TASK REQUIREMENTS UEE30820

UEEEL0003 - Arrange circuits, control, and protection for electrical installations.
1. Determining the extent and nature of the installation from job specifications
2. Arranging the control and protection for electrical installations with and without safety services
3. Applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices
4. Applying safety principles for electrical systems in buildings and premises
5. Applying sustainable energy principles and practices
6. Determining individual load requirements
7. Arranging and terminating circuits, control and protective devices to comply with requirements
8. Selecting circuit protective devices and residual current devices (RCDS) that comply with all requirements
9. Selecting minimum size-earthing conductors in accordance with relevant industry standards
10. Dividing installation into circuits
11. Coordination of protection devices and circuit wiring
12. Selecting overcurrent protection devices, circuit breakers and RCDS/RCBOS
UEEEL0005 - Develop and connect electrical control circuits.
1. Applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices
2. Applying sustainable energy principles and practices
3. Labelling wires and terminals
4. Developing forward reverse circuit requiring interlocking from a description of the circuit operation, including jog and interlock functions
UEEEL0008 - Evaluate and modify low voltage heating equipment and controls
1. Applying work health and safety (WHS)/occupational health and safety (OHS) workplace procedures, including identifying hazards, assessing risks and implementing control measures
2. Checking circuits are isolated in accordance with workplace procedures and regulatory requirements
3. Connecting heating equipment and appliances
UEEEL0009 - Evaluate and modify low voltage lighting circuits, equipment, and controls.
1. Applying work health and safety (WHS)/occupational health and safety (OHS) workplace procedures, including:
2. Identifying and assessing hazards and risks, and implementing control measures
3. Checking circuits are isolated in accordance with workplace procedures and regulatory requirements
4. Determining the operating parameters of existing lighting circuits and equipment
5. Intermediate switching of light points using the loop at the light/switch methods of thermoplastic sheathed (TPS) wiring
6. Developing lighting circuits and equipment to comply with a specified function and operating parameters
7. Determining the cause of low illuminance level in existing lighting circuits and equipment
8. Determining conditions causing existing lighting circuits and equipment to be unsafe
9. Connecting lighting equipment and controls
10. Identifying faulty components in luminaires and auxiliary/control equipment from test results
11. Testing luminaires and auxiliary/control equipment for serviceability
UEEEL0010 - Evaluate and modify low voltage socket outlets circuits
1. Applying work health and safety (WHS)/occupational health and safety (ohs) workplace procedures, including:

2. Identifying and assessing hazards and risks, and implementing control measures
3. Checking circuits are isolated in accordance with workplace procedures and regulatory requirements
4. Altering existing socket outlet circuits to comply with specified operating parameters
5. Developing socket outlets circuits to comply with a specified function and operating parameters
6. Determining conditions causing existing socket outlets circuits to be unsafe
7. Verifying correct operation of the installed circuits, including dead testing to comply with industry standards
8. Verifying the polarity of switched socket outlets
9. Identifying faulty socket outlets from visual inspection and/or test results
UEEEL0012 Install low voltage wiring, appliance, switchgear and associated accessories
1. Reading and interpreting drawings and schedules related to cable layouts, apparatus locations and circuit connections
2. Planning cable routes and installation of appliances, switchgear and accessories and obtaining installation materials
3. Identifying underground services
4. Identifying underground services
5. Installing wiring systems for low voltage (LV) circuits
6. Installing LV electrical apparatus and associated equipment
7. Placing and securing appliances, switchgear and accessories accurately in their planned location
8. Terminating subcircuit cabling at switchboards and connecting components including: correct interconnection between switchgear, protection devices and links' use of adequately sized cables correct marking of equipment clear identification of circuit neutral conductors
9. Terminating and connecting appliances, switchgear and accessories in accordance with industry standards
10. Conducting safety inspection, testing and documentation of installed circuits, including verification of earth continuity, insulation resistance, polarity, circuit connections and protection arrangements
11. Maintaining fire integrity.
UEEEL0014 - Isolate, test and troubleshoot low voltage electrical circuits.
1. Applying work health and safety (WHS)/occupational health and safety (OHS) workplace procedures, including:
2. Identifying and assessing hazards and risks, and implementing control measures
3. Selecting and using correct tools and equipment to isolate, test and troubleshoot electrical circuits
4. Performing safe isolation of equipment
5. Preparing a safe work method statement (SWMS) or job safety analysis (JSA) for effective and safe isolation
6. Applying safe methods to identify sources of supply to be isolated
7. Identifying appropriate points of isolation
8. Isolating equipment from all sources of supply by safely switching off switches or circuit breakers, removing fuses or links, or removing circuit connections
9. Securely isolating devices by applying an isolation securing device which requires a deliberate action to engage or disengage
10. Applying a personal danger tag, lock-out or permit system
11. Applying safe methods to confirm effective and safe isolation from all sources of supply
12. Proving de-energisation of all relevant electrical equipment and conductors
13. Testing the voltage tester on a known live source
14. Testing between all conductors and a known earth
15. Testing between conductors

