



City & Guilds Level 3 Diploma in Bench Joinery (6706-36)

Version 2.4 (September 2024)

Qualification Handbook

Qualification at a glance

Subject area	Building and Construction
City & Guilds number	6706
Age group approved	16+
Entry requirements	n/a
Assessment	Multiple choice/assignment
Grading	Pass/Fail
Approvals	Full approval required
Support materials	Assessor guidance, Practical task manual, Sample tests, Smartscreen
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds Level 3 Diploma in Bench Joinery	6706-36	600/8050/4	457	510

Version and date	Change detail	Section
1.1 August 2013	Correct AC 3.4 – Unit 301/701	Units
2.0 January 2014	Entry requirement information added	Centre requirements
2.1 July 2014	Centre staffing amended	Centre requirements
2.2 December 2015	Updated range for LO 1, 3 and 4 in unit 201/601	5. Units
2.3 September 2017	Added GLH and TQT details	Qualification at a Glance, Structure
	Deleted QCF	Appendix
2.4 September 2024	Handbook reviewed and updated to new template	Throughout

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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?	This qualification is for those individuals who work or want to work as a Bench Joiner in the construction sector.
What does the qualification cover?	This qualification allows candidates to learn, develop and practise the skills required for employment and/or career progression in Bench Joinery. It covers the following skills: <ul style="list-style-type: none">• Set up and use fixed and transportable machinery• Manufacture shaped doors and frames• Manufacture stairs with turns.
What opportunities for progression are there?	It allows candidates to progress into employment or to the following City & Guilds qualifications: <ul style="list-style-type: none">• Level 3 NVQ Diploma in Wood Occupations
Is it part of an apprenticeship framework or initiative?	The qualification forms the technical certificate for the Construction Building Apprenticeship Framework.

Structure

To achieve the City & Guilds Level 3 Diploma in Bench Joinery, learners must achieve 51 credits from the mandatory units. Total GLH – 457.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value	GLH
Mandatory units:				
Learners must achieve all five mandatory units.				
A/504/6719	201/601	Health, safety and welfare in construction	7	70
F/504/7029	301/701	Principles of organising, planning and pricing construction work	7	67
T/504/6766	308	Set up and use fixed and transportable machinery	13	110
A/504/6770	309	Manufacture shaped doors and frames	12	103
L/504/6773	310	Manufacture stairs with turns	12	107

Total Qualification Time (TQT)

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT comprises of the following two elements:

- 1) the number of hours that an awarding organisation has assigned to a qualification for guided learning
- 2) an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by – but, unlike guided learning, not under the immediate guidance or supervision of – a lecturer, supervisor, tutor or other appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds Level 3 Diploma in Bench Joinery	457	510

2 Centre requirements

Approval

Full approval

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document **Centre Approval Process: Quality Assurance Standards** for further information.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

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, crosscut saw, rip saw, surface planer, thicknesser, (may be a combined machine) spindle moulding machine and router (may be inverted) together with suitable tooling, allowing candidates to practise 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

Staff delivering these qualifications must be able to demonstrate that they meet the following occupational expertise requirements. They should:

- be occupationally competent or technically knowledgeable in the area(s) for which they are delivering training and/or have experience of providing training (this knowledge must be to the same level as the training being delivered)
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training
- have a CV available demonstrating relevant experience and any qualifications held..

Continuing professional development (CPD)

Centres are expected to support their staff in ensuring that their knowledge remains current of the occupational area and of best practice in delivery, mentoring, training, assessment and quality assurance, and that it takes account of any national or legislative developments.

Quality assurance

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both CASS and City and Guilds Quality Assurance processes visit: the [What is CASS?](#) and [Quality Assurance Standards](#) documents on the City & Guilds website.

Standards and rigorous quality assurance are maintained by the use of:

- Internal quality assurance
- City & Guilds external quality assurance.

In order to carry out the quality assurance role, Internal Quality Assurers must

- have appropriate teaching and vocational knowledge and expertise in the construction industry
- have experience in quality management/internal quality assurance
- hold or be working towards an appropriate teaching/training/assessing qualification
- be familiar with the occupation and technical content covered within the qualification
- have a CV available demonstrating relevant experience and any qualifications held.

External quality assurance for the qualification will be provided by City & Guilds EQA process. EQAs are appointed by City & Guilds to approve centres, and to monitor the assessment and internal quality assurance carried out by centres. External quality assurance is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres.

The role of the EQA is to:

- provide advice and support to centre staff
- ensure the quality and consistency of assessments and marking/grading within and between centres by the use of systematic sampling
- provide feedback to centres and to City & Guilds.

Learner entry requirements

Whilst there are no formal entry requirements for this qualification, learners are advised to take the Level 1 and Level 2 Diplomas in order to ensure they have the right skills and knowledge for Level 3. Alternatively, the learner should provide evidence of significant industry experience, at the centres discretion.

Age restrictions

This qualification is approved for learners aged 16 or above. City & Guilds cannot accept any registrations for candidates under 16.

Access arrangements and reasonable adjustments

City & Guilds has considered the design of this qualification and its assessments in order to best support accessibility and inclusion for all learners. We understand however that individuals have diverse learning needs and may require reasonable adjustments to fully participate. Reasonable adjustments, such as additional time or alternative formats, may be provided to accommodate learners with disabilities and support fair access to assessment.

Access arrangements are adjustments that allow candidates with disabilities, special educational needs, and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

Equality legislation requires City & Guilds to make reasonable adjustments where a disabled person would be at a substantial disadvantage in undertaking an assessment.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the Joint Council for Qualifications (JCQ) access arrangements and reasonable adjustments and access arrangements - when and how applications need to be made to City & Guilds. For more information documents are available on the City & Guilds website www.cityandguilds.com

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.

Inclusion and diversity

City & Guilds is committed to improving inclusion and diversity within the way we work and how we deliver our purpose which is to help people and organisations develop the skills they need for growth.

