Australian Government

Department of Education, Employment and Workplace Relations

CUVACD304A Make scale models

Release: 1

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Modification History

Version	Comments
CUVACD304A	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 make three-dimensional (3-D) physical scale models in response to specifications. It does not cover the use of 3-D digital software which can be found in 'CUFANM303A Create 3D digital models', a unit in CUF07 Screen and Media Training Package.

Application of the Unit

People working in many industries use scale models as part of the design process. Models are required for production design for live theatre and events, as well as film and television productions. More broadly, individuals working with any 3-D form use and make scale models to inform their work.
At this level, models would be relatively straightforward in nature, and be built based on supplied specifications and requirements. Work would be undertaken with some guidance from others.

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 to make scale models	1.1 Clarify scale model requirements based on relevant ***documentation***, ***verbal briefs*** and consultation with ***relevant people***
	1.2 Identify potential challenges and plan work to minimise risk in consultation with relevant personnel
	1.3 Select ***techniques*** for model making consistent with project objectives and ***parameters***
	1.4 Confirm requirements for presenting final ***scale models***
	1.5 Confirm ***equipment, materials*** and ***work space requirements***
	1.6 Set up work space and equipment according to ***safety considerations*** and organisational procedures
2. Complete model construction	2.1 Safely make preliminary models representing core dimensions in line with specifications
	2.2 Review preliminary models against objectives and specifications in consultation with others as required
	2.3 Make adjustments to models as required
	2.4 Complete models consistent with objectives and other parameters
	2.5 Present models to relevant colleagues in line with project and organisational requirements
	2.6 Follow organisational storage and ***inventory procedures***
	2.7 Seek and use feedback from others to improve own skills

Required Skills and Knowledge

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

Required skills

- communication skills to work with others in the model making process
- initiative and enterprise skills to construct scale models that respond to specifications
- learning skills to improve own skills in constructing scale models
- literacy skills to interpret specifications and briefs for scale models
- numeracy skills to interpret and correctly apply calculations and measurements required for the production of scale models
- planning and organising skills to:
  - plan work tasks in a logical sequence
  - organise resources
- problem-solving skills to identify and resolve common problems in model making
- self-management skills to complete work within agreed timeframes.

Required knowledge

- ways in which model making is used in specific industry contexts
- basic principles of model making, including the physical properties and capabilities of the range of equipment, tools and materials used for model making
- ways in which to present finished scale models
- work space requirements for the production of models, including set-up of work space for particular types of work
- issues and challenges that arise in making scale models
- intellectual property issues and legislation associated with making scale models
- sustainability issues associated with equipment, tools and materials used in scale model making
- OHS procedures for scale model making.

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: • apply selected techniques to make models consistent with project objectives and parameters • demonstrate knowledge of the processes and techniques used for making scale models • present finished scale models in an appropriate way.
Context of and specific resources for assessment	Assessment must ensure access to: • tools and equipment required to construct scale models.
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 the candidate constructing models • evaluation of scale models made by the candidate • oral or written questioning to assess knowledge of scale model making techniques • review of portfolios of evidence • review of third-party reports from experienced practitioners. Assessment methods should closely reflect workplace demands 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, for example: • BSBDES303A Explore and apply the creative design process to 3D forms.

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.

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
	• requirements for development or building consent
	• scope for making adjustments
	• sponsorship
	• technical objectives
	• technology
	• timeframe
	• visual representation of scale model.

Relevant people may include:	• art department • client • creative director • designer • director • head of department • manager

	• mentor • other technical or specialist personnel • producer • production manager • project manager • representative of organisation commissioning the work • supervisor • technical director.

Techniques may relate to:	• carpentry
	• ceramics
	• glasswork
	• lighting, such as:
	  • ambient
	  • laser
	  • spot
	• modelling with flexible materials
	• painting and other surface decoration
	• projection
	• manufacture of form by:
	  • bending
	  • folding
	  • hinging
	  • sculpture
	  • twisting
	  • working with textiles.

Scale models may be required for a wide range of work situations, such as:	• event design
	• foyer design
	• lighting plots
	• object or product design
	• open space environment
	• room, site and stage layouts
	• set design, such as for:
	  • theatre
	  • screen and media productions
	• visual artworks and projects, such as:
	  • ceramic pieces
	  • community installations
	  • performance
	  • public art
	  • sculpture.

Equipment may include:	• brushes
	• buckets
	• clamps and pliers
	• containers
	• hand and power tools, such as:
	  • compressor
	  • drills
	  • saws
	  • sanders
	• lighting
	• protective clothing
	• scrapers
	• shaping tools, such as:
	  • carving tools
	  • planers
	  • surform blades
	• spatulas
	• specialised equipment for ceramic work
	• specialised equipment for sculpture work
	• spray gun.

Materials may include:	• bolts
	• cardboard
	• charcoal
	• clays
	• coloured pencils
	• crayons
	• extenders and binders
	• fibreglass
	• foamcore
	• found objects and materials
	• glass
	• hooks
	• inks
	• laminates
	• latex
	• materials to represent a particular surfaces, such as:
	  • earth
	  • rock
	  • water
	• metals, such as:
	  • sheet
	  • wire
	• nails
	• natural and synthetic fibres
	• paper
	• paper pulp
	• pastels
	• perspex
	• polystyrene
	• recycled materials
	• resins
	• rubber
	• screws
	• solvents and cleaning materials
	• specialised metal and wood primers
	• string
	• tape
	• turps
	• water and oil-based paints
	• waterproof lacquers
	• wood and timber products, such as:

	• balsa wood • MDF board • wooden skewers.
Work space requirements may include:	• drying space • dust extraction • lighting and power requirements • location-specific requirements • process-specific space needs • ventilation • wet and dry areas.
Safety considerations may include:	• federal, state and territory legislation, regulations and standards • personal protection • recycling • safe disposal of waste.

Inventory procedures may involve:	• files, including digital • notes on future use of scale models • product safety labels • spreadsheet documentation • written and visual documentation of manufacturers' instructions.

Unit Sector(s)

Visual communication – art, craft and design