



Australian Government

MSFFDT5006 Design a furniture product using high volume technology services (HVTs) in production

Release: 1

MSFFDT5006 Design a furniture product using high volume technology services (HVTs) in production

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers identifying qualities of high volume technology production and designing a furniture product which utilises this technology to produce details and components for the design. It applies to a custom furniture business and/or design support 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.

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|---|---|-----|--|
| 1 | Identify and analyse qualities and properties of HVTs | 1.1 | Applicable work health and safety (WHS), legislative and enterprise requirements relevant to the design of furniture product using HVTs are verified and complied with |
| | | 1.2 | Details of types of HVTs production methods are identified and documented |
| | | 1.3 | Details of qualities and properties of HVTs are analysed and reviewed for suitability for furniture products |
| | | 1.4 | Features of HVTs production methods are identified |
| | | 1.5 | Resource and equipment implications for HVTs production methods are assessed |

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| 2 | Research product needs | 2.1 | All external parameters affecting the design of the furniture product are obtained from the client or from information sources |
| | | 2.2 | Client needs for product are obtained and recorded |
| | | 2.3 | Inspirational information is collected from relevant sources |
| | | 2.4 | Visual needs of the product are identified and documented |
| | | 2.5 | Ethical considerations are obtained, reviewed and documented |
| | | 2.6 | Product needs are prioritised and recorded in accordance with enterprise practice |
| 3 | Prepare the design brief | 3.1 | Product needs and external parameters and factors are reviewed and clarified with the client |
| | | 3.2 | Report on product needs is produced, including HVTS opportunities |
| | | 3.3 | Feedback from the client is recorded |
| | | 3.4 | Details of changes are negotiated with client and recorded |
| | | 3.5 | Outcomes of design process are clarified and agreed to with client |
| | | 3.6 | Design brief is prepared and documented, including budget, timelines, production needs and methods |
| 4 | Generate ideas in response to design brief | 4.1 | All relevant information on product need and client needs are analysed and absorbed |
| | | 4.2 | Ideas are generated from information provided using lateral thinking methods |
| | | 4.3 | Ideas are visually presented |
| | | 4.4 | Ideas are matured through review and re-working |
| | | 4.5 | New ideas are generated from initial ideas |
| | | 4.6 | Final ideas are visually presented |
| 5 | Evaluate and | 5.1 | Each design idea is evaluated against design brief and |

	develop design proposals		requirements for HVTS production
		5.2	Design proposals are scored against weighted assessment criteria and results recorded
		5.3	Feasible high scoring design proposals are selected for further development
		5.4	Design proposals are completed in response to evaluation feedback
6	Present product proposals to client	6.1	Product proposals are prepared for presentation to client
		6.2	Presentation arrangements are made, checked and confirmed
		6.3	Design proposals are presented to the client
		6.4	Client feedback is gained, analysed and confirmed
		6.5	Design proposals are completed with consideration to client feedback
7	Produce final product proposal information ready for making	7.1	Construction details are finalised and documented
		7.2	Visual aspects of product proposal are documented
		7.3	Part details are documented
		7.4	Manufacturing methods are documented
		7.5	Details are recorded in accordance with enterprise practice

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
- HVTS include:**
- laser cutting
 - machine point to point cutting
 - water jet cutting
 - plasma cutting
 - **stereolithography (SLA)** and computer numerically controlled (CNC) machining
- Inspirational information includes:**
- catalogues
 - brochures
 - magazines
 - existing products
 - reference books
 - other existing enterprise design information
 - transferable technological ideas or concepts
 - natural or man-made structures and objects
- Visual needs of the product include:**
- point
 - line
 - plane
 - volume
 - shape
 - form
 - tone
 - colour
 - surface
 - texture
 - scale
 - size
 - vertex
 - edge

	• face • position • direction • space • balance • movement • proportion • rhythm • repetition • pattern • relief • mass • movement
Ethical considerations include:	• social justice • environmental sustainability • biodiversity • cultural heritage • social responsibility of furniture makers
Lateral thinking methods include:	• suspending belief • looking for gaps of need alternatives • daydreaming • creative leaping • filaments • brainstorming • six thinking hats • asking questions of norms and beliefs
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 LMFFDT5008A Design a furniture product using high volume technology services (HVTs) in production

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 MSFFDT5006 Design a furniture product using high volume technology services (HVTs) in production

Modification History

Release 1 - New unit of competency

Performance Evidence

- Collect, organise and understand information related to furnishing work instructions and work orders and safety procedures
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify the features of HVTs and required specifications when designing a furniture product
- Document and communicate three (3) product proposals, including:
 - customer requirements
 - aesthetics
 - materials and construction
 - costing calculations for products, materials and finishes
 - HVTs components
- Document the product needs analysis and evaluate product proposals
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Lead others and work effectively to improve production quality and outcomes
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Use workplace technology related to the coordination, including communication equipment, time and management aids and other measuring devices
- Minimise wastage of resources, including materials, time and money
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity and encourage participation of employees in the planning of work activities and changes

Knowledge Evidence

- State or territory WHS legislation, regulations, standards and codes of practice relevant to the design of a furniture product
- Ideas generation and conceptual development techniques
- Historical furniture styles and movements
- Contemporary furniture styles and movements
- Furniture design methodology
- Current ethical issues in society affecting furniture makers
- Ergonomic and anthropometric standards
- Environmental issues in making a furnishing product
- Visual aesthetics of furnishing products
- Current market segment products
- HVTs production methods
- Production methodologies of furniture makers
- Physical needs of product type
- Materials used to produce furnishing products
- Furniture materials and finishes
- Making techniques for product types
- Costing techniques, including overhead components
- Options and technologies for presenting visual information
- Established communication channels and protocols
- Relevant production problem identification and resolution methods
- Relevant document control methods

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.

- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to a realistic product need, specific information product type needs, specifications and client instructions, details of the product requirements and options.

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