



**Australian Government**

# **UET40422 Certificate IV in ESI - Network Systems**

**Release 1**

# UET40422 Certificate IV in ESI - Network Systems

## Modification History

Release 1. This is the first release of this qualification in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

## Qualification Description

This qualification provides the skills and knowledge to work on network systems in the electricity supply industry (ESI).

This qualification covers work on the network systems in the specific fields of live line transmission, live line distribution, live line rail traction and/or installation and maintenance of specialised underground cables. These roles may lead or supervise work teams and work in transmission, distribution, rail or cable jointing. The qualification allows individuals to specialise in one of the following areas.

### Group A: Distribution High Voltage Live Line

This specialisation covers the skills and knowledge required to work on high voltage (HV) live distribution networks.

### Group B: Transmission Live Line

This specialisation covers the skills and knowledge required to work on live line transmission networks.

### Group C: Specialised Cable

This specialisation covers the skills and knowledge required to install and maintain gas and oil and/or polymeric 33kv and above underground cables.

### Group D: Switching

This specialisation covers the skills and knowledge required to coordinate switching and/or develop switching schedules.

### Group E: Testing

This specialisation covers the skills and knowledge required for certifying revenue metering instruments and/or injection testing of secondary devices.

***Please note: RTO to insert on the testamur, the specialist elective unit group selected from the group choice below.***

The skills and knowledge described within the units in this qualification may require a licence or permit to practice in the workplace.

Additional and/or other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing the qualification.

## Entry Requirements

There are no entry requirements for this qualification

## Packaging Rules

Total number of units

### Specialisations

#### Distribution High Voltage Live Line

Total of **14 units** of competency

- **11 core units** listed below, plus
- **3 elective units** from Group A.

#### Transmission Live Line

Total of **14 units** of competency

- **11 core units** listed below, plus
- **3 elective units** from Group B.

#### Specialised Cable

Total of **14 units** of competency

- **11 core units** listed below, plus
- **3 elective units** from Group C.

#### Switching

Total of **14 units** of competency

- **11 core units** listed below, plus
- **3 elective units** from Group D.

#### Testing

Total of **13 units** of competency

- **11 core units** listed below, plus
- **2 elective units** from Group E.

**Up to 1 of the elective units** may be selected, with appropriate contextualisation, from Group F – General electives or a qualification in this or any endorsed Training Package, provided the selected unit contributes to the vocational outcome of the qualification.

Where imported units are selected, care must be taken to ensure all prerequisite units specified are complied with. Prerequisites attached to any of the units must be obtained and are additional to the number of units required for the qualification.

Where a prerequisite is attached to a unit it is identified by the symbol  $\perp$ .

### Core units

- UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEECD0019 Fabricate, assemble and dismantle utilities industry components  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEECD0044 Solve problems in multiple path circuits  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ UEECD0046 Solve problems in single path circuits
- UEECD0046 Solve problems in single path circuits  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEEEL0020 Solve problems in low voltage a.c. circuits  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ UEEEL0021 Solve problems in magnetic and electromagnetic devices and  
└ UEECD0043 Solve problems in direct current circuits  
or  
└ UEECD0044 Solve problems in multiple path circuits  
└ UEECD0046 Solve problems in single path circuits
- UEEEL0021 Solve problems in magnetic and electromagnetic devices  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
and  
└ UEECD0043 Solve problems in direct current circuits  
or  
└ UEECD0044 Solve problems in multiple path circuits  
└ UEECD0046 Solve problems in single path circuits
- UETDREL001 Apply environmental requirements

- UETDREL005 Work safely in the vicinity of live electrical apparatus  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UETDRIS028 Implement and monitor environmental policies and procedures
- UETDRIS029 Implement and monitor organisational WHS/OHS policies, procedures and programs

### **Group A: Distribution High Voltage Live Line**

- UETDRDO003 Maintain energised high voltage distribution overhead electrical apparatus (glove and barrier)
- UETDRDO004 Maintain energised high voltage distribution overhead electrical apparatus (stick)
- UETDRIS020 Contribute to coordinated high voltage live work  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ UETDREL005 Work safely in the vicinity of live electrical apparatus