More information and guidance to support centres in supporting inclusion and diversity through the delivery of City & Guilds qualifications can be found here:

[Inclusion and diversity | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com)

Sustainability

City & Guilds are committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and develop environmentally responsible operations to achieve net zero by 2040 or sooner if we can. City & Guilds is committed to supporting qualifications that support our customers to consider sustainability and their environmental footprint.

More information and guidance to support centres in developing sustainable practices through the delivery of City & Guilds qualifications can be found here:

[Our Pathway to Net Zero | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com)

Centres should consider their own carbon footprint when delivering this qualification and consider reasonable and practical ways of delivering this qualification with sustainability in mind. This could include:

- reviewing purchasing and procurement processes (such as buying in bulk to reduce the amount of travel time and energy, considering and investing in the use of components that can be reused, instead of the use of disposable or single use consumables)

- reusing components wherever possible
- waste procedures (ensuring that waste is minimised, recycling of components is in place wherever possible)
- minimising water use and considering options for reuse/salvage as part of plumbing activities wherever possible.

Support materials

The following resources are available for this qualification:

Description	How to access
Assessor guidance	www.cityandguilds.com
Practical task manual	www.cityandguilds.com
Sample tests	www.cityandguilds.com/construction
Qualification approval form	www.cityandguilds.com/construction
SmartScreen	www.smartscreen.co.uk

4 Assessment

Assessment of the qualification

Candidates must:

- successfully complete x1 multiple choice tests for each of the following units: 201/601, 301/701, 308, 309, 310
- have a completed for a practical assignment for units 308, 309 and 310.

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
201/601	Health, safety and welfare in construction	City & Guilds e-volve multiple choice test or on demand externally marked paper. The test covers all of the knowledge in the unit.	Examinations provided on e-volve, or question papers ordered via Walled Garden.
301/701	Principles of organising, planning and pricing construction work	City & Guilds e-volve multiple choice test or on demand externally marked paper. The test covers all of the knowledge in the unit.	Examinations provided on e-volve, or question papers ordered via Walled Garden.
308	Set up and use fixed and transportable machinery	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>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.</p>	www.cityandguilds.com

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
309	Manufacture shaped doors and frames	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment , covering performance outcomes.</p> <p>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.</p>	www.cityandguilds.com
310	Manufacture stairs with turns	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment , covering performance outcomes.</p> <p>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.</p>	www.cityandguilds.com

Assessment strategy

City & Guilds has written the following assessments to use with this qualification:

- live assignments/practical tasks and on demand multiple choice knowledge tests that can be downloaded from the City & Guilds website
- sample multiple choice knowledge tests for units 201/601 and 301/701 that can be downloaded from the City & Guilds website.

Test specifications

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

Grade boundaries may be subject to slight variation to ensure fairness should any variations in the difficulty of the test be identified.

Test 1: Health, safety and welfare in construction

Test: 1	Duration: 60 minutes		
Unit	Outcome	Number of questions	Percentage %
201/601	1 Know the health and safety regulations, roles and responsibilities	7	17.5
201/601	2 Know accident and emergency reporting procedures and documentation	5	12.5
201/601	3 Know how to identify hazards in the workplace	7	17.5
201/601	4 Know about health and welfare in the workplace	3	7.5
201/601	5 Know how to handle materials and equipment safely	2	5
201/601	6 Know about access equipment and working at heights	3	7.5
201/601	7 Know how to work with electrical equipment in the workplace	4	10
201/601	8 Know how to use personal protective equipment (PPE)	5	12.5
201/601	9 Know the cause of fire and fire emergency procedures	4	10
Total		40	100%

Test 2: Principles of organising, planning and pricing construction work

Test: 2	Duration: 60 minutes		
Unit	Outcome	Number of questions	Percentage %
301/701	1 Understand different types of drawn information in construction	7	17.5
301/701	2 Understand energy efficiency and sustainable materials for construction	8	20
301/701	3 Understand how to estimate quantities and price work for construction	10	25
301/701	4 Understand how to plan work activities for construction	6	15
301/701	5 Understand how to communicate effectively in the workplace	9	22.5
Total		40	100%

Test 3: Set up and use fixed and transportable machinery

Test: 3	Duration: 40 minutes		
Unit	Outcome	Number of questions	Percentage %
308	1 Understand how to inspect and maintain fixed and transportable machinery	13	52
308	3 Understand how to use fixed and transportable machinery efficiently and safely	12	48
Total		25	100%

Test 4: Manufacture shaped doors and frames

Test: 4	Duration: 40 minutes		
Unit	Outcome	Number of questions	Percentage %

309	1 Understand how to set out shaped doors and frames	12	48
309	3 Understand how to manufacture shaped doors and frames	8	32
309	5 Understand how to assemble and finish shaped doors and frames	5	20
Total		25	100%

Test 5: Manufacture stairs with turns

Test: 5	Duration: 45 minutes		
Unit	Outcome	Number of questions	Percentage %
310	1 Understand how to set out stairs with turns	17	56
310	3 Understand how to manufacture stairs with turns	8	27
310	5 Understand how to assemble and finish stairs with turns	5	17
Total		30	100%

5 Units

Structure of the units

These units each have the following:

- City & Guilds reference number
- title
- unit accreditation number (UAN)
- level
- credit value
- guided learning hours (GLH)
- endorsement by a sector or regulatory body
- unit aim
- learning outcomes, which are comprised of a number of assessment criteria
- range statements
- supporting information.

Guidance for delivery of the units

This qualification comprises a number of **units**. A unit describes what is expected of a competent person in particular aspects of their job.

Each **unit** is divided into **learning outcomes** which describe in further detail the skills and knowledge that a candidate should possess.

Each **learning outcome** has a set of **assessment criteria** (performance and knowledge and understanding) which specify the desired criteria that must be satisfied before an individual can be said to have performed to the agreed standard.

Range statements define the breadth or scope of a learning outcome and its assessment criteria by setting out the various circumstances in which they are to be applied. Range gives further scope on what areas within assessment criteria must be covered. The range in a unit **must** be taught to learners and parts of the range will be assessed.

