



Australian Government

MSFFDM4008 Investigate materials and technologies for design projects

Release: 1

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Modification History

Release 1. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed and relevant content moved to Assessment Requirements. Assessment Requirements changed to remove duplication with Performance Criteria and include volume/frequency of evidence. Supersedes and is not equivalent to MSFFDT4011 Research and select furniture materials and technology.

Application

This unit describes the skills and knowledge required to research and recommend materials and technologies that meet the requirements of a design brief.

This unit applies to individuals working in a manufacturing or design studio environment who analyse and compare product and technology information from a wide range of sources to develop a design solution, either alone or as part of an internal or external team.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Competency Field

Furniture design and manufacturing – general

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine project requirements	1.1 Review and clarify project brief with client to confirm requirements 1.2 Confirm and evaluate parameters and constraints from requirements 1.3 Select work resources based on needs of project 1.4 Identify and assess aspects of brief that inform finish selection 1.5 Identify key project stakeholders and establish required communication protocols
2. Research materials	2.1 Assess aesthetic requirements of materials and identify potential options that meet requirements 2.2 Evaluate intended use against the functional features of different materials

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.3 Identify and consider new and emerging finish technologies for their application to project brief 2.4 Identify application requirements in terms of available expertise 2.5 Evaluate finish properties for their safety and sustainability 2.6 Source and compare information about costs and availability against project brief
3. Research technologies	3.1 Assess product requirements and identify potential technology options for design and production 3.2 Evaluate intended use against outputs of different technological approaches 3.3 Identify and consider new and emerging production technologies for their application to brief 3.4 Identify application requirements in terms of available expertise, equipment and other relevant resources 3.5 Assess technological options against production output requirements including volume, quality and speed 3.6 Source and compare information about costs and availability against project brief
4. Refine ideas and recommend solution	4.1 Explore and refine ideas about materials and technology through a process of reflection and testing 4.2 Choose a materials and technology solution based on research findings that satisfies elements and principles of design and key objectives of project brief 4.3 Provide clear and relevant research information highlighting findings and rationale for materials and technologies chosen

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Numeracy skills to interpret technical information and perform calculations relating to product and production costings.
- Reading skills to interpret information including design briefs, and materials and technology specifications.

- Writing and oral communication skills to record and present investigation findings.

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. Supersedes and is not equivalent to MSFFDT4011 Research and select furniture materials and technology.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFDM4008 Investigate materials and technologies for design projects

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- investigate materials and associated technologies that respond to three different design briefs and which individually or cumulatively involve at least two types of materials, and in doing so:
 - evaluate the variations in costs and quality outcomes associated with different materials and technologies for each of the three design briefs.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- elements and principles of design, their interrelationships and how they are used in materials selection
- how different technologies can be used to achieve design elements, and how materials and technologies interact
- emerging industry technologies and the potential for application to meet a design brief
- production methodologies of furniture (or similar) manufacturers, including suitability of different methods for a range of output volumes
- design techniques for products based on materials selection
- materials used to produce products, including:
 - their specifications, behaviours and limitations
 - wood, plastics, metals and other commonly used materials
- how to structure and present research information and recommendations.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:

- design briefs
- information technology for research and design presentation.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors

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