UTKAL INSTITUTE OF ENGINEERING & TECHNOLOGY

'DISCIPLINE: **Civil Engineering** **SUBJECT:** Structural Design- II	SEMESTER: **5th Sem** No of Days/Per week class allotted: **4** **Class P/W(60)**	NAME OF THE TEACHING FACULTY: ER. BIJAYALAXMI SAHOO
		Semester From Date:15/09/2022 To Date:22/12/2022 No. Of Weeks: **15**

WEEK	CLASS DAY	THEORY	REMARKS	
1st	1st	Common steel structures, Advantages & disadvantages of steel structures.	Date	Dean/Principal
	2nd	Types of steel, properties of structural steel. Rolled steel sections, special considerations in steel design		
	3rd	Rolled steel sections, special considerations in steel design		
	4th	Loads and load combinations		
2nd	1st	Structural analysis and design philosophy		
	2nd	Brief review of Principles of Limit State design.		
	3rd	Bolted Connections		
	4th	Classification of bolts, advantages and disadvantages of bolted connections.		

3rd	1st	Assignment on Principle of Limit State Design		
	2nd	Different terminology, spacing and edge distance of bolt holes. Types of bolted connections.		
	3rd	Types of action of fasteners, assumptions and principles of design.		
	4th	Strength of plates in a joint, strength of bearing type bolts (shear capacity& bearing capacity), reduction factors, and shear capacity of HSFG bolts.		
4th	1st	Doubt Clear Class on Terminology		
	2nd	Analysis and Design joints using bearing type and HSFG bolts (eccentric load and prying forces)		
	3rd	Efficiency of a joint		
	4th	Welded Connections		
5th	1st	Assignment		
	2nd	Advantages and Disadvantages of welded connection		
	3rd	Types of welded joints and specifications for welding		
	4th	Design stresses in welds		
6th	1st	Numeric problem solve		
	2nd	Numeric problem solve		
	3rd	Numeric problem solve		
	4th	Strength of welded joints.		
	1st	Doubt clear class revision of previous class.		

7th	2nd	Common shapes of tension members		
	3rd	Maximum values of effective slenderness ratio.		
	4th	Doubt clear class		
8th	1st	Analysis and Design of tension members.(Considering strength only and concept of block shear failure.)		
	2nd	Common shapes of compression members		
	3rd	Numeric problem solve		
	4th	Numeric problem solve		
9th	1st	Numeric problem solve		
	2nd	Numeric problem solve		
	3rd	Notebook check and class test		
	4th	Bulking Class of cross section		
10th	1st	slenderness ratio		
	2nd	Design compressive stress and strength of compression members.		
	3rd	Design compressive stress and strength of compression members.		
	4th	Analysis and Design of compression members (axial load only).		
11th	1st	Assignment		
	2nd	Common cross sections and their classification.		
	3rd	Numeric problem solve		
	4th	Deflection limits, web buckling and web crippling.		
12th	1st	Design of laterally supported beams against bending and shear		
	2nd	Doubt clear class		
	3rd	Assignment Question Discussion		

	4th	Round Tubular Sections, Permissible Stresses		
13th	1st	Tubular Compression & Tension Members		
	2nd	Tubular Compression & Tension Members		
	3rd	Joints in Tubular trusses		
	4th	Notebook check and class test		
14th	1st	Numeric problem solve		
	2nd	Design considerations for Masonry walls & Columns		
	3rd	Load Bearing & Non-Load Bearing walls		
	4th	Permissible stresses		
15th	1st	Slenderness Ratio, Effective Length		
	2nd	Height & Thickness.		
	3rd	Doubt Clear class		
	4th	Doubt Clear class		

Tejaswini Das
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HOD

Chittaranjan Parida
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DEAN

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PRINCIPAL