Australian Government

MSFFDT4008 Produce and evaluate developmental furniture models to scale

Release: 1

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Modification History

Release 1 - New unit of competency

Application

This unit of competency covers producing developmental models to scale using fundamental design elements and principles for presentation purposes in an industry workplace or design studio environment.

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

Pre-requisite Unit

Competency Field

Unit Sector

Furniture design and technology

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Plan for production	1.1	Applicable work health and safety (WHS), legislative and organisational requirements relevant to producing developmental models to scale are verified and complied with
		1.2	Design brief is reviewed, confirmed and clarified with appropriate personnel
		1.3	Type and quantity of materials to be used are acquired from the storage location
		1.4	Equipment is selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer recommendations
		1.5	Communication with others is established and maintained in accordance with WHS requirements

2	Interpret design development sketches and drawings	2.1	Sketches and drawings are assessed for their elements of design
		2.2	Sketches and drawings are assessed for their principles of design
		2.3	Sample maquette is produced in accordance with the concept sketches and drawings
		2.4	Concept is modified for its aesthetic value in keeping with the intended function
		2.5	Working drawings are assessed for their specification requirements
		2.6	Concept is planned for model manufacture taking into account available equipment and resources
3	Produce scale model	3.1	Manufacturing process is planned and organised
		3.2	Material is processed in accordance with the manufacturing plan and safe working procedures
		3.3	Components are produced and prepared for assembly
		3.4	Components are assembled in accordance with the working drawings
		3.5	Scale model is finished according to specifications
4	Evaluate scale model	4.1	Design and production process faults are recorded and reported to the appropriate personnel
		4.2	Scale model is evaluated for functionality and aesthetic appeal
		4.3	Scale model is evaluated against design brief requirements
		4.4	Scale model is reviewed with client or test client
		4.5	Modifications to the scale model are explored to satisfy the requirements of the design brief

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit context includes:	• WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent • work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • work requires individuals to demonstrate conceptual and analytical ability, discretion, judgement and problem solving • customers or suppliers may be internal or external
Design brief includes:	• the aims, objectives, milestones for the design project • organisational or personal profiles • target audience • budget • timeline • consultation requirements • colour requirements • image requirements • function
Appropriate personnel include:	• trainers • supervisors • suppliers • clients • colleagues • managers
Materials include:	• timber (native and imported) • man-made timber products

- plastic
- metal
- alloys
- stones
- glass
- textiles
- fibreglass
- foam
- cardboard
- paper products
- any other manipulable substance

Storage locations include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

Storage divisions include by:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment includes:

- static machinery
- portable power tools
- computer numerically controlled (CNC) equipment
- and is to include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source

Sketches include:

- hand drawn images
- ideation drawings completed freehand

Elements of design include:

- line
- shape
- form (geometric or organic)
- texture
- colour
- function

Principles of design include:	• balance • proportion (symmetry and asymmetry) • harmony • contrast • pattern • movement • rhythm • unity • style • focus • scale • dominant • sub-dominant • subordinate relationship • emphasis • proximity • alignment • space • anthropometry • ergonomics • arrangement • workload materials handling capacity • skills available • equipment capabilities • aesthetic relations • tension • development methods
Maquette includes:	• a miniature version of the intended final product to establish if the elements and principles of design have been achieved.
Concepts include:	• ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Aesthetics include:	• consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Working drawings include:	• drafted technical drawings or drawings produced on computer using computer-aided design (CAD) software packages that contain project specifications
Manufacturing processes include:	• methods by which the product will be produced with steps that entail working from drawings and specifications • producing components utilising machine operations • assembly of the components • finishing techniques

Components include:	• parts which make up the whole of a product (each component often requires some level of machining to result in the desired part)
Scale model includes:	• a model replica of the intended final outcome product produced to a suitable scale to distinguish its features, for example, 1:5 or 1:10. The model may be made from similar material as the intended final solution or in some cases made from modelling clay
Specifications include:	• measurements • procedures by which a product is constructed • materials to be utilised
Functionality includes:	• the purpose intended for the product in relationship to the design brief
Records and reports include:	• the design and production method • product type and size • inspection and labelling outcomes • storage locations • quality outcomes • hazards, incidents or equipment malfunctions
Personal protective equipment includes:	• that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures include:	• work procedures/instructions • manufacturer specifications and instructions • standard forms of workplace process and procedures • organisation work specifications and requirements • legislation, regulations and codes of practice • quality and Australian Standards and procedures

Unit Mapping Information

Supersedes and is equivalent to LMFFDT4010A Produce and evaluate developmental furniture models to scale

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73