

**BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING**



LESSON PLAN

SUBJECT: STRUCTURAL DESIGN-II (TH 2)

FACULTY: MISS SRADHANJALI SAHOO

ACCADEMIC SESSION: 2022-23

SEMESTER: 5th

SEC: C

Sd/-
H O D (Civil Engg.)

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Discipline: Civil Engineering	Semester: 5th (C)		Name of the teaching faculty: Miss Sradhanjali Sahoo
Subject: STRUCTURAL DESIGN -II	No. of Days/ per week class allotted: 04 periods per week. (Mon, Tue, Wed and Thurs – 1 period each)		Semester From Date: 15/09/2022 To Date: 22-12-2022 No. of weeks: 14 weeks
Week	Class Day	No of period available	Theory Topics
1ST	15/09/2022	1	1.1 Common steel Structures, advantages and disadvantages of steel structure.
2ND	19/09/2022	1	1.2 Type of steel, properties of structural steel.
	20/09/2022	1	1.3 Rolled steel sections, special consideration in steel design.
	21/09/2022	1	1.4 Load and its combinations 1.5 Structural analysis and design philosophy
	22/09/2022	1	1.6 Brief review of principle of limit state design.
3RD	26/09/2022	1	2.1 Bolted connections.
	27/09/2022	1	2.1.1 Classification of bolts, advantages and disadvantages of bolted connection
	28/09/2022	1	2.1.2 Different terminology, spacing and edge distance of bolt holes.
	29/09/2022	1	2.1.3 types of bolted connections 2.1.4 Types of action of fasteners,
4TH	10/10/2022	1	assumptions and principle of design
	11/10/2022	1	2.1.3 types of bolted connections 2.1.4 Types of action of fasteners, assumptions and principle of design 2.1.5 strength of plates in a joint, strength of bearing type of bolts, reduction factors and shear capacity of HSFG bolts
	12/10/2022	1	2.1.6 Analysis and design of joint using bearing type.

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			2.1.7 Efficiency of a joint
	13/10/2022	1	2.2.1 Welded connections and its advantages and disadvantages. 2.2.2 Types of welded joints and specification of welding.
5TH	17/10/2022	1	2.2.3 Design Stress in welds. 2.2.4 Strength in welded joints.
	18/10/2022	1	Problems related to bolted and welded connections.
	19/10/2022	1	Monthly Class test
	20/10/2022	1	3.1 common shape of tension members
6TH	25/10/2022	1	3.2 maximum values of effective slenderness ratio.
	26/10/2022	1	3.4 analysis and design of tension members
	27/10/2022	1	Problems on tension member
7TH	31/10/2022	1	. 4.1 common shapes of compression members
	01/11/2022	1	4.2 buckling class of cross sections, slenderness ratio
	02/11/2022	1	. 4.3 design compressive stress and strength of compression members
	03/11/2022	1	4.4 analysis and design of compression members (axial load only).
8TH	07/11/2022	1	.problems on compressive member
	09/11/2022	1	5.1 Common cross sections and their classifications of steel beams
	10/11/2022	1	5.2 deflection limits, web buckling and web crippling
9TH	14/11/2022	1	Doubt clearing classes
	15/11/2022	1	Internal Assessment
	16/11/2022	1	Internal Assessment
	17/22/2022	1	5.3 design of laterally supported beams against bending and shear
10TH	21/11/2022	1	problem solving classes
	22/11/2022	1	6.1 round tubular sections ,permissible stresses
	23/11/2022	1	6.2 tubular compression and tension members
	24/11/2022	1	6.3 joints in tubular trusses
11TH	28/11/2022	1	Problem solving classes

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	29/11/2022	1	Problem solving classes
	30/11/2022	1	Monthly class test-2
	1/12/2022	1	7.1 design considerations of masonry walls.
12TH	05/12/2022	1	7.1 Design considerations of columns
	06/12/2022	1	7.2 load bearing walls
	07/12/2022	1	7.2 load non bearing walls
	08/12/2022	1	7.3 slenderness ratio, effective length, height and thickness
13TH	12/12/2022	1	Analysis on masonry wall problems
	13/12/2022	1	Analysis on masonry wall problems
	14/12/2022	1	Revision class
	15/12/2022	1	Monthly class test-3
14TH	19/12/2022	1	Previous year question discussion
	20/12/2022	1	Previous year question discussion
	21/12/2022	1	Previous year question discussion
	22/12/2022	1	Discussion