

# GOPALAN COLLEGE OF ENGINEERING AND MANAGEMENT

Department of Civil Engineering

Academic Year: **2016-17**

Semester: **EVEN**

## COURSE PLAN

Semester: **VIII**

Subject Code: **10CV82**

Subject Name: **DESIGN AND DRAWING OF STEEL STRUCTURES**

Name of Subject Teacher: **KALYANI DONGARKAR**

Name of Subject Expert (Reviewer): **K PRABHAKAR**

For the Period: From: 26-01-17 to 19-05-17

Details of Book to be referred:

Text Books	T1: Design of Steel Structures-S. S. Bhavikatti T2: Limit State Design of Steel Structures-S. K. Duggal T3: N. Krishnaraju, Universities Press India
Reference Books	R1: SUBRAMANINAN, Oxford University Press R2: IS 800: 2007 R3: SP 6(1) -1984/ (Steel Table)

Lecture NO	Topic Planned	Practical Applications & Brief objectives		Book referred with Pg No.	Planned Date	Executed Date	Deviation Reasons thereof	How Made Good / Reciprocate arrangement	Remarks by HOD
1.	Revision of Design of Steel Structures and Introduction of the subject		LI		6-2-17				
2.	<b>UNIT 2: Bolted and Welded</b>				6-2-17				

	<b>Column Connections</b> Column –Column Same size Welded	<p><b>Objective:</b> Introduce the concept of connections for column splices and drawing the details</p> <p><b>Application:</b> Skywalks, steel staircases, Industrial sheds</p> <p><b>OUTCOME:</b> Knowledge of the connection details and method of drawing</p>	L2							
3.	Column –Column Same size Welded		D1	R1-392	7-2-17					
4.	Column –Column Same size Welded		D2	R1-392	7-2-17					
5.	Column –Column Same size Welded		D3	R1-392	7-2-17					
6.	Column –Column Different size Welded		L3		8-2-17					
7.	Column –Column Different size Welded		L4		13-2-17					
8.	Column –Column Different size Welded		D4	R1-392	14-2-17					
9.	Column –Column Different size Welded		D5	R1-392	14-2-17					
10.	Column –Column Different size Welded		D6	R1-392	14-2-17					
11.	Column –Column Different size Bolted		L5		15-2-17					
12.	Column –Column Lacing and Battens		L6	R1-752	20-2-17					
13.	Column –Column Lacing and Battens		D7	R1-752	21-2-17					
14.	Column –Column Lacing and Battens		D8	R1-752	21-2-17					
15.	Column –Column Lacing and Battens		D9	R1-752	21-2-17					

16.	<b>UNIT 1 : Beam –Beam Connections Same Size and Different Size</b>	<b>Objective:</b> Introduce the concept of connections for beams and drawing the details	L7	R1-389	22-2-17				
17.	Beam –Column Connection		L8	R1-389	27-2-17				
18.	Beam –Beam Connections Same Size and Different Size		D10	R1-389	28-2-17				
19.	Beam –Beam Connections Same Size and Different Size		D11	R1-389	28-2-17				
20.	Beam –Column Connection		D12	R1-389	28-2-17				
21.	<b>UNIT 3: Slab Base and Gusseted base</b>	<b>Application:</b> Skywalks, steel staircases, Industrial sheds	L9		1-3-17				
22.	Grillage Foundation		L10		6-3-17				
23.	Beam –Column Connection		D13	R1-424	7-3-17				
24.	Beam –Column Connection		D14	R1-424	7-3-17				
25.	Beam –Column Connection		D15	R1-424	7-3-17				
26.	<b>UNIT 4: Design of Plate girder Moment Calculations</b>	<b>OUTCOME:</b> Knowledge of the connection details and method of drawing	L11	R1-959	8-3-17				
27.	Design of Web Plate		L12	R1-960	13-3-17				
28.	Slab base		D16	R1-756	14-3-17				
29.	Slab base		D17	R1-756	14-3-17				
30.	Gusseted base		D18	R1-753	14-3-17				
		<b>Objective:</b> Introduce the concept designs for heavy structures: Plate girder design and drawing.							

31.	Design of Plate girder : Design of flange plate	Roof truss design and drawing And Gantry girder design and drawing  <b>Application:</b> Bridges: Railway bridges and flyovers, Industrial sheds  <b>OUTCOME:</b> Knowledge of design and the connection details of plate girder, roof truss and gantry girder	L13		15-3-17				
32.	Design of stiffeners		L14		20-3-17				
33.	Gusseted base		D19	R1-1088	21-3-17				
34.	Gusseted base		D20	R1-1088	21-3-17				
35.	Gusseted base		D21	R1-1088	21-3-17				
36.	Design of Plate girder: End bearing		L15		22-3-17				
37.	Connection details		L16		27-3-17				
38.	Plate Girder		D22		28-3-17				
39.	Plate Girder		D23		28-3-17				
40.	Plate Girder		D24		28-3-17				
41.	Design of roof truss: Design of tension members (Bottom chord)		L17		3-4-17				
42.	Plate Girder		D25	R1-936	4-4-17				
43.	Plate Girder		D26	R1-936	4-4-17				
44.	Plate Girder		D27	R1-936	4-4-17				
45.	Design of outer compression member		L18		10-4-17				

46.	Plate Girder		D28	R1-936	11-4-17				
47.	Plate Girder		D29	R1-936	11-4-17				
48.	Plate Girder		D30	R1-936	11-4-17				
49.	Plate Girder Design of inner tension members		L19		12-4-17				
50.	Plate Girder Design of inner compression member		L20		24-2-17				
51.	Roof truss		D31	R1-1153	25-4-17				
52.	Roof truss		D32	R1-1153	25-4-17				
53.	Roof truss		D33	R1-1153	25-2-17				
54.	Anchor bolts and Connection Details		L21	R1-1153	26-4-17				
55.	Roof truss		D34	R1-1037	2-5-17				
56.	Roof truss		D35	R1-1037	2-5-17				
57.	Roof truss		D36	R1-1153	2-5-17				
58.	Gantry Girder: Load calculations		L23		3-5-17				
59.	Design of girder		L24	R1-1153	8-5-17				
60.	Gantry girder		D37	R1-1040- ,1043	9-5-17				

61.	Gantry girder		D38	R1-1040- ,1043	9-5-17				
62.	Gantry girder		D39	R1-1040- ,1043	9-5-17				
63.	Design of Gantry girder		L26		10-5-17				
64.	Connection Details Gantry Girder		L27		15-5-17				
65.	Gantry girder		D40	R1-1040- ,1043	16-5-17				
66.	Gantry girder		D-41	R1-1040- ,1043	16-5-17				
67.	Gantry girder		D42	R1-1040- ,1043	16-5-17				
68.	<b>Revision / Unit Test</b>	Solving VTU Question Paper			17-5-17				
69.	Revision				22-5-17				
70.	Revision				23-5-17				
71.	Revision				23-5-17				
72.	Revision				23-5-17				

Prepared By: \_\_\_\_\_  
(Faculty)  
Date & Sign \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
(Sub. expert)  
Date & Sign \_\_\_\_\_

Approved by: \_\_\_\_\_  
(HOD)  
Date & Sign \_\_\_\_\_

Approved by: \_\_\_\_\_  
(Principal/ Acad. Co)  
Date & Sign \_\_\_\_\_