Supporting information provides guidance of the evidence requirement for the unit and specific guidance on delivery and range statements. Centres are advised to review this information carefully before delivering the unit.

Glossary of terms

Term	Definition
Approved Document K	Section of the Building Regulations that covers protection from falling.

Term	Definition
Balustrade	Collective name for the complete assembly of handrails, baserails, newels, spindles, infill and newel caps.
Close couple roof	This roof incorporates a main tie which is secured to the feet of each rafter and spans the width of the building.
Closed stair strings	A staircase in which the ends of the treads are routed or housed so that they are not visible outside the stair.
Collared roof	A collar roof incorporates a horizontal roof member positioned approximately two thirds of the distance down from the ridge to the wall plate line.
Cut stair string	A string with the upper part of the string cut away to follow the shape of the treads
Draw-bore pins	Holes are drilled through a mortise and tenon about 3mm out of line so that a tapered steel pin (Draw-bore pins) are driven through the holes draws the joint together.
Elliptical arch	An arch having the shape of half an ellipse; in its construction, the ellipse is often approximated by three adjoining circular arcs.
French doors	Two adjoining doors that have glass panes from top to bottom and are hinged at opposite sides of a doorway so that they open in the middle
Geometrical stairs	A geometrical stairway is a winding stairway and is so designed that the tread at the line of travel of all steps is the same width. Commonly known (incorrectly) as a "spiral" staircase. A curved stair of regular shape, eg circular or elliptical in plan.
Gothic arch	A Gothic arch is a sharp-pointed arch, formed of two arc segments
Hammer headed key joint	Is used where there is no straight member to form the tenon. Two mortise sockets are formed one in each piece and a separate tenon piece called a key is formed to fit. For example a door with a shaped head.
Hammer headed tenon	Is used to join a curved member to a straight member such as a curved head member to a jamb.
Handrail bolts	A metal rod with threads and a nut at each end; used to bolt together two surfaces in a butt joint.
Jack rafters	Jack rafters are the short rafters that run from the hip or valley rafter to the wall plate. It is these rafters that form the lower portion of a hip or a valley.
Joiners dogs	A small "staple" shaped device, designed to straddle a joint, and pull the joint tightly together during the glue up process, also called a 'Pinch Dog'.
Kerfed	Saw cuts to one side of a piece of wood and bending it towards that side, a convenient way curving the risers of a bullnose step
Mortice latch/rebate kit	Allows a mortise lock to be fitted to double doors that have been rebated at their meeting stiles.

Term	Definition
Purlins	A purlin is a strong large sectioned timber member which is fixed to the common rafters midway between the ridge and the wall plate and runs parallel to the wall and the ridge.
Raking mouldings	An inclined moulding with horizontal returns
Sprocketed eaves	A wedge-shaped piece of wood nailed to the top of the rafters to reduce the pitch of the roof at the eaves.
Trammel	A lath or batten used to mark out a circular or curve by being pivoted at one end.
Trimmer	These are used to construct a well suitable for the opening of the staircase. The top step fits over a trimmer joist.
Vapour barrier	Is often used to refer to any material for damp proofing, typically a plastic or foil sheet
Wall string	The string of a staircase that is fixed flush with a wall.
Winder tread	Tread with a greater run on one side than the other. Used on circular, spiral or winder staircases.
Wreathed stair string	A curved string or handrail.

UAN:	A/504/6719
Level:	2
Credit value:	7
GLH:	70
Endorsement by a sector or regulatory body:	This unit is endorsed by Construction Skills, the Sector Skills Council for the construction industry.
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:

LO1 Know the health and safety regulations, roles and responsibilities

Assessment criteria

The learner can:

AC1.1 Identify **health and safety legislation** relevant to and used in the construction environment

AC1.2 State **employer and employee responsibilities** under the Health and Safety at Work Act (HASWA)

AC1.3 State **roles and responsibilities** of the Health and Safety Executive (HSE)

AC1.4 Identify **organisations** providing relevant health and safety information

AC1.5 State the importance of holding on-site safety inductions and toolbox talks

Range

AC1.1 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)

AC 1.2 **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.

AC1.2 **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.

AC1.3 **Roles and responsibilities**

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

AC1.4 **Organisations**

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

Learning outcome

The learner will:

LO2 Know accident and emergency reporting procedures and documentation

Assessment criteria

The learner can:

AC2.1 State legislation used for reporting accidents

AC2.2 State major **types of emergencies** that could occur in the workplace

AC2.3 Identify reportable injuries, diseases and dangerous occurrences as per RIDDOR

AC2.4 State main types of **records** used in the event of an accident, emergency and near miss and reasons for reporting them

AC2.5 Identify **authorised personnel** involved in dealing with accident and emergency situations

AC2.6 State **actions** to take when discovering an accident

Range

AC1.1 **Types of emergencies**

Fires, security incidents, gas leaks.

AC2.4 **Records**

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

AC2.5 **Authorised personnel**

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

AC2.6 Actions

Area made safe, call for help, emergency services

Learning outcome

The learner will:

LO3 Know how to identify hazards in the workplace

Assessment criteria

The learner can:

AC3.1 State the importance of **good housekeeping**

AC3.2 State reasons for risk assessments and method statements

AC3.3 Identify **types of hazards** in the workplace

AC3.4 State the importance of the correct storage of combustibles and chemicals on site

AC3.5 Identify different **signs and safety notices** used in the workplace

Range

AC3.1 Good housekeeping

Cleanliness, tidiness, use of skips and chutes, segregation of materials, clear access to fire escapes, clear access to fire extinguishers.

AC3.3 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.

AC3.5 Signs and safety notices

Prohibition, mandatory, warning, safe condition, supplementary.

Learning outcome

The learner will:

LO4 Know about health and welfare in the workplace

Assessment criteria

The learner can:

AC4.1 Identify requirements for welfare facilities in the workplace as per Construction Design Management (CDM)

AC4.2 State health effects of noise and **precautions** that can be taken

AC4.3 State **risks** associated with drugs, alcohol and medication which could affect performance in the workplace

Range

AC4.2 Precautions

Reducing noise at source, PPE, isolation, exposure time.

