

# GOPALAN COLLEGE OF ENGINEERING AND MANAGEMENT

Department of Civil Engineering

Academic Year: **2016-17**

Semester: **EVEN**

## COURSE PLAN

Semester: **VI**

Subject Code& Name: **10CV62 & DESIGN & DRAWING OF RCC STRUCTURES**

Name of Subject Teacher: **K PRABHAKAR**

Name of Subject Expert (Reviewer):

For the Period: From: 6/02/17 to 02/06/17

### Details of Book to be referred:

<b>Text Books</b>	<b>1.RCC Designs:</b> Dr.BC Purnia and others, Laxmi publications ( P ) ltd tenth edition- <b>2. Design of RCC Structures :</b> S S Bhavikatti New age International publishers Fifth Edition
<b>Reference Books</b>	<b>1. Design of RCC Structures-</b> S Ramamrutham., Dhanpat Rai Publishing Company 10th Revised Edition 2012 <b>2. Design and Drawing of RC structures ;</b> Krishna murthy Vol I and Vol II <b>3. General drawings</b>

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	Remark by HOD
1.	<b>Introduction:</b> Drawing concepts			7/2/17				
2.				7/2/17				
3.		To make the students aware of practical drawing		9/2/17				

4.	General building drawing with basic specification	specification according to local authority laws.		9/2/17				
5.				9/2/17				
6.	<b>UNIT 1</b> General layout of building and positioning of columns	<p><b>Objective:</b> Understanding the concept of orientation of building wrt site condition and planning a layout of columns and hence drawing the same</p> <p><b>Application:</b> Plan and draw the building layout and column positioning to make best use of space.</p> <p><b>OUTCOME:</b> Will be able to draw a executable plan of a building layout so that the executive Engineer can read the plan accordingly..</p>	R3- General drawings	14/2/17				
7.	Positioning of footing ,beams and slab			14/2/17				
8.	Drawing –General layout			16/2/17				
9.	Drawing -footing			16/2/17				
10.	Drawing –beams and slabs			16/2/17				
11.	<b>UNIT 2</b> Detailing of beams	<p><b>Objective:</b> To understand the process of detailing the structural members like beams ,slabs columns etc.,</p> <p><b>Application:</b> To project the detailing of structural members in practical drawing and making it self explanatory.</p> <p><b>OUTCOME:</b></p>	T1-177, R1-413	21/2/17				
12.	Detailing of slab floor system		T1-186, R1-413	21/2/17				
13.	Drawing –beam detailing		T1-90 R1-418	23/2/17				
14.	Drawing –slab detailing		T1-177, R1-413	23/2/17				
15.	Drawing –slab detailing		T1-287 R1350	23/2/17				
16.	Detailing of continuous beams.		T1-217, R1-348	28/2/17				

17.	Detailing of continuous beams.	Able to make drawing and detailing of beams and slabs and also the produce the bar bending schedule.	T1-217, R1-348	28/2/17				
18.	Drawing-Detailing of continuous beams.			2/3/17				
19.	Drawing-Detailing of continuous beams.			2/3/17				
20.	Drawing- Detailing of continuous beams.			2/3/17				
21.	<b>UNIT 3</b> Detailing Doglegged staircase	<p><b>Objective:</b> To understand the process of detailing the staircase of different types</p> <p><b>Application:</b> To project the detailing of structural members in practical drawing and making it self explanatory..</p> <p><b>OUTCOME:</b> Able to make drawing and detailing staircase and also the produce the bar bending schedule</p>	T1-237, R1-604	7/3/17				
22.	Detailing Doglegged staircase			7/3/17				
23.	Drawing -Detailing Doglegged staircase			14/3/17				
24.	Drawing- Detailing Doglegged staircase			14/3/17				
25.	Drawing- Detailing Doglegged staircase			16/3/17				
26.	Detailing Open well staircase		T1-242 R1-610	16/3/17				
27.	Detailing Open well staircase			16/3/17				
28.	Drawing-Detailing Open well staircase			21/3/17				
29.	Drawing-Detailing Open well staircase			21/3/17				
30.	Drawing- Detailing Open well staircase			23/3/17				

