



Australian Government

UEECS0025 Modify/redesign industrial computer systems

Release: 1

UEECS0025 Modify/redesign industrial computer 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 modify/redesign industrial computer systems.

It includes applying safe working practices, identifying system parameters, modifying systems, following procedures and documenting final modifications for approval.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, skills and knowledge described in this unit require a relevant contract of training, such as an Australian Apprenticeship.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

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

No other 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

Computer Systems

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Prepare to modify/redesign computer systems

- 1.1** WHS/ OHS processes and workplace procedures for a given work area are obtained and applied
- 1.2** WHS/OHS risk control measures and workplace procedures in preparation for the work are followed
- 1.3** Safety hazards that have not previously been identified are noted and risk control measures implemented
- 1.4** Relevant person/s is consulted to ensure work is coordinated effectively with others involved on the worksite
- 1.5** System operating parameters are identified by reviewing system specifications and component technical data
- 1.6** Limitations and operation of the system to be modified are determined from specifications and manufacturers' data
- 1.7** Modification is determined from measurements, tests, inspections, system limitations and relevant industry requirements
- 1.8** Specifications and work instructions for the modifications are documented in accordance with workplace procedures
- 1.9** Tools, equipment, applications and testing devices required for work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.10** Preparatory work is checked to ensure no damage has occurred in accordance with workplace procedures

2 Generate modification/redesign of computer systems

- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out the work are followed
- 2.2** Alternative modification arrangements are discussed

- with relevant person/s
- 2.3** Safety, functionality and economic considerations are incorporated in the proposed modification design
 - 2.4** Proposed modification for alteration of the system/s and specifications is documented in accordance with relevant industry standards
 - 2.5** Changed outcomes in the use and operation of the system/s of the proposed modification are documented
 - 2.6** Unplanned situations are dealt with in consultation with relevant person/s and job specifications in accordance with relevant industry standards
 - 2.7** Methods for dealing with unexpected situations are selected on the basis of safety and specified work outcomes
 - 2.8** Modification/redesign is carried out efficiently without waste of materials or damage to apparatus, the surrounding environment or services and using sustainable energy principles
- 3 Complete and report modification/redesign activities**
- 3.1** WHS/OHS risk control work completion measures and workplace procedures are followed
 - 3.2** Proposed modification is checked in accordance with workplace procedures and relevant industry standards
 - 3.3** Worksite is cleaned and made safe in accordance with workplace procedures
 - 3.4** Proposed modification is submitted for workplace and relevant industry standard approval
 - 3.5** Approved modification/redesign documents are completed and stored in accordance with workplace procedures and relevant industry standards

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.

Modifying/redesigning computer systems must include at least two of the following:

- computer systems
- associated components
- applications
- controls

Unit Mapping Information

This unit replaces and is equivalent to UEENEED145A Modify-redesign of industrial computer 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 UEECS0025 Modify/redesign industrial computer systems

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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
- checking work to ensure no damage and/or waste to apparatus, environment, materials and services
- consulting with relevant person/s to ensure work is coordinated effectively
- dealing with unplanned events in consultation with relevant person/s and job specifications
- determining limitations and operation of the system to be modified
- developing outlines of alternative designs
- developing the modified/redesigned system within safety and functional requirements and budget considerations
- discussing alternative modification arrangements
- documenting and presenting modifications/redesigns
- documenting specifications and work instructions for the modifications
- generating modification/redesign of computer system/s
- identifying system operating parameters by reviewing system specifications and component technical data
- obtaining approval for final modified/redesigned system
- obtaining tools, equipment, applications and testing devices and checking for correct operation and safety
- preparing to modify/redesign of computer system/s
- using sustainable energy practices.

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:

- design objectives (specifications)
- functional and non-functional requirements of customer/s
- implementation of the selected design
- optimisation of the proposed solution
- problem-solving techniques
- relevant analysis
- relevant computer system and modifications
- relevant industry standards
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications and installation instructions
- relevant materials, apparatus, environment and services
- relevant modification/redesign specifications?
- relevant system limitations and operation
- relevant system operating parameters
- relevant tools, equipment, applications and testing/measuring devices
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace instructions, policies and procedures
- sustainable energy principles
- validations of the resulting design.

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 modifying/redesigning computer systems
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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