



**Australian Government**

# **UET30721 Certificate III in ESI - Rail Traction**

**Release 1**

# UET30721 Certificate III in ESI - Rail Traction

## Modification History

Release 1. This is the first release of this qualification in the UET Transmission, Distribution and Rail Sector Training Package Release 2.0.

## Qualification Description

This qualification provides the skills and knowledge to work in the electrical supply industry (ESI) as a Rail Traction Lineworker.

This qualification covers the installation, maintenance and inspection of overhead poles/structures, conductors, cables and rail traction wiring systems, including associated equipment used in the rail traction industry. It also includes the maintenance of bonds and the operation of rail traction height access equipment.

The application of the skills and knowledge described within the units in this qualification may require a licence/registration to practice in the workplace.

Other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this qualification.

## Entry Requirements

There are no entry requirements for this qualification

## Packaging Rules

A total of **28 units** of competency comprising:

- **26 core units** listed below; plus
- **2 elective units** from the elective units listed below, of which, 1 elective unit may be selected, with appropriate contextualisation, from a qualification in this or any other 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

AHCMOM213      Operate and maintain chainsaws

CPCCLDG3001	Licence to perform dogging
CPCCLRG3001	Licence to perform rigging basic level └ CPCCLDG3001 Licence to perform dogging
TLILIC0005	Licence to operate a boom-type elevating work platform (boom length 11 metres or more)
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
- UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ 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
- UETDRIS007 Install and maintain distribution overhead conductors and cables
  - └ 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
  - └ UETDREL001 Apply environmental requirements
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS012 Install and maintain poles, structures and hardware
- UETDRIS012 Install and maintain poles, structures and hardware
  - └ 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
  - └ UETDREL001 Apply environmental requirements
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus

- UETDRRT001** Install overhead rail traction configurations
- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS007 Install and maintain distribution overhead conductors and cables
  - └ UETDRIS012 Install and maintain poles, structures and hardware
  - └ UETDRRT002 Install overhead traction components and equipment
  - └ UETDRRT004 Install traction overhead wiring systems
- UETDRRT002** Install overhead traction components and equipment
- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS007 Install and maintain distribution overhead conductors and

- cables
- └ UETDRIS012 Install and maintain poles, structures and hardware
- UETDRRT003 Install rail traction bonds
- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS007 Install and maintain distribution overhead conductors and cables
  - └ UETDRIS012 Install and maintain poles, structures and hardware
  - └ UETDRRT002 Install overhead traction components and equipment
  - └ UETDRRT004 Install traction overhead wiring systems
- UETDRRT004 Install traction overhead wiring systems
- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus

- └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS007 Install and maintain distribution overhead conductors and cables
  - └ UETDRIS012 Install and maintain poles, structures and hardware
  - └ UETDRRT002 Install overhead traction components and equipment
- UETDRRT008 Maintain overhead rail traction configurations
- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS007 Install and maintain distribution overhead conductors and cables
  - └ UETDRIS012 Install and maintain poles, structures and hardware
  - └ UETDRRT001 Install overhead rail traction configurations
  - └ UETDRRT002 Install overhead traction components and equipment
  - └ UETDRRT004 Install traction overhead wiring systems
  - └ UETDRRT009 Maintain overhead traction components and equipment
  - └ UETDRRT011 Maintain traction overhead wiring systems
- UETDRRT009 Maintain overhead traction components and equipment
- └ 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
- └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
- └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- └ UETDRIS007 Install and maintain distribution overhead conductors and cables
- └ UETDRIS012 Install and maintain poles, structures and hardware
- └ UETDRRT002 Install overhead traction components and equipment

UETDRRT010

Maintain rail traction bonds

- └ 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
- └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
- └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- └ UETDRIS007 Install and maintain distribution overhead conductors and cables
- └ UETDRIS012 Install and maintain poles, structures and hardware
- └ UETDRRT002 Install overhead traction components and equipment
- └ UETDRRT003 Install rail traction bonds
- └ UETDRRT004 Install traction overhead wiring systems
- └ UETDRRT009 Maintain overhead traction components and equipment
- └ UETDRRT011 Maintain traction overhead wiring systems

