

# Unit of Competency CPCCJS3005

## Manufacture stair components for curved and geometric stairs

### Application

This unit of competency specifies the skills and knowledge required to prepare, cut, join and install stair components for curved and geometric stairs to a specified design and finish, meeting all relevant requirements of the National Construction Code (NCC), Australian Standards, work health and safety (WHS), and Commonwealth and state or territory legislation.

The unit includes manufacture, finishing and preassembly of stringers, stair posts, newel posts, treads, risers and balustrades.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

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

### Prerequisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry.

### Elements and Performance Criteria

1. Plan and prepare.	<ul style="list-style-type: none"><li>1.1 Read and interpret work instructions and plan sequence of work.</li><li>1.2 Plan all work to comply with laws and regulations, the National Construction Code (NCC), Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications, workplace requirements, drawings and specifications.</li><li>1.3 Select tools and equipment, check for serviceability and report any faults.</li><li>1.4 Select and use personal protective equipment (PPE) for each part of the task.</li><li>1.5 Inspect work site, locate services, assess hazards and apply risk controls, including required signage and barricades.</li><li>1.6 Select materials required for task, calculate quantities, handle safely and prepare and position ready for use.</li></ul>
2. Manufacture stringers for geometric curves.	<ul style="list-style-type: none"><li>2.1 Prepare material to designed structural requirements.</li><li>2.2 Construct curved wall or profile to curve design of stair.</li><li>2.3 Set out developed pitch to curved wall or profile location.</li><li>2.4 Manufacture and set out stringer to curved wall measurements and specifications.</li></ul>
3. Prepare stringers for assembly.	<ul style="list-style-type: none"><li>3.1 Set out closed stringer for treads and risers with nosing marked accurately, housings cut to set out and depth.</li><li>3.2 Prepare grooves or mortises to receive balusters.</li><li>3.3 Prepare cut stringer to set-out shape and mark to accommodate treads and risers and junction with newel posts or landing.</li></ul>

4. Set out and manufacture post for spiral stairs.	4.1	Set out spiral stairs to specifications.
	4.2	Manufacture or dress post to designed shape and set out to designed requirements of stair.
	4.3	Cut and make housings accurately to set-out and required depth.
5. Prepare newel posts for assembly.	5.1	Cut and make housings to newel set out and required depth.
	5.2	Cut and make mortises to set out and required depth, and mark newel posts for identification.
6. Cut treads, risers and wedges to length and shape.	6.1	Cut treads to designed length and shape.
	6.2	Cut risers to designed shape, length and requirement for junction with stringer.
	6.3	Mark wedges to design and cut to shape and quantity.
7. Prepare balustrade components.	7.1	Manufacture handrail with groove run and mortises for balusters made to set out.
	7.2	Cut balusters to designed length.
	7.3	Cut handrail length and mark sections for identification.
8. Finish surface and preassemble stair.	8.1	Sand exposed surfaces of components to specification and check components for fit.
	8.2	Preassemble components to ensure stair will assemble appropriately.
	8.3	Disassemble components and stack for transportation.
9. Clean up.	9.1	Clean up, meeting all legislative and workplace requirements for safety, waste disposal and materials handling.
	9.2	Check, maintain and store tools and equipment and report any faults.

## Foundation skills

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

## Unit Mapping Information

Supersedes and is equivalent to CPCCJS3005A Manufacture stair components for curved and geometric stairs.

## Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

# Assessment Requirements for CPCCJS3005

## Manufacture stair components for curved and geometric stairs

### Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by manufacturing:

- components for a set of geometric stairs, one side with a cut stringer and one side with a closed stringer, with a minimum height of one metre and including:
  - balusters
  - glue blocks
  - newel posts
  - nosings
  - risers
  - stringers
  - treads
  - wedges
- a central post for a spiral stair.

### Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- compliance requirements of the National Construction Code and Australian Standards relevant to manufacturing components for curved and geometric stairs
- workplace quality policies and standards for manufacturing components for curved and geometric stairs
- safety requirements for manufacturing components for curved and geometric stairs
- commonly-used stair construction and joining methods
- processes for interpreting drawings and specifications for manufacturing components for curved and geometric stairs
- material identification marking systems for manufacturing components for curved and geometric stairs
- processes for measuring and setting out applicable to curved stair construction
- types and characteristics of different curved stair designs:
  - curved
  - spiral
  - geometric
  - cut and closed stringers
  - open and closed risers
- types of materials and their characteristics relating to stair construction
- range, types and limitations of different static machines used in the manufacture of components for curved and geometric stairs
- types and uses of tools and equipment for manufacturing components for curved and geometric stairs.

## Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions and standards, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

## Links

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