AC4.3 Risks

Reduced risk perception, loss of concentration, balance problems, absenteeism and reduced productivity.

Learning outcome

The learner will:

LO5 Know how to handle materials and equipment safely

Assessment criteria

The learner can:

AC5.1 Identify legislation relating to safe handling of materials and equipment

AC5.2 State procedures for safe lifting and manual handling activities in accordance with guidance and legislation

AC5.3 State the importance of using **lifting aids** when handling materials and equipment

Range

AC5.3 Lifting aids

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

Learning outcome

The learner will:

LO6 Know about access equipment and working at heights

Assessment criteria

The learner can:

AC6.1 Identify legislation relating to working at heights

AC6.2 Identify types of **access equipment**

AC6.3 State **safe methods** of use for **access equipment**

AC6.4 Identify **dangers** of working at height

Range

AC6.2, AC6.3 Access equipment

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

AC6.3 Safe methods

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

AC6.4 **Dangers**

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

Learning outcome

The learner will:

LO7 Know how to work with electrical equipment in the workplace

Assessment criteria

The learner can:

AC7.1 State **precautions** to take to avoid risks to self and others when working with electrical equipment

AC7.2 State **dangers** of using electrical equipment

AC7.3 Identify **voltages** and voltage colour coding that are used in the workplace

AC7.4 State **methods** of storing electrical equipment

Range

AC7.1 **Precautions**

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

AC7.2 **Dangers**

Burns, electrocution, fire.

AC7.3 **Voltages**

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

AC7.4 **Methods**

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

Learning outcome

The learner will:

LO8 Know how to use Personal Protective Equipment (PPE)

Assessment criteria

The learner can:

AC8.1 State the legislation governing use of Personal Protective Equipment (PPE)

AC8.2 State **types of PPE** used in the workplace

AC8.3 State the importance of PPE

AC8.4 State why it is important to store, maintain and use PPE correctly

AC8.5 State the importance of checking and reporting damaged PPE

Range

AC8.2 Types of 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:

LO9 Know the cause of fire and fire emergency procedures

Assessment criteria

The learner can:

AC9.1 State **elements** essential to creating a fire

AC9.2 Identify methods of fire prevention

AC9.3 State actions to be taken on discovering a fire

AC9.4 State **types of fire extinguishers** and their uses

Range

AC9.1 Elements

Oxygen, fuel, heat.

AC9.4 Types of fire extinguishers

Water, foam, CO2, dry powder.

Unit 301/701

Principles of organising, planning and pricing construction work

UAN:	F/504/7029
Level:	3
Credit value:	7
GLH:	67
Endorsement by a sector or regulatory body:	This unit is endorsed by ConstructionSkills.
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.• organise the building process and communicate the design to work colleagues and others.

Learning outcome

The learner will:

LO1 Understand different types of drawn information in construction

Assessment criteria

The learner can:

AC1.1 Compare advantages and disadvantages of computer-aided design (CAD) programs to traditional drawing methods

AC1.2 Explain **information** required to produce orthographic projection drawings

AC1.3 Explain the process and purpose of producing a schedule from a drawing

AC1.4 Explain the **benefits** of isometric projection drawings

AC1.5 Explain **information** required to produce isometric projection drawings

Range

AC1.1 Information

Room dimensions, heights, width, sizes, heights and positions of walls, doors and window specifications, building regulations.

AC1.4 **Benefits**

Pictorial view of an object, assembly or design.

Helps the client, customer, supplier or non-technical person understand how the finished product will look or what is required.

AC1.5 **Information**

Isometric axis, positioning and required view of the object, lines or surfaces relative to isometric axis. Object dimensions and scale.

Learning outcome

The learner will:

LO2 Understand energy efficiency and sustainable materials for construction

Assessment criteria

The learner can:

AC2.1 Evaluate the uses of thermally insulated **materials**

AC2.2 Describe **construction methods** used to insulate against heat loss and gain

AC2.3 Compare thermal values of **wall construction**

AC2.4 Explain the purpose of an Energy Performance Certificate (EPC)

AC2.5 Describe **sustainable materials** and their use in construction

Range

AC2.1 **Materials**

Polyisocyanurate (PIR), expanded polystyrene (EP) fibre glass, sheep wool, mineral wool, double glazed units, multi-foil insulation.

AC2.2 **Construction methods**

location of insulation, selection of materials, compliance with Building Regulations

AC2.3 **Wall construction**

Cavity, solid and timber frame

AC2.5 **Sustainable materials**

Locally sourced, managed timber (FSC), recycled materials.

Learning outcome

The learner will:

LO3 Understand how to estimate quantities and price work for construction

Assessment criteria

The learner can:

- AC3.1 Describe how to estimate quantities of construction materials
 - AC3.2 Describe **information required** to prepare a materials list using a schedule
 - AC3.3 Explain the purpose of preferred suppliers lists when ordering materials
 - AC3.4 Explain the purpose of the Bill of quantities
 - AC3.5 Explain the purpose of the tendering process
 - AC3.6 Explain the difference between quoting and estimating
 - AC3.7 Calculate waste percentages for a construction task
 - AC3.8 Describe the **information required** to prepare a quote
-

Range

AC3.2 Information required

Quantity, quality, colour, dimensions, location, installation details.

AC3.8 Information required

Labour, operational costs, VAT, material cost.

Learning outcome

The learner will:

- LO4 Understand how to plan work activities for construction

Assessment criteria

The learner can:

- AC4.1 Outline the benefits of **planning** the sequence of material and labour requirements
 - AC4.2 Outline advantages and disadvantages of purchasing or hiring plant and equipment
 - AC4.3 Identify **planning methods**
 - AC4.4 Identify information required to produce a GANTT chart for a building project
-

Range

AC4.1 Planning

Programmes of work, stock systems, critical path analysis, lead times, schedules, Gantt chart.

