

APPLY PRINCIPLES OF BUILDING TECHNOLOGY AND SERVICES

UNIT CODE: CON/OS/ARC/CC/05/6/A

UNIT DESCRIPTION

This unit describes the competence required to survey construction site, prepare construction site, construct substructure, construct superstructure, perform mechanical works, install electrical fittings, prepare reinforced concrete, produce building elements, apply building finishes and fittings and perform landscaping

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each element. <i>(Bold and italicized terms are elaborated in the Range)</i>
1. Survey construction site	1.1 Surveying principles are applied during all the phases of the construction according to contract drawings 1.2 Profiles, contours and maps are drawn based on surveyed data and contract drawings 1.3 Surveying equipment and tools are used according to their catalogues and technical standards. 1.4 Reconnaissance is performed 1.5 Levelling is conducted 1.6 Trial pits are excavated and tested
2. Prepare construction site	2.1 Occupational health and safety precautions are observed 2.2 Hoarding is erected as per workplace procedures 2.3 Site is cleared as per SOPs 2.4 Building is set out as per the design 2.5 Site is excavated as per foundation design
3. Construct substructure	3.1 Foundation is laid out as per the design 3.2 Foundation slab, walls, columns or beams are erected as per the design 3.3 Backfilling is performed as per building codes.
4. Construct superstructure	4.1 Concrete slab is laid as per the design 4.2 Walls, columns and beams are erected as per the design 4.3 Roof is constructed as per the design

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each element. <i>(Bold and italicized terms are elaborated in the Range)</i>
5. Perform mechanical works	5.1 Pipework and service ducts are fixed out as per the design 5.2 Pipework and service ducts are tested 5.3 HVAC are fixed and tested as per design
6. Install electrical fittings	6.1 Safety precautions are observed as per workplace procedures 6.2 Electrical conduits and socket boxes are placed as per the design. 6.3 Electrical conduits are tested
7. Prepare <i>reinforced concrete</i>	7.1 <i>Formwork</i> is prepared as per building specifications 7.2 Steel fixing is performed as per design 7.3 Concreting is done as per design
8. Produce building elements	8.1 <i>Precast concrete</i> is produced 8.2 <i>Timber components</i> are fabricated 8.3 <i>Metal components</i> are fabricated 8.4 <i>Stabilized soil components</i> are produced
9. Apply building finishes and fittings	9.1 Building surfaces are prepared to receive finishes 9.2 <i>Building finishes and fittings</i> are installed/applied based on the type of finish 9.3 Finishes are inspected as per workplace procedures
10. Perform landscaping	10.1 Ground is prepared 10.2 Pathways and driveways are set out as per the design 10.3 Plants and vegetation are established 10.4 Pathways and driveways are laid as per the design
11. Perform building maintenance operations	11.1 The building is regularly inspected for any faults 11.2 Finishes are reapplied when needed

RANGE

Variable	Range

1. Foundation may include but not limited to:	<ul style="list-style-type: none"> • Strip foundation • Pad foundation • Pile foundation • Raft foundation
2. Roof may include but not limited to:	<ul style="list-style-type: none"> • Flat roof • Pitched roof
3. Reinforced concrete may include but not limited to:	<ul style="list-style-type: none"> • RC slabs • RC beams • RC columns
4. Precast concrete may include but not limited to:	<ul style="list-style-type: none"> • Paving slabs • Road kerbs and channels • Precast concrete slabs
5. Formwork may include but not limited to:	<ul style="list-style-type: none"> • Timber • Aluminium • Steel
6. Timber components may include but not limited to:	<ul style="list-style-type: none"> • Chip boards • Ply wood • MDF boards • Marine boards
7. Metal components may include but not limited to:	<ul style="list-style-type: none"> • Steel bars • Aluminium frames
8. Stabilized soil components include but not limited to:	<ul style="list-style-type: none"> • Clay roofing tiles • Clay bricks • Clay vents
9. Building finishes and fittings may include but not limited to:	<ul style="list-style-type: none"> • Paint • Tiles • Ceiling • Gypsum • Wardrobes • Kitchen cabinets

REQUIRED KNOWLEDGE

- Safety precautions
- Masonry
- Carpentry and joinery
- Electrical works
- Mechanical works

- Surveying
- Finishes and fittings
- Metal works
- Construction materials, tools and equipment
- Occupational health and safety

SKILLS

- Measuring
- Planning and organizing
- Analytical skills
- Levelling
- Management skills
- Setting out
- Finishing
- Mathematical skills
- Observation skills

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: <ul style="list-style-type: none"> 1.1 Conducted levelling 1.2 Set out building 1.3 Erected walls and beams 1.4 Constructed roof 1.5 Installed pipework and service ducts 1.6 Placed electrical conduits and socket boxes 1.7 Prepared formwork 1.8 Prepared building surfaces to receive finishes 1.9 Installed/ applied <i>building finishes and fittings</i> 1.10 Prepared ground for landscaping
2. Resource Implications	The following resources should be provided: <ul style="list-style-type: none"> 2.1 Access to relevant workplace or appropriately simulated environment where assessment can take place 2.2 Materials relevant to the proposed activity or tasks
3 Methods of Assessment	Competency may be assessed through: <ul style="list-style-type: none"> 3.1 Observation

			<p>3.2 Oral questioning</p> <p>3.3 Written test</p> <p>3.4 Portfolio of Evidence</p> <p>3.5 Interview</p> <p>3.6 Third party report</p>
4	Context Assessment	of	<p>Competency may be assessed</p> <p>4.1 on the job</p> <p>4.2 off the job</p> <p>4.3 during industrial Attachment</p>
5	Guidance information assessment	for	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

easytvvet.com