



**Australian Government**

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

# **CUVCRS04B Produce technical drawings**

**Release: 1**

## **CUVCRS04B Produce technical drawings**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit descriptor**

This unit describes the skills and knowledge required to develop and refine a range of techniques to produce technical drawings. It outlines the ways technical drawing can be applied to a range of contexts where visual representation is required. People working in many industries require the skills and knowledge in this unit, and the unit is written to allow for contextualisation to a particular industry context. This work would usually be carried out independently, although guidance would be available if required.

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

### **Application of the Unit**

Not Applicable

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

## Pre-Requisites

### Prerequisite units

This unit has linkages to a wide range of other units in various Training Packages and combined assessment and/or training would be appropriate.

## Employability Skills Information

### Employability skills

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

| ELEMENT                                            | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 <b>Determine technical drawing requirements.</b> | <p>1.1 Review relevant documentation/concept information to determine <b>technical drawing</b> requirements.</p> <p>1.2 Where appropriate, liaise with relevant colleagues to confirm and clarify technical drawing requirements.</p>                                                                                            |
| 2 <b>Select techniques.</b>                        | <p>2.1 Identify and select appropriate <b>materials, tools</b> and <b>equipment</b> suitable for technical drawing.</p> <p>2.2 Safely follow procedures to <b>test</b> and practise a range of technical drawing <b>techniques</b>.</p>                                                                                          |
| 3 <b>Produce technical drawings.</b>               | <p>3.1 Select the most appropriate technical drawing technique for the work to be produced.</p> <p>3.2 Select the materials, tools and equipment appropriate to the technique.</p> <p>3.3 Use technical drawing techniques correctly to production drawings which are consistent with <b>concept</b>/purpose of the drawing.</p> |

## Required Skills and Knowledge

### Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills:

- literacy skills sufficient to interpret material required to produce technical drawings
- numeracy skills sufficient for calculations and measurements required to produce technical drawings.

#### Required knowledge:

- physical properties and capabilities of the range of materials, tools and equipment

## Required Skills and knowledge

used for technical drawing work

- knowledge about technical drawing techniques and their application to a range of contexts and subject matter
- technical drawing practices, their history and theory
- awareness of copyright, moral rights and intellectual property issues and legislation
- organisational and legislative occupational health and safety procedures in relation to technical drawing work.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The following evidence is critical to the judgement of competence in this unit:

- production of technical drawings which show a command of the selected techniques and meet the required purpose/objectives
- knowledge of technical drawing techniques and their application to specific contexts.

#### **Context of and specific resources for assessment**

The assessment context must provide for:

- practical demonstration of skills using required materials, tools and equipment to produce technical drawings consistent with the concept/work requirements.

#### **Method of assessment**

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of the drawing in progress
- evaluation of technical drawings produced by the candidate
- questioning and discussion of the candidate's

## EVIDENCE GUIDE

- intentions and work outcome
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials, resources and equipment needed to produce technical drawings.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Technical drawings*** may be:

- circuits
- diagrams
- elevations
- flow charts
- illustrations
- plans
- sections
- sketches.

***Materials*** may include:

- acetate sheets
- chalks
- drafting film
- erasers
- inks and wet mediums
- markers
- paper
- pencils
- pens
- tape.

***Tools and equipment*** may include:

- computer, software applications
- cutting knives, scissors
- drafting instruments
- drafting table
- light box
- photo copier
- plotter
- printer

## RANGE STATEMENT

- rulers
  - scanner
  - templates.
- Testing** processes may involve:
- exploring techniques and materials by making practice pieces, test pieces or samples.
- Techniques** may include:
- computer-aided drawing
  - drafting using drafting instruments
  - drawing orthogonal projection
  - drawing to represent scale, perspective, dimension, volume
  - freehand drawing
  - geometric drawing
  - lettering
  - rendering.
- The **concept** for the technical drawing may encompass:
- aesthetic considerations
  - choice of technique and materials
  - presentation context.
- The subject matter or object to be represented may include:
- architectural structure
  - electronics
  - furniture
  - landscape scheme
  - lighting and sound set ups
  - mechanics
  - objects and products
  - theatre, film props
  - theatre, film set.
- Particular safety or environmental issues may include:
- Federal, State and Territory legislation, regulations and standards
  - personal protection.

## **Unit Sector(s)**

Not Applicable