

Department Of Civil Engineering

Name of the Faculty : Ms. Aartil
Semester : 6th
Subject: Steel Structures Design and Drawing (T)
Lesson Plan Duration : 15 weeks (from 20.01.2025 to 02.05.2025)

Work Load (Lecture/Practical) per week (in hours): Lectures-02, Practicals-06

Week	Theory		Delivery Date
	Lecture day	Topic (including assignment/test)	
1st	1	1.1.1 Properties of structural steel as per BIS Code	
	2	1.1.2 Designation of structural steel sections as per IS handbook and	
2nd	3	Riveted Connections- Types of Rivet,	
	4	Permissible stresses in rivets, types of riveted joints	
3rd	5	specifications as per BIS-800, Failure of riveted joint, strength and efficiency of riveted joint,	
	6	Design of Riveted Connection only axially loaded number (No staggered riveting)	
4th	7	Bolt Connections:- Types of bolt, permissible stresses in bolt,	
	8	Types of bolted joints,	
5th	9	First Sessionals	
	10	specifications for bolted joints as per B IS 800. Failure of a bolted joint	
6th	11	Assumptions in the theory of bolted joints. Strength and efficiency of a bolted joint.	
	12	Design of bolted joints for axially loaded members (No Staggered bolts).	
7th	13	Welded connections:- Types of welds and welded joints, advantages and disadvantages of welded joints	
	14	design of fillet and butt weld for axially loaded members	
8th	15	Tension Members- Analysis and design of single section tension members and their riveted and welded connections with gusset plate as per IS:800-2007	
	16	Analysis and design of double angle section tension members and their riveted and welded connections with gusset plate as per IS:800-2007	
9th	17	Analysis and design of single and double angle sections compression members subjected to axial load.	
	18	Revision	
	19	Second Sessionals	
	20	Roof Trusses- Form of trusses, pitch of roof truss, spacing of trusses, spacing of purlins, connection between purlin and roof covering.	
	21	Connection between purlin and principal rafter (no design, only concept)	

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11th	22	Column Bases:- Types of column bases i.e. slab base, gusseted base. Concept of buckling, effective length, slenderness ratio,	
12th	23	Analysis and Design of axially loaded single section column.	
	24	Beams- Analysis and design of single section simply supported laterally restrained steel beams.	
13th	25	Introduction to plate girder and functions of various elements of a plate girder	
	26	Fabrication and erection of steel structures like trusses, columns and girders	
14th	27	Revision	
	28	Third Sessional	

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