



Australian Government

UEPMNT432 Write programs for control systems

Release: 1

UEPMNT432 Write programs for control systems

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

Application

This unit involves the skills and knowledge required to undertake the writing of programs from flow charts for electronic control systems.

A flowchart shows the order in which a series of events and/or processes are carried out, they are used as the basis for writing programs for electronic control systems which direct and regulate other devices and systems.

Competency in this unit requires the ability to plan and prepare for work, write and load programs, test operating parameters and complete all work tasks. Individuals will, in general, work as a maintenance operative, in a power generation facility.

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

Note: Workplace practice

The application of the skills and knowledge described in this unit of competency may require a licence or training permit to practice in the workplace, where work is carried out on gas and electrical installations. Additional and/or other conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

UEPMNT351 Test and commission electrical equipment

UEENEEG108A Troubleshoot and repair faults in low voltage electrical apparatus and circuits

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE104A Solve problems in D.C. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEG006A Solve problems in single and three phase low voltage machines

UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits

UEENEEG063A Arrange circuits, control and protection for general electrical installations

UEENEEG101A Solve problems in electromagnetic devices and related circuits

UEENEEG102A Solve problems in low voltage A.C. circuits

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits

Competency Field

Maintenance

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and prepare for work

PERFORMANCE CRITERIA

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

- 1.1** Requirements including scope of work and assigned roles are identified and confirmed with appropriate personnel or by site inspection, in accordance with workplace procedures
- 1.2** Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) regulations, legislative requirements, industry standards, codes of practice, manufacturers' specifications, environmental obligations and workplace procedures are reviewed in preparation for work
- 1.3** Resources are obtained and inspected for compliance with the job specification
- 1.4** Relevant plans, drawings and manuals are selected and used, in accordance with workplace procedures
- 1.5** Work is planned, sequenced and prioritised, in accordance with workplace procedures
- 1.6** Potential hazards are identified and risk control measures are selected and implemented, in accordance with workplace procedures
- 1.7** Work area is prepared, in accordance with workplace procedures
- 2 Write and load programs**
 - 2.1** Testing and measurement instruments and software packages are selected and used to enable completion of program writing, in accordance with workplace

- procedures
- 2.2 Programming data is written with sequence and variables determined, in accordance with operating parameters of the control system
 - 2.3 Control system program is up loaded, in accordance with workplace procedures
- 3 Test operating parameters**
- 3.1 Testing and measurement instruments to review operating parameters are selected and used, in accordance with workplace procedures
 - 3.2 Programming data is reviewed and confirmed, in accordance with workplace procedures
 - 3.3 Sequence and variables are tested, in accordance with workplace procedures, to confirm operating parameters of control system is being met
- 4 Complete work**
- 4.1 Documentation of programming is presented to appropriate personnel, in accordance with the workplace procedures
 - 4.2 Workplace procedures are modified, where necessary, to comply with new program requirements
 - 4.3 Work is completed and appropriate personnel are 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPMNT432B Write programs for control systems.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

Assessment Requirements for UEPMNT432 Write programs for 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 the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and includes:

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including:
 - emergency procedures
 - hazard identification
 - risk control measures
 - safe working practices
- completing work and documentation communicating with personnel and/or clients
- implementing legislation, industry standards, codes of practice and regulations
- planning and preparing for writing programs for control systems work
- testing operating parameters
- using manufacturers' specifications and manuals
- utilising software packages
- working with testing and measurement instruments
- writing and loading programs

Knowledge Evidence

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

- legislation, industry standards, codes of practice and regulations
- manufacturers' specifications and manuals
- operation parameters
- power generation plant and equipment, its location and operation
- programme writing and up loading
- software packages
- test and measurement instruments
- typical arrangements of power production plant

- WHS/OHS legislated requirements including:
 - emergency procedures
 - hazard identification
 - risk control measures
 - safe working practices
- workplace documentation
- workplace policies and procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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