16. Retesting the voltage tester on a known live source for correct operation
17. Correctly using personal protective equipment (PPE) whilst performing effective isolation and operation of low voltage (LV) equipment
18. Completing visual inspection of the electrical installation for compliance with regulatory requirements including protection requirements
19. Completing visual inspection of the electrical installation for compliance with regulatory requirements including general condition
20. Completing visual inspection of the electrical installation for compliance with regulatory requirements including mains/submains
21. Completing visual inspection of the electrical installation for compliance with regulatory requirements including switchboards
22. Completing visual inspection of the electrical installation for compliance with regulatory requirements including wiring systems
23. Completing visual inspection of the electrical installation for compliance with regulatory requirements including switchboards
24. Completing visual inspection of the electrical installation for compliance with regulatory requirements including equipment and accessories
25. Completing visual inspection of the electrical installation for compliance with regulatory requirements including earthing
26. Conducting mandatory testing to ensure compliance with AS/NZS 3000 mandatory test requirements and the application of mandatory tests following guidance of AS/NZS 3017
27. Conducting mandatory testing to ensure compliance with insulation resistance of mains, submains and final sub-circuits meets the regulatory requirements
28. Conducting mandatory testing to ensure compliance with earth continuity of the main earthin conductor, protective earthing conductors, combined protective earthing and neutral (PEN) conductors and bonding conductors meet the regulatory requirements
29. Conducting mandatory testing to ensure compliance with polarity of active, neutral and earth conductors including phase sequence and rotation meet the regulatory requirements
30. Conducting mandatory testing to ensure compliance with correct connections of active, neutral and protective earthing conductors are tested to ensure no short circuits between conductors, no transposition of conductors that could result in the earthing system or exposed conductive parts becoming energised, and no interconnection of conductors between different circuits, in accordance with regulatory requirements
31. Conducting mandatory testing to ensure compliance with verification that earth fault-loop impedance limitations are not exceeded in accordance with regulatory requirements
32. Conducting mandatory testing to ensure compliance with residual current devices (RCD'S) have been correctly installed, their function verified, and the isolation of all switched poles verified, in accordance with regulatory requirements
33. Locating and diagnosing common faults in electrical circuits
34. Repairing and/or replacing parts to rectify faults in accordance with AS/NZS 3000
35. Applying steps required to ensure the fault does not re-occur
36. Completing final testing and re-commissioning

UEEEL0018 – Select wiring systems and select cables for low voltage electrical systems
1. Applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices, including using risk control measures
2. Applying sustainable energy principles and practices
3. Selecting conductor size based on the maximum current requirement for a given installation condition
4. Determining the extent and nature of the installation for job specifications
5. Determining cable routes, the route lengths of cables and the conditions in which the wiring system is to operate
6. Determining current requirements for given final sub-circuits
7. Selecting wiring system suitable for the installation environment
8. Selecting cables, including voltage-drop, fault-loop impedance and minimum conductor siz to satisfy current-carrying capacity
9. Selecting compliant earthing system components
10. Determining maximum demand for final sub-circuits for an installation in accordance with industry and regulatory standards
11. Arranging installation loads onto separate circuits
12. Selecting cables for final sub-circuits to meet maximum demand and installation condition including any derating factors
13. selecting circuit protection devices to satisfy maximum demand and coordination in accordance with industry and regulatory requirements
14. selecting circuit protection devices to satisfy requirements for discrimination, fault protection and overcurrent
UEEEL0023 - Terminate cables, cords and accessories for low voltage circuits
15. Applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices, including using risk control measures
16. Applying sustainable energy principles and practices
17. Confirming relevant circuits are isolated
18. Terminating wiring and accessories for low voltage circuits, including:
19. Cutting cable ends and stripping sheath/insulation to a sufficient length
20. Fitting and securing cable glands/retaining devices correctly
21. Preparing and terminating conductors to suit the type of terminal at which they are to be connected
22. Selecting appropriate cable/cord and conductor devices
23. Testing completed cables to ensure compliant continuity and insulation resistance
24. Inspecting junction box/terminal enclosures and determining the type and size of required cable and conductor termination devices
25. Testing terminated cables and cords.
UEEEL0024 - Test and connect alternating current A.C rotating machines
1. Applying work health and safety (WHS)/occupational health and safety (OHS) workplace procedures, including:
2. Identifying and assessing hazards and risks, and implementing control measures
3. Checking circuits are isolated in accordance with workplace procedures and regulatory requirements
4. Applying testing and connecting techniques in alternating current (a.c.) Rotating machines, including:
5. Connecting, running and reversing the direction of a single-phase motor
6. Applying sustainable energy principles and practices