

Institute / School Name	School of Mechanical Engineering		
Program Name	BE		
Course Code	MEL4102		
Course Name	Engineering Graphics		
Lecture / Tutorial (per week)	2 + 4	Course Credits	4
Course Coordinator Name	KZ Molla		

1. Scope and Objectives of the Course

1. To understand various types of drawing techniques as per IS code of practice (SP46)
2. To develop the imagination and acquire drawing skills to prepare orthographic projections of points, lines, planes and solid objects in various positions.
3. To communicate the technical ideas through isometric drawings.
4. To develop concepts of development of surfaces and sectioning of solids.

2. Textbooks

TB1: "Engineering Drawing", P.S. Gill ; Eleventh edition, S.K. Kataria & Sons.

TB2: "Engineering Drawing", R. K. Dhawan; 2014 Edition, S. Chand and Company.

3. Other readings and relevant websites

S.No.	Link of Journals, Magazines, websites and Research Papers
1.	http://www.mhhe.com/jolhe/ed
2.	http://www.tech.plymouth.ac.uk/dmme/dsgn131/DSGN131_Course_Notes.pdf
3.	http://kahuna.sdsu.edu/~johnston/drawing_basics.html

5. Course Plan

Lecture Number	Topics	Lecture Held	Cause of Deviation
1-5 L1	Various types of lines, principles of dimensioning, size and location dimensions, symbols, conventions, and lettering as per IS code of practice (SP-46) for general Engg. Drawing. Practice of drawing various types of lines and dimensioning exercises. Drawing exercises pertaining to Symbols, Conventions and exercises on lettering techniques free hand printing of letters and numerals in 5 mm sizes, vertical and inclined.	1-5	
6-10 L2	Scales (plane and diagonal)	6-10	
11-15 L3	Concept of horizontal and vertical planes. First and third angle projections; projection of points	11-15	
16-20 L4	lines, true lengths of lines and their horizontal and vertical traces (inclination to one ref plane)	16-20	
21-25 L5	lines, true lengths of lines and their horizontal and vertical traces (inclination to both ref plane)	21-25	
ST-1 (18.02.2017 To 23 .02. 2017)			
26-30 L6	Projection of planes and their traces.	26-30	
31-35 L7	Projection of Right solids; solids of rotation and polyhedrons etc (inclination to one ref plane)	31-35	
36-40 L8	Projection of Right solids; solids of rotation and polyhedrons etc (inclination to both ref plane)	36-40	
41-45 L9	Principles of sectioning, types of sectioning, and their practice on projection of solids, sectioning by auxiliary planes	41-45	
46-50 L10	Development of surfaces of cylinders, cones, pyramids and prisms .	46-50	
ST-2 (01 .04 2017 To 08.04. 2017)			
51-55 L11	Practice in Orthographic Projections	51-5	
56-60 L12	Concept of Isometric views; Isometric scale and exercises on isometric views.	56-60	
ST-3 (01.05.2017 To 05.05.2017)			

6. Evaluation Scheme:

Component 1*	Sessional Tests (STs) Two*	40
--------------	----------------------------	----

Component 2**	Assignment sheets**	20
Component 3***	End Term Examination***	40
	Total	100

* There are Three Sessional Tests (STs) for all theory papers, all are compulsory and the average of best two is considered.

** There are 12 assignment sheets to be made, one from each individual lecture number.

*** The End Term Comprehensive examination will be held at the end of semester. The mandatory requirement of 75% attendance in all theory classes is to be met for being eligible to appear in this component.

SYLLABUS

This Document is approved by:

Designation	Name	Signature	% wise weightage
Course Coordinator	KZ Molla		
Drawing Techniques: - Various types of lines, single and double, Isometric scales (plane and diagonal) and relocation dimensions, symbols, conventions.	M. G. S. Singh, D. Alroep Kumar, Singh		
Revision: - Practice on projection IS code of practice (SP-46) for general Engg. Drawing. Practice of drawing various types of lines and dimensioning exercises. Drawing exercises pertaining to Symbols, Conventions and exercises on lettering techniques free hand printing of letters and numerals in 5 mm sizes, vertical and inclined.			
Projection of Points and Lines: - Concept of horizontal and vertical planes. First and third angle projections; projection of points and lines, true lengths of lines and their horizontal and vertical traces.			
Projection of Planes: - projection of planes and their traces.			
Projection of Solids: - Projection of Right solids; solids of rotation and polyhedrons etc, Projection of solids with cases when (a) inclined to one ref plane and (b) inclined to both ref planes.			
Sectioning of solids: - Principles of sectioning, types of sectioning, and their practice on projection of solids, sectioning by auxiliary planes.			
Isometric projections and Orthographic projections: - Concept of isometric views; isometric scale and exercises on isometric views. Practice in orthographic projections.			
Development of Surfaces: - Development of surfaces of cylinders, cones, pyramids and prisms.			