

## TECHNICAL DRAWING

**UNIT CODE: CON/CU/PL/CC/02/5/A**

### Relationship to Occupational Standards

This unit addresses the unit of competency: apply technical drawing

**Duration of Unit:** 50 hours

### Unit Description

This unit covers the competencies required to prepare and apply technical drawing. It involves competencies in selecting, using and maintaining drawing equipment and materials. It also involves developing plane geometry drawings, solid geometry drawings, pictorial and orthographic drawings and apply computer aided design

### Summary of Learning Outcomes

1. Select, use and maintain drawing equipment and materials
2. Develop plane geometry drawings
3. Develop solid geometry drawings
4. Develop pictorial and orthographic drawings
5. Apply Computer Aided Design

### Learning Outcomes, Content and Suggested Assessment Methods:

Learning Outcome	Content	Suggested Assessment Methods
1. Select, use and maintain drawing equipment and materials	<ul style="list-style-type: none"><li>• Terms and concepts</li><li>• Drawing equipment</li><li>• Drawing materials</li><li>• Use, care and maintenance of drawing equipment's</li></ul>	<ul style="list-style-type: none"><li>• Written tests</li><li>• Oral questioning</li><li>• Assignments</li><li>• Supervised exercises</li></ul>
2. Develop plane geometry drawings	<ul style="list-style-type: none"><li>• Terms and concepts</li><li>• Types of lines in drawings</li><li>• Freehand sketching</li><li>• Construction, measurement and bisection of angles</li><li>• Construction of geometric forms e.g. squares, circles</li><li>• Standards drawing conventions</li></ul>	<ul style="list-style-type: none"><li>• Written tests</li><li>• Oral questioning</li><li>• Assignments</li><li>• Supervised exercises</li></ul>

3. Develop solid geometry drawings	<ul style="list-style-type: none"> <li>• Terms and concepts</li> <li>• Interpretation of sketches and drawings of patterns e.g. cylinders, prisms and pyramids</li> <li>• Develop geometrical solid figures e.g. prisms, cones</li> <li>• Surface development</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Oral questioning</li> <li>• Assignments</li> <li>• Supervised exercises</li> </ul>
4. Develop orthographic drawings	<ul style="list-style-type: none"> <li>• Terms and concepts</li> <li>• Free hand sketching</li> <li>• Pictorial and orthographic drawings</li> <li>• Meaning of symbols and abbreviations</li> <li>• Drawing and interpretation of orthographic elevations</li> <li>• Dimensioning of orthographic elevations</li> <li>• Conversion of orthographic to pictorial</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Oral questioning</li> <li>• Assignments</li> <li>• Supervised exercises</li> </ul>
5. Apply computer Aided design	<ul style="list-style-type: none"> <li>• Terms and concepts</li> <li>• Geometry drawings</li> <li>• Orthographic drawings</li> </ul>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Oral questioning</li> <li>• Assignments</li> <li>• Supervised exercises</li> </ul>

**Suggested methods of instructions**

- Discussions
- Demonstration
- visiting Lecturer/Expert
- Industrial Visits

**Recommended Resources**

- Drawing room

- Drawing instruments e.g. T-squares, set squares, drawing sets
- Drawing tables
- Pencils, papers, erasers
- Masking tapes
- Text books
- Samples of solids
- Computer (CAD)