

PNS SCHOOL OF ENGG. & TECH., MARSHAGHAI
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN
SUBJECT: STRUCTURAL DESIGN -II (5TH SEM)
NAME OF THE LECTURER: Er. SOUDAGAR BEHERA

CHAPTER	MONTH	DATE	TOPIC TO BE COVERED
Introduction	SEP	15.09.22	Common steel structures, Advantages & disadvantages of steel structures.
		16.06.22	Types of steel, properties of structural steel.
		19.09.22	Rolled steel sections, special considerations in steel design.
		20.09.22	Loads and load combinations.
		21.09.22	Structural analysis and design philosophy.
		22.09.22	Brief review of Principles of Limit State design
		23.09.22	Doubt Clearing
Structural Steel Fasteners and Connections	SEP	24.09.22	Classification of bolts, advantages and disadvantages of bolted connections.
		26.09.22	Different terminology, spacing and edge distance of bolt holes.
		27.09.22	Types of bolted connections.
		28.09.22	Types of action of fasteners, assumptions and principles of design.
		29.09.22	Strength of plates in a joint,
		30.09.22	Strength of bearing type bolts (shear capacity& bearing capacity)
	OCT	10.10.22	Reduction factors, and shear capacity of HSFG bolts.
		11.10.22	Analysis of Joints using bearing type and HSFG bolts
		12.10.22	Design of Joints using bearing type and HSFG bolts
		13.10.22	Efficiency of a joint
		14.10.22	Welded Connections:
		15.10.22	Advantages and Disadvantages of welded connection
		18.10.22	Types of welded joints and specifications for welding.
		19.10.22	Design stresses in welds
20.10.22	Strength of welded joints.		
21.10.22	Doubt Clearing		
22.10.22	Class Test		
Design of Steel Tension Members	OCT	26.10.22	Common shapes of tension members.
		27.10.22	Design strength of tension members
		28.10.22	yielding of gross cross section, rupture of critical section
		29.10.22	the concept of block shear
		31.10.22	Maximum values of effective slenderness ratio
	NOV	01.11.22	Analysis of tension members
		02.11.22	Design of tension members
		03.11.22	Doubt Clearing
Design of Steel Compression members	NOV	04.11.22	Common shapes of compression members
		05.11.22	Bulking class of cross sections.
		09.11.22	slenderness ratio
		10.11.22	Design compressive stress
		11.11.22	strength of compression members.
		12.11.22	Analysis of compression members
		14.11.22	Design of compression members (axial load only)
		15.11.22	Analysis
17.11.22	Doubt Clearing		

		18.11.22	Common cross sections
		19.11.22	their classification
		21.11.22	Plastic moment capacity of sections
		22.11.22	Moment capacity
		23.11.22	Shear resistance

Design of Steel beams	NOV	24.11.22	Deflection limits, web buckling and web crippling.
		25.11.22	Design of laterally supported beams against bending and shear.
		26.11.22	Types of built up sections
		28.11.22	Design of simple built up sections using flange plates with I-sections or web plates
		29.11.22	Doubt Clearing
		30.11.22	Class Test
Design of Tubular Steel structures	DEC	01.12.22	Tube columns and compression members, crinkling
		02.12.22	Round tubular sections, permissible stresses
		03.12.22	Tube tension members and tubular roof trusses.
		05.12.22	Joints in tubular trusses
		06.12.22	Design of tubular beams and purlins
		07.12.22	Design consideration for masonry walls
		08.12.22	Load bearing walls -Permissible stresses ,
		09.12.22	Slenderness ratio
		10.12.22	Effective length
		12.12.22	Effective height
		13.12.22	Effective thickness, Eccentricity of loads, Grade of mortar
		14.12.22	Non-Load bearing walls – Panel walls, Curtain walls, Partition walls.
		15.12.22	Doubt Clearing
		Design of masonry Structures	DEC
17.12.22	Design consideration for piers and buttresses		
19.12.22	Doubt Clearing		
20.12.22	Class Test		
21.12.22	REVISION		
22.12.22	REVISION		

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SIGNATURE OF LECTURER

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