# GOVERNMENT POLYTECHNIC, PURI
## DEPARTMENT OF CIVIL ENGINEERING

| | | |
|---|---|---|
| Discipline: CIVIL ENGG. | Semester: 6TH | Name of the Teaching Faculty: - **Mrs. MADHUSMITA SAHOO** |
| Subject:**CADD Lab and Design & Detailing Practice (Pr- 3)** | No. of days/per week class allotted: 03 | Semester From date:10.03.2022 To Date: 10.06.2022<br>No. of Weeks:15 |
| PRE-REQUISITE | Basic knowledge about design and drafting . | |
| COURSE OUTCOMES | 1. Draw necessary detailing and schedule of bars for the various structural members | |
| | 2. Draw important components of buildings using AutoCAD | |
| | 3. Draw connectors using AutoCAD | |
| | 4. Use STADD Pro in modeling structural members | |
| | 5. Analyze the stress and deformation pattern in structural members | |
| | 6. Design of buildings using STADD Pro software | |
| | 7. Prepare building drawings suiting to approval needs prescribed by regulatory bodies | |

| Week | Class day | Practical topics<br>CADD LAB | Delivery Method |
|---|---|---|---|
| 1ST | 1ST | **1.0 Structural Detailing Practice:**<br>1.1 Slab, beam and lintel with chajja as in a simple building (Help from Sections 8 & 9 of SP 34 may be taken ) (Plate I) | Whiteboard |
| | 2ND | 1.1 Slab, beam and lintel with chajja as in a simple building (Help from Sections 8 & 9 of SP 34 may be taken ) (Plate I) | Whiteboard |
| | 3RD | 1.1 Slab, beam and lintel with chajja as in a simple building (Help from Sections 8 & 9 of SP 34 may be taken ) (Plate I) | Whiteboard |
| 2ND | 1ST | 1.1 Slab, beam and lintel with chajja as in a simple building (Help from Sections 8 & 9 of SP 34 may be taken ) (Plate I) | Whiteboard |
| | 2ND | 1.1 Slab, beam and lintel with chajja as in a simple building (Help from Sections 8 & 9 of SP 34 may be taken ) (Plate I) | Whiteboard |
| | 3RD | **Record checking and viva**<br>1.2 Columns, column-beam connections with & without splicing, isolated footing, staircase (Help from sections 6, 7, 10 of SP 34 may be taken)(Plate 2) | Whiteboard |
| 3RD | 1ST | 1.2 Columns, column-beam connections with & without splicing, isolated footing, staircase (Help from sections 6, 7, 10 of SP 34 may be taken)(Plate 2) | Whiteboard |
| | 2ND | 1.2 Columns, column-beam connections with & without splicing, isolated footing, staircase (Help from sections 6, 7, 10 of SP 34 may be taken)(Plate 2) | Whiteboard |
| | 3RD | 1.2 Columns, column-beam connections with & without splicing, isolated footing, staircase (Help from sections 6, 7, 10 of SP 34 may be taken)(Plate 2) | Whiteboard |
| 4TH | 1ST | 1.2 Columns, column-beam connections with & without splicing, isolated footing, staircase (Help from sections 6, 7, 10 of SP 34 may be taken)(Plate 2) | Whiteboard |
| | 2ND | 1.3 Different types of bolt connections, welded connections. (Plat3) | Whiteboard |
| | 3RD | 1.3 Different types of bolt connections, welded connections. (Plat3) | Whiteboard |
| 5TH | 1ST | 1.3 Different types of bolt connections, welded connections. (Plat3) | Whiteboard |
| | 2ND | 1.3 Different types of bolt connections, welded connections. (Plat3) | Whiteboard |
| | 3RD | 1.3 Different types of bolt connections, welded connections. (Plat3) | Whiteboard |
| 6TH | 1ST | **Record checking and viva**<br>1.4 Details of Pile and Pile cap | Whiteboard |

