

Diploma in Shopfitting Joinery at SCQF Level 5 (6806-27)

February 2016 Version 2



Qualification at a glance

Subject area	Construction
City & Guilds number	6806
Age group approved	16-18, 19+
Entry requirements	None
Assessment	Multiple choice/assignment
Support materials	Centre handbook Assessor guidance Task manual
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	City & Guilds number
Diploma in Shopfitting Joinery at SCQF Level 5	6806-27

Version and date	Change detail	Section
V2 February 2016	Unit 201 amended	Units
	City & Guilds group statement amended	Useful contacts
	Phone numbers deleted	Useful contacts



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1 Introduction

This document tells you what you need to do to deliver the qualification:

Area	Description
Who is the qualification for?	It is for learners who work or want to work as a Shopfitting Joiner in the construction sector.
What does the qualification cover?	<p>It allows learners to learn, develop and practise the skills required for employment and/or career progression in Shopfitting Joinery.</p> <p>It covers the following skills:</p> <ul style="list-style-type: none">• Set up and operate a circular saw• Produce setting out details for bench joinery products• Manufacture internal and external shopfitting joinery products
What opportunities for progression are there?	<p>It allows learners to progress into employment or to the following City & Guilds qualifications:</p> <ul style="list-style-type: none">• Diploma in Shopfitting Joinery at SCQF Level 6

Structure

To achieve the **Diploma in Shopfitting Joinery at SCQF level 5 (6706-27)**, learners must achieve **42** credits from the mandatory units below.

City & Guilds unit number	Unit title	Credit value
Unit 201	Health, safety and welfare in construction	7
Unit 202	Principles of building construction, information and communication	6
Unit 211	Set up and operate a circular saw	5
Unit 240	Manufacture internal shopfitting joinery products	13
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2 Centre requirements

Approval

The approval process for Construction qualifications is available at our website. Please visit www.cityandguilds.com/construction for further information.

Resource requirements

Physical resources and site agreements

Centres will have well equipped workshops with a comprehensive range of hand and portable power tools that meet current industry standards. All powered equipment should be well maintained and PAT certified. A Bench vice will be available to each candidate. Facilities for grinding and sharpening hand tools will be available. Centres are required to have a morticer, bandsaw and a fixed or transportable circular saw, together with suitable tooling, allowing candidates to practice the requirements of the units and carry out the Practical Assignments. All machinery shall be to industrial standards and comply with current regulations.

Centre staffing

All staff who assess (tutor/deliver) these qualifications must:

- have recent relevant experience in the specific area they will be teaching;
- be technically competent in the area for which they are delivering training and/or have experience of providing training;
- have a CV available demonstrating relevant experience and any qualifications held.

All staff who quality assure these qualifications must:

- have a good working knowledge and experience within the construction industry;
- have an established strategy and documentary audit trail of internal quality assurance;
- have a good working knowledge of quality assurance procedures;
- have a CV available demonstrating relevant experience and any qualifications held.

While the Assessor/Verifier (A/V) units/TAQA are valued as qualifications for centre staff, they are not currently a requirement for this SCQF qualification. However, we encourage trainers and assessors to qualify to the current TAQA standard.

Continuing professional development (CPD)

Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training, assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.

Learner entry requirements

City & Guilds does not set entry requirements for this qualification. However, centres must ensure that learners have the potential and opportunity to gain the qualification successfully.

Age restrictions

City & Guilds cannot accept any registrations for learners under 16 as these qualifications are not approved for under 16s.



3 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs,
- support and guidance they may need when working towards their qualification.
- any units they have already completed, or credit they have accumulated which is relevant to the qualification.
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner, and the responsibilities of the centre. This information can be recorded on a learning contract.

Support materials

The following resources are available for this qualification:

Description	How to access
Assessor guidance	www.cityandguilds.com
Task manual	www.cityandguilds.com
Qualification Approval Form	www.cityandguilds.com



4 Assessment

Unit	Title	Assessment method	Where to obtain assessment materials
201	Health, safety and welfare in construction	City & Guilds e-volve multiple choice test. The test covers all of the knowledge in the unit.	Examinations provided on e-volve.
202	Principles of building construction, information and communication	City & Guilds e-volve multiple choice test. The test covers all of the knowledge in the unit.	Examinations provided on e-volve.
211	Set up and operate a circular saw	Multiple choice question paper, covering knowledge outcomes. Practical assignment , covering performance outcomes.	www.cityandguilds.com
240	Manufacture internal shopfitting joinery products	Multiple choice question paper, covering knowledge outcomes. Practical assignment , covering performance outcomes.	www.cityandguilds.com

Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.

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Unit	Title	Assessment method	Where to obtain assessment materials
241	Manufacture external shopfitting joinery products	Multiple choice question paper, covering knowledge outcomes. Practical assignment, covering performance outcomes. Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.	www.cityandguilds.com

Test specifications

The way the knowledge is covered by each test is laid out in the tables below:

Test 1: Unit 201 Health, safety and welfare in construction
Duration: 60 minutes

Unit	Outcome	Number of questions	%
201	1 Know the health and safety regulations, roles and responsibilities	7	17.5
	2 Know accident and emergency reporting procedures and documentation	5	12.5
	3 Know how to identify hazards in the workplace	7	17.5
	4 Know about health and welfare in the workplace	3	7.5
	5 Know how to handle materials and equipment safely	2	5
	6 Know about access equipment and working at heights	3	7.5
	7 Know how to work with electrical equipment in the workplace	4	10
	8 Know how to use personal protective equipment (PPE)	5	12.5
	9 Know the cause of fire and fire emergency procedures	4	10
Total		40	100

Test 2: Unit 202 Principles of building construction, information and communication

Duration: 80 minutes

Unit	Outcome	Number of questions	%
202	1 Understand how to select types of building information	5	12.5
	2 Know about environmental considerations in relation to construction	5	12.5
	3 Understand the construction of foundations	7	17.5
	4 Understand construction of internal and external walls	9	22.5
	5 Know about construction of floors	4	10
	6 Know about construction of roofs	3	7.5
	7 Understand how to communicate in the workplace	7	17.5
	Total	40	100

Test 3: Unit 211 Set up and operate a circular saw

Duration: 45 minutes

Unit	Outcome	Number of questions	%
211	1 Know the principles of using circular saws safely	11	36
	2 Know how to change circular saw blades	8	27
	4 Know timber, timber products and processes	6	20
	5 Know how to cut timber and manufactured boards	5	17
	Total	30	100

Test 4: Unit 240 Manufacture internal shopfitting joinery products

Duration: 45 minutes

Unit	Outcome	Number of questions	%
240	1 Know how to set out internal shopfitting joinery products	10	33
	3 Know how to manufacture internal shopfitting joinery products	17	57
	5 Know how to assemble and finish internal shopfitting joinery products	3	10
	Total	30	100

Test 5: Unit 241 Manufacture external shopfitting joinery products

Duration: 45 minutes

Unit	Outcome	Number of questions	%
241	1 Know how to set out external shopfitting joinery products	10	33
	3 Know how to manufacture external shopfitting joinery products	17	57
	5 Know how to assemble and finish external shopfitting joinery products	3	10
	Total	30	100



5 Units

Structure of units

These units each have the following:

- City & Guilds reference number
- title
- level
- credit value
- unit aim
- learning outcomes which are comprised of a number of assessment criteria

Range explained

Range gives further scope on what areas within the assessment criteria must be covered. The range in a unit **must** be taught to learners and parts of the range will be assessed.

