Australian Government

Department of Education, Employment and Workplace Relations

CUVACD303A Produce technical drawings

Release: 1

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Modification History

Version	Comments
CUVACD303A	This version first released with *CUV11 Visual Arts, Craft and Design Training Package version 1.0*

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply a range of techniques to produce technical drawings that meet required standards and conventions.

Application of the Unit

People working in many industries apply the skills and knowledge outlined in this unit.
In the cultural industries, technical drawing skills to produce visual representations of objects, processes or spaces are required in sectors such as stage and set design for live theatre and events, as well as film and television productions. In the visual arts, technical drawings could be required in preparation for exhibitions, or as part of the process for designing artworks.
At this level, work is undertaken independently but within established parameters. Supervision or guidance is available as required.

Licensing/Regulatory Information

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

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
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

1. Prepare for technical drawing work	1.1 Clarify ***technical drawing requirements*** with reference to relevant ***documentation*** and in consultation with ***appropriate people***
	1.2 Identify ***factors*** that may impact on technical drawing work
	1.3 Review the ***purpose*** of drawings and select appropriate ***techniques***
	1.4 Prepare ***equipment*** and ***materials*** according to relevant ***workplace procedures*** and safety requirements
2. Create technical drawings	2.1 Apply appropriate conventions and standards to technical drawings
	2.2 Prepare and review preliminary drawings in consultation with relevant people and confirm required amendments
	2.3 Produce technical drawings that are consistent with concept and purpose of drawings
	2.4 Finalise and submit technical drawings within agreed timeframes

Required Skills and Knowledge

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

Required skills

- learning skills to improve own skills in technical drawing
- literacy skills to interpret material required to produce technical drawings
- numeracy skills to interpret and apply calculations and measurements in technical drawing
- planning and organising skills to plan work tasks in a logical sequence
- problem-solving skills to select technical drawing techniques that best suit the purpose and make adjustments as required
- self-management skills to complete work within agreed timeframes.

Required knowledge

- physical properties and capabilities of the range of materials, tools and equipment used for technical drawing work
- technical drawing techniques and their application to a range of contexts and subject matter
- technical drawing practices, history and theory, including current standards and conventions
- intellectual property issues and legislation associated with technical drawing work
- OHS procedures for technical drawing work.

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.

Overview of assessment	

Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to:
	• produce a number of technical drawings which:
	  • show a command of selected techniques
	  • adhere to technical drawing standards and conventions
	• apply knowledge of technical drawing practice, history and theory.

Context of and specific resources for assessment	Assessment must ensure access to: • equipment and materials required to produce technical drawings.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct observation of technical drawing in progress • evaluation of technical drawings produced by the candidate • questioning and discussion to determine candidate's understanding of technical drawing techniques • review of portfolios of evidence • review of third-party reports from experienced practitioners. 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).
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

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 drawing requirements may include:	• circuits • diagrams • elevations • flow charts • illustrations • plans • sections • sketches.

Documentation may include briefs or specifications with information, such as:	• background information about clients
	• budget
	• clients' needs
	• considerations, such as:
	  • contractual
	  • copyright
	  • ethical
	  • legal
	• creative objectives
	• diagrams indicating, for example:
	  • colours
	  • measurements
	  • scale
	  • style
	• materials
	• personnel involved in the project
	• purpose
	• relevant statutory requirements, e.g. health and safety considerations
	• sponsorship
	• technical objectives
	• technology
	• timeframe.

Appropriate people may include:	• clients • colleagues

	• industry practitioners • managers • mentors • supervisors.
Factors may include:	• aesthetic considerations • availability of personnel • availability of resources • available budget • complexity of project • expectations of target users of technical drawings • own level of skill • presentation context • timelines.
Purpose of technical drawings may be to represent:	• architectural structures • electronics • furniture • landscape scheme • lighting and sound set-ups • mechanics • objects and products • theatre and film props and sets.

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.

Equipment may include:	• computer • cutting knives • drafting instruments • drafting table • light box • photocopier • plotter • printer

	• rulers • scanner • scissors • software applications • templates.
Materials may include:	• acetate sheets • chalks • drafting film • erasers • inks and wet mediums • markers • paper • pencils • pens • tape.
Workplace procedures may relate to:	• cost control • process-specific procedures • recycling • reporting • safety • use of materials.

Unit Sector(s)

Visual communication – art, craft and design