

1. Module details**Module name****Repairs and Maintenance to Community Facilities****Module duration**

It is expected that students with the appropriate entry knowledge and skills will successfully complete this module in 36 - 40 hours.

Module code

NUE026

Discipline code

10031

2. Module purpose

This module will provide the learners with the skills required to perform minor maintenance and repairs to the community's Essential Services facilities and to participate in a community safety / security program.

3. Prerequisites

Nil.

4. Relationship to competency standards

This module provides part of the underpinning knowledge and skills in the 'Evidence Guide' of specific units of competency in the National Electrotechnology Training Package and provides similar support, where mapped, to equivalent units in the National Metals and Engineering Competency Standards. For details refer to the module to unit maps, available from NUEITAB.

5. Content**Window repair and maintenance**

Emergency repairs
 Louvre type
 Fixed pane type
 Shutters
 Safety awareness

Repair and maintenance to fences and gates

Emergency repairs
 Locks and catches
 Security fencing
 Fence maintenance
 Gates
 Safety awareness

Maintenance painting

Preparation of surfaces
 Blockwork
 Concrete
 Timber
 Steel
 Paint selection
 Brush and roller selection

Paint application
Clean up process
Paint and accessories storage
Safety awareness

Essential services facilities lighting

Incandescent light globes
Flourescent tubes
Flourescent light starters
Diffusion devices
Safety awareness

Essential services facilities safety and security and emergency checks

Broken windows
Faulty lighting
Damaged gates
Logging the inspections
Notification of the situation
Safety awareness

6. Assessment strategy

Assessment methods

Assessment should be progressive reflecting a holistic approach to ensure the module purpose is met. To assist in ensuring validity, reliability and fairness assessment instruments should include practical exercises, assignments and written tests consisting of a number of item types, such as multiple choice, short answer and problem solving.

Conditions of assessment

Learning and assessment will take place in an environment that is conducive to a learner's development.

7. Learning outcome details

Learning outcome 1

Repair broken and damaged windows in the essential service facilities.

Assessment criteria

Louvre type window

- 1.1 Repair and clean all broken glass debris from the louvre galleries and the surrounding areas.
- 1.2 Inspect the louvre gallery for ease of operation and alignment of the louvre blade holders.
- 1.3 Measure and obtain the correct amount of louvre blades.
- 1.4 Fit the louvre blades into the gallery making sure the lock tabs are correctly positioned.
- 1.5 Clean the window and the work area.

Note Points 1.2 to 1.5 apply also to metal blade louvres.

Fixed pane type window

- 1.6 Remove all loose, broken glass and debris from the window and surrounding area.
- 1.7 Remove the old putty or rubber locking strip, clean the remaining glass from the area and the frame.
- 1.8 Measure the frame and order a piece of glass to suit.
- 1.9 Fit the new glass and secure with new putty (silicone) or rubber lock strip.
- 1.10 Clean the window, work area and all the equipment.

Storm Shutters

- 1.11 Repair any damaged section of the shutter including hinges and locking devices.
- 1.12 Make temporary emergency repairs to a window (board up the opening).
- 1.13 Observe all safety procedures including the wearing of personal protective equipment.

Learning outcome 2

Perform emergency repairs and minor maintenance to gates and fences in or around the community's essential services facilities.

Assessment criteria

- 2.1 Identify and remove the damaged portion of fencing, wire strands and wire mesh.
- 2.2 Remove, replace or straighten any damaged fence poles.
- 2.3 Realign the fence straining poles as required.
- 2.4 Restring the wire through the poles and strain the fence.
- 2.5 Place the new wire mesh against the fence, wire one end to the straining pole, strain and attach the mesh to the wire strands.
- 2.6 Secure the wire mesh to the fence strands.
- 2.7 Design and construct emergency fencing.
- 2.8 Repair (straighten and weld) a steel framed, wire mesh gate.
- 2.9 Rehang the gate after completion of any repairs.
- 2.10 Repair the hinge and locking mechanism of the gate.
- 2.11 Observe all safety procedures including the wearing of personal protective equipment.

Learning outcome 3

Perform maintenance painting on different textures in given situations on the community's essential service facilities.

