



REPUBLIC OF KENYA

COMPETENCY BASED CURRICULUM

FOR

ELECTRICAL OPERATION (POWER OPTION)

KNQF LEVEL 5

ISCED CODE: 07130554 B



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

WORKSHOP TECHNOLOGY

UNIT CODE: ENG/CU/PO/CC/02/6/A

Relationship to Occupational Standards

This unit addresses the unit of competency: Perform workshop process.

Duration of Unit: 60 hours

Unit Description

This unit covers the competencies required to perform workshop processes. Competencies include applying workshop Safety, use of workshop tools, instruments and equipments, preparation of workshop materials, preparation of workshop for Electrical installation practicals, Storage of Electrical tools and materials after practicals and troubleshoot and repair workshop tools and equipment.

Summary of Learning Outcomes

1. Apply workshop safety
2. Use of workshop tools, Instruments and equipments
3. Prepare workshop tools and instruments for an Electrical installation practical
4. Prepare the workshop for an Electrical practical
5. Store Electrical tools and materials after Practicals
6. Troubleshoot and repair workshop tools and equipment

Learning Outcomes, Content and Suggested Assessment Methods:

| Learning Outcome | Content | Suggested Assessment Methods |
|--------------------------|---|--|
| 1. Apply workshop safety | <ul style="list-style-type: none">• Meaning of PPE• Standard operating procedure in PPE• Workshop rules• Electrical hazards e.g.• Electric shock.• Fire• Classes of fire• Causes of fire• Various methods of fire extinguishing• First Aid | <ul style="list-style-type: none">• Oral questioning• Written tests |

| | | |
|---|--|---|
| <p>2. Use of workshop tools, Instruments and equipments</p> | <ul style="list-style-type: none"> • Meaning of workshop tools, instruments and equipments • Uses of workshop tools, Instruments and equipments • Classification of workshop tools and equipments • Care and Maintenance of workshop tools and Instruments | <ul style="list-style-type: none"> • Oral questioning • Practical tests • Written tests |
| <p>3. Prepare workshop tools and instruments for an Electrical installation practical</p> | <ul style="list-style-type: none"> • Tools and instruments for an Electrical practical • Preparation of a list of tools and instruments for an Electrical practical. • Issuing and confirmation of tools and instruments before and after practical • Testing of practical tools and Instruments | <ul style="list-style-type: none"> • Observation • Oral questioning • Practical tests • Written tests |
| <p>4. Prepare workshop for an Electrical practical</p> | <ul style="list-style-type: none"> • Practical stations • Interpretation of a list of practical material | <ul style="list-style-type: none"> • Observation • Oral questioning • Practical tests • Written tests |
| <p>5. Store Electrical tools and materials after practicals</p> | <ul style="list-style-type: none"> • Classification of workshop tools and instruments. • Storage of workshop Tools and equipment • Waste disposal | <ul style="list-style-type: none"> • Observation • Oral questioning • Practical tests • Written tests |
| <p>6. Troubleshoot and repair/replace workshop tools and equipment</p> | <ul style="list-style-type: none"> • Meaning of troubleshooting • Common faults in Electrical equipments • Fault diagnosis procedure • Repair/Replace of components in Electrical equipments | <ul style="list-style-type: none"> • Observation • Oral questioning • Practical tests • Written tests |

Suggested methods of instructions

- Demonstration by trainer
- Practice by the trainee
- Field trips
- On-job-training
- Discussions

Recommended Resources

- Set of screw drivers
- Pliers
- Phase testers
- Multimeter
- Stationery
- Cables
- Lubricants
- Service parts
- PPE –hand gloves, dust coat, dust masks
- Multimeter
- Clamp meter
- Earth electrode resistance meter

Phase sequence meter