# LESSON PLAN

**Name of Faculty: Sunita** **Discipline: Civil Engg.**

**Semester: First** **Subject: Engineering Graphics**

**Lesson Plan Duration: 15 weeks (from Sept 2023 to Dec 2023)**

**Teaching Load: Practical - 2Turns/week (3 Hrs./ Turn)**

| WEEK | TURN | TOPIC | Covered on Date |
|---|---|---|---|
| 1 | 1 | **UNIT I**<br>**1. Introduction to Engineering Drawing and Graphics**<br>1.1 Introduction to use and care of drawing instruments, drawing materials, layout and sizes of drawing sheets and drawing boards. | |
| | 2 | 1.2 Symbols and conventions<br>a) Conventions of Engineering Materials, Sectional Breaks and Conventional lines.<br>b) Civil Engineering Sanitary fitting symbols<br>c) Electrical fitting symbols for domestic interior installations. | |
| 2 | 3 | | |
| | 4 | 1.3 Geometrical construction-geometrical figures such as triangles, rectangles, circles, ellipses and curves, hexagons, pentagons bisecting a line and arc, division of line and circle with the help of drawing instruments. | |
| 3 | 5 | | |
| | 6 | **2. Technical Lettering of Alphabet and Numerals**<br>Definition and classification of lettering, Free hand (of height of 5,8,12 mm) and instrumental lettering (of height 20 to 35 mm) : upper case and lower case, single and double stroke, vertical and inclined (Gothic lettering) at 75 degree to horizontal and with suitable height to width ratio 7:4 | |
| 4 | 7 | | |
| | 8 | **3. Dimensioning**<br>3.1 Necessity of dimensioning, method and principles of dimensioning (mainly theoretical instructions).<br>3.2 Dimensioning of overall sizes, circles, threaded holes, chamfered surfaces, angles, tapered surfaces, holes, equally spaced on P.C.D., countersunk holes, counter bored holes, cylindrical parts, narrow spaces and gaps, radii, curves and arches. | |
| 5 | 9 | | |
| | 10 | **4. Scales**<br>4.1 Scales –Needs and importance (theoretical instructions), Type of scales, Definition of Representative Fraction (R.F.) and Length of Scale.<br>4.2 To draw/construct plain and diagonal scales. | |
| 6 | 11 | | |
| | 12 | **UNIT II**<br>**1. Orthographic Projections**<br>1.1 Theory of orthographic projections | |
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|---|---|---|---|
| **7** | **13** | 1.2 Three views of orthographic projections of different objects of given pictorial view of a block in 1st and 3rd angle. | |
| | **14** | 1.3 Projection of Points in different quadrant | |
| **8** | **15** | 1.4 Projection of Straight Line (1st angle) i. Line parallel to both the planes. ii. Line perpendicular to any one of the reference plane and parallel to others iii. Line inclined to any one of the references and parallel to another plane. | |
| | **16** | 1.5 Projection of Plane – Different lamina like square rectangular, triangular, circle and Hexagonal pentagon. Trace of planes (HT and VT). | |
| **9** | **17** | 1.6 Identification of surfaces. | |
| | **18** | **2. Sectioning**<br>2.1 Importance and salient features 2.2 Drawing of full section, half section, partial or broken out sections, Offset sections, revolved sections and removed sections (theoretical only). | |
| **10** | **19** | | |
| | **20** | 2.3 Orthographic sectional views of different objects. | |
| **11** | **21** | **UNIT III**<br>**1. Introduction of projection of right solids** such as prism & pyramid (square, Pentagon, Hexagonal) cube, cone & cylinder (Axes perpendicular to H.P and parallel to V.P.) | |
| | **22** | **2. Introduction of sections of right solids** - Section planes, Sections of Hexagonal prism, pentagon pyramid, cylinder and cone (Section plane parallel to anyone reference planes and perpendicular to V.P. and inclined to H.P.) | |
| **12** | **23** | **3. Development of Surfaces** – Development of lateral surfaces of right solids like cone, cylinder, pentagonal prism, pyramid and hexagonal pyramid (Simple problems) | |
| | **24** | **UNIT IV**<br>**1. Fundamentals of isometric projections and isometric scale.** | |
| **13** | **25** | **2. Isometric views of different laminas** like circle, pentagon and hexagon. | |
| | **26** | **3. Isometric views of different regular solids** like cylinder, cone, cube, cuboid, pyramid and prism. | |
| **14** | **27** | **4. Isometric views from given different orthographic projections(front, side and top view)** | |
| | **28** | **UNIT V**<br>**Introduction to AutoCAD** Basic introduction and operational instructions of various commands in AutoCAD. | |
| **15** | **29** | | |
| | **30** | **Drawing of different objects on AutoCAD** (given pictorial/isometric view of a block). | |
| **16** | **31** | | |
| | **32** | **Viva** | |

# Lesson Plan

**Name of Faculty** : **Chetna**
**Discipline** : **CIVIL**
**Semester** : **1st**
Subject : **PLUMBING SERVICES**
**Lesson Plan Duration** : **15 Weeks (From Sept 2023 to Dec 2023)**

| Week | Theory | |
|---|---|---|
| | Lecture | Topic (including assignment/test) |
| 1st | **1st** | Selection, use and care of tools required for plumbing work |
| | **2nd** | Such as threading die, bit brace, ratchet brace |
| 2nd | **1st** | pipe wrench, spanner set, pipe cutter, pipe vice, hacksaw, chisel, |
| | **2nd** | files and other common hand tools, bench drilling machine,soldering iron |
| 3rd | **1st** | Selection and use of different pipes like GI Pipes, |
| | **2nd** | Plastic pipes, PVC pipes, HDPE pipes, Cast iron pipes, |
| 4th | **1st** | Plumbing symbols; Bends, Elbows, Sockets, Tees,Unions, |
| | **2nd** | Pipe cutting, Pipe bending, Pipe Threading, Pipe joints, Pipefitting |
| 5th | **1st** | Alignment of pipes, Branching of pipes, Safety precautions |
| | **2nd** | Sources of water; Rainwater harvesting; |
| 6th | **1st** | Sessional Exam + revision |
| | **2nd** | Sessional Exam+ revision |
| 7th | **1st** | Water supply systems in a town; Water distribution systems |
| | **2nd** | Distribution reservoirs; Pumps; Valves; Fire hydrants; Storage of water in buildings |

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|---|---|---|
| 8th | **1st** | Types of tanks; Laying water supply pipe lines |
| | **2nd** | Drainage system (two pipes, one pipe, single stack and other systems), Trap, Cesspool, |
| 9th | **1st** | Sceptic tank, cleaning blocked pipes and drains, laying sanitary and sewer pipes, Manholes, |
| | **2nd** | Inspection and testing (pressure & leakage test, testing straightness of pipes, ball test etc.) Fixing accessories, Problems in drainage and their solution |
| 11th | **1st** | 2nd Sessional Exam + revision |
| | **2nd** | 2nd Sessional Exam + revision |
| 12th | **1st** | Flush toilet, Squat toilet, Wash basin, |
| | **2nd** | Sink, Floor traps, Urinal, Bathtub, |
| 13th | **1st** | Shower, Bidet, Mixing tap, Popup waste |
| | **2nd** | Heat transfer, Water heater, |
| 14th | **1st** | Geyser, Domestic hot water supply system |
| | **2nd** | Central heating, Solar water heater |
| 15th | **1st** | 3rd Sessional Exam + revision |
| | **2nd** | 3rd Sessional Exam + revision |