

Modification history

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version [4.0] Version created to update workplace health and safety requirements in performance criteria and clarify intent of unit and assessment requirements.
Release 1	This version replaces equivalent unit FPITMM4201B Construct prototypes and samples, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

UNIT CODE	FWPTMM4201 Construct prototypes and samples
Application	<p>This unit of competency describes the skills and knowledge required to construct prototypes and samples <u>of timber structures</u> in a production setting, in line with established plans, drawings or other specifications for the purpose of testing the viability of <u>timber</u> construction methods. Work involves making recommendations for changing designs and methods of <u>timber</u> construction.</p> <p>The unit applies to individuals who work as timber fabricators, supervisors and designers of timber structures. <u>They generally demonstrate autonomy, judgement and limited responsibility in known or changing contexts and within established parameters.</u></p> <p><u>All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.</u></p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil.
Unit Sector	Timber Manufactured Products Timber Merchandising

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. Prepare for construction <u>of prototypes and samples</u>	1.1 Review prototype or sample the purpose <u>for prototype or sample</u> , work order and <u>prototype</u> construction plans and where required clarify requirements with appropriate personnel 1.2 Obtain type and quantity of material to be assembled and hardware in line with prototype construction plan and specifications 1.3 Select appropriate tools and equipment and check for operational effectiveness in line with manufacturer's recommendations 1.4 Plan and document stages of the <u>prototype</u> construction process

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. Set up <u>equipment and components</u>	<p>2.1 Follow workplace health and safety <u>requirements, environmental protection practices and emergency procedures and use personal protective equipment (PPE) in line with operational requirements</u> procedures throughout production <u>prototype construction</u> activities</p> <p>2.2 <u>Identify and report hazards, accidents, incidents and/or near misses in line with operational requirements and health and safety legislative requirements to maintain safe work practices</u></p> <p>2.2-3 Select and prepare set-up jigs required for <u>prototype</u> construction</p> <p>2.3-4 Select timber components, check for compatibility with specifications and cut in line with the prototype or sample plans</p> <p>2.5-4 Position and clamp components in jigs ready for joining with allowable faults, joints and grain in line with construction standards and grading rules</p> <p>2.5-2.6 <u>Identify defective components, incorrect timber cuts and off-cuts; and dispose of or recycle in line with environmental protection practices-</u></p> <p>2.6-7 <u>Staple components to maintain temporary alignment during assembly</u></p>
3. Construct and review prototypes and samples	<p>3.1 Follow <u>prototype</u> construction plan throughout assembly and conduct checks at designated points</p> <p>3.2 Position and install hardware on joints to prototype specifications</p> <p>3.3 Nail or staple temporary bracing to product in line with construction standards</p> <p>3.4 Identify required modifications to designs and plans; <u>and</u> document and follow recommended changes</p> <p>3.5 Correct construction faults in line with recommendations</p> <p>3.6 Review prototype or sample for effectiveness of purpose and efficiency of <u>timber</u> construction methods</p> <p>3.7 Record <u>prototype</u> or sample construction processes, problems and recommendations for change and report to appropriate personnel</p> <p>3.8 Store temporary bracing, prototypes and samples; <u>and</u> dispose of when not required in line with environmental protection practices</p>

Foundation Skills	
<i>This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.</i>	
Skill	Description
Numeracy	<ul style="list-style-type: none"> interpret production data from construction plans to: <ul style="list-style-type: none"> count quantities of timber and hardware components and select appropriate sizes complete calculations from plans accurately measure dimensions and angles
Oral communication	<ul style="list-style-type: none"> ask open and closed probe questions and actively listen to clarify purpose of product and contents of constructions plans
Reading	<ul style="list-style-type: none"> interpret detailed familiar and unfamiliar: <ul style="list-style-type: none"> workplace health and safety and other organisational procedures, construction standards and grading rules construction plans manufacturer instructions
Writing	<ul style="list-style-type: none"> complete detailed and accurate reports on construction processes and problems clearly represent details of and rationale for recommended changes to designs and construction plans
Plan and organise	<ul style="list-style-type: none"> plan and organise own construction activities in line with plan and complete assembly in a logical sequence
Problem-solving	<ul style="list-style-type: none"> diagnose production problems involving design failures and construction difficulties and resolve by modification and reporting
Teamwork	<ul style="list-style-type: none"> work as part of a team to develop fit for purpose products and appropriate construction methods
Technology	<ul style="list-style-type: none"> select and use appropriate machinery, tools and personal protective equipment used to assemble the products

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
FWPTMM4201 Construct prototypes and samples	FWPTMM4201 Construct prototypes and samples	Updated workplace health and safety requirements in performance criteria and clarified intent of unit and assessment requirements	Equivalent unit

Links
Companion Volume Implementation Guide - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47

TITLE	Assessment requirements for FWPTMM4201 Construct prototypes and samples
Performance Evidence	
<p>An individual demonstrating competency must satisfy all of the elements, performance criteria and foundation skills of this unit. There must be evidence that, on at least one occasion, the individual has:</p> <ul style="list-style-type: none"> • constructed at least two prototypes or samples, in line with an individual work order and construction plan for each including: <ul style="list-style-type: none"> • roof, wall and floor frames/trusses • staircases • door and window frames • structural beams • specialised pallets or crates • reviewed each prototype or sample for effectiveness of purpose and efficiency of construction methods and complete a detailed and accurate report on construction processes, problems and recommended changes. 	
Knowledge Evidence	
<p>An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:</p> <ul style="list-style-type: none"> • <u>health and operational hazards or risks related to constructing timber prototypes or sample as identified through risk assessments, manufacturer technical information, regulations and industry health and safety guides</u> • organisational procedures specific to constructing timber prototypes and samples: <ul style="list-style-type: none"> • workplace health and safety • use of equipment • communication reporting lines • recording and reporting construction processes, problems and recommendations for change • environmental protection practices for forest products factory settings: <ul style="list-style-type: none"> • reducing water and energy use • cleaning of plant, tools and equipment • disposing of, recycling and reusing timber and other waste • rough and dressed timber native and imported species, timber grades and treatments, boards and board products, laminated beams • common timber defects • products and their use • construction sequences • construction componentry and construction standards • industry standard cross-sections and lengths • tools, equipment and hardware used to construct prototypes and samples; their purpose, features and operation: <ul style="list-style-type: none"> • measuring equipment • assembly jigs • nail plate presses • nail and staple guns • compressor or compressed air supply • marking equipment • strapping equipment. 	
Assessment Conditions	
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • skills must be demonstrated in an environment that accurately represents workplace conditions • resources, equipment and materials: <ul style="list-style-type: none"> • measuring equipment • assembly jigs • nail plate presses 	

Assessment Conditions	
<ul style="list-style-type: none"> • staple guns • nail guns • compressor or compressed air supply • marking equipment • strapping equipment • assembly hardware: • nailing plates • gang nails • nail gun nails • staples • temporary bracing • personal protective equipment suitable for constructing prototypes and samples • pre-cut sections of timber • specifications: <ul style="list-style-type: none"> • work order and construction plan with specifications for the assembly of prototypes and samples • <u>template reports for recording construction processes, problems and recommendations for change</u> • <u>workplace health and safety and emergency procedures</u> • <u>environmental protection procedures</u> • organisational procedures for constructing prototypes and samples. • relationships <ul style="list-style-type: none"> • relevant personnel for the purposes of communicating information. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	

Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47
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