

Lesson Plan

Subject: Structural Design-II (Code) Th-1 Name of faculty: Sadegh Khalun  
 Semester: 4th Class allotted: 75 P/w Branch: Civil Engg.

Discipline	Semester	From date: <u>14/02/23</u> To date: <u>23/05/23</u>	Teaching Aid
Subject	No. of days/ per week	Theory/ Practical - Topics/Lesson	
Week	Date/Period		
1	14/02/23 to 17/02/23 (04P/w)	<u>Ch-1</u> Objectives of design & detailing. Methods of design of concrete structures. Introduction to reinforced concrete R.C. sections, grades, behaviour Permissible stresses, assumptions used	White Board & Marker
	20/02/23 to 25/02/23 (06P/w)	Design & analysis of single reinforced sections under-reinforced, over-reinforced, balanced and <u>Ch-2</u> Advantages of LSM over WEM Types of limit state. P.S.F, characteristic strength, cover of slab, beam, column, footing	White Board & Marker
	27/02/23 to 04/03/23 (06P/w)	<u>Ch-3</u> Limit state of collapse, Assumptions, Stress-strain relationship for concrete & steel. N.A. stress-strain block diagram concept of under-reinforced, over-reinforced & limiting section, neutral axis, limiting value of M.D.R., Percentage of steel.	White Board & Marker
3	06/03/23 to 11/03/23 (04P/w)	Analysis & design: of design constants; M.C.R. & area of steel. Doubly reinforced section. <u>Ch-4</u> Nominal shear stress in R.C. section, design shear strength of concrete	White Board & Marker
	13/03/23 to 18/03/23 (06P/w)	Max <sup>n</sup> shear stress, design of shear reinforcement, min <sup>n</sup> shear reinforcement, Forms of shear reinforcement types, development length. Design of shear reinforcement. Min <sup>n</sup> shear reinforcement in beams	White Board & Marker
	20/03/23 to 25/03/23 (06P/w)	<u>Ch-5</u> General features, advantages effective width of flange. Analysis of singly reinforced T-Beam.	White Board & Marker
4	27/03/23 to 31/03/23 (04P/w)	Stress - Strain diagram, depth of N.A., M.R. of T-beam section with N.A. lying within the flange. Simple numerical problem on effective flange width.	White Board & Marker

Signature of HOD

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Week	Date/Period	Theory/ Practical - Topics/Lesson	Teaching Aid
8	03/04/23	<u>Ch-6</u>	White Board
	to	Design of simply supported	&
	08/04/23	one-way slabs for flexure check for deflection control & shear	Marker
9	(05P/W)		White Board
	10/04/23	Design of one-way cantilever	&
	to	slabs & cantilever Chajjal	Marker
10	15/04/23	for flexure check for deflection control & check for development length & shear	White Board
	(05P/W)		&
	17/04/23	Design of two-way simply supported slabs for flexure with corner free to lift.	Marker
11	21/04/23		White Board
	(06P/W)		&
	24/04/23	Design of dog-legged staircase	Marker
12	29/04/23	Detailing of reinforcement in stairs spanning longitudinally	White Board
	(05P/W)		&
	01/05/23	<u>Ch-7</u>	Marker
13	06/05/23	Assumptions in limit state of collapse - compression	White Board
	(05P/W)		&
	08/05/23	Definition & classification of column, effective length of column, min <sup>m</sup> reinforcement, cover, max <sup>m</sup> reinforcement, no. of bars, spacing of lateral ties	Marker
14	13/05/23		White Board
	(06P/W)		&
	15/05/23	Analysis & design of axially loaded short square, rectangular & circular columns	Marker
15	20/05/23		White Board
	(05P/W)		&
	22/05/23	Types of footing Design of isolated square column footing of uniform thickness for flexure & shear	Marker
	23/05/23		
	(2P/W)		



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