



Australian Government

Department of Education, Employment and Workplace Relations

LMFFM4006A Construct joints for custom furniture

Revision Number: 1

LMFFM4006A Construct joints for custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to join timber by constructing joints using hand and portable power tools. It includes adapting/designing joints that are compatible with the product material, purpose and style of the furniture
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furnishing maker operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the person's job and authority
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1. Applicable legislative, OH&S and organisational requirements relevant to constructing joints for custom furniture are verified and complied with 1.2. Instructions, plans and/or design briefs are read and interpreted to identify furniture joint requirements 1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.4. Product purpose, furniture style and construction material are identified 1.5. Joints are identified and type of joint to be used is selected and adapted/designed as necessary 1.6. Tools, adhesives and fasteners are selected to match the joint type 1.7. Quality checking procedures are developed and documented for each step in the joint construction process
2. Make joint	2.1. Cutting and joining lines are marked out to suit joint type 2.2. Measurements and calculations are checked for accuracy to ensure quality outcomes 2.3. Timber features are identified and optimal usage criteria are observed 2.4. Timber is cut to specification, inspected and prepared for joining 2.5. Timber is joined in accordance with the job specifications 2.6. Fasteners and adhesives are used to make joints firm where required 2.7. Finished joint is checked against quality requirements
3. Complete housekeeping	3.1. Unused materials are stored or recycled as required 3.2. Tools and equipment are cleaned and stored appropriately 3.3. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 3.4. Work area is cleaned and rubbish disposed of appropriately 3.5. Workplace documentation and/or reports are

ELEMENT	PERFORMANCE CRITERIA
	completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Collect, organise and understand information related to work orders, basic plans and safety procedures
- Communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- Work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate custom furniture jointing problems to avoid re-work and wastage
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities including the preparation and layout of the worksite and the obtaining of tools and materials to avoid any back tracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- Clarify and confirm work instructions
- Plan work within given task parameters
- Accept responsibility for given tasks
- Set, monitor and satisfy personal work goals
- Satisfy the competency requirements for the job
- Maintain current knowledge of jointing tools and materials
- Maintain current knowledge of precision timber jointing techniques
- Seek learning opportunities
- Use the workplace technology related to the selection, preparation, operation and maintenance of hand and power tools including calculators and measuring devices
- Apply knowledge of timber technology to optimise the selection and use of timber varieties

Required knowledge

- State or Territory OH&S legislation, regulations, standards and codes of practice relevant to moisture suppressants and barrier systems
- Organisational and site standards, requirements, policies and procedures for the creation of joints
- Types of tools and equipment used in joint construction and procedures for their safe use, operation and maintenance
- Characteristics and properties of timber being used

REQUIRED SKILLS AND KNOWLEDGE

- Characteristics, properties and selection criteria of adhesives used
- Matching requirements of adhesives and fasteners to timbers/materials used
- Environmental protection requirements
- Established communication channels and protocols
- Problem identification and resolution
- Work flow in relation to the furniture items being made or repaired

Evidence Guide

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.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and presenting design information
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Select appropriate joint types for the furniture item
- To produce a minimum of four different joint types as specified in the Range Statement in accordance with industry standards and tolerances with at least two produced substantially by hand operations
- Utilise at least three different adhesive types
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the design

EVIDENCE GUIDE	
	and application of jointing techniques • specifications and work instructions
Method of assessment	• Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other joint related units of competency

Range Statement

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.

Legislative requirements	are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OH&S, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OH&S requirements	are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OH&S, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Joints for custom furniture	are to include dowel, mortise and tenon, dovetail, lap joint, biscuit joint, finger joint, housing joint, mitre or bridle joints
Tools and equipment	are to include chisels, mallets, mortise gauges, vernier callipers, vices, dovetail saws, tenon

RANGE STATEMENT	
	saws, coping saws, planes, files, hand drills, power drills, dowel jigs and power routers • may include portable biscuit machines, power planers, power saws and power sanders
Materials	• may include timber (both indigenous and overseas), adhesives and fasteners
Instructions	• Workplace procedures relating to the use and operation of tools and equipment • Production planning figures • Workplace instructions, including job sheets, plans, specifications, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		