

TEACHING PLAN FOR THEORY

Name of Subject Teacher: Girish Joshi

Subject: Advanced Analysis of Steel Frames		Class: M.E.(Third Semester)	Branch: CIVIL
Lecture No	Scheduled Date		
1	23/08/2016	Module 1: Elastic stability & structural Instability, Review of critical loads of long columns for various boundary conditions	
2	25/08/2016	Elastic stability & structural Instability, Review of critical loads of long columns for various boundary conditions	
3	25/08/2016	Elastic stability & structural Instability, Review of critical loads of long columns for various boundary conditions	
4	29/08/2016	Beam-columns, critical load of simple rectangular frames	
5		Beam-columns, critical load of simple rectangular frames	
6	01/09/2016	Columns with initial imperfection	
7	06/09/2016	Module 2: First order elastic (FOE) & first order inelastic(FOIE) (Plastic) analysis of rectangular portal frames	
8	08/09/2016	First order elastic (FOE) & first order inelastic(FOIE) (Plastic) analysis of rectangular portal frames	
9		First order elastic (FOE) & first order inelastic(FOIE) (Plastic) analysis of rectangular portal frames	
10	12/09/2016	Analysis of rectangular portal frames	
11	19/09/2016	Elastic & limit state of strength of frame	
12	22/09/2016	Elastic & limit state of strength of frame	
13	23/09/2016	Module 3: Second order considerations in elastic analysis of frames P- δ & P-effect	
14	24/09/2016	Critical load of single bay, single storey portal frame using P- δ & P-effect	
15		classical & semi geometrical approach.Direct second order elastic analysis (SOE)	

16	04/10/2016	classical & semi geometrical approach.Direct second order elastic analysis (SOE)
17		international codal provisions, application for simple frame
18	17/10/2016	international codal provisions, application for simple frame
19	20/10/2016	Module 4: Second order inelastic (SOIE) analysis of frames, elastic plastic hinge analysis
20		Plastic zone method, use of finite element method Refined plastic hinge analysis
21	27/10/2016	Reduction in stiffness of member due to plasticity at hinge. Advantages of advanced analysis
22	10/11/2016	Design of frame using advanced analysis
23	14/11/2016	Use of suitable software illustrating difference in analytical results among all methods such as FOE, FOIE, SOE, SOIE
24	21/11/2016	Use of suitable software illustrating difference in analytical results among all methods such as FOE, FOIE, SOE, SOIE