COMPETENCY BASED CURRICULUM

FOR

ELECTRICAL ENGINEERING (POWER OPTION)

KNQF LEVEL: 6

ISCED PROGRAMME CODE: 0713 554B

TVET CDACC
P.O BOX 15745-00100
NAIROBI

WORKSHOP TECHNOLOGY

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

Relationship to Occupational Standards
This unit addresses the unit of competency: Perform Workshop Processes
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 equipment, preparation of workshop materials, preparation of workshop for Electrical installation practicals, Storage of Electrical tools and materials after practicals, 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	• 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
		• Oral questioning
		• Written tests

2. Use of workshop tools, Instruments and equipment	• Meaning of workshop tools, instruments and equipment • Uses of workshop tools, Instruments and equipment • Classification of workshop tools and equipment • Care and Maintenance of workshop tools and Instruments	• Oral questioning • Practical tests • Written tests

3. Prepare workshop tools and instruments for an Electrical installation practical	• 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
		• Observation
		• Oral questioning
		• Practical tests
		• Written tests

4. Prepare workshop for an Electrical practical	• Practical stations • Interpretation of a list of practical material	• Observation • Oral questioning • Practical tests • Written tests
5. Store Electrical tools and materials after practicals	• Classification of workshop tools and instruments. • Storage of workshop Tools and equipment • Waste disposal	• Observation • Oral questioning • Practical tests • Written tests
6. Troubleshoot and repair/replace workshop tools and equipment	• Meaning of troubleshooting • Common faults in Electrical equipments • Fault diagnosis procedure • Repair/Replace of components in Electrical equipments	• Observation • Oral questioning • Practical tests • Written tests

Suggested Methods of Instruction

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

Recommended Resources

Tools

- Set of screw drivers
- Pliers
- Phase testers
- Multimeter

Materials and supplies

- Stationery
- Cables
- Lubricants
- Service parts

Equipment

- PPE –hand gloves, dust coat, dust masks
- Multimeter
- Clamp meter
- Earth electrode resistance meter
- Phase sequence meter

Reference materials

- IEE regulations
- Organizational procedures manual