Glossary of terms

Term	Definition
Acrylic	A clear plastic. It resembles glass, but is stronger and lighter.
Adhesives	A substance that when applied to two surfaces bonds them together.
Adjustable feet	A fitting used on the underside of a unit which allows it to be levelled.
Aluminium	A material commonly used in the fabrication of shopfront and entrance door components, generally with a painted or anodised finish.
Angle finder	A tool which can be set to an unknown angle giving a reading in degrees.
Astragal	A standard common moulding section.
Back fitments	Display or storage units fixed to the rear of a point of sale counter.
Balusters	A vertical member, plain or decorative, that acts as the infill between the handrail and string capping on a staircase.
Band saw	A fixed machine which houses continuous band of metal with teeth along one edge. Used to cut curved components.
Bed moulding	A decorative embellishment set below the surface between a panel and its framing.

Bevel edge chisel	A chisel with the edges ground to a bevel to lighten the chisel and allow better access when paring back to the shoulders when dovetailing.
Bevel	An edge planed at an angle not across the full thickness of the timber.
Blind box	A box above the shopfront which contains the sun blind.
Block planes	A small plane that can easily be used with one hand and used for cleaning up end grain.
Blue stain	A blue fungal discolouration in the sapwood, which does not reduce its strength.
Bolection moulding	A decorative embellishment which stands proud and runs around the inside edge of panelled framework.
Bowing	A defect where the board has started to curve along its length.
Box square	A tool allowing lines to be squared over a moulding on the edge of a length of timber.
Broken details	A method used to show full size details, but with a written dimension between them so a long rod is not required.
Building regulations	These contain the rules for building work in new and altered buildings to make them safe, accessible, limit waste and environmental damage.
Case hardening	Case hardening is caused by timber being kiln dried too rapidly, leaving the outside dry but the centre still wet.
Chamfer	A 45 degrees bevel planed across the corner of a piece of timber.
Claw hammer	A heavy weight hammer with a claw on one end of the head which can be used to withdraw large nails.
Collapse	Irregular or excessive shrinkage during the drying of timber.
Combination plane	A large plough plane that is able to take a range of ploughing and moulding cutters.
Combination square	A square that enables both 90 degree and 45 degree angles to be marked.
Computer aided design CAD	The use of a computer drawing package to assist in the creation, modification of drawings used by architects and Setter out to produce drawings.
Coping saw	A saw with a thin, narrow blade used for cutting round sharp curves.
Corner post/bars	The corner member of a shopfront where it returns around a corner.
Cramp heads	Loose cramp shoes which can be used over a wooden bar of any length to assemble long items.
Crosscut saw	A saw used to cut across the width of a board.

Cupping	A defect where the width of the board has become hollow.
Cut string	A stair string with the top edge cut away to follow the shape of the steps.
Dividers	A tool similar to a compass but with two points, used to step off equal dimensions along a line.
Division	A vertical dividing panel in a unit.
Door closer	An item of ironmongery fixed to a door and frame allowing the controlled closing of a door.
Door selectors	A item of ironmongery which holds the slave door of a pair open until the master door has closed, then the device allows the slave door to close.
Dovetail saw	Small saw fine-toothed saw used for cutting dovetails and other fine work.
Dowel	A round wooden peg used to secure joints.
Draw-bore pins	A tapered metal pin used to pull up a tenon joint through offset holes in the tenon and mortice.
Drawer runners	An item of ironmongery fitted to drawers to allow them to run smoothly and even self-close.
Drawers	A removable box within a unit used for storage.
Drawing board	The board that hand drawings are produced on.
Drill /drivers	A portable power tool that can bore holes and drive screws.
Enclosure	An area behind a shopfront used to display goods.
European red wood	A commonly used softwood for grounds and structural work not seen.
Fascia	The area directly above the shopfront displaying the shop name.
F-cramp	A steel F-shaped screw cramp used for holding two materials together.
Flaws	A term used to describe a fault in a material.
Flush bolts	Bolts which are recessed flush into the edge of a door commonly used to hold the slave door closed on a pair of doors.
Foreign body	A term used to describe something buried in a tree and has continued to grow around it. It is not discovered until the timber has been cut.
Frieze	The upper area of a wall above door height.
G-cramp	A steel G-shaped screw cramp used for holding two materials together.
Gentsaw	Small saw fine-toothed saw used for fine work, it usually has a file small pad saw shaped handle.

Glazing bars	Vertical and horizontal members used to divide a large glass are up into smaller sections, mainly used for design reasons: i.e. to give a 'Georgian' look.
Glazing beads	Small sections of timber or aluminium used to hold glass in place.
Glue blocks	Triangular blocks of timber used to strengthen a joint at internal corners.
Gouge	A hollow chisel which can be ground on either the outside (carving gouge) or the inside (scribing gouge).
Hand rail	The guard rail on a flight of stairs.
Handles	A piece of ironmongery used to provide a means of opening a door or drawer.
Handrail bolts	A metal rod which is threaded at each end. A square (or captured) nut is used at one end and a castellated (slotted allowing or tightening) nut at the other. It is used between two handrail joints usually on wreathed handrails.
Handrail brackets	A decorative metal bracket used to support a handrail at the wall side of a staircase.
Handsaw	Often used to describe a large (6-8 points /25mm) cross cutting saw.
Head	A term used to describe the upper most member of a frame.
Hinges	Ironmongery used to hang doors.
Intermediate	A term given to a member between the outside of a frame or unit.
Ironmongery	A collective term for hinges, handles and other items of metalwork used in shopfitting joinery.
Jack plane	A large plane for removing excess material, by hand, commonly used to shoot (fit) doors to frames.
Jambs	The outermost vertical members of a frame.
Jigs	A ready-made or handmade device allowing repetitive tasks to be carried out consistently and efficiently.
Jigsaw	A portable power tool made to cut freehand curves.
Job Sheets	A sheet accompanying a drawing giving instruction and information of the task to be made.
Joiners dogs	A small "staple" shaped device, designed to straddle a joint, and pull the joint tightly together during the assembly process, also called a 'Pinch Dog'.
Kicking plate	A metal plate screwed to the bottom of a door to provide protection from damage during use.
Knots	A term used to describe where a branch shows on the face or edge of timber.