31.	<b>UNIT 4</b> Detailing of square column and footing.	<p><b>Objective:</b> To understand the process of detailing the column and footing of different types</p> <p><b>Application:</b> To project the detailing of columns and footings in practical drawing and making it self explanatory for the purpose of execution and bar bending</p> <p><b>OUTCOME:</b> Able to make drawing and detailing columns and footings and also the produce the bar bending schedule</p>	T1-320 R1-132	23/3/17				
32.	Detailing of Rectangular column and footing.			23/3/17				
33.	Drawing-Detailing of square column and footing.			28/3/17				
34.	Drawing-Detailing of square/rectangular column and footing.			28/3/17				
35.	Drawing-Detailing of rectangular column and footing.			30/3/17				
36.	Revision			30/3/17				
37.				30/3/17				
38.	Unit test			4/4/17				
39.				4/4/17				
40.	<b>UNIT 5</b> Design of combined footing	<p><b>Objective:</b> To analyse and design the combined footing for a particular compressive strength and condition vy</p>		6/4/17				
41.	Design of combined footing			6/4/17				

42.	Drawing of combined footing	using IS 456-2000	R1-525 T1-413	6/4/17				
43.	Drawing of combined footing	<b>Application:</b> Design a combined footing for the given condition of building layout economically and giving details of reinforcement .		11/4/17				
44.	Drawing of combined footing	<b>OUTCOME:</b> Able to understand the building layout and design a combined footing for a building and detailing for execution and also the produce the bar bending schedule		11/4/17				
45.	<b>UNIT 6</b> Design of cantilever Retaining Wall.	<b>Objective:</b> Understanding the concept of Retaining wall and its requirement wrt site condition .Analyzing the soil characteristics and designing the thickness of wall and determining the reinforcement and drawing the same so that it can be executed accordingly. <b>Application:</b> Designing a retaining wall of a particular type to suit the condition and hence drawing for execution.. <b>OUTCOME:</b> Will be able to draw a executable plan of a retaining wall so that the	R1-890,900 T1-501,510	13/4/17				
46.	Design of cantilever Retaining Wall.			13/4/17				
47.	Drawing of cantilever Retaining Wall.			13/4/17				
48.	Drawing of cantilever Retaining Wall.			20/4/17				
49.	Drawing of cantilever Retaining Wall.			20/4/17				
50.	Design of counterfort retaining wall.			20/4/17				
51.	Design of counterfort retaining wall.			25/4/17				
52.	Drawing of counterfort retaining wall.			25/4/17				
53.	Drawing of counterfort retaining wall.			27/4/17				

		executive Engineer can read the plan accordingly and execute the same.						
54.	Drawing of counterfort retaining wall.			27/4/17				
55.	<b>UNIT 7</b> Design of circular water tank	<p><b>Objective:</b> Understanding the concept of overhead water tank of large capacity and the different shapes it can be design. To analyse the structure and design the components an determine the reinforcement.</p> <p><b>Application:</b> Overhead tank for a community can be designed to meet the water requirement based on demand.</p> <p><b>OUTCOME:</b> Will be able to design and draw a executable plan of a water tank so that the executive Engineer can read the plan accordingly</p>	R1-970 T1-681,597	27/4/17				
56.	Design of circular water tank			2/5/17				
57.	Drawing of circular water tank			2/5/17				
58.	Drawing of circular water tank			4/5/17				
59.	Drawing of circular water tank			4/5/17				
60.	Design of Rectangular water tank			4/5/17				
61.	Design of Rectangular water tank			9/5/17				
62.	Drawing of Rectangular water tank			9/5/17				
63.	Drawing of Rectangular water tank			11/5/17				
64.	Drawing of Rectangular water tank			11/5/17				
65.	<b>UNIT 8</b> Design of portal frame.	<p><b>Objective:</b> Understanding the concept of framed structure in the high rise buildings and for bridges. To analyse and design a portal frame for the given loading condition.</p>		11/5/17				
66.	Design of portal frame.			16/5/17				
67.	Drawing of portal frame.			16/5/17				

68.	Drawing of portal frame.	<b>Application:</b> Can analyse the need for the portal frame for the given structure and design the same with drawings of reinforcement details. <b>OUTCOME:</b> Will be able to understand the kind of structure that required to be designed as portal frame and further design and draw a executable plan.	T1-764	18/5/17				
69.	Drawing of portal frame.			18/5/17				
70.				18/5/17				
71.	Revision			23/5/17				
72.				23/5/17				
73.	Unit test	Solving VTU Question Paper		25/5/17				
74.				25/5/17				
75.				25/5/17				

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

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

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

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