



**Australian Government**

# **UEENEEH151A Install large security systems**

**Release 2**

## UEENEEH151A Install large security systems

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

#### 1) Scope:

##### 1.1) Descriptor

This unit covers installing, entering instructions and testing of electronic security systems within excess of 50 connected devices in buildings, premises and precincts. It encompasses working safely and to standards, following and job specifications, securely placing and connecting security system components, and applying customer relation protocols.

### Application of the Unit

#### Application of the Unit 2)

This unit is intended for competency development in entry-level employment based programs incorporated in approved contracts of training or approved training programs.

### Licensing/Regulatory Information

#### License to practice 3)

The skills and knowledge described in this unit require a license to practice in the workplace where plant and equipment operate at voltage above 50 V a.c. or 120 V d.c. However other conditions may apply in some States/Territories subject to regulations related to electrical work.

Practice of this unit in the work place is subject to State and Territory Security Industry regulations. Where the

**License to practice****3)**

security system has a call-back-to-base facility practice in the workplace is also subject to ACMA regulations to undertake cabling work.

Note:

Unit 'UEENEEF102A and UEENEEF104A provide the required skill and knowledge for registration in accordance with ACMA regulations for undertaking cabling work.

Practice in the workplace and during training is also subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

**Pre-Requisites****Prerequisite Unit(s)****4)****Competencies****4.1)**

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEE1 02A	Fabricate, dismantle, assemble of utilities industry components
UEENEEE1 05A	Fix and secure electrotechnology equipment
UEENEEE1 07A	Use drawings, diagrams, schedules, standards, codes and specifications
UEENEEH1 50A	Assemble and set up basic security systems

**Literacy and numeracy skills****4.2)**

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and

Numeracy<sup>7</sup>

Reading 3      Writing 3      Numeracy 3

## Employability Skills Information

### Employability Skills 5)

This unit contains Employability Skills

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

## Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit      Performance Criteria describe the required performance needed to demonstrate achievement of the element.  
 Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |   |  |     |   |
|---|--|-----|---|
| 1 | Prepare to install and set up basic wired and wireless security systems. | 1.1 | OHS procedures for a given work area are identified, obtained and understood through established routines.  |
|   |  | 1.2 | Established OHS risk control measures are followed in preparation for the work.   |
|   |  | 1.3 | Safety hazards, which have not previously been identified, are reported and advise on risk control measures, are sought from the work supervisor. |
|   |  | 1.4 | The nature and location of the work is obtained from work supervisor or other appropriate   |

**ELEMENT****PERFORMANCE CRITERIA**

- person to establish the scope of work to be undertaken.
- 1.5 Advice is sought from the work supervisor or other appropriate person to ensure the work is co-ordinated effectively with others.
- 1.6 Sources of materials that may be required for the work are established in accordance with established routines.
- 1.7 Tools, equipment and testing devices needed to carry out the work are obtained and checked for correct operation and safety.
- 2 Install basic wired and wireless security systems.
- 2.1 Established OHS risk control measures for carrying out the work are followed.
- 2.2 Circuits/machines/plant are checked as being isolated where necessary in strict accordance OHS requirements and procedures
- 2.3 Security controllers and devices are located for optimum performance within limitation imposed by customers and regulations. (See note 1)
- 2.4 Accessories are installed straight and square in the required locations and within acceptable tolerances.
- 2.5 Cables and conductors are terminated at accessories in accordance with manufacture's specifications and regulatory requirements.
- 2.6 Established methods for dealing with unexpected situations are discussed with appropriate person or persons and documented.
- 2.7 Unexpected situations are dealt with safely and with the approval of an authorised person.
- 2.8 Security installation is carried out efficiently without waste of materials or damage to apparatus, circuits or the surrounding environment and using sustainable energy practices.