| | | | |
|---|---|---|---|
| | 2ND | 1.4 Details of Pile and Pile cap | Whiteboard |
| | 3RD | 1.4 Details of Pile and Pile cap | Whiteboard |
| 7TH | 1ST | 1.4 Details of Pile and Pile cap | Whiteboard |
| | 2ND | 1.4 Details of Pile and Pile cap | Whiteboard |
| | 3RD | **2.0 Use of STADD Pro Software:**<br>2.1 2-D Modelling of structures, Use of Structure wizard, Geometry, Property, Support, Loads and combinations, Analysis | Whiteboard |
| 8TH | 1ST | 2.1 2-D Modelling of structures, Use of Structure wizard, Geometry, Property, Support, Loads and combinations, Analysis | Whiteboard |
| | 2ND | 2.1 2-D Modelling of structures, Use of Structure wizard, Geometry, Property, Support, Loads and combinations, Analysis | Whiteboard |
| | 3RD | 2.1 2-D Modelling of structures, Use of Structure wizard, Geometry, Property, Support, Loads and combinations, Analysis | Whiteboard |
| 9TH | 1ST | **Record checking and viva**<br>2.2 Analysis of a Continuous beam with more than two span subjected to udl and point load | Whiteboard |
| | 2ND | 2.2 Analysis of a Continuous beam with more than two span subjected to udl and point load | Whiteboard |
| | 3RD | 2.2 Analysis of a Continuous beam with more than two span subjected to udl and point load | Whiteboard |
| 10TH | 1ST | 2.2 Analysis of a Continuous beam with more than two span subjected to udl and point load | Whiteboard |
| | 2ND | 2.3 3-D modeling of building structures ,dead load, live load, earthquake and wind load analysis, design of a 3 storeyed building and preparation of reinforcement drawing and detailing | Whiteboard |
| | 3RD | 2.3 3-D modeling of building structures ,dead load, live load, earthquake and wind load analysis, design of a 3 storeyed building and preparation of reinforcement drawing and detailing | Whiteboard |
| 11TH | 1ST | 2.3 3-D modeling of building structures ,dead load, live load, earthquake and wind load analysis, design of a 3 storeyed building and preparation of reinforcement drawing and detailing | Whiteboard |
| | 2ND | 2.3 3-D modeling of building structures ,dead load, live load, earthquake and wind load analysis, design of a 3 storeyed building and preparation of reinforcement drawing and detailing | Whiteboard |
| | 3RD | 2.4 Introduction to STADD foundation. | Whiteboard |
| 12TH | 1ST | 2.4 Introduction to STADD foundation. | Whiteboard |
| | 2ND | 2.4 Introduction to STADD foundation. | Whiteboard |
| | 3RD | **3.0 Revit Architecture Software:**<br>3.1 Basics- Modify, Wall, Door, Window, Component Room, Roof, Floor, Grid, Lines, Dimension, Section, Level, Text, View | Whiteboard |
| 13TH | 1ST | 3.2 Modelling- Ramp, Railing, Stair | Whiteboard |
| | 2ND | 3.3 Site- Topo surface- Parking Component, Site Component | Whiteboard |
| | 3RD | 3.3 Site- Topo surface- Parking Component, Site Component | Whiteboard |
| 14TH | 1ST | 3.4 Align, Split, Trim, offset, Match type, Line work, Paint, Scale, Unit | Whiteboard |
| | 2ND | 3.4 Align, Split, Trim, offset, Match type, Line work, Paint, Scale, Unit | Whiteboard |
| | 3RD | **Record checking and viva**<br>3.5 3D View | Whiteboard |
| 15TH | 1ST | 3.5 3D View | Whiteboard |
| | 2ND | 3.6 Preparation of approval drawing of a double storied residential building from given specifications with its 3D view using above commands. | Whiteboard |
| | 3RD | 3.6 Preparation of approval drawing of a double storied residential building from given specifications with its 3D view using above commands. | Whiteboard |

**RNING RESOUCES:**

- STADD-Pro/V8i (latest Version) - Bentley

10/03/22

SIGNATURE OF CONCERNED FACULTY

10.03.2022

SIGNATURE OF HOD

PRINCIPAL
G.P. [illegible]