



**THE REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**BUILDING TECHNOLOGY**

**KNQF LEVEL 6**

**ISCED PROGRAM CODE: 0732 554B**



**TVET CDACC**

**P.O BOX 15745-00100**

**NAIROBI**

## **WORKSHOP TECHNOLOGY PRACTICES**

**UNIT CODE: CON/CU/BUT/CC/04/6/B**

### **Relationship to Occupational Standards**

This unit addresses the unit of competency: Apply Workshop Technology Practices

**Duration of Unit:** 90 Hours

### **Unit Description**

This unit describes the competence in applying workshop technology practices. It entails performing masonry, plumbing and carpentry tasks. It also involves performing electrical and mechanical operations.

### **Summary of Learning Outcomes**

1. Perform masonry tasks
2. Perform plumbing tasks
3. Perform carpentry tasks
4. Perform electrical operations
5. Perform mechanical operations

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

| <b>Learning Outcome</b>    | <b>Content</b>   | <b>Suggested Assessment Methods</b>  |
|----------------------------|--|--|
| 1. Perform masonry tasks   | <ul style="list-style-type: none"><li>• Masonry workshop safety requirements</li><li>• Masonry hand tools</li><li>• Masonry machine tools</li><li>• Maintenance of masonry tools</li><li>• Use of masonry tools</li></ul>      | <ul style="list-style-type: none"><li>• Written Tests</li><li>• Oral Questioning</li><li>• Practical tests/Project</li></ul> |
| 2. Perform plumbing tasks  | <ul style="list-style-type: none"><li>• Plumbing workshop safety requirements</li><li>• Plumbing hand tools</li><li>• Plumbing machine tools</li><li>• Maintenance of Plumbing tools</li><li>• Use of Plumbing tools</li></ul> | <ul style="list-style-type: none"><li>• Written Tests</li><li>• Oral Questioning</li><li>• Practical tests/Project</li></ul> |
| 3. Perform carpentry tasks | <ul style="list-style-type: none"><li>• Carpentry workshop safety requirements</li><li>• Carpentry hand tools</li><li>• Carpentry machine tools</li></ul>  | <ul style="list-style-type: none"><li>• Written Tests</li><li>• Oral Questioning</li><li>• Practical tests/Project</li></ul> |

|                                  |  |  |
|----------------------------------|--|--|
|                                  | <ul style="list-style-type: none"> <li>• Maintenance of Carpentry tools</li> <li>• Use of Carpentry tools</li> </ul>   |  |
| 4. Perform electrical operations | <ul style="list-style-type: none"> <li>• Electrical workshop safety requirements</li> <li>• Measurement of electrical quantities</li> <li>• IEE regulations</li> <li>• Electrical conventional tools</li> <li>• Installation of basic electrical circuits</li> <li>• Renewable energy</li> <li>• Power supply</li> </ul> | <ul style="list-style-type: none"> <li>• Written Tests</li> <li>• Oral Questioning</li> <li>• Practical tests/Project</li> </ul> |
| 5. Perform mechanical operations | <ul style="list-style-type: none"> <li>• Mechanical workshop safety requirements</li> <li>• Mechanical hand tools</li> <li>• Use of mechanical tools</li> <li>• Diesel and petrol engines</li> <li>• Water pumps</li> <li>• Maintenance of engines and water pumps</li> </ul>  | <ul style="list-style-type: none"> <li>• Written Tests</li> <li>• Oral Questioning</li> <li>• Practical tests/Project</li> </ul> |

#### **Suggested Methods of Instruction:**

- Demonstration by trainer
- Practical work by trainee
- Demonstration videos
- Field trips
- Trainee group discussions

#### **Recommended Resources**

##### **Tools and equipment**

- Masons trowel
- Wood float
- Cold chisels
- Masons square
- Spade
- Shovel
- Plumb bob

- Concrete mixer
- Block cutter
- Vibrator
- Pneumatic hammer
- Compactors
- Bench shears
- Anvil
- Pipe wrench
- Pliers
- Bending machine
- Welding
- Sheet metal holding machine
- Portable power drill
- Saws
- Planes
- Hammer
- Carpenter square
- Marking gauges
- Hand drill
- Screw drivers
- circular saw
- Thicknesser
- Portable sander
- Close cut saw
- Portable drill machine
- phase tester
- screw driver
- pliers
- long nose
- side cutter
- draw in wire
- electrical knife
- electrical hammer
- Arc welding shields
- Leather gloves
- Chipping hammers
- Welding goggles
- Tongs

- Hand vices
- Mole punch
- Pliers
- Centrifugal
- Submersible
- Reciprocating pump
- Hand pumps
- Hand grinder

### **Materials and supplies**

- Lumber
- PPR pipes
- PVC pipes
- GI pipes
- Pipe fittings
- Cement
- Sand
- Lime
- Sheet metal
- Steel plates
- Electrical materials
- Electrical appliances
- Plumbing appliances
- Fuel
- Grease
- Oil
- Filters

### **Personal protective equipment (PPEs)**

- Helmets
- Gloves
- Safety goggles
- Safety boots
- Overalls
- Dust masks
- Gas masks
- Dust coats