Assessment criteria

- 3.1 Demonstrate the correct preparation methods necessary before painting surfaces of different textures.
- 3.2 Demonstrate the correct preparation methods necessary before repainting surfaces of different textures.
- 3.3 List the correct undercoat application and thinning agent as recommended by the manufacturer for both new and previously painted: timber, block, concrete or a steel surface.
- 3.4 Explain the reasons for the correct preparation procedures on: timber, block, concrete or a steel surface.
- 3.5 Select the most suitable top coat application and thinning agent as recommended by the manufacturer for the given task.
- 3.6 Explain the problems arising from the use of paints that are incompatible with other paints.
- 3.7 Discuss the health and safety aspects of paint thinning products other than water.
- 3.8 Select the most appropriate method of application eg, roller, brush or paint pads
- 3.9 Paint selected surface textures located within the communities essential services facilities.
- 3.10 Refurbish all of the paint application equipment in the appropriate cleaning agent.
- 3.11 Store paint and any flammable thinning agent in a designated area eg, a flammable liquid storage compartment.
- 3.12 Observe all safety procedures including the wearing of personal protective equipment.

Note Any activity involving the handling of paint and thinning agents is to be done under supervision.

Learning outcome 4

Identify and replace in a safe manner, light globes, tubes and ancillary equipment located in the community's essential services facilities, and report on any inoperative light.

Assessment criteria

- 4.1 Identify light globes that require changing.
- 4.2 Remove and replace light fitting cover(s).
- 4.3 Isolate (switch off) the power, remove and replace the globe, switch the power back on and test the light, (if still inoperative isolate and tag the power and notify the appropriate person(s).
- 4.4 Locate and identify fluorescent tubes that require changing.
- 4.5 Remove and replace fluorescent light defusion devices.
- 4.6 Isolate (switch off) the power, remove and replace the tube, switch the power back on and test the light, (if still inoperative isolate and tag the power and notify the appropriate person(s).
- 4.7 Locate, identify and change a faulty fluorescent lighting starter.
- 4.8 Report any inoperative or incorrectly positioned lighting to the appropriate person(s), eg the **strobe** effect on moving machinery lathes, grinders, engines, fans, flywheels etc gives an impression that the machine is stationary and could be a potential hazard.
- 4.9 Ensure that all protective guarding is in place on the lighting fixtures.
- 4.10 Observe all safety procedures including the wearing of personal protective equipment.

Learning outcome 5

Conduct safety, emergency and security inspections of the community's essential services facilities and report the findings to the appropriate person(s).

Assessment criteria

- 5.1 Check and report on the operation of essential services, facilities security systems and the emergency control plan.
- 5.2 Check and report on the operation of security lighting in and around the essential services facilities.
- 5.3 Check and report on the condition of the security fences and gates in and around the essential services facilities.
- 5.4 Check the safety and security of the bulk fuel depot.
- 5.5 Check and ensure that all decanting facilities for fuel are secure.
- 5.6 Check that all switch boards and sub boards provisions are securely locked.
- 5.7 Log the security/safety inspections and make reports including any potential hazards to the appropriate person(s).
- 5.8 Observe all safety procedures including the wearing of personal protective equipment.

Learning outcome 6

Maintain a stock control register for the recording of outgoing goods and incoming consumables in relation to the R&M (repair and maintenance) of the communities essential services facilities.

Assessment criteria

- 6.1 Record all outgoing consumables against the appropriate stock register or job card.
- 6.2 Prepare a list of consumables and forward it to the appropriate person(s).
- 6.3 Receive the incoming goods and log their receipt:
 - Paints and accessories
 - Light globes and tubes
 - Window and door hardware
 - Timber and steel fasteners
 - Glassware as required
 - Other R&M (repair and maintenance) consumables as required.
- 6.4 Store the incoming consumables in a safe and appropriate manner.
- 6.5 Report any broken or damaged stock to the appropriate person(s).
- 6.6 Observe all necessary safety procedures including manual lifting techniques.

8. Delivery of the module

Delivery strategy

Delivery strategies must be suitable for learning both theoretical and practical aspects described in the module purpose. It is considered that the most effective method to achieve this is by integration of theory and practice where students learn by experimentation, research and reports. It is recommended that learning and assessment be facilitated in a holistic manner that may require learning outcome sequence other than that indicated in the module.

Resource requirements

Students will need access to an operational powerhouse to gain maximum benefit from this module. They will also need access to all service manuals for the equipment they are training on.

Occupational health and safety requirements

A safe and healthy environment will be provided for students and teachers as well as the particular safety procedures followed as part of the learning / teaching activity and content.