AC4.3 Planning methods

GANTT chart, critical path analysis.

Learning outcome

The learner will:

- LO5 Understand how to communicate effectively in the workplace
-

Assessment criteria

The learner can:

AC5.1 Explain the purpose of **site documentation**

AC5.2 Identify information to create an agenda for a meeting

AC5.3 Explain information required to prepare a toolbox talk and site induction

AC5.4 Explain the purpose of a site survey and the information required to prepare a **defects** list

AC5.3 Describe information required to prepare written communications to resolve **problems**

Range

AC5.1 **Site documentation**

Organisation chart, method statement, risk assessment, manufacturers' technical information, delivery notes, variation orders, permits to work, diaries, minutes, memos.

AC5.4 **Defects**

Poor standard of work, poor quality of materials, damaged materials, human error

AC5.3 **Problems**

Delivery, materials, quality, human resources.

Unit 308

Set up and use fixed and transportable machinery

UAN:	T/504/6766
Level:	3
Credit value:	13
GLH:	110
Endorsement by a sector or regulatory body:	This unit is endorsed by ConstructionSkills.
Aim:	<p>The aim of this unit is to provide the learner with the skills to:</p> <ul style="list-style-type: none">• set up, perform basic maintenance on, and use fixed and transportable machinery• make checks before start-up to ensure efficiency and safety. <p>The skills developed by the learner include the ability to:</p> <ul style="list-style-type: none">• use circular saws, planers, thicknessers, bandsaws, morticers• use associated safety aids• produce joinery components.

Learning outcome

The learner will:

LO1 Understand how to inspect and maintain fixed and transportable machinery

Assessment criteria

The learner can:

AC1.1 Describe the **components** of fixed and transportable machinery

AC1.2 Interpret **information** relating to fixed and transportable **machinery**

AC1.3 Describe the process of inspecting for **faults** and **maintaining** fixed and transportable **machinery**

AC1.4 Explain the procedures for changing fixed and transportable machinery **tooling** safely

AC1.5 Explain **actions** taken upon finding **faults** to fixed and transportable **machinery**

Range

AC1.1 Components

Rip saws: guards, extraction points, fences, riving knife, bed, blade, information plate, mouth and packing piece, on/off button, adjusting mechanisms

Crosscut saws: guards, fence, length stops, bed, retracting and adjusting mechanisms, information plate, blade, on/off button, extraction points,

Surface planer: infeed, outfeed table, fence, guarding, adjustment mechanism, cutter block, information plate, on/off button, extraction points

Thicknesser: infeed, offfeed rollers, anti-kickback fingers, pressure bar, cutter block, extraction points, on/off button, adjustment mechanism, feed speed adjustment

Narrow bandsaws: bed, throat, thrust wheel, guides, guards, tracking and tensioning adjustment mechanism, information plate, on/off button, extraction points,

Morticers: bed, cramp, adjustment, depth stop, collar, chuck, collet, lever handle,

AC1.2, AC1.3, AC1.5 Machinery

Saws (crosscut, rip), surface planer and thicknesser, narrow bandsaws, morticers.

AC1.2 Information

Manufacturers' literature, schedules, regulations.

AC1.3, AC1.5 Faults

Damage, DIY repair, missing riving knife, badly fitting or missing guards, poor wiring, lack of maintenance, inadequate or blocked extraction, unsafe work area, inadequate braking, blunt tooling.

AC1.3 Maintaining

Grease points, moving parts, tensions, belts, tooling.

AC1.4 Tooling

Bandsaw and circular saw blades, knives, mortice chisel and auger bits.

AC1.5 Actions

Isolate, record, take the appropriate action, repair if appropriate.

Learning outcome

The learner will:

LO2 Be able to inspect and maintain fixed and transportable machinery

Assessment criteria

The learner can:

AC2.1 Carry out risk assessment for inspecting and maintaining fixed and transportable **machinery**

AC2.2 Inspect machinery and ensure it is in good running order

AC2.3 Follow the appropriate **actions** on identification of **faults** in machinery

AC2.4 **Maintain** machinery in accordance with manufacturers' instructions and regulations
AC2.5 Change **tooling** and adjust **components** on fixed and transportable machinery
AC2.6 Follow current environmental and relevant health and safety **regulations** relating to inspecting and maintaining fixed and transportable machinery

Range

AC2.1 Machinery

Saws (crosscut, rip), surface planer and thicknesser, narrow bandsaws, morticers.

AC2.3 Actions

Isolate, record, inform the appropriate people, repair if appropriate.

AC2.3 Faults

Damage, DIY repair, missing riving knife, badly fitting or missing guards, poor wiring, lack of maintenance, inadequate or blocked extraction, unsafe work area, inadequate braking, blunt or inappropriate tooling.

AC2.4 Maintain

Grease points, moving parts, tensions, belts.

AC2.5 Tooling

Bandsaw and circular saw blades, knives, mortice chisel and auger bits.

AC2.5 Components

Rip saw: guards, riving knife, mouth and packing piece

Crosscut saw: guards

Surface planer: infeed, outfeed table, guarding, cutter block

Thicknesser, cutter block, narrow bandsaws, thrust wheel, guides, guards, tracking and tensioning adjustment mechanism

Morticers: collar, chuck, collet.

AC2.6 Regulations

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

Learning outcome

The learner will:

LO3 Understand how to use fixed and transportable machinery efficiently and safely

Assessment criteria

The learner can:

AC3.1 Describe fixed and transportable machinery **tooling**

AC3.2 Describe potential **hazards** when using fixed and transportable machinery
AC3.3 Describe methods of using **fixed** and **transportable machinery** safely
AC3.4 Describe **methods** of supporting materials when using fixed and transportable machinery

Range

AC3.1 Tooling

Bandsaw and circular saw blades, knives, mortice chisel and auger bits.

AC3.2 Hazards

Missing, faulty or incorrectly set guarding, blunt or incorrectly fitted tooling, untidy work environments (dust, off cuts).

