



Australian Government

UEEEEC0053 Provide engineering solutions to air traffic control system problems

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to provide engineering solutions to air traffic control (ATC) system problems in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes determining and providing solutions to ATC system by interpreting diagrams, using effective problem-solving techniques and reporting work activities and outcomes.

Typical systems could be air traffic management (ATM), voice switching and control system (VSCS), data and communications networks, aeronautical fixed telecommunications network (AFTN), control maintenance monitoring (CMM), operational display suite (ODS), air situation display (ASD), tower situational awareness display (TSAD), aeronautical reference data display and distribution system (ARDDDS), backup to the above systems, buildings and services and navigational aids.

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

Pre-requisite Unit

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

Competency Field

Electronics and Communications

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Determine solutions to ATC system

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given aviation work area are identified and applied
- 1.2** Aviation operational safety procedures for a given work area are obtained and applied
- 1.3** WHS/OHS risk control measures and workplace procedures are followed in preparation for aviation work activity
- 1.4** Extent of problems within the ATC system are determined from diagrams, performance specifications and situation reports, and in consultation with relevant person/s
- 1.5** Activities are planned to meet scheduled timelines in consultation with others involved in the work
- 1.6** Tools, equipment and testing devices needed are obtained in accordance with workplace procedures and checked for correct operation and safety

2 Provide solutions to problems within ATC system

- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out work are followed
- 2.2** ATC system operation, characteristics and applications are applied to developing engineering solutions to aviation control problems
- 2.3** Parameters, specifications and performance requirements in relation to ATC system problems are obtained in accordance with workplace procedures
- 2.4** Approaches to resolving ATC system problems are evaluated to provide most effective solution/s
- 2.5** Unplanned situations are responded to in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- 2.6** Problems are solved efficiently without waste of materials or damage to apparatus, the surrounding environment or aviation services using sustainable energy practices

3 Inspect, test and document solution to problems within ATC system

- 3.1** WHS/OHS risk control measures and workplace procedures for carrying out work are followed
- 3.2** Engineering solutions to ATC system problems are tested to determine their effectiveness and modified, as required
- 3.3** Adopted solutions are documented, including instructions for implementation, that incorporates risk control measures to be followed
- 3.4** Justification for solutions used to solve ATC system problems are documented in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Providing solutions to ATC system problems must include at least four of the following:

- aeronautical fixed telecommunications network (AFTN)
- aeronautical reference data display and distribution system (ARDDDS)
- air situation display (ASD)
- air traffic management (ATM)
- control maintenance monitoring (CMM)
- data and communications networks
- operational display suite (ODS)
- tower situational awareness display (TSAD)
- voice switching and control system (VSCS)
- backup to the above systems
- buildings and services and navigational aids

Unit Mapping Information

This unit replaces and is equivalent to UEENEEH190A Provide engineering solutions to air traffic control system problems.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>