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |     |   |
|---|--|-----|---|
| 3 | Set up basic wired and wireless security systems and document. | 3.1 | OHS work completion risk control measures and procedures are followed.                            |
|   |  | 3.2 | Work site is cleaned and made safe in accordance with established procedures.                     |
|   |  | 3.3 | Security system is documented in accordance with regulatory requirement and established routines. |

## Note1:

Examples of security devices are, Reed switches, PIRs, Glass break facilities, Panic buttons, Monitored Door Strikes, Momentary Key Switches, Latching Key Switches, CCTVs, Monitors and Access panels.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and installing large wired and wireless security systems.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

#### **KS01-EH151A Large security systems**

Evidence shall show an understanding of closed circuit televisions to an extent indicated by the following aspects:

T1 Application CCTV systems encompassing:

- Sub-system components (i.e. functional blocks) and their function

T2 Television principles encompassing:

- Sub-system components (i.e. functional blocks) and their function
- Video signals

T3 CCTV cameras encompassing:

- Types of cameras
- Sub-system components (i.e. functional blocks) and their operating parameters

T4 Camera lens encompassing:

- Types of lenses and their characteristics
- Application of various types
- Setting up

T5 Monitors and recording devices

- Types and application
- Analogue and digital recording devices and their application

T6 Installation and mounting encompassing:

- Consideration in locating and mounting CCTV camera and auxiliary equipment

Note.

1. Examples are need for sealed and heated housings, IP rating required, methods for overcoming earth (ground) loops, need for lighting protection.

2. Examples of auxiliary equipment are in-line video amplifiers/ equalizers and video distribution amplifiers

T7 Evidence shall show an understanding of advanced electronic security systems to an extent indicated by the following aspects:

- Connection of input and output devices to detectors and control panels
- Procedures to perform hardware and software upgrades

## REQUIRED SKILLS AND KNOWLEDGE

- Types of code pads and commands required to operate the system

### T8 Security video monitoring and recording

Evidence shall show an understanding of security video monitoring and recording to an extent indicated by the following aspects:

- Principles of television systems
- Multiplexing techniques
- Multiplex display and recording of CCTV
- Digital encoding techniques
- Video distribution and transmission techniques
- Microprocessor based CCTV systems
- Factors affecting picture quality

T9 Evidence shall show an understanding of biometric devices to an extent indicated by the following aspects:

- Biometrics techniques and processes including definitions, terminology, advantages, disadvantages and applications

Note.

Includes basic principles of database design, software techniques, classifier combination, feature extraction, feature enhancement, chain code methods, image analysis, biometric transforms, matching techniques, verification and identification, biometric tools, statistical measures of biometrics

### T10 Biometric device tools, software and testing techniques

- Physical interaction with biometric devices including operation and installation of biometric devices examples are iris scanners, hand scanners voice recognition apparatus, facial recognition devices and like equipment
- Legal aspects of biometrics
- Australian laws impacting on biometrics security and privacy legislation.
- Australian standards



## Evidence Guide

### EVIDENCE GUIDE

9) The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. .

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of the unit and performed in accordance with the Assessment Guidelines of this Training Package.

#### Overview of Assessment 9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it must include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work influence decisions about how/how much the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit 9.2)**

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each Element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines – UEE11'. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
  - Implement Occupational Health and Safety workplace procedures and practices, including the use of risk control measures as specified in the performance criteria and range statement
  - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
  - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
  - Demonstrate an appropriate level of skills enabling employment
  - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Install large wired and wireless security systems as described in 8) and including:

- A Reading and interpreting drawings related to cable layouts and apparatus locations.
- B Placing and securing devices and accessories accurately.
- C Maintaining fire integrity.
- D Terminating cable and conductors correctly.
- E Documenting installation.
- F Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in a holistic assessment with the above listed items.

Note:

Successful completion of relevant vendor training may be used to contribute to evidence on which competency is deemed. In these cases the alignment of outcomes of vendor training with performance criteria and critical aspects of evidence shall be clearly identified.

**Context of and specific resources for assessment 9.3)**

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.

These should be part of the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to installing large wired and wireless security systems.

**Method of assessment 9.4)**

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the industry to which this unit applies. This requires that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

**Concurrent assessment and relationship with other units 9.5)**

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

UEENEEE 108A Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits

UEENEEF1 02A Install and maintain cabling for multiple access to telecommunication services

UEENEEH 150A Assemble and set up basic security systems

The critical aspects of occupational health and safety covered in unit UEENEEE101A and other discipline specific occupational health and safety units shall be incorporated in relation to this unit.

## Range Statement

### RANGE STATEMENT

**10)** This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit shall be demonstrated by installing for a representative range of large wired and wireless security systems at least two large security systems.

Systems shall have controllers and more than 50 connected devices of five different types.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

## Unit Sector(s)

Not applicable.

## Competency Field

<b>Competency Field</b>	<b>11)</b>
	Electronics