Ramgarhia Polytechnic College, Phagwara

Civil Engineering Department

Head of Department: Er. Gurcharan Singh

Name of the Faulty: Er. Neeraj Sobti

Discipline: Civil Engineering Department

Semester: 5th

Subject: RCC DRAWING

Lesson Plan Duration: 16 Weeks

RATIONALE

Diploma holders in Civil Engineering are required to supervise the construction of RC structures. Thus one should be able to read and interpret drawings of RC structures. The competence to read and interpret structural drawings is best learnt by being able to draw these drawings. Hence there is a need to have a subject devoted to preparation of structural drawings.

Learning Outcomes

After undergoing the subjectstudents will be able to:

- Draw the reinforcement details for various structural elements from the given data
- Calculate reinforcement details from the given drawings
- Draw bar bending schedule from drawing
- Read and interpret R.C.C. drawings

PO ⇨ / CO ⇩	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	✓						✓

Syllabus

PRACTICAL	Details
1.	RC Slabs - One way slab, Two way slab and Cantilever Slab.
2.	Beams - Singly and doubly reinforced rectangular beams and Cantilever beam (All beams with vertical stirrups)

3.	Columns and Footings – Square, Rectangular and Circular Columns with lateral ties and their isolated sloped column footings.
4.	Portal Frame – Three bay two storey RC portal frame with blow up of column beam junctions
5.	Draw atleast one sheet using AutoCAD software

Delivery/Instructional Methodologies

Sr.No.	Description
1.	Chalk and Talk
2.	PowerPoint Presentation

Assessment Methodologies

Sr. No.	Description	Type
1.	Student Assignment	Direct
2.	Test	Direct
3.	Board Examination	Direct
4.	Student Feedback	Direct

Gaps in the syllabus - to meet industry/profession requirements

S.NO.	DESCRIPTION	PROPOSED ACTIONS	PO MAPPING
	N/A	N/A	N/A

Topics beyond syllabus/advanced topics

Units	Details	Hours
N/A	N/A	N/A

Web Source References

Sr. No.	URL
1.	https://nptel.ac.in/

Lesson Plan

Week	Practical Day	
1st	1 to 4	RC Slabs - One way slab, Two way slab and Cantilever Slab.
2nd	5 to 8	REPEAT
3rd	9 to 12	REPEAT

4th	13 to 16	Beams - Singly and doubly reinforced rectangular beams and Cantilever beam (All beams with vertical stirrups)

5th	17 to 20	REPEAT

	21 to 24	REPEAT
6th		

7th	25 to 28	Columns and Footings – Square, Rectangular and Circular Columns with lateral ties and their isolated sloped column footings.
8th	29 to 32	REPEAT
9th	33 to 36	REPEAT

10th	37 to 40	Portal Frame – Three bay two storey RC portal frame with blow up of column beam junctions
11th	41 to 44	REPEAT

12th	45 to 48	REPEAT
13th	49 to 52	Draw atleast one sheet using AutoCAD software
14th	53 to 56	REPEAT
15th	57 to 60	REPEAT

16th	61 to 64	VIVA

NBA has defined the following seven POs for an Engineering diploma graduate:

i) **Basic and Discipline specific knowledge**: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

ii) **Problem analysis:** Identify and analyze well-defined engineering problems using codified standard methods.

iii**)** **Design/ development of solutions**: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

iv) **Engineering Tools, Experimentation and Testing**: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

v) **Engineering practices for society, sustainability and environment**: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

vi) **Project Management**: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

vii) **Life-long learning**: Ability to analyze individual needs and engage in updating in the context of technological changes.

Program Specific Outcomes (PSOs)

PSOs are a statement that describes what students are expected to know and be able to do in a specialized area of discipline upon graduation from a program. Program may specify 2-4 program specific outcomes, if required.

These are the statements, which are specific to the particular 11 program. They are beyond POs. Program Curriculum and other activities during the program must help in the achievement of PSOs along with POs.