AC3.3 Machinery

Fixed - saws (crosscut, rip), surface planer and thicknesser, narrow bandsaws, morticers.

Transportable - saws (chop, hand held circular and jigsaw), planer, router, drills, sanders.

AC3.4 Methods

Use of the outfeed table, rollers, additional manual support.

Learning outcome

The learner will:

LO4 Be able to use fixed and transportable machinery efficiently and safely

Assessment criteria

The learner can:

AC4.1 Carry out risk assessment for using fixed and transportable machinery

AC4.2 **Cut** material using a narrow bandsaw

AC4.3 **Cut** material using a crosscut saw

AC4.4 **Cut** material using a rip saw

AC4.5 **Cut** material using a surface planer

AC4.6 **Cut** material using a thicknesser

AC4.7 **Cut** material using a morticer

AC4.8 Follow current environmental and relevant health and safety **regulations** relating to using fixed and transportable machinery efficiently and safely

Range

AC4.2 Cut

Straight, curved, angled.

AC4.3 Cut

Straight.

AC4.4 Cut

Straight, bevel, taper using push sticks, jigs (saddle, wedge).

AC4.5 Cut

Face side, face edge.

AC4.6 Cut

Width, thickness, bevel, taper.

AC4.7 Cut

Through, stub, haunched mortice.

AC4.8 Regulations

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

Unit 309

Manufacture shaped doors and frames

UAN:	A/504/6770
Level:	3
Credit value:	12
GLH:	103
Endorsement by a sector or regulatory body:	This unit is endorsed by ConstructionSkills.
Aim:	The aim of this unit is to provide the learner with the skills to set out, manufacture, assemble and finish shaped doors and frames.

Learning outcome

The learner will:

LO1 Understand how to set out shaped doors and frames

Assessment criteria

The learner can:

- AC1.1 Interpret **information** used for setting out **shaped** doors and frames
- AC1.2 Explain what **information** is collected from a site survey
- AC1.3 Describe **tools and equipment** used for setting out shaped doors and frames
- AC1.4 Describe **methods** used to set out shaped doors and frames
- AC1.5 Describe different construction **methods** of forming curved components
- AC1.6 Describe **jointing details** required for shaped doors and frames
- AC1.7 Describe information required to produce a cutting list
- AC1.8 Explain how to record and rectify **discrepancies** in information

Range

AC1.1 Information

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

AC1.1 **Shaped** (single curvature)

In elevation: arches, gothic, semi-circular, elliptical (true, pseudo), segmental.
In plan: segmental.

AC1.2 Information

Detailed sizes and shapes, profiles of existing work, images, templates.

AC1.3 Tools and equipment

Set squares, trammel heads and beam, dividers, trammel frame, string, drawing board, computer aided design (CAD), plotter.

AC1.4 Methods

Full size geometrical drawing, patterns, CAD.

AC1.5 Methods

Built up, laminated, solid.

AC1.6 Jointing details

Built up, laminated, hammer headed tenon and key joint, loose tenons, handrail bolts, dovetail key joint.

AC1.8 Discrepancies

Between information sources in 1.1 and 1.2.

Learning outcome

The learner will:

LO2 Be able to set out shaped doors and frames

Assessment criteria

The learner can:

AC2.1 Carry out risk assessment for setting out **shaped** doors and frames

AC2.2 Set out shaped doors and frames

AC2.3 Produce templates for curved components

AC2.4 Produce a cutting list

AC2.5 Follow current environmental and relevant health and safety **regulations** in relation to setting out shaped doors and frames

Range

AC2.1 **Shaped** (single curvature)

Arches: Gothic, semi-circular, elliptical (true, pseudo)

In plan: segmental

AC2.5 Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), Building Regulations, Vibration at Work Regulations, Control of Noise at Work

Regulations, Manual Handling Regulations, Working at Height Regulations, current environmental.

Learning outcome

The learner will:

LO3 Understand how to manufacture shaped doors and frames

Assessment criteria

The learner can:

AC3.1 Describe how materials are **selected** when manufacturing shaped doors and frames

AC3.2 Explain the process of setting up and using **machines** to produce materials from cutting list

AC3.3 Explain the process of forming spindle moulder jigs from templates to meet **current regulations**

AC3.4 Explain the process of setting up and using **machines** to form joints

AC3.5 Explain the process of setting up and using spindle moulder and router to profile materials

Range

AC3.1 **Selected**

Avoid defects, consider grain characteristics.

AC3.2 **Machines**

Crosscut and rip saw, surface planer and thicknesser.

AC3.3 **Current regulations**

PUWER, ACoP.

AC3.4 **Machines**

Morticer, band saw.

Learning outcome

The learner will:

LO4 Be able to manufacture shaped doors and frames

Assessment criteria

The learner can:

AC4.1 Carry out risk assessment for manufacturing shaped doors and frames

AC4.2 **Select** materials for manufacturing shaped doors and frames

AC4.3 Use **machines** to produce materials from cutting list

AC4.4 Mark out materials from setting out details

AC4.5 Form spindle moulder jigs from templates

AC4.6 Use **machines** to form joints

AC4.7 Use spindle moulder and router to profile materials

AC4.8 Follow current environmental and relevant health and safety **regulations** in relation to manufacturing shaped doors and frames

Range

AC4.2 **Select**

Avoid defects, consider grain characteristics

AC4.3 **Machines**

Crosscut and rip saw, surface planer and thicknesser

AC4.6 **Machines**

Morticer, band saw

AC4.8 **Regulations**

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), Building Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, Manual Handling Regulations, Working at Height Regulations, current environmental.

Learning outcome

The learner will:

LO5 Understand how to assemble and finish shaped doors and frames

Assessment criteria

The learner can:

AC5.1 Explain the **reasons** for dry fitting **products** prior to assembly

AC5.2 Describe **cramping techniques**

AC5.3 Describe the process of assembling and finishing products

Range

AC5.1 **Reasons**

Check the joints, finished size and shape.

AC5.1 **Products**

Shaped doors and frames.

