



Australian Government

Assessment Requirements for UEEEC0030 Fault find and repair electronic medical equipment

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- applying logical diagnostic methods
- using fault scenarios to test the source of system faults
- identifying faults and competency needed to rectify them
- rectifying faults in system electronics
- verifying that the system operates correctly
- documenting fault rectification
- dealing with unplanned events
- applying relevant risk identification, assessment, reporting and control requirements
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- coordinating work with relevant person/s
- determining live testing/measurement requirements
- determining scope of work
- identifying and accessing materials, tools, apparatus and testing devices
- isolating circuits/machines/systems.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- electronic medical equipment fault finding and repair, safe working practices and relevant standards, codes and regulations, including:
 - medical equipment principles:
 - equipment categories, types, functions and operation
 - hazards and safety procedures
 - causes of failure

- safety testing requirements and methods
- categories and examples of medical equipment, including:
 - cardiovascular systems: blood warmers, cardiac catheterisation systems and defibrillators
 - electrocardiogram (ECG) machines, ECG monitors, heart-lung machines and infusion
 - pumps, intra-aortic balloon pumps, pacemakers, syringe pump and cardiac output measurement equipment
 - respiratory systems: anaesthetic delivery and monitoring units, medical gases, oxygen concentrator, pulse oximeter, respiratory humidifier, respiratory support units and ventilators
 - neurological systems: electroencephalograph (EEG) recorder, electromyograph (EMG) recorder and intracranial pressure (ICP) monitoring
 - renal systems: haemodialysis machine, continuous veno-venous hemofiltration (CVVH) machine and peritoneal dialysis
 - medical imaging: x-ray equipment, computerised axial tomography (CAT scan), magnetic resonance imaging (MRI), nuclear medicine and diagnostic ultrasound equipment
 - physiological equipment: blood pressure monitors, foetal cardiotocograph, infant care systems, multiparameter systems, thermometry, telemetry, networking and patient warmers
 - miscellaneous equipment: electrosurgery, electric stimulators, and endoscopy and laparoscopy systems, laser, operating microscopes, therapeutic diathermy and ultrasound
- medical equipment, anatomy and physiology and infection control:
 - nature of infection
 - control of microbial growth
 - infection control strategies
 - body systems
- medical equipment safe working practices:
 - risk management and assessment of risk encompassing:
 - principle and purpose of risk management, and
 - processes for conducting a risk assessment
 - hazards associated with medical equipment, encompassing:
 - infections
 - toxic materials
 - electrical components
 - radiation
 - risks and control measures associated with working with medical equipment
- fault finding and repair:
 - typical faults, their symptoms and cause
 - fault diagnosis procedures and testing

- component replacement
- equipment adjustments
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- resources that assessment should reflect current industry practices in relation to diagnosing and rectifying faults in electronic medical equipment
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>