Laminated glass	Two thicknesses of glass sandwiching a poly-vinyl butyl interlayer, providing a strong and secure glazing.
Letter plates	An item of ironmongery fitted to a door or frame allowing the delivery of letters etc.
Lobby	The name given to an entranceway or foyer to a building.
Mahogany	A reddish brown central American hardwood.
Manufactured boards	Plywood, mdf and chipboard are examples of this.
Manufacturer's catalogues	These display items produced or sold by a company.
Marking gauge	A tool used to mark a line parallel to an edge of timber.
Measuring tape	Generally in a case (cassette) it can be pulled out and will spring back.
Medium density fibre board	A type of manufactured board, which is made from wood fibres glued under heat and pressure.
Mitre square	More correctly known as a set mitre used to mark lines at 45° onto timber.
Mortice chisel	A heavyweight chisel used to chop mortices by hand.
Mortice gauge	Similar to a marking gauge but marks two lines at a set width in one operation.
Morticer	A fixed machine used to mechanically produce mortices.
Mullion	An intermediate vertical component in glazed framework.
Muntin	An intermediate vertical component in panelled framework.
Nail Punch	Sometimes called a nail set. This is a metal tool allowing nails to be punched or set below the surface. The hole produced will then be concealed with a filler.
Nail gun	A power tool which is able to drive nails using a gas charge.
Newel	A post used at the ends of staircases supporting the strings and handrail.
Nosing	The front edge of a step.
Oak	A decorative light brown decorative and durable hardwood.
Ogee	A standard moulding shape.
Orbital sander	A power tool used to abrade (sand) the surface of a finished product.
Overhead router	A fixed woodworking machine where the router is mounted above the machine table.
Ovolo	A standard moulding profile.
Panel saw	A medium length handsaw with 8-10 teeth per 25mm generally used for cutting manufactured boards.

Panic bolts	Used on emergency exit doors. A waist height bar can be depressed to allow exit in case of an emergency
Paring chisel	A long bevel edged or firmer chisel used to pare long housings.
Pilasters	A slightly projecting column (or facing) applied to the face of the party walls between shopfronts
Pin Hammer	A light weight hammer (75g) used to drive short veneer and panel pins.
Pitch board	A triangular templet used to mark out the housings on stair strings
Pith	A name given to the heart of a tree also known as the medulla.
Planer	A portable power tool used to plane the face and edges of timber
Plinth	The lowest part of a unit or counter, it is usually set back from the face to allow closer access to the counter/unit.
Plywood	A manufactured board made from a sandwich of opposing veneers. There is always an odd number so that the grain follows the same direction on both faces.
Protractor	An instrument allowing you to measure angles.
Push/finger plate	A thin hard wearing decorative plate (either metal or plastic) screwed to the face of a door where there is a high traffic area to protect it from wear due to its constant use.
Rails	The name given to horizontal components in panelled framework.
Rebate	A section removed from the corner of a component generally to create better holding strength.
Resin pockets	A defect in softwoods; consists of an opening in the grain that contains pitch or resin. Also called a pitch pocket.
Rip saw	The largest of the handsaw categories. The teeth are designed specifically for cutting down the grain.
Risers	The name given to the vertical face of a step in a staircase.
Rod	The name given to any full sized setting out.
Router	A very versatile portable power tool used to mould, rebate, groove and recess timber. Many purpose made jigs are available which extend the range of work that can be produced with it.
Sash cramp	A light weight bar cramp used for assembly of lighter joinery.
Scale drawings	Drawings produced to a reduced size where it cannot be shown full size on a sheet of paper.

Schedules	Information give in a precise way such as a time schedule or an ironmongery schedule.
Scotia	A standard moulding profile.
Seasoning defects	Defects occurring during the drying process of timber.
Set squares	Plastic drawing instruments use to draw set angle. Eg 30, 45 and 60 degrees.
Shakes	A general term for a variety of split shapes that can occur along the length of the timber.
Shelves	A horizontal surface for the storage of general or specific items.
Shopfront sash	The term for the glazed area of a shopfront.
Shoulder	These form the end grain of the male part of the joint which abuts its apposing female part.
Shutters	Often contained in a box similar to a blind box , but containing a security shutter.
Sill	Traditionally spelt 'Cill', the lowest member of a frame.
Site survey	This is carried out to measure for a job along with any other information that needs to be collected from site to enable to manufacture of shopfitting products.
Sliding bevel	A marking out tool which can be set to any angle.
Sloping grain	Where the grain of timer does not run parallel to its edge or face.
Smoothing Plane	Used for the flushing off of the surface joints prior to finishing with abrasive paper.
Soffit	The underside of a surface generally set lower than the ceiling height. Eg a window enclosure soffit.
Specification	A document which provides written information about the product and how it is to be made. This will supplement the drawings.
Spindle moulder	A fixed woodworking machine used to run heavy section profiles.
Springing	The term used to describe the point where a curve will start on a shaped item of shopfitting.
Stairs strings	The inclined members which carry the steps of a staircase.
Stall riser	The area directly below the shopfront sash.
Standards	Sometimes known as ends, these form the outside of a unit.
Stiles	The vertical components on the outside of any panelled construction.

String capping	This sits on the top edge of a string increasing its width and allowing for the fixing of the thicker balusters.
Surface planer	A fixed woodworking machine used to prepare a flat surface to the face of timber and produce a square edge to the face.
Table router	A portable router mounted upside down in a table.
Tee square	A drawing square used against the edge of a drawing board and provides a platform for the use of set squares.
Tenon saw	A backed saw larger than a dovetail saw used for general cutting of joints.
Thickneser	A fixed woodworking machine used to bring timber to both width and thickness.
Top	The upper most surface of an product.
Torus	A standard moulding profile.
Toughened	A term given where glass has been hardened for additional protection or security.
Tower bolt	A lightweight face fixed bolt.
Transom	The intermediate horizontal component in a frame usually at door height.
Tread	The name given to the horizontal part of a step.
Try square	A marking out tool used to mark square lines around timber.
Twist	A seasoning defect in timber.
Upset	A flaw in timber caused by a heavy blow or impact that splits fibers across the grain.
Vice	A cramping device generally affixed to a joiners bench.
Waney edge	A waney edge is the edge that follows the natural curve of the tree. Basically a bark edge. Known as 'waney edged' timber.
Wedges	Tapered pieces of timber used to secure through mortice and tenon joints.
Winding	A term given to a twist in assembled framework.

Unit 201

Health, safety and welfare in construction

Level:	5
Credit value:	7
Aim:	The aim of this unit is to provide the learner with the knowledge to carry out safe working practices in construction, in relation to sourcing relevant safety information and using the relevant safety procedures at work.

Learning outcome
The learner will: 1. know the health and safety regulations, roles and responsibilities
Assessment criteria
The learner can: 1.1 identify health and safety legislation relevant to and used in the construction environment 1.2 state employer and employee responsibilities under the Health and Safety at Work Act (HASWA) 1.3 state roles and responsibilities of the Health and Safety Executive (HSE) 1.4 identify organisations providing relevant health and safety information 1.5 state the importance of holding on-site safety inductions and toolbox talks.

Range
Health and safety legislation Health and Safety at Work Act, Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Control of Substances Hazardous to Health (COSHH), Construction, Design and Management (CDM) regulations, Provision and Use of Work Equipment Regulations (PUWER), manual handling operations Regulations, Personal Protective Equipment (PPE) at Work Regulations, Work at Height Regulations, Control of Noise at Work Regulations, Control of Vibration at Work Regulations, Electricity at Work Regulations, Lifting operations and Lifting Equipment Regulations (LOLER)
Employer responsibilities Safe working environment, adequate staff training, health and safety information, site inductions, toolbox talks, risk assessment, supervision, PPE, reporting hazards, accidents and near misses, sections 2 to 9 of Health and Safety at Work Act, CDM reg's,

construction phase plans, welfare, display public liability Insurance and health and safety law poster.

