**Australian Government**

**Department of Education, Employment and Workplace Relations**

# CUF40307 Certificate IV in Broadcast Technology

**Revision Number: 1**

ISC INDUSTRY SKILLS COUNCILS
Creating Australia's Future

# CUF40307 Certificate IV in Broadcast Technology

# Modification History

Not applicable.

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# Description

**Descriptor**

This qualification reflects the role of individuals who use well-developed skills and a broad knowledge base in a wide variety of contexts in the television and radio broadcasting industries. They apply solutions to a defined range of unpredictable problems, and analyse and evaluate information from a variety of sources. They may provide leadership and guidance to others with some limited responsibility for the output of others.

**Job roles**

- Broadcast maintenance technician
- Broadcast technologist
- Master control operator (technical).
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# Pathways Information

**Qualification pathways**

*Pathways into the qualification*

Candidates may enter the qualification with qualifications or vocational experience in electronics or ICT.

# Licensing/Regulatory Information

**Licensing**, **legislative**, **regulatory and certification considerations**

There is no direct link between this qualification and licensing, legislative and/or regulatory requirements. However, where required, a unit of competency will specify relevant licensing, legislative and/or regulatory requirements that impact on the unit.

*Electrical work*

In some states and territories of Australia, a restricted electrical licence is required. Restricted electrical licences allow a person to carry out electrical work incidental to a trade. Incidental work may include fault-finding on equipment or changing like for like equipment by disconnecting and reconnecting the fixed wiring. It does not include any other changes to the fixed wiring.

*National Standard for Licensing Persons Performing High Risk Work*

The National Standard for Licensing Persons Performing High Risk Work applies to persons performing dogging and rigging work. Completion of the following units is required for certification at either basic, intermediate or advanced levels.
CPCCLDG3001A Licence to perform dogging
CPCCLRG3001A Licence to perform rigging basic level
CPCCLRG3002A Licence to perform rigging intermediate level
CPCCLRG4001A Licence to perform rigging advanced level.

*National Code of Practice for Induction for Construction Work*

Sets and staging for some performances or events may fall within the definition of construction work. If so, people entering the construction site are required to complete the general induction training program specified by the National Code of Practice for Induction Training for Construction Work (Australian Safety Compensation Council, May 2007). Achievement of the unit 'CPCCOHS1001A Work safely in the construction industry' from the CPC08 Construction and Plumbing Integrated Framework Training Package fulfils this requirement.

Information on occupational licensing and its intersection with vocational education and training can be found in Licensing Line News at www.licensinglinenews.com.

### *EME hazards*

RF workers are required to complete an Electro Magnetic Emissions (EME) Awareness course. In order to attend a site where there is substantial EME hazard (such as a broadcast transmission site) an understanding of the risks of EME and the necessary precautions to mitigate the risks is required.

### *First aid*

The broadcast industry recommends completion of the St John Ambulance Senior First Aid course.

## Pre-requisite Units

| Code and title | Pre-requisite units required |
|---|---|
| UEENEEH026B      Provide solutions to polyphase electronic power control problems | UEENEEH025B Provide solutions to single phase electronic power control problems |
| UEENEEH042B      Solve problems in oscillator sections of electronic apparatus | •   UEENEEH014B Solve problems in frequency dependent circuits<br>•   UEENEEH039B Solve problems in basic amplifier circuits |
| UEENEEH045B      Develop solutions to analogue electronic problems | UEENEEH039B Solve problems in basic amplifier circuits |
| UEENEEH049B      Develop solutions to audio electronic problems | UEENEEH039B Solve problems in basic amplifier circuits |
| UEENEEH072B      Find and repair faults in communication systems | UEENEEH046B Solve fundamental problems in electronic communications systems |
| UEENEEH073B      Find and repair faults in professional audio reproduction components | UEENEEH024B Carry out repairs of predictable faults in audio components |
| UEENEEH074B      Find and repair faults in audio/video recording equipment | UEENEEH017B Carry out repairs of predictable faults in audio and video |

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| Code and title | Pre-requisite units required |
|---|---|
| | replay/recording apparatus |
| UEENEEH077B    Diagnose and rectify faults in recording and replay apparatus | UEENEEH074B Find and repair faults in audio/video recording equipment |
| UEENEEH078B    Diagnose and rectify faults in camera circuits | UEENEEH018B Find and repair faults in electronic apparatus |
| UEENEEH080B    Diagnose and rectify faults in digital transmission systems | UEENEEH076B Diagnose and rectify faults in display circuits |
| ICAI4097B    Install and configure a network | ICAI3101B    Install and manage network protocols |
| ICAI4175B    Select and install a router | ICAI3101B    Install and manage network protocols |
| ICAS4109B   Evaluate system status | ICAT3025B Run standard diagnostic tests |
| ICAS4127B Support system software | ICAI3020B    Install and optimise operating system software |

# Entry Requirements

Not applicable.

