MOHAMMED SATHAK A J COLLEGE OF ENGINEERING

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			LESSON I	PLAN				
		Depai	rtment of Mechan	ical Enginee	ering			
Name of	the Subject	Engineering Graphics		N handl	Jame of the ing Faculty	R		
Su	ıbject Code	GE 3251			Year / Sem			
	Acad Year	2022-23			Batch	2022-26		
			Course Obj	jective				
To develo	p in student	s, graphic skills for communication of concep	ots, ideas and desig	n of Engineer	ring products.			
To expose	e them to ex	isting national standards related to technical d	Irawings					
			Course Ou	tcome				
CO1-Des	scribe the fu	ndamentals and standards of engineering grap	bhics & draw the ba	asic geometri	cal constructions			
CO2-Ske	tch orthogra	phic projections of lines and plane surfaces.						
CO3-Ske	tch the proj	ections and solids and perform freehand sketc	hing of simple soli	ids				
CO4-Cor	nstruct the se	ection and development of surfaces concept for	or simple solids					
CO5- Cor	nstruct the is	ometric and perspective projections of simple	e solids					
			Lesson P	lan				
			T / R*	Donio da	Mode of Teaching	Blooms Lovel (L1	Τ	
Sl. No.		Topic(s)	Book	Required	(BB / PPT / NPTEI MOOC / etc)	L6)	СО	РО
UNIT I	PLANE	CURVES AND FREEHAND SKET	CHING			ŀ		
1	BIS conver folding of	ntions and specifications – Size, layout and drawing sheets	T1	1	NPTEL	L1,L2	CO1	PO1, PO2, PO12
2	Basic Geor	netrical constructions, Curves used in	T1	1	BB/NPTEL	L2	CO1	PO1, PO2
3	Conics – C	construction of ellipse, parabola and	T1	1	BB	L3	CO1	PO1, PO2,
4	Constructi	on of eveloid	T1	2	BB	L3	CO1	PO1, PO2,
	aanstructie	n of involutor of caucro and circle	 T1	- 1	DD	1.3	CO1	PO3, PO12 PO1, PO2,
3		in or involutes of square and circle		1	DD	L5		PO3, PO12 PO1, PO2,
6	Tutorial		T1 & R1	12	-		CO1	PO3, PO12
Suggestee *Tutorials	d Activity: . s / Assignme	Assignment / Case Studies / Tuorials/ Qui ent	iz / Mini Projects	/ Model Dev	eloped/others Plan	ied if any		
	U							
Evoluctio	n mathad							
*based on	answer she	ets and direct interaction during Tutorials						
UNIT I	I PROJE	CTION OF POINTS, LINES AND	PLANE SURF	ACE				
7	Orthograp	nic projection- principles-Principal planes-	T1	1	BB	L1,L2	CO2	PO1, PO2,
8	Projection	projection-projection of points of straight lines (only First angle	T1	2	BB	L3	CO2	PO12 PO1, PO2, PO3

	Determination of true lengths and true inclinations by						
9	rotating line method and traces Projection of planes	T1	3	BB	L3	CO2	PO1, PO2,
	(polygonal and circular surfaces) inclined to both the					0.02	PO3
	principal planes by rotating object method.						POL PO2
10	Tutorial	T1 & R1	12	-	L3	CO2	PO1, PO2, PO3, PO12
Suggestee *Tutorials	d Activity: Assignment / Case Studies / Tuorials/ Qu s / Assignment	iz / Mini Projects /	Model Dev	eloped/others Planne	d if any		
Evaluation *based on	on method a answer sheets and direct interaction during Tutorials						
UNIT I	II PROJECTION OF SOLIDS AND FREE	IAND SKETCH	IING	1	1		
11	Projections of prisms,	T1	1	BB	L2, L3	CO3	PO1, PO2, PO3, PO12
12	Projections of pyramids,	T1	1	BB	L3	CO3	PO1, PO2, PO3, PO12
13	Projections of cylinder,	T1	1	BB	L3	CO3	PO1, PO2, PO3
14	Projections of cone and	T1	1	BB	L3	CO3	PO1, PO2, PO3
15	Projections of truncated solids	T1	1	BB	L3	CO3	PO1, PO2, PO3, PO12
16	Visualization concepts and Free Hand sketching - Layout of views & multiple views from pictorial views of objects	T1	1	BB	L1, L2, L3	CO3	PO1, PO2, PO12
17	Tutorial	T1 & R1	12	-	L3	CO3	PO1, PO2, PO3, PO12
Evaluation *based on	on method a finishing of model design						
UNIT I	V PROJECTION OF SECTIONED SOLIDS	S AND DEVELO	OPMENT	OF SURFACES			
18	Sectioning of solids - Prism	T1	1	BB	L1, L2, L3	CO4	PO1, PO2, PO3, PO12
19	Pyramids	T1	1	BB	L3	CO4	PO1, PO2, PO3
20	Development of Prism	T1	1	BB	L1, L2, L3	CO4	PO1, PO2, PO3, PO12
21	Pyramids	T1	2	BB	L3	CO4	PO1, PO2, PO3
22	Tutorial	T1 & R1	12	-	L3	CO4	PO1, PO2, PO3, PO12
Suggestee *Tutorials Evaluatio *based on	d Activity: Assignment / Case Studies / Tuorials/ Qu s / Assignment on method a answer sheets and direct interaction during Tutorials	iz / Mini Projects /	Model Dev	eloped/others Planne	d if any		
	/ ISOMETRIC AND PERSPECTIVE PROT	FCTIONS					
	Principles of isometric projection - isometric scale		1	1	1		DOL DO2
23	-Isometric projections of simple solids truncated solids - Prisms, pyramids, cylinders, cones-	T1	2	BB	L1, L2, L3	CO5	PO3, PO12 PO1 PO2
24	combination of two solid objects	T1	2	BB	L3	CO5	PO3

