GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN-2021/22(WINTER)

Discipline : CIVIL ENGG.		Semester: 5th Sem		Name of the Teaching Faculty :DAMAYANTI PRADHAN
Subject : STRUCTURAL DESIGN-II(Th.2)		per week class allotted : 04		Semester From date : 1.10.2021 To Date : 08.01.2022
Month	**Week**	**Day**	**Unit**	**Topics**
OCTOBER	1st	5th	UNIT-1	**INTRODUCTION**
				1.1 Common steel structures, Advantages & disadvantages of steel structures.
	2nd	1st		1.2 Types of steel, properties of structural steel.
		2nd		1.3 Rolled steel sections, special considerations in steel design.
		4th		1.4 Loads and load combinations.
		5th		1.5 Structural analysis and design philosophy.
		6th		1.6 Brief review of Principles of Limit State design.
	4th	4th		DISCUSSION
		5th		**Structural Steel Fasteners and Connections.**
		6th		2.1 Bolted Connections
		2nd		**2.1.1** Classification of bolts, advantages and disadvantages of bolted connections.
		3rd		**2.1.2** Different terminology, spacing and edge distance of bolt holes.

	5th	4th		2.1.3 Types of bolted connections.
		5th		2.1.4 Types of action of fasteners, assumptions and principles of design.
		6th		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.
NOVEMBER	1ST	1ST		Question and answer practice
		2ND	UNIT-2	Question and answer practice
		3RD		Question and answer practice
		6TH		INTERNAL
				2.1.6 Analysis & design of Joints using bearing type and HSFG bolts (except eccentric load and prying forces)
	2ND	1ST		2.1.7 Efficiency of a joint
		2ND		2.2 Welded Connections: 2.2.1 Advantages and Disadvatages of welded conncetion
		3RD		2.2.2 Types of welded joints and specifications for welding
		4TH		2.2.3 Design stresses in welds.
		6TH		2.2.4 Strength of welded joints.
	3RD	1ST		Previous year question and answer practice
		2ND		Discussion class
		3RD	UNIT-3	**Design of Steel tension Members**

		4TH		**3.1** Common shapes of tension members
		6TH		**3.2** Maximum values of effective slenderness ratio
	4TH	1ST		**3.4** Analysis and Design of tension members.(Considering strength only and concept of block shear failure.)
		2ND		Discussion class
		3RD		Discussion class
		4TH		Previous year question and answer practice
		5TH		**Design of Steel Compression members**
	1ST	2ND		**4.1** Common shapes of compression members
		3RD		**4.2** Buckling class of cross sections, slenderness ratio
		4TH		**4.3** Design compressive stress and strength of compression members
		6TH		INTERNAL
	2ND	1ST		**4.4** Analysis and Design of compression members
		2ND		Discussion class
		3RD	UNIT-5	Previous year question and answer practice
				Design of Steel beams:
		4TH		**5.1** Common cross sections and their classification.

DECEMBER		**6TH**		**5.2** Deflection limits, web buckling and web crippling.
				5.3 Design of laterally supported beams against bending and shear.
	3RD	**1ST**		CLASSTEST
				Design of Tubular Steel Structures:
		4TH	**UNIT-6**	**6.1** Round Tubular Sections, Permissible Stresses
		6TH		**6.2** Tubular Compression & Tension Members
	4TH	**1ST**		**6.3** Joints in Tubular trusses
		2ND		DISCUSSION
		3RD		DISCUSSION
		4TH	**UNIT-7**	Question and answer practice
				Design of Masonry Structures:
	5TH	**1ST**		
		2ND		Previous year question and answer practice
		3RD		DISCUSSION
		4TH		Question and answer practice

H.O.D SIGNATURE

ACADEMIC COORDINATOR SIGNATURE

SUBJECT EXPERT SIGNATURE