# Employability Skills Summary

| EMPLOYABILITY SKILLS QUALIFICATION SUMMARY |
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| The following table contains a summary of the employability skills required by a master control operator (technical) based on the units listed above. Using this employability skills summary as an example, trainers and assessors can work out how employability skills would apply to other job roles relevant to the qualification to include important industry application of employability skills in learning and assessment strategies. |

| Employability Skill | Industry/enterprise requirements for this qualification include: |
| --- | --- |
| Communication | • interpreting information from system drawings, equipment specifications, software and hardware manuals and technical handbooks<br>• completing workplace documentation, e.g. maintenance reports, fault logs, OHS records and emergency incident reports<br>• liaising effectively with service providers and customers/clients, including ability to communicate technical terminology in plain English<br>• conveying messages clearly on two-way communication devices |
| Teamwork | • leading a team and fostering a sense of team cohesiveness<br>• facilitating discussion and resolving team conflict situations<br>• seeking and responding to feedback on work in progress |
| Problem-solving | • diagnosing and repairing faults in broadcast facilities and equipment<br>• identifying and resolving IT equipment, system and software faults<br>• diagnosing and rectifying faults in digital transmission systems |
| Initiative and enterprise | • proposing maintenance solutions that are practicable and meet technical requirements<br>• participating in quality improvement activities<br>• planning for contingencies in the context of organising maintenance activities<br>• managing casualties and coordinating first aid activities until arrival of medical assistance |
| Planning and organising | • planning maintenance activities to cause minimum disruption to normal work flows<br>• planning and implementing maintenance procedures<br>• planning all operational aspects of outside broadcasts, including contingency planning<br>• preparing materials in a given sequence for broadcast<br>• implementing and monitoring hazard and risk control procedures |

| EMPLOYABILITY SKILLS QUALIFICATION SUMMARY | |
|---|---|
| | • regular testing and maintenance of electronic systems and equipment on-site and from remote locations<br>• maintaining first aid equipment and resources |
| Self-management | • managing work calmly and effectively to achieve goals and results<br>• observing OHS procedures in the workplace<br>• prioritising work tasks<br>• seeking expert assistance when problems arise<br>• sourcing information and reference material in a timely fashion<br>• working under pressure and meeting deadlines |
| Learning | • keeping up to date with industry developments and trends<br>• identifying and taking advantage of opportunities for ongoing professional development<br>• providing one-to-one instruction to users about software applications and networks<br>• providing team members with workplace learning opportunities with regard to OHS issues |
| Technology | • using hand and power tools and test equipment<br>• using the internet for research<br>• installing software<br>• installing and configuring a network<br>• operating basic transmission control equipment<br>• using computer systems to capture, record and convert material for broadcast<br>• operating all equipment in a specified outside broadcast vehicle/facility<br>• connecting and monitoring performance of link between OB point and program centre |

# Packaging Rules

| Packaging Rules |
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| **Total number of units** = **19**<br><br>**7 core units**<br><br>**12 elective units**<br><br><br>**9 elective** units must be selected from the elective list below. |

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**Packaging Rules**

The remaining **3 elective units** may be selected from the elective units listed any endorsed Training Package or accredited course at the same qualification level.

Electives must be relevant to the work outcome, local industry requirements and the qualification level.

**Core units**

**Broadcast technology**

| CUFBRT402A | Maintain broadcast equipment and facilities |
| CUFBRT403A | Ensure quality of broadcast output |

**ICT support**

| ICAI4030B | Install software to networked computers |
| ICAT4221B | Locate equipment, system and software faults |
| ICTTC102D | Repair electronic faults |

**Industry context**

| CUFIND301B | Work effectively in the screen and media industries |

**OHS**

| CUSOHS301A | Follow occupational health and safety procedures |

**Elective units**

**Broadcast technology**

| CUFBRT401A | Install or upgrade broadcast equipment and facilities |
| CUFBRT404A | Coordinate outside broadcasts |

**Broadcasting**

| CUFBRD301A | Perform basic transmission operations |
| CUFBRD303A | Prepare video material for television transmission |
| CUFBRD401A | Coordinate television transmission operations |

**Camera/cinematography**

| CUFCAM301A | Shoot material for screen productions |
| CUFCAM402A | Shoot television content in a multi-camera environment |
| CUFCAM403A | Plan and implement installation of camera supports |