### **Group B: Transmission Live Line**

- UETDRIS020 Contribute to coordinated high voltage live work  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRTO010 Maintain energised transmission lines using barehand techniques from a helicopter  
└ UETDRTO012 Maintain energised transmission lines using live work stick techniques
- UETDRTO011 Maintain energised transmission lines using live work barehand techniques  
└ UETDRTO012 Maintain energised transmission lines using live work stick techniques
- UETDRTO012 Maintain energised transmission lines using live work stick techniques

### **Group C: Specialised Cable**

- UETDRDU012 Joint, terminate and maintain high voltage underground paper insulated cable  
└ UEECD0007 Apply work health and safety regulations, codes and

- practices in the workplace
- └ UEECD0019 Fabricate, assemble and dismantle utilities industry components
  - └ UEECD0044 Solve problems in multiple path circuits
  - └ UEECD0046 Solve problems in single path circuits
  - └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications
  - └ UEEEL0020 Solve problems in low voltage a.c. circuits
  - └ UEEEL0021 Solve problems in magnetic and electromagnetic devices
  - └ UETDREL001 Apply environmental requirements
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0019 Fabricate, assemble and dismantle utilities industry components
  - └ UEECD0044 Solve problems in multiple path circuits
  - └ UEECD0046 Solve problems in single path circuits
  - └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications
  - └ UEEEL0020 Solve problems in low voltage a.c. circuits
  - └ UEEEL0021 Solve problems in magnetic and electromagnetic devices
  - └ UETDREL001 Apply environmental requirements
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRDU020 Joint, terminate and maintain gas and oil filled underground cables
- UETDRDU021 Joint, terminate and maintain underground polymeric cable 33kV and above
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0019 Fabricate, assemble and dismantle utilities industry components
  - └ UEECD0044 Solve problems in multiple path circuits
  - └ UEECD0046 Solve problems in single path circuits
  - └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications
  - └ UEEEL0020 Solve problems in low voltage a.c. circuits

- └ UEEEL0021 Solve problems in magnetic and electromagnetic devices
  - └ UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable
  - └ UETDREL001 Apply environmental requirements
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRDU022 Maintain gas and oil pressure systems for underground cables
- └ UETDRDU020 Joint, terminate and maintain gas and oil filled underground cables

### **Group D: Switching**

- UETDRIS021 Coordinate and direct switching programs
- UETDRIS022 Coordinate permit procedures
- UETDRIS023 Develop and validate high voltage distribution switching programs
- UETDRIS024 Develop and validate low voltage distribution switching programs

### **Group E: Testing**

- UEEEL0019 Solve problems in direct current (d.c.) machines
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEEEL0021 Solve problems in magnetic and electromagnetic devices and
  - └ UEECD0043 Solve problems in direct current circuits
- or
- └ UEECD0044 Solve problems in multiple path circuits
  - └ UEECD0046 Solve problems in single path circuits
- UETDRTS028 Calibrate, verify and certify revenue metering/energy measurement instruments
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0019 Fabricate, assemble and dismantle utilities industry components
  - └ UEECD0044 Solve problems in multiple path circuits
  - └ UEECD0046 Solve problems in single path circuits

- └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications
  - └ UEEEL0019 Solve problems in direct current (d.c.) machines
  - └ UEEEL0020 Solve problems in low voltage a.c. circuits
  - └ UEEEL0021 Solve problems in magnetic and electromagnetic devices
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRTS039 Perform current injection testing of secondary devices
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0019 Fabricate, assemble and dismantle utilities industry components
  - └ UEECD0044 Solve problems in multiple path circuits
  - └ UEECD0046 Solve problems in single path circuits
  - └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications
  - └ UEEEL0020 Solve problems in low voltage a.c. circuits
  - └ UEEEL0021 Solve problems in magnetic and electromagnetic devices
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus

### Group F: General

- BSBINS402 Coordinate workplace information systems
- BSBLDR413 Lead effective workplace relationships
- BSBLDR414 Lead team effectiveness
- BSBOPS402 Coordinate business operational plans
- BSBSTR402 Implement continuous improvement
- UETDRIS030 Install high voltage mobile generator
- UETDRRT015 Maintain energised rail traction networks
- UETDRVC012 Coordinate vegetation control operations
- └ UETDREL002 Comply with environmental requirements
  - └ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker



└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control

or

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

└ UETDREL001 Apply environmental requirements

└ UETDREL005 Work safely in the vicinity of live electrical apparatus

## Qualification Mapping Information

This qualification replaces and is not equivalent to UET40421 Certificate IV in ESI - Network Systems

## Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>