



# UTKAL INSTITUTE OF ENGINEERING & TECHNOLOGY

DISCIPLINE:	SEMESTER:	NAME OF THE TEACHING FACULTY: Er. PRASANTA KUMAR JENA		
All Branch	1st Sem	Semester From Date:25/10/2022 To Date:31/01/2023 No. Of Weeks: 15		
SUBJECT:	No of Days/Per week class allotted: 4 Class P/W(60)			
ENGINEERING MATHEMATICS-I				
WEEK	CLASS DAY	THEORY TOPICS	REMARKS	
1 <sup>st</sup>	1 <sup>st</sup>	MATRICES AND DETERMINANTS a) Types of matrices b) Algebra of matrices c) Determinant d) Properties of determinant	Date	Dean/Principal
	2 <sup>nd</sup>			
	3 <sup>rd</sup>			
	4 <sup>th</sup>			
2 <sup>nd</sup>	1 <sup>st</sup>	Doubt clear class		
	2 <sup>nd</sup>	e) Inverse of a matrix (second and third order) (Question should be on second order matrix)		
	3 <sup>rd</sup>	f) Cramer's Rule (Question should be on two variables)		
	4 <sup>th</sup>	g) Solution of simultaneous equations by matrix inverse method (Question should be on two variables)		
3 <sup>rd</sup>	1 <sup>st</sup>	2) TRIGONOMETRY		
	2 <sup>nd</sup>	a) Trigonometrical ratios b) Compound angles, multiple and sub-multiple angles (only formulae) c) Define inverse circular functions and its properties (no derivation)		
	3 <sup>rd</sup>			
	4 <sup>th</sup>			
1 <sup>st</sup>	3) CO-ORDINATE GEOMETRY IN TWO DIMENSIONS (Straight line)			
4 <sup>th</sup>	2 <sup>nd</sup>	a) Introduction of geometry in two dimensiono		
	3 <sup>rd</sup>	b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)		

	4 <sup>th</sup>	c) Define slope of a line, angle between two lines (only F), condition of perpendicularity and parallelism.		
5 <sup>th</sup>	1 <sup>st</sup>	i) One point form (ii) two point form (iii) slope form (iv) intercept form (v) Perpendicular form		
	2 <sup>nd</sup>	e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line		
	3 <sup>rd</sup>	f) Equation of a line passing through the intersection of two lines		
	4 <sup>th</sup>			
		g) Distance of a point from a line		
6 <sup>th</sup>	1 <sup>st</sup>	4) CIRCLE		
	2 <sup>nd</sup>	a) Equation of a circle (i) center radius form (ii) general equation of a circle (iii) end point of diameter form		
	3 <sup>rd</sup>	5) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS		
	4 <sup>th</sup>	a) Distance formulae, section formulae, direction ratio, direction cosine, angle between two lines (condition of parallelism and perpendicularity)		
7 <sup>th</sup>	1 <sup>st</sup>	b) Equation of a plane		
	2 <sup>nd</sup>	i) General form, angle between two planes, perpendicular distance of a point from a plane, equation of a plane passing through a point and		
	3 <sup>rd</sup>	i) parallel to a plane (ii) perpendicular to a plane		
	4 <sup>th</sup>	6) SPHERE		
8 <sup>th</sup>	1 <sup>st</sup>	a) Equation of a sphere		
	2 <sup>nd</sup>			
	3 <sup>rd</sup>	i) center radius form ii) general form		

	4 <sup>th</sup>	Dout Clear Class		
9 <sup>th</sup>	1 <sup>st</sup>	iii) two end points of a diameter form (only formulae and problems)		
	2 <sup>nd</sup>	iii) two end points of a diameter form (only formulae and problems)		
	3 <sup>rd</sup>	ii) general form		
	4 <sup>th</sup>	Assignment		
10 <sup>th</sup>	1 <sup>st</sup>	Assignment question discussion		
	2 <sup>nd</sup>	Nuemerical problem solve		
	3 <sup>rd</sup>	Class Test		
	4 <sup>th</sup>	(ii) perpendicular to a plane		
11 <sup>th</sup>	1 <sup>st</sup>	Doubt Clear Class		
	2 <sup>nd</sup>	Last Class Discussion		
	3 <sup>rd</sup>	i) General form, angle between two planes, perpendicular distance of a point from a plane, equation of a plane passing through a point and		
	4 <sup>th</sup>	i) General form, angle between two planes, perpendicular distance of a point from a plane, equation of a plane passing through a point and		
12 <sup>th</sup>	1 <sup>st</sup>	i) General form, angle between two planes, perpendicular distance of a point from a plane, equation of a plane passing through a point and		
	2 <sup>nd</sup>	Revision Class		

12 <sup>th</sup>	3 <sup>rd</sup>	a) Distance formulae, section formulae, direction ratio, direction cosine, angle between two lines (condition of parallelism and perpendicularity)		
	4 <sup>th</sup>	Last Class Discussion		
13 <sup>th</sup>	1 <sup>st</sup>	Numerical problem solve		
	2 <sup>nd</sup>	Numerical problem solve		
	3 <sup>rd</sup>	Numerical problem solve		
	4 <sup>th</sup>	Numerical problem solve		
14 <sup>th</sup>	1 <sup>st</sup>	Last Class Discussion		
	2 <sup>nd</sup>	Sample Paper Question Discussion		
	3 <sup>rd</sup>	Sample Paper Question Discussion		
	4 <sup>th</sup>	Previous Year Question Paper Discussion		

Tejaswini Das

HOD

Chittaranjan Parida

DEAN



PRINCIPAL