Employee responsibilities

Working safely, working in partnership with the employer, reporting hazards, accidents and near misses, following organisational procedures as per Sections 2 to 9 of Health and Safety at Work Act.

Roles and responsibilities:

Enforcement (including fees for intervention), legislation and advice, inspection, investigation eg site investigations.

Organisations

Health and Safety Executive (HSE) website, Institute of Occupational Safety and Health, British Safety Council, 'manufacturer', ROSPA.

Learning outcome

The learner will:

2. know accident and emergency reporting procedures and documentation

Assessment criteria

The learner can:

- 2.1 state legislation used for reporting accidents
- 2.2 state major **types of emergencies** that could occur in the workplace
- 2.3 identify reportable injuries, diseases and dangerous occurrences as per RIDDOR
- 2.4 state main types of **records** used in the event of an accident, emergency and near miss and reasons for reporting them
- 2.5 identify **authorised personnel** involved in dealing with accident and emergency situations
- 2.6 state **actions** to take when discovering an accident.

Range

Types of emergencies

Fires, security incidents, gas leaks.

Records:

Accident book, first aid records, organisational records and documentation.

Authorised personnel

First aiders, supervisors/managers, health and safety executive, emergency services, safety officer.

Actions

Area made safe, call for help, emergency services.

Learning outcome
The learner will: 3. know how to identify hazards in the workplace
Assessment criteria
The learner can: 3.1 state the importance of good housekeeping 3.2 state reasons for risk assessments and method statements 3.3 identify types of hazards in the workplace 3.4 state the importance of the correct storage of combustibles and chemicals on site 3.5 identify different signs and safety notices used in the workplace.

Range
Good housekeeping: Cleanliness, tidiness, use of skips and chutes, segregation of materials, clear access to fire escapes, clear access to fire extinguishers.
Types of hazards: Fires, slips, trips and falls, hazardous substances (relating to inhalation, absorption, exposure, ingestion, cross-contamination), electrical, asbestos, manual handling, plant and vehicle movement, adverse weather.
Signs and safety notices: Prohibition, mandatory, warning, safe condition, supplementary.

Learning outcome
The learner will: 4. know about health and welfare in the workplace
Assessment criteria
The learner can: 4.1 identify requirements for welfare facilities in the workplace as per Construction Design Management (CDM) 4.2 state health effects of noise and precautions that can be taken 4.3 state risks associated with drugs, alcohol and medication which could affect performance in the workplace.

Range
Precautions Reducing noise at source, PPE, isolation, exposure time.
Risks Reduced risk perception, loss of concentration, balance problems, absenteeism and reduced productivity.

Learning outcome

The learner will:

5. know how to handle materials and equipment safely

Assessment criteria

The learner can:

- 5.1 identify legislation relating to safe handling of materials and equipment
- 5.2 state procedures for safe lifting and manual handling activities in accordance with guidance and legislation
- 5.3 state the importance of using **lifting aids** when handling materials and equipment.

Range**Lifting aids**

Wheelbarrow, sack barrow, mechanical lifting aids, pallet truck.

Learning outcome

The learner will:

6. know about access equipment and working at heights

Assessment criteria

The learner can:

- 6.1 identify legislation relating to working at heights
- 6.2 identify types of **access equipment**
- 6.3 state **safe methods** of use for **access equipment**
- 6.4 identify **dangers** of working at height.

Range**Access equipment:**

Stepladders, ladders (pole, extension), trestles, hop-ups, proprietary scaffolding, podium, stilts

Safe methods

Regular inspection, check for broken, damaged or missing components, responsible use, consideration of adverse weather conditions, good housekeeping

Dangers

Falling tools, falling equipment, falling materials, persons falling from height (injuries to themselves and others).

Learning outcome

The learner will:

7. know how to work with electrical equipment in the workplace

Assessment criteria

The learner can:

- 7.1 state **precautions** to take to avoid risks to self and others when working with electrical equipment
- 7.2 state **dangers** of using electrical equipment
- 7.3 identify **voltages** and voltage colour coding that are used in the workplace
- 7.4 state **methods** of storing electrical equipment.

Range**Precautions**

Check leads, check plugs, use of cable hangers, check tools and equipment, current valid PAT certificate

Dangers:

Burns, electrocution, fire.

Voltages

Battery powered, 110/115 volts, 230/240 volts and 415 volts.

Methods

Components present, equipment cleaned, checked for damage, stored in a clean and secure location.

Learning outcome

The learner will:

8. know how to use Personal Protective Equipment (PPE)

Assessment criteria

The learner can:

- 8.1 state the legislation governing use of Personal Protective Equipment (PPE)
- 8.2 state **types of PPE** used in the workplace
- 8.3 state the importance of PPE
- 8.4 state why it is important to store, maintain and use PPE correctly
- 8.5 state the importance of checking and reporting damaged PPE.

Range**PPE:**

Head protection, eye protection, ear protection, face/dust masks, breathing apparatus, high visibility clothing, safety footwear, gloves, sun protection, barrier cream, water proofs, knee pads, overalls/disposable clothing

Learning outcome

The learner will:

9. know the cause of fire and fire emergency procedures

Assessment criteria

The learner can:

9.1 state **elements** essential to creating a fire

9.2 identify methods of fire prevention

9.3 state actions to be taken on discovering a fire

9.4 state **types of fire extinguishers** and their uses.

Range**Elements**

Oxygen, fuel, heat.

Types of fire extinguishers:

Water, foam, CO2, dry powder.

Unit 202

Principles of building construction, information and communication

Level:	5
Credit value:	6
Aim:	<p>The aim of this unit is to provide the learner with the knowledge of building methods and construction technology in relation to:</p> <ul style="list-style-type: none">• understanding a range of building materials used within the construction industry and their suitability to the construction of modern buildings.• source relevant information and apply it to relevant tasks• calculating the resources from required drawings and specifications.

Learning outcome
The learner will: 10. understand how to select types of building information.
Assessment criteria
The learner can: 10.1 interpret information sources used in construction 10.2 interpret scale, symbols and hatchings on a working drawing 10.3 explain the purpose of benchmarks used in construction.

Range
Information sources Drawings, schedules, specifications, programme of work, organisational chart, method statements, risk assessment, manufacturers' technical information, bill of quantities, order requisitions, delivery notes, variation orders, permits to work, signs and notices.
Symbols WC, sink, bath, door, window
Hatchings Brickwork, timber (wrot and unwrot), blockwork, concrete, hardcore, sub soil, insulation, damp proof course (DPC), damp proof membrane (DPM)
Benchmarks Site datums, temporary bench marks (TBM), ordnance bench marks (OBM).

Learning outcome

The learner will:

11. know about environmental considerations in relation to construction.

Assessment criteria

The learner can:

- 11.1 describe thermally insulated **materials**
- 11.2 describe **methods** of making buildings water efficient
- 11.3 describe **methods** of making buildings energy efficient
- 11.4 state environmental-friendly **building materials**
- 11.5 state **procedures** for waste management.

Range**Materials**

Polyisocyanurate (PIR), Expanded Polystyrene (EP), fibre glass, mineral wool, double glazed units, multi-foil insulation.

Methods (2.2)

Efficient sanitary ware, water harvesting.

