

Lesson Plan/ Course Break – up
PCC-CVE303-T STRUCTURAL ANALYSIS – II

Discipline	B.Tech in Civil Engineering
Semester	V (3 rd Year)
Subject	Structural Analysis-II
Lesson Plan Duration	15 Weeks
Work Load (Lecture / Practical) per week (in hrs.)	Lectures – 03

Week	Theory	
	Lecture Day	Topic (Including assignment / Test)
1 st	1	Statically Indeterminate Structures : Introduction
	2	Static and Kinematic Indeterminacies
	3	Static and Kinematic Indeterminacies
2 nd	4	Castigliano's theorems
	5	Castigliano's theorems
	6	Strain energy method
3 rd	7	Strain energy method
	8	Analysis of frames with one or two redundant members using Castigliano's 2 nd theorem.
	9	Analysis of frames with one or two redundant members using Castigliano's 2 nd theorem.
4 th	10	Slope deflection and moment Distribution Methods
	11	Slope deflection and moment Distribution Methods
	12	Analysis of continuous beams & portal frames
5 th	13	Analysis of continuous beams & portal frames
	14	Portalframes with inclined members.
	15	Column Analogy Method: Elastic centre
6 th	16	Properties of analogous column
	17	Applications to beam & frames
	18	Analysis of Two hinged Arches: : Parabolic and circular Arches
7 th	Minor Test-I	
8 th	19	Analysis of Two hinged Arches: Parabolic and circular Arches
	20	Bending Moment Diagram for various loadings
	21	Temperature effects, Rib shortening

9 th	22	Axial thrust and Radial Shear force diagrams.
	23	Unsymmetrical Bending: Introduction
	24	Centroidal principal axes of sections
10 th	25	Bending stresses in beam subjected to unsymmetrical bending
	26	Bending stresses in beam subjected to unsymmetrical bending
	27	Shear centre, shear centre for channel
11 th	28	Angles and Z sections.
	29	Angles and Z sections.
	30	Cable and suspension Bridges: Introduction
12 th	31	Cable and suspension Bridges: Introduction
	32	Uniformly loaded cables
	33	Uniformly loaded cables
13 th	34	Temperature stresses
	35	Temperature stresses
	36	Three hinged stiffening Girder
14th	Minor Test-II	
15 th	37	Three hinged stiffening Girder
	38	Two hinged stiffening Girder.
	39	Two hinged stiffening Girder.