



DEPARTMENT OF PRODUCTION ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	B.Tech. I Semester - Metallurgical and Materials Engineering(MME)		
Course Title	Engineering Graphics		
Course Code	MEIR12	No. of Credits	3
Course Code of Pre-requisite subject(s)	Nil		
Session	July 2023	Section (if, applicable)	1 st year
Name of Faculty	M Sivakumar/ D Selvakumar	Department	Production Engineering
Official Email	siva.sky06@gmail.com/ 414122001@nitt.edu	Telephone No.	9677521121
Name of Course Coordinator(s) (if, applicable)	-		
Official E-mail	-	Telephone No.	-
Course Type (please tick appropriately)	<input checked="" type="checkbox"/> Core course	<input type="checkbox"/> Elective course	
Syllabus (approved in BoS)			
Fundamentals Drawing standard - BIS, dimensioning, lettering, type of lines, scaling- conventions.			
Orthographic projection Introduction to orthographic projection, drawing orthographic views of objects from their isometric views - Orthographic projections of points lying in four quadrants.			
Orthographic projection of lines parallel and inclined to one or both planes Orthographic projection of planes inclined to one or both planes.			
Projections of simple solids - axis perpendicular to HP, axis perpendicular to VP and axis inclined to one and both planes.			
Sectioning of solids Section planes perpendicular to one plane and parallel or inclined to other plane.			
Intersection of surfaces Intersection of cylinder & cylinder, intersection of cylinder & cone, and intersection of prisms.			
Development of surfaces Development of prisms, pyramids and cylindrical & conical surfaces.			
Isometric and perspective projection: Isometric projection and isometric views of different planes and simple solids, introduction to perspective projection.			
References			
1. Bhatt, N. D. and Panchal, V.M, Engineering Drawing, Charotar Publishing House, 2010.			
2. Ken Morling, Geometric and Engineering Drawing, 3rd Edition, Elsevier, 2010			
3. Jolhe, D. A., Engineering drawing, Tata McGraw Hill, 2008			
4. Shah, M. B. and Rana, B. C., Engineering Drawing, Pearson Education, 2009			
5. K.V. Natarajan, A text book of Engineering Graphics, Dhanalakshmi Publishers, Chennai, 2006.			



COURSE OBJECTIVES

1. Irrespective of engineering discipline, it has become mandatory to know the basics of Engineering Graphics. The student is expected to possess efficient drafting skills depending on the operational function in order to perform the day-to-day activity.
2. Provide a neat structure of the industrial drawing.
3. Enables knowledge about the position of the component and its forms Interpretation of technical graphics assemblies.
4. Preparation of machine components and related parts.

MAPPING OF COs with POs

Course Outcomes	Program Outcomes(PO)
1. At the end of the course student will be able to visualize the engineering components	1, 4, 5
2. Ability to create the prototypes	1, 5, 12
3. Ability to draft and present engineering designs & ideas	1, 6, 10, 12

COURSE PLAN – PART II

COURSE OVERVIEW

- Fundamental of Drawings and Standards.
- Geometrical Constructions of basic shapes and conic sections.
- Orthographic views and projections of points, lines, planes, and solids.
- Sections, Intersections, and Developments of solids.
- Isometric and Perspective projections.

COURSE TEACHING AND LEARNING ACTIVITIES

S.No	Week/Contact Hours	Topic	Mode of Delivery
1.	Week 1	Introduction to Engineering Graphics,	PPT, Chalk and Talk
2.	Week 2	Lettering and dimensions	PPT, Chalk and Talk
3.	Week 3	Construction of basic geometric shapes	PPT, Chalk and Talk
4.	Week 4	Orthographic projections and orthographic view of objects from their isometric views	PPT, Chalk and Talk
5.	Week 5	Projection of points, Projection of lines	PPT, Chalk and Talk
6.	Week 6	Projections of solids	PPT, Chalk and Talk
7.	Week 7	Section of solids- Parallel and perpendicular planes	PPT, Chalk and Talk
8.	Week 8	Section of solid- Inclined planes, Intersection of surfaces	PPT, Chalk and Talk
9.	Week 9	Development of surfaces- Cylinder	PPT, Chalk and Talk



10.	Week 10	Viva-Voce	-
11.	Week 11	Development of surfaces- Pyramid and prism	PPT, Chalk and Talk
12.	Week 12	Isometric projection	PPT, Chalk and Talk
13.	Week 13	Perspective projection	PPT, Chalk and Talk
14.	Week 14	End Semester Examination and Viva-voce	-

COURSE ASSESSMENT METHODS

S.No	Mode of Assessment	Week	Duration	% Weightage
1	Continuous Assessment	Every week	-	50 ✓
2	Viva-voce	Week 10	30 minutes	10 ✓
3	Assignments I & II	-	-	10 ✓
CPA	Compensation: Viva-voce	Week 10	-	10
4	End Semester Examination	Week 16	3 Hours	30 ✓

COURSE EXIT SURVEY

Feedback from the students during class committee meetings
End semester feedback on course outcomes

COURSE POLICY (including compensation assessment to be specified)

MODE OF CORRESPONDENCE

Students can contact through email or MS Teams for clarifying doubts.

COMPENSATION ASSESSMENT POLICY

If any student is not able to attend any of the class practice session due to genuine reason, student is permitted to attend one compensation class practice session before end semester exam.

Attendance Policy

(As per Institute rules)



Academic Dishonesty & Plagiarism

Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.

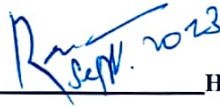
- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.
- The above policy against academic dishonesty shall be applicable for all the programmes.

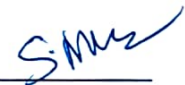
ADDITIONAL INFORMATION, IF ANY: NIL

FOR APPROVAL


Course Faculty _____

CC- Chairperson _____


HOD _____



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