

LESSON PLAN

Session	::	Winter – 2022
Course Type	::	Theory
Semester/Branch	::	5th Semester, Civil Engineering
Subject (with code)	::	Structural Design-II (Th.2)
Contact hours/week	::	4 hours
Name of Faculty	::	Suchismita padhi

SL. No	CLAS S ID	COURSE CONTENT	MODE OF DELIVERY	EXHIBIT/ REFERENCE
1	1.1	Common steel structures.	Lecture	Study material
2	1.2	Advantages & disadvantages of steel structures.	Lecture	Study material
3	1.3	Types of steel, properties of structural steel.	Lecture	Study material
4	1.4	Rolled steel sections.	Lecture	Study material
5	1.5	special considerations in steel design.	Lecture	Study material
6	1.6	Loads and load combinations.	Lecture	Study material
7	1.7	Structural analysis and design philosophy	Lecture	Study material
8	2.1	Bolted Connections	model with video presentation	https://nptel.ac.in/courses/105105162
9	2.2	Classification of bolts.		Study material
10	2.3	advantages and disadvantages of bolted connections	Lecture	Study material
11	2.4	Different terminology, spacing and edge distance of bolt holes.	Lecture	Study material
12	2.5	Types of bolted connections.	Video presentation	https://www.youtube.com/watch?v=EZRAvbHi9yE
13	2.6	Problems on bolted connection	Lecture	Study material
14	2.7	Types of fasteners	Student presentation	Study material
15	2.8	assumptions and principles of design	Lecture	Study material
16	2.9	Strength of plates in a joint, strength of bearing type bolts (shear capacity& bearing capacity)	Lecture	Study material

17	2.10	reduction factors, and shear capacity of HSFG bolts	Lecture	Study material
18	2.11	Analysis & design of Joints using bearing type and HSFG bolts (except eccentric load and prying forces)	Lecture	Study material
19	2.12	Problems on HSFG bolt.	Lecture	Study material
20	2.13	Efficiency of a joint.	Lecture	Study material
21	2.14	problems	Lecture	Study material
22	2.15	problems	Lecture	Study material
23	2.16	problems	Lecture	Study material
24	2.17	Advantages and Disadvantages of welded connection	Lecture	Study material
25	2.18	Types of welded joints .	Video presentation	https://www.youtube.com/watch?v=MarnKM9e0qM
26	2.19	Design stresses in welds.	Lecture	Study material
27	2.20	Strength of welded joints	Lecture	Study material
28	2.21	specifications for welding	Lecture	Study material
29	2.22	Problems	Lecture	Study material
30	2.23	problems	Lecture	Study material
31	3.1	Common shapes of tension members.	Video presentation	https://www.youtube.com/watch?v=gLUtu51Yae4
32	3.2	Analysis and Design of tension members.(Considering strength only and concept of block shear failure.	Guest lecture	https://www.youtube.com/watch?v=gLUtu51Yae4
33	3.3	problems	Lecture	Study material
34	4.1	Common shapes of compression members	Lecture	Study material
35		Builtup sections	Video content	https://www.youtube.com/watch?v=23ir7VemF8I
36	4.2	Design compressive stress and strength of compression members	Lecture	Study material
36	4.3	Analysis and Design of compression members (axial load only).	Lecture	Study material
37	4.4	Problems	Lecture	Study material
38	5.1	Common cross sections and their classification.	Lecture	Study material
39	5.2	Deflection limits, web buckling and web crippling.	Lecture	Study material
40	5.3	Design of laterally supported beams against bending and shear	Lecture	Study material
41	5.4	Problems	Lecture	Study material
42	6.1	Round Tubular Sections, Permissible Stresses	Lecture	Study material
43	6.2	Tubular Compression & Tension Members	Lecture	Study material
44	6.3	Joints in Tubular trusses	Lecture	Study material
45	7.1	Design considerations for Masonry walls & Columns	Lecture	Study material

46	7.2	Load Bearing & Non-Load Bearing walls	Lecture	Study material
47	7.3	Permissible stresses. Slenderness Ratio	Lecture	Study material

Signature of Concern Teacher