



Australian Government

UEEIC0045 Troubleshoot medical equipment control systems

Release: 1

UEEIC0045 Troubleshoot medical equipment control systems

Modification History

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

Application

This unit involves the skills and knowledge required to troubleshoot medical equipment control systems.

It includes applying safe working practices, interpreting processes, applying knowledge of medical process controls to logical fault-finding procedures, conducting effective repairs, performing safety and functional inspection and testing, and completing service documentation.

Permits may be required for some work environments, such as confined spaces, working aloft, near live electrical apparatus and site rehabilitation

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Competency Field

Instrumentation & Control

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to find and rectify faults in medical equipment control systems

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Work health and safety (WHS)/occupational health and safety (OHS) processes and workplace procedures for a given work area are identified, obtained and applied

- 1.2 WHS/OHS risk control measures and workplace procedures are followed in preparation for the work
 - 1.3 Scope of medical equipment control system fault is obtained from documentation and/or work supervisor to determine work
 - 1.4 Advice is sought from work supervisor to ensure work is coordinated effectively with others
 - 1.5 Sources of materials required for work are identified in accordance with workplace procedures
 - 1.6 Tools, equipment and testing devices required to carry out work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 2 Find faults in medical equipment control systems**
 - 2.1 WHS/OHS risk control measures and workplace procedures for carrying out the work are followed
 - 2.2 Need to inspect, test and measure live work is determined in accordance with WHS/OHS requirements and workplace procedures
 - 2.3 Apparatus is inspected and isolated in accordance with WHS/OHS requirements and workplace procedures
 - 2.4 Fault finding of medical equipment control systems is conducted using measured and calculated system parameters values in accordance with workplace procedures
 - 2.5 Apparatus components are dismantled, as required, and parts stored to protect against loss or damage in accordance with workplace procedures and relevant industry standards
 - 2.6 Faulty components are rechecked and fault status confirmed
 - 2.7 Unplanned situations are dealt with safely and with the approval of relevant person/s
 - 2.8 Fault-finding activities are carried out without damage to apparatus circuits, the surrounding environment or services using sustainable energy principles
- 3 Rectify faults in medical equipment control systems**
 - 3.1 WHS/OHS risk control measures and workplace procedures for carrying out the work are followed

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| | 3.2 | Apparatus is inspected and isolated in accordance with WHS/OHS and workplace procedures |
| | 3.3 | Materials required to rectify faults are sourced and obtained in accordance with workplace procedures |
| | 3.4 | Repairs are conducted without damage to relevant components or apparatus in accordance with workplace procedures and sustainable energy principles |
| | 3.5 | Repairs are tested in accordance with workplace procedures |
| | 3.6 | Apparatus is reassembled, inspected, tested and prepared for return to customer |
| 4 Complete and report fault-finding and rectification activities | 4.1 | WHS/OHS work completion risk control measures and workplace procedures are followed |
| | 4.2 | Work area is cleaned and made safe in accordance with workplace procedures |
| | 4.3 | Written justification is made for repairs to apparatus |
| | 4.4 | Work completion is documented and relevant person/s notified in accordance with workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Finding and rectifying faults must include at least two of the following:

- cardiovascular systems
- respiratory systems
- neurological systems
- renal systems
- medical imaging
- physiological equipment

- miscellaneous medical equipment

Unit Mapping Information

This unit replaces and is equivalent to UEENEEI115A Trouble shooting in medical equipment control systems.

Links

Companion Volume implementation guides are found in VETNet - -

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

Assessment Requirements for UEEIC0045 Troubleshoot medical equipment control systems

Modification History

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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 two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including
 - using risk control measures
- carrying out fault-finding activities without damage using sustainable energy principles
- completing and reporting fault-finding and rectification activities
- dealing with unplanned situations safely and with the approval of relevant person/s
- determining the need to inspect, test and measure live work
- dismantling apparatus components and storing to protect against loss or damage
- finding faults
- inspecting and isolating apparatus
- inspecting and testing reassembled apparatus
- obtaining scope of the medical equipment control system faults
- obtaining tools, equipment and testing devices
- preparing to find and rectify faults
- rectifying faults without damage
- providing written justification for the rectifications undertaken and notifying relevant person/s.

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:

- problem-solving techniques
- relevant isolation procedures
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications and operating instructions
- relevant medical equipment principles and control systems, including medical equipment and

systems and safe working practices, including:

- cardiovascular systems
- respiratory systems
- neurological systems
- renal systems
- medical imaging
- miscellaneous medical equipment
- physiological equipment
- medical equipment, anatomy and physiology and infection control
- relevant tools, equipment and testing devices
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace instructions, policies and procedures
- sustainable energy principles.

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 simulated suitable 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, facilities and equipment currently used in industry
- resources that reflect current industry practices in relation to finding and rectifying faults in medical equipment control systems
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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