**Communication**

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| **Packaging Rules** |
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| BSBCMM401A          Make a presentation |
| **Construction** |
| CPCCOHS1001A Work safely in the construction industry |
| **Electronics** |
| ICTTC096D   Conduct field tests of radio/wireless networks |
| ICTTC104D   Maintain an electronic system |
| UEENEEH026B Provide solutions to polyphase electronic power control problems |
| UEENEEH042B Solve problems in oscillator sections of electronic apparatus |
| UEENEEH043B Diagnose and rectify faults in digital subsystems of electronic controls |
| UEENEEH044B          Diagnose and rectify faults in analogue circuits and components in electronic control systems |
| UEENEEH045B          Develop solutions to analogue electronic problems |
| UEENEEH049B          Develop solutions to audio electronic problems |
| UEENEEH072B          Find and repair faults in communication systems |
| UEENEEH073B          Find and repair faults in professional audio reproduction components |
| UEENEEH074B          Find and repair faults in audio/video recording equipment |
| UEENEEH077B          Diagnose and rectify faults in recording and replay apparatus |
| UEENEEH078B          Diagnose and rectify faults in camera circuits |
| UEENEEH080B          Diagnose and rectify faults in digital transmission systems |
| **First aid** |
| HLTFA301B   Apply first aid |
| HLTFA402B   Apply advanced first aid |
| HLTFA403A   Manage first aid in the workplace |
| **Frontline management** |
| BSBWOR402A          Promote team effectiveness |
| **General maintenance** |
| UEEPOPS208B          Operate local systems |
| UEEPOPS209B          Perform process plant inspections |
| **ICT building and implementation** |
| ICAI4029B   Install network hardware to a network |
| ICAI4097B   Install and configure a network |

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**Packaging Rules**

ICAI4175B　　Select and install a router

**ICT support**

ICAS4109B　　Evaluate system status

ICAS4114B　　Implement maintenance procedures

ICAS4127B　　Support system software

**Industry context**

BSBCON401A　　　Work effectively in a business continuity context

CUFIND401A　　　Provide services on a freelance basis

**Lighting**

CUFLGT301A　　　Prepare, install and test lighting equipment

**Sustainability**

BSBSUS201A　Participate in environmentally sustainable work practices

**OHS**

BSBOHS407A　　　Monitor a safe workplace


**Selecting electives for different outcomes**

The context for this qualification varies, and this must guide the selection of elective units. Examples of appropriate elective units for particular outcomes at this level follow.


**Broadcast technologist**

Core units plus:

- BSBWOR402A Promote team effectiveness
- CUFBRT401A Install or upgrade broadcast equipment and facilities
- CUFBRT404A Coordinate outside broadcasts
- ICAI4097B Install and configure a network
- ICAS4114B Implement maintenance procedures
- UEENEEH044B Diagnose and rectify faults in analogue circuits and components in electronic control systems
- UEENEEH045B Develop solutions to analogue electronic problems
- UEENEEH049B Develop solutions to audio electronic problems
- UEENEEH072B Find and repair faults in communication systems
- UEENEEH074B Find and repair faults in audio/video recording equipment
- UEENEEH080B Diagnose and rectify faults in digital transmission systems
- ICTTC104D Maintain an electronic system.

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**Packaging Rules**

**Master control operator** (**technical**)

Core units plus:

- CUFBRD301A Perform basic transmission operations
- CUFBRD401A Coordinate television transmission operations
- CUFBRT404A Coordinate outside broadcasts
- BSBWOR402A Promote team effectiveness
- BSBOHS407A Monitor a safe workplace
- ICAS4109B Evaluate system status
- ICAS4114B Implement maintenance procedures
- ICAI4097B Install and configure a network
- UEENEEH080B Diagnose and rectify faults in digital transmission systems
- ICTTC104D Maintain an electronic system
- HLTFA301B Apply first aid
- HLTFA402B Apply advanced first aid.


**Broadcast maintenance technician**

Core units plus:

- BSBWOR402A Promote team effectiveness
- ICTTC104D Maintain an electronic system
- ICTTC096D Conduct field tests of radio/wireless networks
- ICAI4029B Install network hardware to a network
- ICAI4097B Install and configure a network
- ICAI4175B Select and install a router
- UEENEEH072B Find and repair faults in communication systems
- UEENEEH073B Find and repair faults in professional audio reproduction components
- UEENEEH074B Find and repair faults in audio/video recording equipment
- UEENEEH077B Diagnose and rectify faults in recording and replay apparatus
- UEENEEH078B Diagnose and rectify faults in camera circuits
- UEENEEH080B Diagnose and rectify faults in digital transmission systems.

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