



**Australian Government**

# **UET60222 Advanced Diploma of ESI - Power Systems**

**Release 1**

# UET60222 Advanced Diploma of ESI - Power 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 in the electricity supply industry within distribution and transmission networks. The qualification allows individuals to specialise in one of the following areas.

### Design and Drafting

This specialisation covers the skills and knowledge for designing and drafting transmission and distribution networks, and the use of CAD software and drawing management systems.

### Design

This specialisation covers the skills and knowledge for designing transmission and distribution networks.

### System Operations Distribution

This specialisation covers the skills and knowledge for monitoring, operating, coordinating and maintaining distribution networks.

### System Operations Transmission

This specialisation covers the skills and knowledge for monitoring, operating, coordinating and maintaining transmission networks.

### Protection (Testing)

This specialisation covers the skills and knowledge for commissioning, maintaining, diagnosing faults of complex protection and control systems.

### Protection and Metering (Testing)

This specialisation covers the skills and knowledge for commissioning, maintaining, diagnosing faults of metering systems.

***Please note: RTO to insert on the testamur, the specialisation selected from the specialist 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

#### Design and Drafting

Total of **14 units** of competency

- **6 core units** listed below, plus
- **8 electives** from Group A and/or B, with up to 3 from Group G

#### Design

Total of **14 units** of competency

- **6 core units** listed below, plus
- **8 electives** from Group B

#### System Operations Distribution

Total of **13 units** of competency

- **6 core units** listed below, plus
- **7 electives** from Group C

#### System Operations Transmission

Total of **12 units** of competency

- **6 core units** listed below, plus
- **6 electives** from Group D

#### Protection (Testing)

Total of **14 units** of competency

- **6 core units** listed below, plus
- **8 electives** from Group E

#### Protection and Metering (Testing)

Total of **14 units** of competency

- **6 core units** listed below, plus
- **8 electives** from Group F

**Up to 1 of the elective units** may be selected, with appropriate contextualisation, from 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 ⊥.

### Core units

- 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

**Group A: Design and Drafting**

- UEECS0033 Use engineering applications software on personal computers
- MEM30031A Operate computer-aided design (CAD) system to produce basic drawing elements
- MEM30033A Use computer-aided design (CAD) to create and display 3-D models  
└ MEM30031A Operate computer-aided design (CAD) system to produce basic drawing elements
- UETDRDS023 Draft and layout distribution substation minor upgrade  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ 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
- UETDRDS024 Draft and layout overhead distribution extension  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ 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
- UETDRDS025 Draft and layout street lighting system  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ 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

UETDRDS026 Draft and layout underground distribution extension

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

UETDRDS028 Prepare and manage detailed construction plans for electrical infrastructure

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

UETDREL005 Work safely in the vicinity of live electrical apparatus

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

### **Group B: Design**

UEECS0033 Use engineering applications software on personal computers

UETDRDS015 Assess distributed energy resource connections to a distribution network

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ 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
  - └ UETDRDS027 Investigate quality of supply issues
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRDS016 Coordinate and perform line and easement surveys
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
  - └ UETDRDS028 Prepare and manage construction plans for electrical infrastructure
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRDS017 Design customer substations
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRDS018 Design distribution protection systems
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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

UETDRDS019 Design distribution substations

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

UETDRDS020 Design overhead distribution systems

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

UETDRDS021 Design public lighting systems

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



- UETDRDS022 Design underground distribution systems
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRDS027 Investigate quality of supply issues
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRDS028 Prepare and manage construction plans for electrical infrastructure
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDREL005 Work safely in the vicinity of live electrical apparatus
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

### **Group C: Systems Operations Distribution**

- UETDRSO012 Coordinate and manage distribution and sub-transmission network access and activities
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
  - └ UETDRSO015 Develop and validate distribution and sub-transmission switching programs
  - └ UETDRSO016 Develop and validate low voltage switching programs
  - └ UETDRSO020 Operate SCADA equipment
- UETDRSO015 Develop and validate distribution and sub-transmission switching programs
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRSO016 Develop and validate low voltage switching programs
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRSO018 Dispatch and monitor field staff activities
- UETDRSO019 Manage supply and demand in distribution and sub-transmission networks