Methods (2.3)

Low energy lighting, automatic movement sensors, solar panels, wind turbines, heat source, biomass heating.

Building materials

Locally sourced, managed timber (FSC), lime, sheep wool, recycled materials, straw.

Procedures

Segregation and recycling of waste, safe disposal of hazardous materials, Local Exhaust Ventilation (LEV).

Learning outcome

The learner will:

12. understand the construction of foundations.

Assessment criteria

The learner can:

- 12.1 describe **factors** to be considered when selecting **foundations**
- 12.2 describe **materials** and mix-ratios used in concrete foundations
- 12.3 explain how to **set out** foundations
- 12.4 explain **factors** to consider when excavating foundations
- 12.5 describe methods of transferring datums
- 12.6 calculate the volume of concrete used in pile foundation.

Range**Factors (3.1)**

Ground conditions (subsoil), strength, types of building.

Foundations

Strip, raft, pile, pad.

Materials

Course aggregate, fine aggregate, cement, water, steel reinforcement, sulphate-resisting cement, ordinary portland cement, frost proofing, accelerators, retardants.

Set out

3:4:5 method, diagonals, profiles, builder's square.

Factors (3.4)

Underground services, proximity to neighbouring buildings, tree roots, ground conditions.

Methods

Optical/laser level, straight edge and spirit level

Learning outcome

The learner will:

13. understand construction of internal and external walls.

Assessment criteria

The learner can:

13.1 describe **wall components**

13.2 explain the importance of a Damp Proof Course (DPC)

13.3 calculate the area of a gable

13.4 identify **additives** used in mortar

13.5 identify different types of **bonding**

13.6 describe the differences between load-bearing and non-load-bearing internal walls

13.7 calculate the volume of paint required to cover a wall area.

Range**Wall components**

Brick, block, insulation, Damp Proof Course (DPC), lintels, wall ties, airbrick and liner, cavity closures, stud partition, light density blocks, plasterboard, plaster.

Additives

Retardant, accelerant, frost inhibitor, cement dyes, plasticiser.

Bonding

Stretcher, English, Flemish.

Learning outcome

The learner will:

14. know about construction of floors.

Assessment criteria

The learner can:

14.1 describe **floor components**

14.2 calculate the linear quantity of floor boarding to cover an irregular shaped area

14.3 calculate additional quantities of wastage using percentage.

Range**Floor components**

Hardcore, blinding sand, Damp Proof Membrane (DPM), insulation, oversite concrete, block and beam, pre-cast floor panels, screed (dry, self-levelling) sleeper walls, wall plates, DPC, joists, joist hangers, floor covering.

Learning outcome

The learner will:

15. know about construction of roofs.

Assessment criteria

The learner can:

15.1 describe **types** of roofs

15.2 describe **roof components**.

Range**Types**

Gable-ended, flat, hipped, lean-to.

Roof components

Purlins, rafters, truss rafters, ridge, batten/lathe, fascia, soffit, barges, valleys, wall plate, flashings, felt, slate/tile, insulation, joists, wall plate straps.

Learning outcome

The learner will:

16. understand how to communicate in the workplace.

Assessment criteria

The learner can:

16.1 describe **job roles** within building teams

16.2 explain **key personnel** involved in day to day communication

16.3 state **information** needed when requesting materials

16.4 identify methods of communication used to relay information to colleagues and others

16.5 describe advantages and disadvantages of **methods of communication**

- 16.6 state **occasions** when clear communication is vital in the workplace
- 16.7 explain **benefits** of positive communication with colleagues and others.

Range

Job roles

Professional, technician, trade, general operative.

Key personnel

Site manager, supervisors, fellow operatives.

Information

Dimensions, quantities, type, when and where required, contact name and details.

Methods of communication (7.4)

Letters, emails, telephone, memos, verbal, posters, signs, meetings, radio, text messages

Methods of communication (7.5)

Written, verbal

Occasions

Changes to risk assessments, work restrictions, changes to method statement, permits to work, changes to legislation.

Benefits

Improved motivation, avoid conflict, complying with equality and diversity, meeting deadlines.

Unit 211

Set up and operate a circular saw

Level:	5
Credit value:	5
Aim:	<p>The aim of this unit is to provide the learner with the knowledge and skills to use a circular saw to cut wood, wood products and non-ferrous metals.</p> <p>The knowledge acquired by the learner will enable them to understand how the relevant law and good practice relating to circular saw usage is important.</p> <p>The skills developed by the learner include the ability to maintain, use and change tooling on fixed and transportable circular saws.</p>

Learning outcome
The learner will: 1. know the principles of using circular saws safely
Assessment criteria
The learner can: 1.1 state current legislation applicable to circular saws 1.2 identify components of a circular saw 1.3 state potential faults in relation to circular saws 1.4 describe the procedure to follow on identification of faults 1.5 describe types of dust extraction for circular saws 1.6 state the importance of dust extraction on circular saws 1.7 identify sawing safety aids used in conjunction with circular saws 1.8 state safety features of a circular saw.

Range
Current legislation Provision and Use of Work Equipment Regulations (PUWER), Approved Code of Practice (ACoP), Health and Safety at Work Act, Personal Protective Equipment at Work (PPE), Control of Substances Hazardous to Health (COSHH), Electricity at Work Act, Abrasive Wheels Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, current environmental regulations.
Circular saws Fixed and transportable.

Components

Guards, extraction points, fences, riving knife, bed, blade, information plate, mouth piece, on/off button, adjusting mechanisms.

Faults

Missing or damaged guards, faulty or incorrectly fitted tooling and damage to equipment, riving knife (thickness, distance, height).

Types

Fixed and transportable.

Sawing safety aids

Push sticks, jigs (saddle, wedge, taper).

Safety features

Crown/top saw guard, riving knife, braking systems, isolation switch, outfeed table.

Learning outcome

The learner will:

2. know how to change circular saw blades

Assessment criteria

The learner can:

- 2.1 state the **sequence** of changing circular **saw blades**
- 2.2 state the importance of the minimum saw blade diameter in relation to peripheral speed
- 2.3 state the importance of fitting correct circular saw blades
- 2.4 identify **features** of a circular saw blade
- 2.5 describe **effects** of timber and sheet **material** on circular saw blades
- 2.6 describe the use of lubricants on circular saw blades.

Range**Sequence**

Consult the risk assessment, isolate, remove guarding, riving knife, saw blade, clean down, replace saw blade, riving knife and guarding, undergo pre-start checks.

Saw blades

Rip saw, crosscut and combination.

Features

Root, top, face, back, point, heel, positive, negative and neutral hook, gullet, tip, kerf.

Effects

Abrasion, resin build up, overheating.

Material

Softwoods and hardwoods, manufactured boards (Plywood, chipboard, MDF).

Learning outcome

The learner will:

3. be able to change circular saw blades

Assessment criteria

The learner can:

- 3.1 carry out risk assessment for changing circular saw blades
- 3.2 follow the **sequence** for changing circular saw blades using manufacturers' **tools** in accordance with their instructions and current legislation
- 3.3 select appropriate types of **saw blades** for the operations being carried out
- 3.4 inspect saw blades for **damage** and potential hazards
- 3.5 follow current environmental and relevant health and safety **legislation** relating to changing circular saw blades.

