

<b>Title:</b>	<b>Construction Principles</b>
<b>Level:</b>	2
<b>Credit Value:</b>	5
<b>GLH</b>	40
<b>Unique Reference Number:</b>	K/618/0748
<b>Aim:</b>	The aim of this unit is to provide learners with the skills and knowledge to be able to identify construction information, construction features, construction materials
<b>Assessment</b>	This unit is assessed through a multiple-choice test of 30 questions. Learners will need to achieve an overall pass at 70%, (21/30). The test is available on the Test Platform.
<b>Learning outcomes</b> <i>The learner will:</i>	
1. Be able to identify construction information.	
<b>Delivery Content:</b> The aim of this learning outcome is to provide learners with the knowledge to identify construction information required for a building project.  The learner must: <ul style="list-style-type: none"> <li>• identify the types <b>documentation</b> used by the construction industry and the details contained within them.</li> <li>• identify different types of <b>drawings</b> and their purpose.</li> <li>• know the reason for the use of symbols, <b>abbreviations</b> and <b>hatchings</b> used in drawings.</li> <li>• interpret <b>drawings</b> including the common <b>scales</b>, <b>abbreviations</b> and <b>hatchings</b> used.</li> <li>• read and apply measurements from the information correctly.</li> </ul>	
2. Be able to identify common construction methods for the structure of a building.	
<b>Delivery Content:</b> The aim of this learning outcome is to provide learners with the knowledge to identify the different elements and processes involved in a construction of the structure of a building.  The learner must identify: <ul style="list-style-type: none"> <li>• different <b>types of foundations</b>.</li> <li>• the <b>materials of foundation construction</b>.</li> <li>• <b>principles of foundation construction</b>.</li> <li>• different <b>types of floor construction</b>.</li> <li>• the <b>structure and components of floor construction</b>.</li> <li>• different <b>types of wall construction</b>.</li> <li>• the <b>materials of wall construction</b>.</li> <li>• the basic <b>principles and properties of wall construction</b>.</li> <li>• different <b>types of roof construction</b>.</li> </ul>	

- the **materials of roof construction.**
- the **structure and components of roof construction.**

3. Be able to identify the construction methods involved in the construction of the interior fabric of a building.

**Delivery Content:**

The aim of this learning outcome is to provide learners with the knowledge to identify the different elements and processes involved in a construction of the interior fabric of a building.

The learner must identify:

- the **materials used on interiors.**
- key **characteristics and properties of materials used on interiors.**
- the different **types of partitions.**
- the different **types of wall coverings.**
- the different **types of floor coverings.**

**Scope of Training**

The Scope of Training identifies areas that must be covered during the delivery of this unit. This is the minimum that is expected but tutors are expected to include other areas, knowledge of which will benefit their learners, based on location, types of work available and from the tutors own professional experience.

**Assessment**

The test is available online or paperbased. Access to the Test Platform is available from NOCN.

	<b>Requirements</b>		
<b>Documentation and sources of information</b>	<b>Current legislation relating to health and safety</b> <b>Job specification</b> <b>Company policies</b> <b>Building suppliers price lists</b> Basic time study sheets Site diaries Purchase orders Small plant and equipment availability lead times	<b>Risk assessments</b> <b>Manufacturer’s guidance</b> <b>Method statements</b> Book systems for pricing <b>Job sheets</b> <b>Gantt charts</b> <b>Schedules</b> <b>Requisition forms</b> Invoices Bill of quantities	
<b>Drawings</b>	<b>2D and 3D drawings (including elevations)</b>	<b>Site and location plans</b> BIM related models	
<b>Common scales</b>	To include: <b>1:5, 1:10, 1:20, 1:50, 1:100, 1:500, 1:2500</b>		
<b>Abbreviations</b>	<b>Brickwork (bwk)</b> <b>Foundation (fdn)</b> <b>Ground level (GL)</b> <b>Damp proof membrane (DPM)</b>	<b>Concrete (conc)</b> <b>Insulation (insul)</b> <b>Finished Floor Level (FFL)</b>	<b>Damp proof course (dpc) (Temporary)</b> <b>Bench mark ((T)BM)</b>
<b>Hatchings</b>	<b>Brick/brickwork</b> <b>Block/blockwork</b> <b>Sawn timber (unwrot)</b> Stonework Top soil	<b>Concrete</b> <b>Insulation</b> <b>Softwood planed (wrot)</b> Hardcore <b>Plywood</b>	Earth <b>Steel</b> Subsoil Granular fill <b>Screed / render</b> Block board Plasterboard

<b>Types of wall construction</b>	<b>Cavity walls</b> Timber frame Modern methods	<b>Solid walls</b> Offsite construction	<b>Steel frame</b> Modular construction
<b>Materials of wall construction</b>	<b>Brick</b> Insulation materials Reinforced concrete	<b>Block</b> Ties/reinforcements Stone Cladding materials Render	Damp proof materials Timber Glass Cob
<b>Principles and properties of wall construction</b>	<b>Load bearing</b> Stresses Energy efficiency	<b>Structural stability</b> Moisture control	
<b>Types of roof construction</b>	<b>Flat</b> Mono pitched	<b>Duo pitched</b> Traditional	Offsite manufactured
<b>Materials of roof construction</b>	<b>Tiles</b> Rubber Flashings Slates	<b>Asphalt</b> Felt Timber components Bitumen	<b>Mastic</b> <b>Battens</b> Modern methods / materials
<b>Structure / components of roof construction</b>	<b>Ridge</b> Valley Fascia	<b>Eave</b> Hip Pitch/falls	<b>Spar</b> <b>Soffit</b> <b>Dormer</b>
<b>Types of foundations</b>	<b>Strip</b> Deep strip Pad	<b>Raft</b> Reinforced	<b>Pile</b> Sheet piling
<b>Materials of foundation construction</b>	<b>Concrete</b> Bricks	<b>Reinforcement</b> Blocks	<b>Steel</b> Additives
<b>Principles of foundation construction</b>	<b>Setting out: depth, width</b> Loads	<b>Excavation</b> Reinforcement Profiles	<b>Bedrock, soil and site conditions</b>
<b>Types of floor construction</b>	<b>Solid</b> Block and beam	<b>Concrete slab</b> Hollow timber	<b>Floating</b> <b>Suspended</b>
<b>Structure / components of floor construction</b>	<b>Joists (hangers / wallplates)</b> Screeds	<b>Damp-proof course</b> Coverings Precast beam	<b>Damp-proof membrane</b> Strutting
<b>Interior materials</b>	<b>Polystyrene</b> Insulation Aggregates Timber/timber products	<b>Polyurethane</b> Brick / blocks Plasterboard Mineral wool Plaster	<b>Glass fibre</b> <b>Concrete</b> <b>Glass</b> <b>Metals</b> Cladding
<b>Features and properties of internal materials</b>	<b>Compression</b> Strength Expansion Decorative Recyclability	<b>Durability</b> Porosity Effects of elements (water, frost, chemicals, fire)	<b>Flexibility</b> <b>Conductivity (thermal)</b> Tension
<b>Types of partitions</b>	<b>Metal studwork</b> Blockwork	<b>Timber studwork</b> Modular/offsite	<b>Plastered</b> Glass
<b>Types of wall coverings</b>	<b>Paints</b> Plaster products	<b>Papers</b>	Cladding
<b>Types of floor coverings</b>	<b>Textile</b> Wood based block Screeded	<b>Resilient sheet</b> Wood based engineered / laminate	<b>Tile</b> <b>Hardwood</b> Resin / painted