

Domain

JOINERY AND CABINET MAKING

Title:

Set out and manufacture wooden stair components for curved and geometric stairs

Level: 4

Credits: 6

Purpose

This unit standard specifies the competencies required to set out and manufacture wooden components for curved and geometric stairs. This includes conducting setting out procedures, manufacture strings for geometric curves, preparing strings for assembly, preparing post for spiral stair, preparing newels for assembly, cutting treads, risers and wedges to length and shape, preparing balustrade components, and finishing surfaces and pre-assemble stair.

This unit standard is intended for those who work as joiners and cabinet makers.

Special Notes

1. Entry information:

Prerequisite:

- 1157-*Demonstrate basic knowledge of workplace health and safety or demonstrated equivalent knowledge and skills.*

2. To demonstrate competence, at a minimum, evidence is required of planning and manufacturing the components for curved or geometric stair case.

3. Assessment evidence may be collected from a real or simulated workplace in which joinery and cabinet making operations are carried out.

4. '*Specifications*' refers to any, or all of the following: manufacturers' specifications and recommendations and workplace specific requirements.

5. Tools and equipment may include but are not limited to hand tools, portable power tools, supporting tools and stationary machines

6. Materials used in stair component construction include timber, medium density fibre bound, plywood, steel and plastics.

7. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' and company guidelines, instructions, and reasonable flat rate time.

8. Regulations and legislation relevant to this unit standard include the following:

- Labour Act No 11, 2007 as amended;
- SABS 0400, NOSA, Local Authorities Act;
- Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Conduct setting out procedures

Performance criteria

- 1.1 Tools and equipment are selected to carry out processes consistent with job requirements.
- 1.2 Steel Square and pitch board are prepared to set out stair pitch.
- 1.3 Strings are set out to show lengths for junctions with newels and landings.
- 1.4 Floors or landing height relationships with allowances for floor discrepancies are marked on newels.
- 1.5 Newels are set out to show positions of strings to be determine the position of treads, riser, flooring, joists, bearers and handrails.

Element 2: Manufacture strings for geometric curves

Performance criteria

- 2.1 Materials are prepared to designed structural requirements.
- 2.2 Curved wall or profile is constructed to curve design of stair.
- 2.3 Developed pitch is set out to curved wall or profile location.
- 2.4 Strings are manufactured in accordance with curved wall and set out to specifications.

Element 3: Prepare strings for assembly

Performance criteria

- 3.1 Strings set out for treads and risers with nosing are marked accurately.
- 3.2 Housing cuts and waste are removed accurately to set out and depth.

- 3.3 Grooves or mortises to receive balusters run are carried out to set out requirements.
- 3.4 Open strings are cut to set out shape for treads and risers.
- 3.5 Ends of strings are cut to set out requirements for junction with newels/landing or left long for on-site fitting.
- 3.6 Strings are marked for identification where applicable.

Element 4: Prepare post for spiral stair

Performance criteria

- 4.1 Post is manufactured and dressed to designed shape.
- 4.2 Post is set out to designed requirements of stair.
- 4.3 Housings are cut and made accurately to set out and required depth.

Element 5: Prepare newels for assembly

Performance criteria

- 5.1 Mortises are cut and made accurately to set out and required depth.
- 5.2 Newels are marked for identification.

Element 6: Cut treads, risers and wedges to length and shape

Performance criteria

- 6.1 Treads are cut to designed length and shape.
- 6.2 Risers are cut to length and requirement for junction with string.
- 6.3 Wedges are marked to design and cut to shape.

Element 7: Prepare balustrade components

Performance criteria

- 7.1 Handrail is manufactured to shape with groove run for balusters, where applicable.
- 7.2 Mortises in handrail for balusters are made to set out.
- 7.3 Balusters are cut to designed length.

- 7.4 Handrail is cut to length and sections marked for identification, where applicable.

Element 8: Finish surfaces and pre-assemble stair

Performance criteria

- 8.1 Exposed surfaces of components are sanded for finishing.
- 8.2 Component parts are checked.
- 8.3 Components are preassembled to ensure stair will assemble appropriately.

Registration Data

Subfield:	Manufacturing
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