

PERFORM SUPERSTRUCTURE WORKS

UNIT CODE: CON/OS/BUT/CR/03/4/A

UNIT DESCRIPTION

This Unit describes the competencies required to perform superstructure works. It involves setting out and constructing superstructure columns, setting out and erecting superstructure walling, setting and constructing superstructure beams and setting and erecting building roofs

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function	These are assessable statements which specify the required level of performance for each of the elements. <i>Bold and italicized terms are elaborated in the Range</i>
1. Set out and construct superstructure columns	1.1 Kickers are positioned and cast as per specifications 1.2 Reinforcement bars are positioned as per structural design drawings 1.3 Column formwork is erected and aligned as per construction regulations 1.4 Concrete is mixed as per design requirements 1.5 Concrete is cast and compacted into forms as per construction regulations
2. Set out and erect superstructure walling	2.1 Wall dimensions and door openings are marked on the solid ground floor according to the design details 2.2 Building wall mortar is prepared as per building codes of practice 2.3 Wall screeding is laid in accordance with the plan layout and construction methods 2.4 Damp proof course is laid as per specifications 2.5 Building wall courses are laid according to prescribed bonding methods , building regulations and design details 2.6 Wall openings are bridged according to building codes and client specification
3. Set and construct superstructure beams	3.1 Beam formwork is constructed as per construction regulations and design dimensions 3.2 Props are erected in accordance to construction regulations

	<p>3.3 Reinforcement bars are positioned as per structural design drawings</p> <p>3.4 Concrete materials are mixed as per design ratio requirements</p> <p>3.5 Mixed concrete is placed and compacted as per construction regulations</p>
4. Set and erect building roof	<p>4.1 Roof truss is constructed according to the building design</p> <p>4.2 Roofing materials are laid according to construction regulations</p>

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Bonding methods may include but is not limited to:	<ul style="list-style-type: none"> • Stretcher bond • English bond • Flemish bond • Header bond
2. Concrete materials may include but is not limited to:	<ul style="list-style-type: none"> • Cement • Sand • Ballast • Admixtures and additives
3. Roof truss may include but is not limited to:	<ul style="list-style-type: none"> • Timber truss • Steel truss
4. Roofing materials may include but is not limited to:	<ul style="list-style-type: none"> • Tiles • Iron sheets • Concrete • Wood shingles/shakes • any other approved covering materials

REQUIRED KNOWLEDGE AND SKILLS

Knowledge

- Measurement

- Formwork
- Scaffolding
- Wall construction
- Basic arithmetic
- Technical drawings
- Structural design
- Timber properties
- Steel properties
- Plan interpretation
- Occupational safety and health
- Codes of practice
- Roofing materials
- Types of roofs
- Materials science
- Concrete mix ratio
- Construction machines, tools and equipment
- Types of bonds
- Carpentry and joinery
- Waterproofing
- Admixtures and additives

Skills

- Measurement
- Basic mathematic
- Communication
- Problem solving
- Critical thinking
- Construction tools handling
- Bonding
- Bar bending
- Interpreting
- Cutting and fixing

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Set out and erected superstructure walls 1.2. Constructed columns, beams 1.3. Erected building roof
2. Resource Implications	The following resources should be provided: 2.1 Training/assessment workshops 2.2 Construction tools and equipment 2.3 Occupational Safety and health manuals 2.4 Construction materials 2.5 Qualified trainers
3. Methods of Assessment	Competency may be assessed through: 3.1 Written assignments 3.2 Written Exams 3.3 Practical projects 3.4 Practical exams 3.5 Oral questioning 3.6 Observation of work procedures
4. Context of Assessment	Competency may be assessed 4.1 On job 4.2 Off job 4.3 During industrial attachment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.