UETDRRT011

Maintain traction overhead wiring systems



- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS007 Install and maintain distribution overhead conductors and cables
  - └ UETDRIS012 Install and maintain poles, structures and hardware
  - └ UETDRRT002 Install overhead traction components and equipment
  - └ UETDRRT004 Install traction overhead wiring systems
- UETDRRT012      Operate rail road height access plant near rail traction systems
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UETDREL001 Apply environmental requirements
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRRT014      Test and verify rail traction installations
- └ 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
- └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
- └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- └ UETDRIS007 Install and maintain distribution overhead conductors and cables
- └ UETDRIS012 Install and maintain poles, structures and hardware
- └ UETDRRT001 Install overhead rail traction configurations
- └ UETDRRT002 Install overhead traction components and equipment
- └ UETDRRT003 Install rail traction bonds
- └ UETDRRT004 Install traction overhead wiring systems
- └ UETDRRT008 Maintain overhead rail traction configurations
- └ UETDRRT009 Maintain overhead traction components and equipment
- └ UETDRRT010 Maintain rail traction bonds
- └ UETDRRT011 Maintain traction overhead wiring systems
- └ UETDRRT012 Operate rail road height access plant near rail traction systems

## Group A

- |             |   |
|-------------|---|
| CPCCLRG3002 | Licence to perform rigging intermediate level<br>└ CPCCLRG3001 Licence to perform rigging basic level   |
| TLILIC0002  | Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)   |
| TLILIC0003  | Licence to operate a forklift truck   |
| TLILIC0010  | Licence to operate a slewing mobile crane (up to 20 tonnes)   |
| TLILIC2015  | Licence to drive a medium rigid vehicle   |
| TLILIC2016  | Licence to drive a heavy rigid vehicle  |
| UETDRAI001  | Inspect and test poles at and below ground level<br>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace<br>and |

- └ UETDREL002 Comply with environmental requirements
    - └ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker
  - or
  - └ UETDREL001 Apply environmental requirements
    - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRAI004 Treat poles
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UETDREL002 Comply with environmental requirements
  - └ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker
- UETDRDO001 Inspect overhead poles, structures and electrical apparatus
- └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
  - └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications
  - └ UETDREL001 Apply environmental requirements
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
- UETDRDO005 Maintain overhead energised low voltage distribution network
- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus
  - └ UETDRIS007 Install and maintain distribution overhead conductors and cables

- └ UETDRIS012 Install and maintain poles, structures and hardware
- UETDRIS008 Install and maintain electrical apparatus
- └ 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
  - └ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus
  - └ UETDREL005 Work safely in the vicinity of live electrical apparatus and
  - └ UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable
  - └ UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable
- or
- └ UETDRIS007 Install and maintain distribution overhead conductors and cables
  - └ UETDRIS012 Install and maintain poles, structures and hardware
- UETDRRT013 Perform rail traction switching operations to a given schedule
- └ 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

	<ul style="list-style-type: none"><li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li><li>└ UETDREL001 Apply environmental requirements</li><li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li><li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li><li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li><li>└ UETDRIS012 Install and maintain poles, structures and hardware</li><li>└ UETDRRT001 Install overhead rail traction configurations</li><li>└ UETDRRT002 Install overhead traction components and equipment</li><li>└ UETDRRT004 Install traction overhead wiring systems</li></ul>
UETDRSB001	Perform substation switching operations to a given schedule
UETDRV003	Control vegetation for powerline work <ul style="list-style-type: none"><li>└ AHCMOM213 Operate and maintain chainsaws</li><li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li><li>└ UETDREL001 Apply environmental requirements</li><li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li><li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li></ul>

## Qualification Mapping Information

This qualification replaces and is not equivalent to UET30719 Certificate III in ESI – Power Systems – Rail Traction

## Links

Companion Volume Implementation Guides are found in VETNet -

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