25	Perspectiv	ve projectio	n of simple	solids		1	Γ1	2	E	BB	L1,L	.2, L3	CO5	PO1, PO2, PO3, PO12
26	Tutorial					T1 a	& R1	12		-	I	.3	CO5	PO1, PO2, PO3
Suggestee *Tutorials	d Activity: s / Assignn	Assignment	nt / Case S	tudies / T	uorials/ Qu	iz / Mini I	Projects / N	1 Iodel Deve	eloped/oth	ers Planne	d if any			1
Evaluation	on method answer sh	eets and dir	ect interact	ion during	Tutorials									
				and an ing	1 40011410									
Content I	Beyond th	e Syllabus	Planned											
1	Scale's													
2	Trapizoidal method													
						Т	Text Book	s						
1	Natrajan	K.V., —A te	ext book of	Engineerir	ng Graphicsl	, Dhanalak	shmi Publi	shers, Cher	mai, 2009.					
2	Venugopa	al K. and Pr	abhu Raja	V., —Engir	neering Grap	hicsl, New	Age Intern	ational (P)	Limited, 2	008				
						Ref	erence Bo	oks						
1	Bhatt N.I	D. and Panel	hal V.M., –	–Engineeri	ng Drawing	, Charotar	Publishing	House, 50	h Edition,	2010				
2	Basant Ag	garwal and a	Agarwal C.	.M., —Eng	ineering Dra	wingl, Tata	a McGraw	Hill Publisl	ning Comp	any Limite	d, New De	lhi, 2008		
3	Gopalakr	ishna K.R.,	—Enginee	ring Drawi	ngl (Vol. I&	II combine	d), Subhas	Stores, Bar	igalore, 20	07				
	L				/	Website	URL Re	eferences						
1	https://np	tel.ac.in/cou	urses/112/1	03/112103	019/									
						Bl	ooms Lev	el						
Level 1 (L1) : Remembering							Level 4 (L4) : Ana	lysing				Higher	Projects /
Level 2 (L2) : Understanding Order						Hour	Level 5 (L5) : Eva	luating				Order	Mini
Level 3 (L3) : Applying Thinking						Exams	Exams Level 6 (L6) : Creating						Thinking	Projects
		Maj	pping sy	llabus w	vith Bloor	n's Taxo	nomy L	OT and H	ЮТ					
Uni	t No		Unit	Name		L1	L2	L3	L4	L5	L6	LOT	НОТ	Total
Un	nit 1	PLANE CUF	RVES			1	2	4				7	0	7
Un	nit 2	PROJECTIO SURFACE	N OF POINT	S, LINES AN	D PLANE	1	1	3				5	0	5
Un	nit 3	PROJECTIO	N OF SOLID	S & FREE HA	AND SKETCH	1	2	7				10	0	10
Unit 4 PROJECTION OF SECTIONED SOLIDS AND DEVELOPMENT OF SURFACES					OS AND	2	2	5				9	0	9
Un	nit 5	ISOMETRIC	C AND PERSE	PECTIVE PRO	DJECTIONS	2	2	4				8	0	8
		То	otal			7	9	23	0	0	0	39	0	39
Total Percentage						17.9487	23.0769	58.9744	0	0	0	100	0	100
CO PO Mapping														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	1	2									2	1	
CO2	3	1	2									2	1	
CO3	3	1	2									2	1	
CO4	3	1	2									2	1	
CO5	3	1	2									2	1	
Avg	3	1	2									2	1	

Justification for CO-PO mapping										
CO1	PO1: Apply the basic Maths to the problem to get solution strongly PO2: Problems are related to Maths/Design modeling Lowerely PO3: Problems are related to complex engineering and design system components moderately PO12: Lifelong learning of engineering problems to the society moderately									
CO2	PO1: Apply the basic Maths to the problem to get solution strongly PO2: Problems are related to Maths/Design modeling Lowerely PO3: Problems are related to complex engineering and design system components moderately PO12: Lifelong learning of engineering problems to the society moderately									
СОЗ	PO1: Apply the basic Maths to the problem to get solution strongly PO2: Problems are related to Maths/Design modeling Lowerely PO3: Problems are related to complex engineering and design system components moderately PO12: Lifelong learning of engineering problems to the society moderately									
CO4	PO1: Apply the basic Maths to the problem to get solution strongly PO2: Problems are related to Maths/Design modeling Lowerely PO3: Problems are related to complex engineering and design system components moderately PO1: Lifelong learning of engineering problems to the society moderately									
СО5	PO1: Apply the basic Maths to the problem to get solution strongly PO2: Problems are related to Maths/Design modeling Lowerely PO3: Problems are related to complex engineering and design system components moderately PO12: Lifelong learning of engineering problems to the society moderately									
	3 High level 2 Moderate level 1 Low level									
Name & Sign of Faculty Incharge : Mr.Mohan S R										
Name & Sign of Subject Expert : Mr.Mohan S R										
Head of the Department : Dr.Shunmugasundaram M										

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