

LESSON PLAN

Academic Session :- 2023-2024

Discipline: Civil.Engineering

Name of teaching faculty: Swagatika Dani

Subject: Structural Design-II(Th.2)

Semester from Date:01/08/2023 to 30/11/2023

Semester: 5th

No. of weeks: 14

4P/week

No. of Days/ week class allotted: 04 period per week(MONDAY, TUESDAY, THURSDAY, FRIDAY)
One class each day

Total period: 60

MONTH	Week	DATE	DAYS/PERIOD	Syllabus to be covered	NO. OF PERIODS AVAILABLE
				CHAPTER-1- Introduction (5P)	5
A U G U S T	1ST	01-08-2023	Tuesday	1.1.Common steel structures, Advantages and disadvantages of steel structures; Types of steel, properties of structural steel	1
		03-08-2023	Thursday	1.2.Rolled steel sections, special considerations in steel design	1
		04-08-2023	Friday	1.3.Loads and load combinations	1
	2ND	07-08-2023	Monday	1.4.Structural analysis and design philosophy	1
		08-08-2023	Tuesday	1.5.Brief review of Principles of Limit State design	1
				CHAPTER-2-Structural Steel Fasteners and connections(10P)	10
				2.1.Bolted Connection	
		10-08-2023	Thursday	2.1.1.Classification of bolts, advantages and disadvantages of bolted connections	1
		11-08-2023	Friday	2.1.2. Different terminology, Spacing and edge distance of bolt holes	1
		14-08-2023	Monday	2.1.3.Types of bolted connections.	1
		17-08-2023	Thursday	2.1.4.Types of action of fasteners, assumptions and principles of design	1
		18-08-2023	Friday	2.1.5.Strength of plates in a joint, strength of bearing type bolts(shear capacity and bearing capacity), reduction factors, and shear capacity of HSFG bolts	1
	4TH	21-08-2023	Monday	2.1.6.Analysis and design of joints using bearing type and HSFG bolts(expert eccentric load and prying forces)	1
		22-08-2023	Tuesday	2.1.7.Efficiency of a joint	1
				2.2.Welded connections:	
		24-08-2023	Thursday	2.2.1. Advantages and Disadvantages of welded connection	1
		25-08-2023	Friday	2.2.2.Types of welded joints and specifications for welding	1
		28-08-2023	Monday	2.2.3.Design stresses in welds, strength of welded joints	1
	5TH	29-08-2023	Tuesday	Class test	1
				CHAPTER-3-Design of Steel tension Members(10P)	10
31-08-2023		Thursday	3.1 .Common shapes of tension members.	1	
			3.2.Common shapes of tension members	1	
S	1ST	01-09-2023	Friday	3.3.Maximum values of effective slenderness ratio	1
	2ND	04-09-2023	Monday	3.4.Maximum values of effective slenderness ratio	1
		05-09-2023	Tuesday	3.5.Analysis of tension member	1
		07-09-2023	Thursday	3.6.Analysis of tension member	1
		08-09-2023	Friday	3.6.Analysis of tension member	1

E P T E M B E R	3RD	11-09-2023	Monday	3.7.Design of tension members	1	
		12-09-2023	Tuesday	3.8.Design of tension members	1	
		14-09-2023	Thursday	3.8.Design considering strength only	1	
		15-09-2023	Friday	3.9.Design considering concept of block shear failure	1	
	4TH	18-09-2023	Monday	3.10.Design considering concept of block shear failure	1	
				CHAPTER-4-Design of steel compression members.(10P)	10	
		21-09-2023	Thursday	4.1.common shapes of compression members	1	
		04-12-2021	Saturday	4.2.Buckling class of cross sections	1	
		22-09-2023	Friday	4.2.Bulking class of section	1	
	5TH	25-09-2023	Monday	4.3.Slenderness ratio	1	
		26-09-2023	Tuesday	4.4.Design of compressive stress	1	
		28-09-2023	Thursday	4.5.Design of compressive stress	1	
	O C T O B E R	1ST	03-10-2023	Tuesday	4.6.Design strength of compression members	1
05-10-2023			Thursday	4.7.Design strength of compression member	1	
06-10-2023			Friday	4.8.Analysis of compression member	1	
2ND		09/10/2023	09/10/2023	4.9.Design of compression members	1	
		10-10-2023	Tuesday	4.10.Design of compression members	1	
				5.CHAPTER-5-Design of steel beams(10P)	10	
		12-10-2023	Thursday	5.1.common cross sections	1	
		13-10-2023	Friday	5.2.Classification of steel cross section	1	
3RD		16-10-2023	Monday	5.3.Classification of steel cross section	1	
		17-10-2023	Tuesday	5.4.Deflection limits	1	
		19-10-2023	Thursday	5.5.Web buckling	1	
		20-10-2023	Friday	5.6.web crippling	1	
4TH		30-10-2023	Monday	5.7.Design of laterally supported beam against bending	1	
		31-10-2023	Tuesday	5.8. Design of laterally supported beam against bending	1	
N O V E M B E R		1ST	02-11-2023	Thursday	5.9.Design of laterally supported beam against shear	1
			03-11-2023	Friday	5.10.Design of laterally supported beam against shear	1
	2ND			CHAPTER-6-Design of Tubular steel structure(6P)	6	
		06-11-2023	Monday	6.1.Round tubular sections	1	
		07-11-2023	Tuesday	6.2.permissible stresses	1	
		09-11-2023	Thursday	6.3.Permissible stresses	1	
		10-11-2023	Friday	6.4.Tubular compression members	1	
	3RD	13-11-2023	Monday	6.5. Tubular tension members	1	
		14-11-2023	Tuesday	6.6.Joints in Tubular trusses	1	
		16-11-2023	Thursday	CHAPTER-7-Design of Masonry structures (9P)	9	
		17-11-2023	Friday	7.1.Design consideration of masonry walls	1	
	4TH	20-11-2023	Monday	7.2.Design consideration of masonry walls	1	
		21-11-2023	Tuesday	7.3.Design consideration of masonry columns	1	
		23-11-2023	Thursday	7.4.Design consideration of masonry columns	1	
		24-11-2023	Friday	7.5. Load bearing and non-load bearing walls	1	
	5TH	28-11-2023	Tuesday	7.6. Permissible stresses	1	
		30-11-2023	Thursday	7.7.Slenderness ratio	1	
			EXTRA		7.8.Effective length	1
			CLASSES		7.9.Effective height and effective thickness	1