Range**Sequence**

Consult the risk assessment, isolate, remove guarding, riving knife, saw blade, clean down, replace saw blade, riving knife and guarding, undergo pre-start checks.

Tools

Spanners, allen keys and mallet.

Saw blade

Rip saw, crosscut and combination.

Damage

Missing or damaged teeth, warping.

Current legislation

Provision and Use of Work Equipment Regulations (PUWER), Approved Code of Practice (ACoP), Health and Safety at Work Act, Personal Protective Equipment at Work (PPE), Control of Substances Hazardous to Health (COSHH), Electricity at Work Act, Abrasive Wheels Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, current environmental regulations.

Learning outcome

The learner will:

4. know timber, timber products and processes

Assessment criteria

The learner can:

- 4.1 identify different **types** of timber
- 4.2 identify **methods** of timber conversion
- 4.3 describe **defects** found in timber
- 4.4 state **methods** of **drying** timber
- 4.5 identify types of **manufactured boards**.

Range**Types**

Softwoods (European red wood, white wood, Douglas fir) and hardwoods (oak, mahogany, beech, ash).

Methods (AC 4.2)

Quarter sawn, through and through, tangential, boxed heart.

Defects

Natural (sloping grain, knots, shakes, upset, waney edge, resin pockets, foreign bodies, decay, pith, blue stain, insect infestation), seasoning (cupping, winding, twist, case hardening, bowing, springing, collapse).

Methods (AC 4.4)

Air and kiln drying.

Drying

Moisture content.

Manufactured boards

Medium density fibre board (MDF), plywood, orientated strand board (OSB), chipboard, hardboard.

Learning outcome

The learner will:

5. know how to cut timber and manufactured boards

Assessment criteria

The learner can:

- 5.1 describe the type of **information** recorded on a cutting list
- 5.2 state the **requirements** for setting guards, saw blades and fences
- 5.3 state the **requirements** for adjusting the circular saw
- 5.4 state **methods** of supporting materials during cutting.

Range
<p>Information Description of the item, quantity, material, length, width, thickness (sawn and planed), remarks, contract details.</p> <p>Requirements According to current legislation and approved code of practice.</p> <p>Methods Use of the outfeed table, rollers, additional manual support.</p>

Learning outcome
The learner will: 6. be able to cut timber and manufactured boards
Assessment criteria
<p>The learner can:</p> <p>6.1 carry out risk assessment for cutting timber and manufactured boards</p> <p>6.2 check circular saws for faults</p> <p>6.3 select material for cutting</p> <p>6.4 set guards according to current legislation</p> <p>6.5 set fences and adjust saw blades according to given specifications</p> <p>6.6 identify defects and cut materials appropriately</p> <p>6.7 cut materials according to given specifications</p> <p>6.8 use appropriate sawing safety aids to specifications</p> <p>6.9 follow current environmental and relevant health and safety legislation relating to cutting timber and manufactured boards.</p>

Range
<p>Faults Missing or damaged guards, faulty or incorrectly fitted tooling and damage to equipment, riving knife (thickness, distance).</p> <p>Material Softwood, manufactured board.</p> <p>Defects Natural (sloping grain, knots, shakes, upset, waney edge, resin pockets, foreign bodies, decay, pith, blue stain, insect infestation), seasoning (cupping, winding, twist, case hardening, bowing, springing, collapse).</p> <p>Specification Working drawings, cutting lists and given instructions.</p> <p>Sawing safety aids Push sticks, jigs (saddle, wedge, taper).</p>

Legislation

Provision and Use of Work Equipment Regulations (PUWER), Approved Code of Practice (ACoP), Health and Safety at Work Act, Personal Protective Equipment at Work (PPE), Control of Substances Hazardous to Health (COSHH), Electricity at Work Act, Abrasive Wheels Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, current environmental regulations, Manual Handling Regulations.

Unit 240

Manufacture internal shopfitting joinery products

Level:	5
Credit value:	13
Aim:	<p>The aim of this unit is to provide the learner with the skills to:</p> <ul style="list-style-type: none">• produce setting out details prior to manufacture of internal joinery products• produce details of internal shopfitting joinery items.

Learning outcome
The learner will: 1. know how to set out internal shopfitting joinery products
Assessment criteria
The learner can: 1.1 identify component parts of internal shopfitting joinery products 1.2 identify information used for setting out internal shopfitting joinery products 1.3 describe the requirements of current Building Regulations in relation to public stairways 1.4 identify tools and equipment used for setting out internal shopfitting joinery products 1.5 describe methods used to set out internal shopfitting joinery products 1.6 identify commonly used moulding profiles 1.7 describe joint details required for internal shopfitting joinery products 1.8 identify what information is found on a cutting list.

Range

Component parts

Stairs: strings, tread, risers, string capping, balusters, newel, hand rail, nosing, wedges, glue blocks,

Units and panelling: ends, sides, shelves, top, standards, plinth, rails (top, front, fascia), division, drawers, back panels, doors, cappings, pilasters and panels

Internal shopfitting joinery products

Units (wall and floor display, island, point of sale), display stand, back fittings, panelling, straight stairs

Information (1.2)

Scale drawings (floor plan, elevations), job sheets, specifications, schedules, Building Regulations, manufacturer's catalogues, site survey

Tools and equipment

Set squares, dividers, drawing board, tee square, trammel heads, pitch board and templates

Methods

Use of rods (full size and broken details), computer aided design CAD

Moulding profiles

Scotia, ovolo, torus, ogee, astragal, bevel, chamfer

Joint details

Mortice and tenon, housings, dovetail, dowel, cam and stud and biscuit

Learning outcome

The learner will:

2. be able to set out internal shopfitting joinery products

Assessment criteria

The learner can:

- 2.1 carry out risk assessment for setting out **internal shopfitting joinery products**
- 2.2 select appropriate **tools and equipment** for setting out **internal shopfitting joinery products**
- 2.3 set out **internal shopfitting joinery products**
- 2.4 produce a cutting list
- 2.5 follow current environmental and relevant health and safety **regulations** in relation to setting out **internal shopfitting joinery products**

Range
<p>Internal shopfitting joinery products units (wall and floor display, island, point of sale), display stand, back fittings, panelling, straight stairs</p> <p>Tools and equipment Set squares, dividers, drawing board, tee square, trammel heads, pitch board and templates</p> <p>Regulations Provision and Use of Work Equipment Regulations (PUWER), personal protective equipment at work (PPE), building regulations, manual handling regulations, current environmental</p>

Learning outcome
The learner will: 3. know how to manufacture internal shopfitting joinery products
Assessment criteria
<p>The learner can:</p> <p>3.1 describe characteristics of materials used for manufacturing internal shopfitting joinery products</p> <p>3.2 describe how materials are selected when manufacturing internal shopfitting joinery products</p> <p>3.3 describe various defects found in internal shopfitting joinery materials</p> <p>3.4 identify jigs and their purposes</p> <p>3.5 identify ironmongery used for internal shopfitting joinery products</p> <p>3.6 describe the process of marking out for internal shopfitting joinery products</p> <p>3.7 identify tools required for marking out for internal shopfitting joinery products</p> <p>3.8 identify tools for manufacturing internal shopfitting joinery products and their purpose</p> <p>3.9 identify machinery and its use for manufacturing internal shopfitting joinery products.</p>