AC5.2 **Cramping techniques**

Strap and ratchet, jigs and cramps, draw-bore pins and dowels, cramping heads, joiners dogs, vacuum bags.

Learning outcome

The learner will:

LO6 Be able to assemble and finish shaped doors and frames

Assessment criteria

The learner can:

AC6.1 Carry out risk assessment for assembling and finishing shaped doors and frames

AC6.2 Dry fit to check the joints, finished size and shape

AC6.3 Clean up the inside edges of components

AC6.4 Select and set up appropriate **cramping techniques**

AC6.5 Assemble with adhesive and cramp

AC6.6 Carry out **quality checks**

AC6.7 Prepare products to receive finishes as in given specifications

AC6.8 Follow current environmental and relevant health and safety **regulations** in relation to assembling and finishing shaped doors and frames

Range

AC6.4 Cramping techniques

Strap and ratchet, jigs and cramps, draw-bore pins and dowels, cramping heads, joiners dogs, vacuum bags.

AC6.6 Quality checks

Square, wind, size, shape.

AC6.8 Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), Building Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, Manual Handling Regulations, Working at Height Regulations, current environmental.

Unit 309

Manufacture shaped doors and frames

Supporting information

Additional guidance for the delivery of woodworking machine training covered in this unit

Before any group of learners is allowed to use woodworking machinery a risk assessment should be carried out to help identify learner suitability, maturity and supervision ratios.

While learning and training is in its early stages it is expected that the supervision level would be high and group demonstration and practice would be used.

The trainer must be someone who knows the machining process, its risks and the safe working practices that should be used.

As the learners begin to demonstrate safe working practices and show confidence in using the machines involved within the training program then a gradual move away from group learning should be allowed.

All wood machining training schemes, including those as part of a joinery qualification, should include the following elements:

- General skills
- Machine-specific skills
- Machine familiarisation
- Demonstrating competence
- Competence checklist
- Record keeping

General skills

General health and safety skills include an awareness of the health and safety risks and how to control them by:

- current regulations and approved codes of practice
- extraction
- noise
- correct use of lifting aids
- correct use of protective equipment for eyes ears and hands etc.
- keeping the workshop safe and tidy
- sensible behaviour
- awareness of other operators.

Machine-specific skills

Operators need practical and theoretical instruction in the safe operation of all machines covered within the training programme, including:

- main causes of accidents

- responsibility for their own safety, and others who may be affected by their working practices
- importance of reporting defects to responsible people
- dangers and limitations of working practices and ancillary equipment, for example:
 - safety aides like push stick and blocks
 - the risks from delivery and taking off material
 - dropping on
 - kickback
 - jigs
 - types and correct use of tooling
 - timber selection
 - curved working
- knowledge and demonstration of safe working practices for each stage of the process, for example:
 - machine isolation, emergency stops, interlocks and speed controls
 - purpose, use, limitation and adjustment of guards
 - setting up, correct tool section and changing/replacing tooling
 - selecting and fitting correct guarding for machining process
 - prestart safety procedures including extraction, ear protection and safety glasses
 - operation the machine for the different machining process
 - maintenance and fault reporting procedures

Machine familiarisation

All learners should be familiar with the machine, its ancillary equipment and machining processes including on-the-job training under close supervision.

Demonstrating competence

After the training has taken place the operator's competence should be assessed to see if the training has been successful. The assessor must be someone who knows the machining process, its risks and the safe working practices that should be used.

Operators can only be classed as competent when they can demonstrate that they use the required knowledge and safe working practice at all times.

Competence checklist

A competent worker should be able to demonstrate:

- that they can select the correct machine, tooling and protection devices
- the ability and confidence to say 'this is the wrong machine for this job; it can be done more safely on...'
- what the guards do and how to use and adjust them properly, as well as any other protection devices. For example
 - on a circular saw, why a riving knife is needed and how to set it and adjust the top guard
 - on a spindle, why end stops are needed for "dropping on", how are they set, how to fit and use guards while using end stops

- knowledge of safe methods of working including appropriate selection of jigs, holders, push-sticks and similar protection appliances
- their understanding of the legal requirements for the guards to be used correctly
- knowledge of the nature of the wood and the hazards that this can cause, such as kickback, snatching, short grain and ejection.

Keeping records

While undergoing training it is good practice to keep written records for each learner on the types of training they have received. Once the learner has received the necessary training and has demonstrated their competence, it is good practice to authorise them in writing for the machines and operations that they can use.

Unit 310

Manufacture stairs with turns

UAN:	L/504/6773
Level:	3
Credit value:	12
GLH:	107
Endorsement by a sector or regulatory body:	This unit is endorsed by ConstructionSkills.
Aim:	The aim of this unit is to provide the learner with the skills to set out, manufacture, assemble and finish stairs with turns.

Learning outcome

The learner will:

LO1 Understand how to set out stairs with turns

Assessment criteria

The learner can:

AC1.1 Interpret **information** used for setting out **stairs**

AC1.2 Explain what **information** is collected from a site survey

AC1.3 Describe **tools and equipment** used for setting out stairs

AC1.4 Describe the requirements of current **Building Regulations** in relation to stairs

AC1.5 Describe stair **calculations** required to comply with **Building Regulations**

AC1.6 Describe **methods** used to set out stairs

AC1.7 Describe different construction **methods** of forming turning stairs

AC1.8 Describe **jointing details** required for **stairs** and **handrails**

AC1.9 Describe turning stair **components**

AC1.10 Describe information required to produce a cutting list

AC1.11 Explain how to record and rectify **discrepancies** in information

Range

AC1.1 **Information**

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

catalogues.

AC1.1 Stairs

Geometrical, winding, landing.

AC1.2 Information

Accessibility, openings, head room, finish floor levels, available going, total rise, landing clearance, dimensions.

AC1.3 Tools and equipment

Set squares, trammel heads and beam, dividers , CAD, roofing square and fence.

AC1.4, AC1.5 Building regulations

Approved document K.

AC1.5 Calculations

Rise, going, pitch.

