CHRISTU JYOTI INSTITUTE OF TECHNOLOGY & SCIENCE
Civil ENGINEERING DEPARTMENT
LESSON PLAN

Academic Year   : **2018-2019**   **Year : II Yr B. Tech -II-Sem**

Name of the Faculty   : **P SHIVASHANKER**   **Designation : Asst professor**

Name of the subject   :   STRUCTURAL ANALYSIS   **Subject code:**

Number of periods/week : 06   **Theory : 06**   **Special Remedial classes : 0**

Unit	Name of the Topic as per JNTUH latest syllabus	Text book fallowed	No. of classes planned	Mode of teaching	Syllabus to be completed by date
I	**INTRODUCTION TO STRUCTURE AND INDETERMINACY** Equilibrium Compatibility equations	T1, T2	2	BB	24/12/2018
	Types of supports and reactions		1	BB	28/12/2018
	Types of joints and equilibrium equations		2	BB	29/12/2018
	Static and kinematic indeterminacies of beams and frames		2	BB	31/12/2018
	Effect of force release like moment hinge shear releases		1	BB	03/01/2019\
	Link on static indeterminacy, relative merits of indeterminate structures over determinate structures		1	BB	04/01/2019
	PROPPED CANTILEVER AND FIXED BEAMS Elastic and rigid props		2	BB	05/01/2019
	Analysis of propped cantilever and fixed beams with different moment of inertia		2	BB	07/01/2019
	Subjected to uniformly distributed load		1	BB	10/01/2019\
	Central point load		1	BB	11/01/2019
	Eccentric point load		1	BB	16/01/2019
	UVL		1	BB	17/01/2019
	Number of point loads		1	BB	18/01/2019
	Couple and combination of loads		1	BB	19/01/2019
	SFD and BMD for propped cantilever and fixed beams		1	BB	19/01/2019
	Effect of sinking of support		1	BB	21/01/2019
	Effect of rotation of support		1	BB	23/01/2019
II	**ANALYSIS OF PERFECT FRAMES** Plane and space frames, pin and rigid jointed frames	T1, T2	1	BB	24/01/2019
	Types of frames		1	BB	25/01/2019
	Perfect imperfect and redundant frames		1	BB	28/01/2019
	Pin jointed frames		1	BB	30/01/2019
	Assumptions, transfer of loads to joints from wind and other forces		2	BB	31/01/2019
	Analysis of determinate pin jointed frames Method of joints		2	BB	02/02/2019
	Method of sections (for vertical, inclined and horizontal loads)		2	BB	04/02/2019

		T1, T3	1	BB	07/02/2019
III	**ENERGY THEOREMS** Introduction Strain energy in linear elastic system				
	Expression of strain energy due to axial load Bending moment and Shear forces		2	BB	08/02/2019
	Castiglionos first theorem		1	BB	13/02/2019
	Unit load method Deflection of simple beams and pin jointed plane trusses		2	BB	14/02/2019
	ARCHES Introduction Types of arches		2	BB	16/02/2019
	Comparison between 2 and 3 hinged arches		1	BB	21/02/2019
	Linear arch Eddys theorem		1	BB	22/02/2019
	Analysis of 3 hinged arches		2	BB	23/02/2019
	Normal thrust and radial shear		2	BB	25/02/2019
	Geometrical parameters of circular and parabolic arches		2	BB	28/02/2019
	3 hinged circular arch at different levels		2	BB	02/03/2019
	Absolute maximum BMD for a 3 hinged arch		1	BB	06/03/2019
IV	**SLOPE DEFLECTION METHOD** Derivation of slope deflection equation	T1, T4	2	BB	07/03/2019
	Application to continuous beams with and without settlement of support		2	BB	11/03/2019
	SFD, BMD and elastic curve		2	BB	14/03/2019
	MOMENT DISTRIBUTION METHOD Application to continuous beams with and without settlement of support		3	BB	16/03/2019
	SFD, BMD and elastic curve		2	BB	22/03/2019
V	**MOVING LOADS AND INFLUENCE LINES** Introduction and application to bridges	T1, T5	1	BB	23/03/2019
	Influence line for SF and BM		2	BB	25/03/2019
	Max shear and BM Absolute max SF and BM		2	BB	28/03/2019
	Single point load		1	BB	30/03/2019
	Two point loads		1	BB	01/04/2019
	UDL longer then the span		2	BB	03/04/2019
	UDL shorter than the span		2	BB	05/04/2019
	Several point loads		2	BB	06/04/2019
	Load positions for max SF and BM in all cases		1	BB	10/04/2019
	Focal length Influence lines for Pratt and warren trusses		2	BB	11/04/2019
	Muller Breslau principle		2	BB	15/04/2019

Total 80 classes planneds