Range
<p>Characteristics Durability, stability, weight, workability, ability to take preservatives and finishes, quality of finish, colour, interior (INT), moisture resistant (MR) and weather and boil proof (WBP) classifications, fire resistance</p> <p>Materials <i>Timber:</i> softwoods (European red wood, white wood, Douglas fir) and hardwoods (oak, mahogany, beech, ash) <i>Manufactured boards:</i> medium density fibre board (MDF), plywood, chipboard, hardboard, melamine faced chipboard (MFC), fire resistant boards</p>

Other: plastic laminates, aluminium extrusions (door tracks for display units), toughened and laminated glass, adhesives, intumescent coatings

Internal shopfitting joinery products

Units (wall and floor display, island, point of sale), display stand, back fittings, panelling, straight stairs

Selected

Avoid defects, consider grain characteristics, end use, security of premises

Defects

Natural: (sloping grain, knots, shakes, upset, grain, waney edge, resin pockets, foreign bodies, decay, pith, blue stain, insect infestation)

Seasoning: (cupping, winding, twist, case hardening, bowing, springing, collapse)

Glass: cracks, chips, flaws

Jigs

Stair, dowel, dovetail, worktop

Ironmongery

Hinges (concealed, butt), handles, screws, locks, latches, drawer runners, catches, shelving brackets, adjustable feet, worktop clamps, handrail brackets and handrail bolts

Process

Use of rods, face and edge marks, patterns, marking in pairs and multiples

Tools (3.7)

Mortice gauge, marking gauge, try square, combination square, sliding bevel, box square, mitre square, bevel, protractor, angle finder

Tools (3.8)

Chisels: bevel edge, mortice, gouge, paring

Planes: Block, jack, smoothing, shoulder, rebate and combination planes

Handsaw: coping, tenon, panel, rip, dovetail, crosscut, gentsaw, hacksaw

Other hand tools: Hammers (pin and claw), mallet, punches, measuring tapes and rules, try square, combination square, sliding bevel, marking gauge, mortice gauge, scribe, files, sash cramp, G-cramp, F-cramp, hook, vice, proprietary cramps

Power tools: sanders, drills and drivers, planer, router, jigsaw, chop saw and nail guns and associated tooling

Machinery

Morticer, band saw, spindle moulder, table router, overhead router

Use

Morticing, cutting and moulding In line with current legislation

Learning outcome

The learner will:

4. be able to manufacture internal shopfitting joinery products

Assessment criteria

The learner can:

- 4.1 carry out risk assessment for manufacturing **internal shopfitting joinery products**
- 4.2 **select** materials for manufacturing **internal shopfitting joinery products**
- 4.3 mark out materials from setting out details
- 4.4 use tools and **machines** to profile timber and form joints to manufacture **internal shopfitting joinery products**
- 4.5 **maintain** tools and work area during joinery work
- 4.6 follow current environmental and relevant health and safety **regulations** in relation to manufacturing **internal shopfitting joinery products**

Range**Internal shopfitting joinery products**

Units (wall and floor display, island, point of sale), display stand, back fittings, panelling, straight stairs

Select

Avoid defects, consider grain characteristics

Machines

Morticer, band saw, portable router

Maintain

Keeping tools sharp, clean and in good repair, keep work area safe

Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), building regulations, manual handling regulations, current environmental regulations, Control of Substances Hazardous to Health (COSHH)

Learning outcome
The learner will: 5. know how to assemble and finish internal shopfitting joinery products
Assessment criteria
The learner can: 5.1 explain the reasons for dry fitting internal shopfitting joinery products prior to assembly 5.2 describe cramping techniques 5.3 describe the process of assembling and finishing internal shopfitting joinery products

Range
Reasons Check the joints for fit, wind and square, finished size, access and transportation issues
Internal shopfitting joinery products Units (wall and floor display, island, point of sale), display stand, back fittings, panelling, straight stairs
Cramping techniques Jigs and cramps, draw-bore pins and dowels, cramping heads, joiners dogs

Learning outcome
The learner will: 6. be able to assemble and finish internal shopfitting joinery products
Assessment criteria
The learner can: 6.1 carry out risk assessment for assembling and finishing internal shopfitting joinery products 6.2 dry fit to check the joints, finished size and shape 6.3 clean up the inside face of components 6.4 carry out quality checks 6.5 prepare products to receive finishes as in given specifications 6.6 maintain tools and work area during joinery work 6.7 follow current environmental and relevant health and safety regulations in relation to assembling and finishing internal shopfitting joinery products

Range
Internal shopfitting joinery products Units (wall and floor display, island, point of sale), display stand, back fittings, panelling, straight stairs

Quality checks

Square, wind, size, shape

Maintain

Keeping tools sharp, clean and in good repair, keep work area safe

Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), building regulations, manual handling regulations, current environmental regulations, Control of Substances Hazardous to Health (COSHH)

Unit 241

Manufacture external shopfitting joinery products

Level:	5
Credit value:	11
Aim:	The aim of this unit is to provide the learner with the skills to: <ul style="list-style-type: none">• produce setting out details prior to manufacture of external joinery products• produce details of external shopfitting joinery items.

Learning outcome
The learner will: 1. know how to set out external shopfitting joinery products
Assessment criteria
The learner can: 1.1 identify component parts of external shopfitting joinery products 1.2 identify information used for setting out external shopfitting joinery products 1.3 identify information collected from a site survey for a shopfront opening 1.4 identify tools and equipment used for setting out external shopfitting joinery products 1.5 describe methods used to set out external shopfitting joinery products 1.6 identify commonly used moulding profiles 1.7 describe joint details required for external shopfitting joinery products 1.8 identify what information is found on a cutting list

Range
Component parts Head, sill, jambs, transom, mullion, stiles, rails (bottom, middle, top, frieze intermediate), glazing bars, corner post/bars, muntin, panels, glazing beads, bed and bolection mouldings
External shopfitting joinery products Shopfront, sash, entrance frame, pilasters, lobby, enclosure, soffit, blind box, shutters, fascia, stall riser, doors (glazed, fire exit)

Information (1.2)

Scale drawings, job sheets, specifications, schedules, Building Regulations, manufacturer's catalogues, site survey

Information (1.3)

Overall brickwork opening size, established datum, dimensions below and above datum, construction features (wall support above shopfront), obstructions

Tools and equipment

Set squares, dividers, drawing board, tee square, combination square, line runner/thumb rule, sliding bevel

Methods

Use of rods (full size and broken details), computer aided design (CAD)

Moulding profiles

Scotia, ovolo, torus, ogee, astragal, bevel, chamfer

Joint details

Mortice and tenon, housings, draw bored, match boarding, tongue and groove, heading, scarf, loose tongue, biscuits and mitre/scribe

Learning outcome

The learner will:

2. be able to set out external shopfitting joinery products

Assessment criteria

The learner can:

- 2.1 carry out risk assessment for setting out **external shopfitting joinery products**
- 2.2 select appropriate **tools and equipment** for setting out **external shopfitting joinery products**
- 2.3 set out **external shopfitting joinery products**
- 2.4 produce a cutting list
- 2.5 follow current environmental and relevant health and safety **regulations** in relation to setting out **external shopfitting joinery products**