AC1.6 Methods

Full size geometrical drawing, templates, Pythagoras' theorem.

AC1.7 Methods

Built up (staved), laminated, solid.

AC1.8 Jointing details

Stairs

Mortice and tenon, housing, housing joints, widening joints, fixings, dowels, handrail bolt, counter cramp, bareface tenon.

Handrails

Shaped in plan or elevation only.

AC1.9 Components

Strings (Wall, well, wreathed, closed, cut), carriage and bracketing, handrail, newels, riser (open, closed), decorative bracket, tread, glue block, wedges, spindles/baluster, bull nose, semi-circular ending, curtail, commode steps, apron, nosing, scotia.

AC1.11 Discrepancies

Between information sources in 1.1 and 1.2.

Learning outcome

The learner will:

LO2 Be able to set out stairs with turns

Assessment criteria

The learner can:

- AC2.1 Carry out risk assessment for setting out stairs with **turns**
 - AC2.2 Set out stairs with turns
 - AC2.3 Produce templates for stairs with turns
 - AC2.4 Produce a cutting list
 - AC2.5 Follow current environmental and relevant health and safety **regulations** in relation to setting out stairs with turns
-

Range

AC2.1 Turns

Quarter and half turn landings, geometrical, winding.

AC2.5 Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), Building Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, Manual Handling Regulations, Working at Height Regulations, current environmental.

Learning outcome

The learner will:

LO3 Understand how to manufacture stairs with turns

Assessment criteria

The learner can:

- AC3.1 describe how materials are **selected** when manufacturing stairs with turns
 - AC3.2 explain the process of setting up and using **machines** to produce materials from cutting list
 - AC3.3 explain the process of forming and using stair jigs for string housings
 - AC3.4 explain the process of setting up and using a morticer to form joints
 - AC3.5 explain the process of manufacturing **strings**
 - AC3.6 explain the process of manufacturing **steps**
-

Range

AC3.1 Selected

Avoid defects, consider grain characteristics.

AC3.2 Machines

Crosscut and rip saw, surface planer and thicknesser, morticer, bandsaw.

AC3.5 Strings

Wall, well, wreathed, closed, cut.

AC3.6 Steps

Treads (straight and tapered), risers (open and closed).

Learning outcome

The learner will:

LO4 Be able to manufacture stairs with turns

Assessment criteria

The learner can:

AC4.1 Carry out risk assessment for manufacturing stairs with turns

AC4.2 Select materials for manufacturing stairs with turns

AC4.3 Set up and use **machines** to produce materials from cutting list

AC4.4 Mark out materials from setting out details

AC4.5 Manufacture stair **components** to given specifications

AC4.6 Follow current environmental and relevant health and safety **regulations** in relation to manufacturing stairs with turns

Range

AC4.3 Machines

Crosscut and rip saw, surface planer, thicknesser and morticer, bandsaw.

AC4.5 Componentents

Bull nosed, parallel and tapered steps, bottom newel, eased wall and well strings.

AC4.8 Regulations

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), Building Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, Manual Handling Regulations, Working at Height Regulations, current environmental, ACoP.

Learning outcome

The learner will:

LO5 Understand how to assemble and finish stairs with turns

Assessment criteria

The learner can:

AC5.1 Explain the **reasons** for dry fitting stairs prior to assembly

AC5.2 Describe **cramping techniques**

AC5.3 Describe the process of assembling and finishing stairs with turns

AC5.4 State which stair components are left loose for site assembly

Range

AC5.1 Reasons

Check the joints, finished size and shape.

AC5.2 **Cramping techniques**

Cramps, draw-bore pins and dowels.

Learning outcome

The learner will:

LO6 Be able to assemble and finish stairs with turns

Assessment criteria

The learner can:

AC6.1 carry out risk assessment for assembling and finishing stairs with turns

AC6.2 dry fit to check the joints, finished size and shape

AC6.3 clean up the inside edges of components

AC6.4 select and set up appropriate **cramping techniques**

AC6.5 assemble with adhesive, cramp and wedge

AC6.6 carry out **quality checks**

AC6.7 prepare products to receive finishes as in given specification

AC6.8 follow current environmental and relevant health and safety **regulations** in relation to assembling and finishing stairs with turns

Range

AC6.4 **Cramping techniques**

Cramps, draw-bore pins and dowels.

AC6.6 **Quality checks**

Square, wind, size, shape.

AC6.8 **Regulations**

Provision and Use of Work Equipment Regulations (PUWER), Personal Protective Equipment at Work (PPE), Building Regulations, Vibration at Work Regulations, Control of Noise at Work Regulations, Manual Handling Regulations, Working at Height Regulations, current environmental, ACoP.

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 [Centre document library](#) on www.cityandguilds.com or click on the links below:

Centre Handbook: Quality Assurance Standards

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on:

- centre quality assurance criteria and monitoring activities
- administration and assessment systems
- centre-facing support teams at City & Guilds/ILM
- centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the centre contract.

Centre Assessment: Quality Assurance Standards

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre-assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre assessments.

Access arrangements: When and how applications need to be made to City & Guilds

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 document library](#) also contains useful information on such things as:

- conducting examinations
- registering learners
- appeals and malpractice.

Useful contacts

Please visit the [Contact us](#) section of the City & Guilds website.

City & Guilds

For over 140 years, we have worked with people, organisations and economies to help them identify and develop the skills they need to thrive. We understand the life-changing link between skills development, social mobility, prosperity and success. Everything we do is focused on developing and delivering high-quality training, qualifications, assessments and credentials that lead to jobs and meet the changing needs of industry.

We partner with our customers to deliver work-based learning programmes that build competency to support better prospects for people, organisations and wider society. We create flexible learning pathways that support lifelong employability because we believe that people deserve the opportunity to (re)train and (re)learn again and again – gaining new skills at every stage of life, regardless of where they start.

The City & Guilds community of brands includes Gen2, ILM, Intertrain, Kineo and The Oxford Group.

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Published by City & Guilds, a registered charity established to promote education and training.

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5–6 Giltspur Street
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