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ 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
- └ UETDRSO012 Coordinate and manage distribution and sub-transmission network access and activities
- └ UETDRSO015 Develop and validate distribution and sub-transmission switching programs
- └ UETDRSO020 Operate SCADA equipment

UETDRSO020 Operate SCADA equipment

UETDRSO021 Respond to protection operations

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ 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
- └ UETDRSO020 Operate SCADA equipment

#### **Group D: Systems Operations Transmission**

UETDRSO013 Coordinate and manage transmission network access and activities

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

- └ UETDRSO017 Develop and validate transmission switching programs
- └ UETDRSO020 Operate SCADA equipment
- UETDRSO014 Coordinate operations in a regulated energy market
  - └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRSO017 Develop and validate transmission switching programs
  - └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRSO018 Dispatch and monitor field staff activities
- UETDRSO020 Operate SCADA equipment
- UETDRSO021 Respond to protection operations
  - └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
  - └ UETDRSO020 Operate SCADA equipment

### **Group E: Protection (Testing)**

- UEECD0010 Compile and produce an energy sector detailed report
- UEECD0019 Fabricate, assemble and dismantle utilities industry components  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEECD0036 Provide engineering solutions for problems in complex multiple path circuits
- UEECD0039 Provide solutions to basic engineering computational problems  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UETDREL005 Work safely in the vicinity of live electrical apparatus  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UETDRTS029 Commission and maintain communication equipment  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ UEECD0010 Compile and produce an energy sector detailed report  
└ 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  
└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents
- UETDRTS032 Commission and maintain metering schemes  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace  
└ UEECD0010 Compile and produce an energy sector detailed report  
└ 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
- └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

- UETDRTS033 Commission and maintain network protection and control systems
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0010 Compile and produce an energy sector detailed report
  - └ 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
  - └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

- UETDRTS034 Commission and maintain voltage regulating equipment
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0010 Compile and produce an energy sector detailed report
  - └ 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
  - └ UETDRTS036 Develop secondary protection and control scheme isolation

and restoration documents

- UETDRTS035 Conduct evaluation of network protection and control system faults
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0010 Compile and produce an energy sector detailed report
  - └ 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
  - └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents
- UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ 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
- UETDRTS037 Maintain and calibrate protection relays and meters
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0010 Compile and produce an energy sector detailed report
  - └ 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
- └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS038 Perform accuracy checks on instrument transformers

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ UEECD0010 Compile and produce an energy sector detailed report
- └ 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
- └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

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: Protection and Metering (Testing)**



- UEECD0010 Compile and produce an energy sector detailed report
- UEECD0019 Fabricate, assemble and dismantle utilities industry components  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEECD0036 Provide engineering solutions for problems in complex multiple path circuits
- UEECD0039 Provide solutions to basic engineering computational problems  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- 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
- UETDREL005 Work safely in the vicinity of live electrical apparatus  
└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- 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

UETDRTS029 Commission and maintain communication equipment

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

└ UEECD0010 Compile and produce an energy sector detailed report

└ 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

└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS030 Commission and maintain complex energy/revenue metering schemes

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

└ UEECD0010 Compile and produce an energy sector detailed report

└ 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

└ UETDRTS031 Commission and maintain energy/revenue metering schemes

└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS031 Commission and maintain energy/revenue metering schemes

└ UEECD0007 Apply work health and safety regulations, codes and

practices in the workplace

└ UEECD0010 Compile and produce an energy sector detailed report

└ 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

└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS032 Commission and maintain metering schemes

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

└ UEECD0010 Compile and produce an energy sector detailed report

└ 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

└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS033 Commission and maintain network protection and control systems

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

└ UEECD0010 Compile and produce an energy sector detailed report

└ 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
- └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS034 Commission and maintain voltage regulating equipment

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ UEECD0010 Compile and produce an energy sector detailed report
- └ 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
- └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS035 Conduct evaluation of network protection and control system faults

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ UEECD0010 Compile and produce an energy sector detailed report
- └ 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
- └ UETDRTS036 Develop secondary protection and control scheme isolation

and restoration documents

UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

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

└ 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

UETDRTS037 Maintain and calibrate protection relays and meters

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

└ UEECD0010 Compile and produce an energy sector detailed report

└ 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

└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

UETDRTS038 Perform accuracy checks on instrument transformers

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

└ UEECD0010 Compile and produce an energy sector detailed report

└ 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
- └ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents

### **Group G: General Electives**

- BSBFIN501 Manage budgets and financial plans
- BSBHRM523 Coordinate the learning and development of teams and individuals
- BSBINS501 Implement information and knowledge management systems
- BSBLDR522 Manage people performance
- BSBOPS502 Manage business operational plans
- BSBOPS505 Manage organisational customer service
- BSBPEF501 Manage personal and professional development
- BSBSTR501 Establish innovative work environments
- BSBSTR502 Facilitate continuous improvement
- BSBSUS511 Develop workplace policies and procedures for sustainability
- BSBTWK502 Manage team effectiveness
- TLIF0021 Administer the implementation of fatigue management strategies
- TLIF2010 Apply fatigue management strategies
- UEECD0019 Fabricate, assemble and dismantle utilities industry components
  - └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEECD0030 Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software
  - └ UEECS0033 Use engineering applications software on personal computers

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

└ UEECD0019 Fabricate, assemble and dismantle utilities industry components

└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

└ UEECD0031 Prepare engineering drawings using manual drafting and CAD for electrotechnology applications

and

└ UEECD0043 Solve problems in direct current circuits

or

└ UEECD0044 Solve problems in multiple path circuits

└ UEECD0046 Solve problems in single path circuits

UEECD0031 Prepare engineering drawings using manual drafting and CAD for electrotechnology applications

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

└ UEECS0033 Use engineering applications software on personal computers

└ UEECD0019 Fabricate, assemble and dismantle utilities industry components

└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEECD0032 Produce detailed electrotechnology/utilities drawings using CAD equipment and software

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

└ UEECD0019 Fabricate, assemble and dismantle utilities industry components

└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

└ UEECD0031 Prepare engineering drawings using manual drafting and CAD for electrotechnology applications

└ UEECD0030 Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software

└ UEECS0033 Use engineering applications software on personal computers  
and

└ UEECD0043 Solve problems in direct current circuits

- or
- └ UEECD0044 Solve problems in multiple path circuits
  - └ UEECD0046 Solve problems in single path circuits
- UEECD0036 Provide engineering solutions for problems in complex multiple path circuits
- UEECD0039 Provide solutions to basic engineering computational problems
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEECO0001 Estimate electrotechnology projects
- UEECS0033 Use engineering applications software on personal computers
- 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
- UEEEL0062 Provide engineering solutions to problems in complex polyphase power circuits
- └ UEECD0036 Provide engineering solutions for problems in complex multiple path circuits
  - └ UEEEL0020 Solve problems in low voltage a.c. circuits
- UEEIC0012 Develop structured programs to control external devices
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- UEPOPS030 Coordinate power generation
- UEPOPS038 Evaluate cost estimations and initiate appropriate solutions
- └ UEECO0001 Estimate electrotechnology projects
- UETDRIS025 Diagnose and resolve faults in distribution systems
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace



- └ UEECD0019 Fabricate, dismantle, assemble of 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
- └ UETDRIS026 Diagnose and resolve faults in electrical apparatus
- └ UETDRIS032 Solve problems in network equipment

**UETDRIS026**

Diagnose and resolve faults in electrical apparatus

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ UEECD0019 Fabricate, dismantle, assemble of 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
- └ UETDRIS032 Solve problems in network equipment

**UETDRIS027**

Diagnose and resolve faults in transmission systems

- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
- └ UEECD0019 Fabricate, dismantle, assemble of 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
- └ UETDRIS026 Diagnose and resolve faults in electrical apparatus
- └ UETDRIS032 Solve problems in network equipment

- UETDRIS028 Implement and monitor environmental policies and procedures
- UETDRIS029 Implement and monitor organisational WHS/OHS policies, procedures and programs
- UETDRIS032 Solve problems in network equipment
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0019 Fabricate, dismantle, assemble of 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
- UETDRIS033 Solve problems in network protection
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0019 Fabricate, dismantle, assemble of 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
- └ UETDRIS032 Solve problems in network equipment

## **Qualification Mapping Information**

This qualification replaces and is not equivalent to UET60221 Advanced Diploma of ESI - Power Systems

## **Links**

Companion Volume Implementation Guides are found in VETNet -

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