



REPUBLIC OF KENYA

COMPETENCY BASED CURRICULUM

FOR

CARPENTRY AND JOINERY

LEVEL 5

PROGRAMME CODE:0722 554B



TVET CDACC

**P.O BOX 15745-00100
NAIROBI**

TECHNICAL DRAWING

UNIT CODE: CON/CU/CAJ/CC/02/5/B

Relationship to Occupational Standards

This unit addresses the unit of competency: Prepare and interpret technical drawings

Duration of Unit: 60 hours

Unit Description

This unit covers the competencies required to prepare and interpret technical drawings. It involves competencies to perform general communication. It also involves producing plain geometry drawings, orthographic and pictorial drawings, solid geometry, working drawings for building and producing perspective drawing.

Summary of Learning Outcomes

1. Perform General Communication
2. Produce plane geometry drawings
3. Produce orthographic and pictorial drawings
4. Produce solid geometry drawings
5. Produced working drawings for building
6. Produced perspective drawing

Learning Outcomes, Content and Suggested Assessment Methods:

| Learning Outcome | Content | Suggested Assessment Methods |
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| 1. Perform General Communication | <ul style="list-style-type: none">• Role of drawing as means of communication• Identification and care of drawing equipment• Identification and care of drawing materials• Procedures of laying and folding drawing papers• Drawing and printing quality lines and letters• Dimension• Drawing a given scale• Reference to manufacturer's instructions and work place | <ul style="list-style-type: none">• Observation• Oral questioning• Written tests |

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| | <p>procedures on use and maintenance of drawing equipment and materials</p> <ul style="list-style-type: none"> • Reference to relevant environmental legislations • Use of Personal Protective Equipment (PPEs) | |
| 2. Produce plane geometry drawings | <ul style="list-style-type: none"> • Reduction and enlarging figures by construction method • Construction of figures to other shapes of equal area • Construction of an ellipse using different methods from given lines and fixed points • Construction of a parabola • Construction of loci of points of sliding and rotating mechanism • Construction of helix • Types of lines in drawings | <ul style="list-style-type: none"> • Oral questioning • Practical tests • Observation |
| 3. Produce orthographic and pictorial drawings | <ul style="list-style-type: none"> • Drawing objects in first and third angles • Conversion of pictorial views into orthographic projections • Construction of isometric drawings of solids having curves and circles • Construction of oblique drawings of solids having curves and circles • Construction of isometric drawings of objects having inclined sides • Free hand sketching through lines and boxes • Use of lines and boxes to produce pictorial sketches | <ul style="list-style-type: none"> • Observation • Practical tests • Oral questioning |

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| <p>4. Produce solid geometry drawings</p> | <ul style="list-style-type: none"> • Drawing front elevation and plan of sectioned solids • Production of auxiliary views from elevations and plan • Projecting points of intersecting solid • Development of surfaces of intersecting solids • Development of surfaces of truncated regular solids | <ul style="list-style-type: none"> • Observation • Practical tests • Oral questioning |
| <p>5. Produced working drawings for building</p> | <ul style="list-style-type: none"> • Identification of symbols for building materials • Drawing details of foundation, walls, floors • Drawing details of roofs and trusses • Drawing floor plans • Construction of elevations of houses • Designing simple objects • Designing drawings of buildings • Introduction to CAD | <ul style="list-style-type: none"> • Observation • Practical tests • Oral questioning |
| <p>6. Produced perspective drawing</p> | <ul style="list-style-type: none"> • Meaning of perspective drawing • Drawing objects using one-point perspective • Drawing objects using two-point perspective | <ul style="list-style-type: none"> • Observation • Practical tests • Oral questioning |

Suggested Methods of Instruction

- Demonstration by trainer
- Practice by the trainee
- Discussions

Recommended Resources

- Drawing room
- Drawing instruments e.g. T-squares, set squares, drawing sets
- Drawing tables
- Pencils, papers, erasers
- Masking tapes