

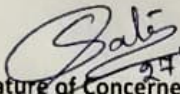
# GOVERNMENT POLYTECHNIC, SAMBALPUR (RENGALI)


NAME OF THE FACULTY: Smt. Shushree Sangita Patel ( Lecturer ), Civil Engineering

LESSON PLAN OF TH-2 STRUCTURAL DESIGN II FOR 5TH SEM, CIVIL ENGG, WINTER 2021 W.E.F. 01.10.2021

WEEK NO.	DATE	TOPIC	PERIODS ASSIGNED PER TOPIC	PERIODS AVAILABLE PER WEEK
W-1	01.10.21 TO 02.10.21	<b>1.0 Introduction:</b> 1.1 Common steel structures, Advantages & disadvantages of steel structures. 1.2 Types of steel, properties of structural steel. 1.3 Rolled steel sections, special considerations in steel design.	5	3
W-2	04.10.21 TO 09.10.21	1.4 Loads and load combinations. 1.5 Structural analysis and design philosophy. 1.6 Brief review of Principles of Limit State design.		2
W-3	21.10.21 TO 23.10.21	<b>2.0 Structural Steel Fasteners and Connections.</b> 2.1 Bolted Connections. 2.1.1 Classification of bolts, advantages and disadvantages of bolted connections.	10	2
W-4	25.10.21 TO 30.10.21	2.1.2 Different terminology, spacing and edge distance of bolt holes. 2.1.3 Types of bolted connections. 2.1.4 Types of action of fasteners, assumptions and principles of design. 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.		4
W-5	01.11.21 TO 06.11.21	2.1.6 Analysis & design of Joints using bearing type and HSFG bolts (except eccentric load and prying forces) 2.1.7 Efficiency of a joint. 2.2 Welded Connections: 2.2.1 Advantages and Disadvantages of welded connection. 2.2.2 Types of welded joints and specifications for welding. 2.2.3 Design stresses in welds. 2.2.4 Strength of welded joints.		4
W-6	08.11.21 TO 13.11.21	<b>3.0 Design of Steel tension Members</b> 3.1 Common shapes of tension members. 3.2 Maximum values of effective slenderness ratio.	10	4+2 EXTRA CLASS
W-7	15.11.21 TO 20.11.21	3.3 Analysis and Design of tension members. ( Considering strength only and concept of block shear failure.)		2+2 EXTRA CLASS
W-8	22.11.21 TO 27.11.21	<b>4.0 Design of Steel Compression members.</b> 4.1 Common shapes of compression members. 4.2 Bulking class of cross sections and slenderness ratio.	10	4+2 EXTRA CLASS
W-9	29.11.21 TO 04.12.21	4.3 Design compressive stress and strength of compression members. 4.4 Analysis and Design of compression members (axial load only).		2+2 EXTRA CLASS

W-10	06.12.21 TO 11.12.21	<b>5.0 Design of Steel beams:</b> 5.1 Common cross sections and their classification. 5.2 Deflection limits, web buckling and web crippling. Design of laterally supported beams against bending and shear.	5.3	10	4+1 EXTRA CLASS
W-11	13.12.21 TO 18.12.21				4+1 EXTRA CLASS
W-12	20.12.21 TO 25.12.21	<b>6.0 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		6	4+2 EXTRA CLASS
W-13	27.12.21 TO 01.01.22	<b>7.0 Design of Masonry Structures:</b> 7.1 Design consideration for masonry walls & Columns Load Bearing & Non-Load Bearing walls, Permissible stresses, Slenderness Ratio, Effective Length, Height & Thickness		9	2+1 EXTRA CLASS
W-14	03.01.22 TO 08.01.22 & Onwards		4+2 EXTRA CLASS		
W-15		REVISION		-	-

  
 Signature of Concerned Faculty

  
 C/S Signature of Senior Lect./ HOD