERENTIAL EQUATION a) Order and degree of a differential equation
	3 rd	DIFFERENTIAL EQUATION a) Order and degree of a differential equation
	4 th	b) Solution of differential equation i) 1st order and 1st degree equation by the method of separation of variables
	5 th	b) Solution of differential equation i) 1st order and 1st degree equation by the method of separation of variables