

<b>LESSON PLAN FOR WINTER 2024</b>			
<b>DISCIPLINE:- CIVIL ENGG.</b>	<b>SEMESTER:-5th SEM SEC B</b>	<b>NAME OF THE TEACHING FACULTY:- R. BHANU (GF)</b>	
<b>SUBJECT:- STRUCTURAL DESIGN-II(TH-2)</b>	<b>NO. OF DAYS/PER WEEK CLASS ALLOTTED:- 4T</b>	Semester from date: 01/07/2024 to 08/11/2024 No. of Weeks :19 Topics to be covered:-	
<b>WEEK</b>	<b>CLASS DAY</b>	<b>THEORY TOPICS</b>	<b>Remarks</b>
<b>8TH WEEK</b>		<b>1.0 Introduction:(5P)</b>	
	<b>1st</b>	1.1 Common steel structures, Advantages & disadvantages of steel structures.	
	<b>2nd</b>	1.2 Types of steel, properties of structural steel. 1.3 Rolled steel sections, special considerations in steel design.	
	<b>3rd</b>	1.4 Loads and load combinations. 1.5 Structural analysis and design philosophy.	
<b>9TH WEEK</b>	<b>1st</b>	1.6 Brief review of Principles of Limit State design.	
		<b>2.0 :Structural Steel Fasteners and</b>	
	<b>2nd</b>	2.1 Bolted Connections 2.1.1 Classification of bolts, advantages and disadvantages of bolted connections.	
	<b>3rd</b>	2.1.2 Different terminology, spacing and edge distance of bolt holes. 2.1.3 Types of bolted connections.	
<b>10 WEEK</b>	<b>1st</b>	2.1.4 Types of action of fasteners, assumptions and principles of design.	
	<b>2nd</b>	2.1.5 Strength of plates in a joint, strength of bearing type bolts (shear capacity& bearing capacity), reduction factors, and shear capacity of HSFG bolts. 2.1.6 Analysis & design of Joints using bearing type and HSFG bolts (except eccentric load and prying forces)	
<b>11 WEEK</b>	<b>1st</b>	2.1.7 Efficiency of a joint. 2.2 Welded Connections: 2.2.1 Advantages and Disadvantages of welded connection	
	<b>2nd</b>	2.2.2 Types of welded joints and specifications for welding 2.2.3 Design stresses in welds.	
	<b>3rd</b>	2.2.4 Strength of welded joints.	
<b>12th WEEK</b>		<b>3-Design of Steel tension Members(10P)</b>	
	<b>1st</b>	3.1 Common shapes of tension members.	
	<b>2nd</b>	3.2 Maximum values of effective slenderness ratio.	
	<b>3rd</b>	3.2 Maximum values of effective slenderness ratio.	
	<b>1st</b>	3.4 Analysis and Design of tension members.( Considering strength only and concept of block shear failure.)	

13th WEEK	2nd	3.4 Analysis and Design of tension members.( Considering strength only and concept of block shear failure.)	
	3rd	3.4 Analysis and Design of tension members.( Considering strength only and concept of block shear failure.)	
14th WEEK	1st	3.4 Analysis and Design of tension members.( Considering strength only and concept of block shear failure.)	
	3rd	3.4 Analysis and Design of tension members.( Considering strength only and concept of block shear failure.)	
15th WEEK		<b>PUJA VACATION</b>	
16th WEEK		<b>4.Design of Steel Compression</b>	
	1st	4.1 Common shapes of compression members.	
	3rd	4.2 Buckling class of cross sections, slenderness ratio	
17th WEEK	1st	4.2 Buckling class of cross sections, slenderness ratio	
	2nd	4.3 Design compressive stress and strength of compression members.	
	3rd	4.3 Design compressive stress and strength of compression members.	
18th WEEK	1st	4.4 Analysis and Design of compression members (axial load only).	
	2nd	4.4 Analysis and Design of compression members (axial load only) <span style="float: right;">5.Design of Steel beams:</span>	
		5.1 Common cross sections and their classification.	
		<b>5. Design of Steel beams:(10P)</b>	
3rd	5.1 Common cross sections and their classification.		
19th WEEK	1st	5.2 Deflection limits, web buckling and web crippling.	
	2nd	5.3 Design of laterally supported beams against bending and shear.	
EXTRA CLASSES		<b>6. Design of Tubular Steel Structures:</b> 6.1 Round Tubular Sections, Permissible Stresses	
		6.2 Tubular Compression & Tension Members 6.3 Joints in Tubular trusses	
		<b>7. Design of Masonry Structures:</b> 7.1 Design considerations for Masonry walls & Columns, Load Bearing & Non-Load Bearing walls, Permissible stresses, Slenderness Ratio, Effective Length, Height & Thickness.	

*R. Bharu*

**SIGNATURE OF THE FACULTY**



