

Branch Name:	Computer Engineering / Information Technology / Artificial Intelligence and Data Science / Information and Communication Technology / Mechanical Engineering / Civil Engineering/ Electrical Engineering / Artificial Intelligence and Machine Learning / Electronics and Communication Engineering
Program Code:	ET103 / ET105 / ET108 / ET107 / ET101 / ET106 / ET109 / ET114 / ET116
Course Title:	Engineering Graphics and Design Practical
Course Code:	2ET1000108P
Pre-requisite Course:	Zeal to learn the subject

Course Objectives:

CO1. Understand the importance and principles of engineering drawing by hand practice.

CO2. Understand the isometric and orthographic projections of different objects.

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								
					Theory (Marks)				Practical (Marks)				Total (Marks)
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	-	-	2	2	-	-	-	-	10	25	10	25	50

Course Contents:

Sr. No	Detail of Practicals	Contact Hours
1.	Practice sheet (which includes dimensioning methods, different types of line, construction of different polygon, divide the line and angle in parts, use of stencil)	2
2.	Plane scale and diagonal scale (At least Three Examples)	2
3.	Loci of points (At least Three Examples)	2
4.	Engineering curves (At least Three Examples)	2
5.	Projection of line (At least Three Examples)	2
6.	Projection of plane (At least Three Examples)	2
7.	Projection of solid, section of solid (At least Three Examples)	2
8.	Orthographic projection (At least Two Examples)	2
9.	Isometric projection (At least Two Examples)	2
10.	Orthographic drawing (three views) using Computer Aided Drawing.	2

Reference Books:

1. A Text Book of Engineering Graphics by P. J. Shah S.Chand & Company Ltd., New Delhi
2. Elementary Engineering Drawing by N. D. Bhatt Charotar Publishing House, Anand
3. A text book of Engineering Drawing by R. K. Dhawan, S.Chand & Company Ltd., New Delhi
4. A text book of Engineering Drawing by P. S. Gill, S. K. Kataria & sons, Delhi
5. Engineering Drawing by B. Agrawal and C M Agrawal, Tata McGraw Hill, New Delhi.

Course Learning Outcomes (CLO):

CLO	Description	Bloom's Taxonomy Level
CLO1	To know and understand the conventions and the methods of engineering drawing.	2 Understanding
CLO2	To improve their technical communication skill in the form of communicative drawings.	1 Remembering
CLO3	Interpret engineering drawings using fundamental technical mathematics.	3 Applying 4 Analyze
CLO4	Construct basic and intermediate geometry.	2 Understanding 6 Creating
CLO5	To improve their visualization skills so that they can apply these skills in developing new products.	5 Evaluating
CLO6	Comprehend the theory of projection.	2 Understanding

Mapping of CLO with PO and PSO

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2
CLO1	M	M	L			M	L				L			
CLO2			M	H	L	L							L	
CLO3		L			H			L	M				M	
CLO4		L	M		M			L	M	M			M	
CLO5		M		M	L		L							M
CLO6								M		M	L	L		L

H: High, M: Medium, L: Low