Range**External shopfitting joinery products**

Shopfront, sash, entrance frame, glazed entrance doors

Tools and equipment

Set squares, dividers, drawing board, tee square, combination square, line runner/thumb rule, sliding bevel

Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), building regulations, manual

handling regulations, current environmental regulations, Control of Substances Hazardous to Health (COSHH)

Learning outcome

The learner will:

3. know how to manufacture external shopfitting joinery products

Assessment criteria

The learner can:

- 3.1 identify methods of constructing timber shopfronts
- 3.2 identify methods of constructing aluminium shopfronts
- 3.3 describe **characteristics** of **materials** used for manufacturing **external shopfitting joinery products**
- 3.4 describe how **materials** are **selected** when manufacturing **external shopfitting joinery products**
- 3.5 describe various **defects** found in external shopfitting joinery **materials**
- 3.6 identify **ironmongery** used for **external shopfitting joinery products**
- 3.7 describe the **process** of marking out for **external shopfitting joinery products**
- 3.8 identify **tools** required for marking out for **external shopfitting joinery products**
- 3.9 identify **tools** for manufacturing **external shopfitting joinery products** and their purpose
- 3.10 identify **machinery** and its **use** for manufacturing **external shopfitting joinery products**

Range

Characteristics

Durability, stability, weight, workability, ability to take preservatives and finishes, quality of finish, water boil proof (WBP) classifications

Materials

Timber: softwoods (European red wood, white wood, Douglas fir) and hardwoods (oak, mahogany)

Manufactured boards: medium density fibre board (MDF), plywood

Other: plastics, acrylics aluminium, toughened and laminated glass, adhesives

External shopfitting joinery products

Shopfront, sash, entrance frame, glazed entrance doors

Selected

Avoid defects, consider grain characteristics, end use, security of premises, corrosion

Defects

Natural: (sloping grain, knots, shakes, upset, grain, waney edge, resin pockets, foreign bodies, decay, pith, blue stain, insect infestation)

Seasoning: (cupping, winding, twist, case hardening, bowing, springing, collapse)

Glass: cracks, chips, flaws

Ironmongery

Hinges (friction, butt) , handles, screws, locks, door closers, selectors, panic pads/bars, push, kick, letter plates, tower and flush bolts

Process

Use of rods, face and edge marks, patterns, marking in pairs and multiples

Tools (3.6)

Mortice gauge, marking gauge, try square, combination square, sliding bevel, box square, mitre square, bevel, protractor, angle finder

Tools (3.7)

Chisels: bevel edge, mortice, gouges, paring

Planes: Block, jack, smoothing, shoulder, rebate and combination planes

Handsaw: coping, tenon, panel, rip, dovetail, crosscut, gentsaw, vice, proprietary cramps

Other hand tools: Hammers (pin and claw), mallet, punches, measuring tapes and rules, try square, combination square, sliding bevel, marking gauge, mortice gauge, sash cramp, G-cramp, F-cramp, hook,

Power tools: sanders, drills and drivers, planer, router, jigsaw, chop saw and nail guns and associated tooling

Machinery

Morticer, surface planer, thicknesser, band saw, spindle moulder, table router

Use

Morticing, cutting and moulding in line with current legislation

Learning outcome

The learner will:

4. be able to manufacture external shopfitting joinery products

Assessment criteria

The learner can:

4.1 carry out risk assessment for manufacturing **external shopfitting joinery products**

4.2 **select** materials for manufacturing **external shopfitting joinery products**

4.3 mark out materials from setting out details

4.4 use tools and **machines** to profile timber and form joints to manufacture **external shopfitting joinery products**

4.5 **maintain** tools and work area during shopfitting joinery work

4.6 follow current environmental and relevant health and safety

regulations in relation to manufacturing **external shopfitting joinery products**

Range

External shopfitting joinery products

Shopfront, sash, entrance frame, glazed entrance doors

Select

Avoid defects, consider grain characteristics

Machines

Morticer, band saw, table router

Maintain

Keeping tools sharp, clean and in good repair, keep work area safe

Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), building regulations, manual handling regulations, current environmental regulations, Control of Substances Hazardous to Health (COSHH)

Learning outcome

The learner will:

5. Know how to assemble and finish external shopfitting joinery products

Assessment criteria

The learner can:

- 5.1 explain the **reasons** for dry fitting **external shopfitting joinery products** prior to assembly
- 5.2 describe **cramping techniques**
- 5.3 describe the process of assembling and finishing **external shopfitting joinery products**

Range

Reasons

Check the joints for fit, wind and square, finished size, access and transportation issues

External shopfitting joinery products

Shopfront, sash, entrance frame, glazed entrance doors

Cramping techniques

Jigs and cramps, draw-bore pins and dowels, cramping heads

Learning outcome

The learner will:

6. Be able to assemble and finish external shopfitting joinery products

Assessment criteria

- 6.1 carry out risk assessment for assembling and finishing **external shopfitting joinery products**
- 6.2 dry fit to check the joints, finished size and shape
- 6.3 clean up the inside face of components
- 6.4 assemble with adhesive and cramp
- 6.5 carry out **quality checks**
- 6.6 prepare products to receive finishes as in given specifications
- 6.7 **maintain** tools and work area during joinery work
- 6.8 follow current environmental and relevant health and safety **regulations** in relation to assembling and finishing **external shopfitting joinery products** .

Range

External shopfitting joinery products

Shopfront, sash, entrance frame, glazed entrance doors

Quality checks

Square, wind, size, shape

Maintain

Keeping tools sharp, clean and in good repair, keep work area safe

Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), building regulations, manual handling regulations, current environmental regulations, Control of Substances Hazardous to Health (COSHH)



Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on www.cityandguilds.com.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information on such things as:

- **Walled Garden:** how to register and certificate candidates on line
- **Events:** dates and information on the latest Centre events
- **Online assessment:** how to register for e-assessments.

Useful contacts

International learners

General qualification information

E: intcg@cityandguilds.com

Centres

Exam entries, Certificates,
Registrations/enrolment, Invoices,
Missing or late exam materials,
Nominal roll reports, Results

E: centresupport@cityandguilds.com

Single subject qualifications

Exam entries, Results, Certification,
Missing or late exam materials,
Incorrect exam papers, Forms
request (BB, results entry), Exam
date and time change

E: singlesubjects@cityandguilds.com

International awards

Results, Entries, Enrolments,
Invoices, Missing or late exam
materials, Nominal roll reports

E: intops@cityandguilds.com

Walled Garden

Re-issue of password or username,
Technical problems, Entries,
Results, e-assessment, Navigation,
User/menu option, Problems

E: walledgarden@cityandguilds.com

Employer

Employer solutions, Mapping,
Accreditation, Development Skills,
Consultancy

E: business@cityandguilds.com

Publications

Logbooks, Centre documents,
Forms, Free literature

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As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group is a leader in global skills development. Our purpose is to help people and organisations to develop their skills for personal and economic growth. Made up of City & Guilds, City & Guilds Kineo, The Oxford Group and ILM, we work with education providers, businesses and governments in over 100 countries.

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City & Guilds

1 Giltspur Street

London EC1A 9DD

www.cityandguilds.com