

WORKSHOP TECHNOLOGY

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

Relationship to Occupational Standards

This unit addresses the unit of competency: Perform workshop process

Duration of Unit: 150 hours

Unit Description

This unit specifies the competencies required to manage an electrical workshop. It includes applying workshop safety, use of workshop tools, instruments and equipment, preparation of workshop tools and instruments for an electrical installation practical, storage of electrical tools and materials after practical and troubleshooting and repair/ replacement of workshop tools and equipment

Summary of Learning Outcomes

1. Apply workshop safety
2. Use of workshop tools, Instruments and equipment
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 practical
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"><input type="checkbox"/> Meaning of PPE<ul style="list-style-type: none">• Standard operating procedure in PPE<input type="checkbox"/> Workshop rules<input type="checkbox"/> Electrical hazards e.g.<ul style="list-style-type: none">• Electric shock.<input type="checkbox"/> Fire<ul style="list-style-type: none">• Classes of fire• Causes of fire• Various methods of fire extinguishing<input type="checkbox"/> First Aid	<ul style="list-style-type: none"><input type="checkbox"/> Oral questioning<input type="checkbox"/> Written tests

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

Suggested Methods of Instruction

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

Recommended Resources

Tools <ul style="list-style-type: none">• Set of screw drivers• Pliers• Phase testers• Multimeter	Materials and supplies <ul style="list-style-type: none">• Stationery• Cables• Lubricants• Service parts
Equipment <ul style="list-style-type: none">• PPE –hand gloves, dust coat, dust masks• Multimeter• Clamp meter• Earth electrode resistance meter• Phase sequence meter	Reference materials <ul style="list-style-type: none">• IEE regulations• Organizational procedures manual

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