



PIABC LEVEL 2 NVQ DIPLOMA IN WOOD MACHINING (FURNITURE)

Qualification Number: 600/5687/3

Qualification Specification

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EXECUTIVE SUMMARY

The *PIABC Level 2 NVQ Diploma in Wood Machining (Furniture)* is a nationally recognised qualification which requires the learner to possess or acquire the competencies and knowledge of straight forward wood machining tasks (on traditional machines and/or CNC) with a limited requirement to produce and use aids. The qualification also requires knowledge of health and safety in a machine shop environment and a contribution to the efficient working practices.

The qualification includes a mandatory unit on basic traditional sawing wood machine operations. Learners also choose from a list of other units to best suit their own job role, including jointing, profiling, planning, boring, sanding, edging, operating CAD equipment etc

It is expected that the prospective learner will have had sufficient initial assessment by the centre to establish the likely success of the learner, together with the learner specific learning requirements to maximise success.

Programmes leading to **PIABC Level 2 NVQ Diploma in Wood Machining (Furniture)** can be organised and delivered by providers who have gained centre and qualification approval from PIABC. To achieve this they need to complete the PIABC centre and qualification approval procedures available from www.piabc.org.uk.

Success in this qualification prepares learners to advise others on the most appropriate method to produce accurate components in a safe, effective and efficient manner.

The qualification was developed under the Qualifications Credit Framework (QCF) and comprises of units from a number of Sector Skills Councils and therefore Assessors should use the associated relevant Assessment Strategies.

AIM

This national qualification is competence based with a requirement to understand the capabilities and limitations of every day wood machining machines.

The aim of the qualification is to acknowledge an individuals achievement whilst promoting a wider understanding of health and safety, efficient working and the use of machines. Those achieving the PIABC Level 2 NVQ Diploma in Wood Machining (Furniture) will be able to produce components and apply related knowledge in a commercial setting.

The qualification is intended for those who have access to a range of machines to carry out a range of operations. The qualification contains Level 2 units only. Learners who have already obtained relevant units can claim APL for the units already achieved.

The PIABC Level 2 NVQ Diploma in Wood Machining (Furniture) also provides the competency qualification component of the apprenticeship programme.

OUTCOMES

In setting out a clearly-defined level of achievement, this qualification will:

1. Confirm and enhance the knowledge and job satisfaction of learners - providing them with a means of progression to higher level job roles and qualifications.
2. Provide employers with an open and transparent basis for judging the suitability of learners for employment and promotion.
3. Facilitate job movement throughout the timber sector and other related areas of the timber industry.

Specific outcomes for the qualification are listed under the individual unit description.

TARGET GROUP

This Level 2 qualification is appropriate for those working in woodworking machine shops, wanting to gain recognition for the competencies and understanding in the basic operation of wood working machines.

Learners are likely to be working as wood machinists.

Job role	Type of company
Wood machinist	Any sized company having access to a wide range of traditional machines producing components for the furniture or construction industry or similar.

ENTRY REQUIREMENTS

There are no entry qualifications or age limits required for this qualification.

Assessment for this qualification is open to any learner who has the potential to reach the standards laid down for this qualification. An initial assessment of past experience and current skills, knowledge and understanding should be carried out prior to commencement, to determine suitability for this qualification.

Aids or appliances, which are designed to alleviate disability, may be used during assessment, providing they do not compromise the standard required.

PROGRESSION

Success in this qualification prepares learners for progression in the timber and furniture industries to a position where they can assume a level of responsibility for not only machine use but also for a workshop or department. Natural progression would be to take the PIABC Level 3 NVQ in Wood Machining (Furniture). Learners may have the opportunity to progress into Supervisory and Management roles taking suitable qualifications or equally may have opportunities to study related crafts such as joinery or cabinet making – both of which have national qualifications and Apprenticeships at Levels 2 and 3. Learners are encouraged to consider belonging to a professional institute or similar. Centres are encouraged to make learners aware of wood machining and related professional bodies.

QUALIFICATION STRUCTURE

The qualification was developed under the Qualifications Credit Framework (QCF) and comprises of units from a number of Sector Skills Councils and therefore Assessors should use the associated appropriate Assessment Strategies.

The qualification is made up of mandatory and optional units. The mandatory units cover those areas which have a common approach, such as safety and the principle learning outcomes for the job role. The optional units offer a choice that can be combined to meet the needs of an individual's specific job role together with the organisations and learners preferences.

Guided Learning Hours (GLH) is the number of hours of teacher supervised or directed study time required to teach an individual unit or qualification. GLH have been calculated unit by unit - in isolation of each other - such that the unit is a stand alone unit, therefore centres may find that where learners are completing a number of units to achieve the complete qualification actual overall GLH will reduce (i.e. the actual GLH for the entire qualification is unlikely to be a sum total of the individual units taken).

Learning time will clearly be reduced if learners hold QCF credits from prior learning. Learners will also be expected to carry out additional reading, practice and other work to complete each unit and prepare for assessment.

Credit values are determined by the total learning hours (teaching + demonstrations + practice + reflection + assessment - including developing competence in the work environment etc) divided by 10. For example 7 credits reflect a total learning time of 70 hours. Learning time is usually much greater than GLH. Credit values have been calculated

unit by unit - in isolation of each other - such that the unit is a stand alone unit; therefore centres may find that where learners are completing a number of units to achieve the complete qualification, actual learning time will reduce (i.e. the actual learning time for the entire qualification is unlikely to be a sum total of the credits of the individual units taken).

Rules of Combination are used to define the structure of QCF qualifications and specify the minimum credits which must be achieved through a particular combination of units to gain a full qualification.

RULES OF COMBINATION

Rules of Combination summary: Learners must achieve 50 credits in Group A and 28 credits from Group B and 20 credits from Group C. The total minimum credit value of this qualification is 98 credits.

Group A: 50 credits required

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
PI001	A/600/8286	Make sure your own actions reduce risks to health and safety within a furniture/interiors related workplace	6	2	27
PI002	A/600/8398	Work effectively in a furniture/interior-related commercial environment	13	2	56
WM2M	L/600/8129	Assist with the operation of furniture production machinery	11	2	49
WM305	L/600/8566	Producing sawn wood and wood-based products in the workplace. This unit must be assessed against three of the following endorsements: <ul style="list-style-type: none"> - band resaw - narrow band saw - parallel band saw - band mill - twin line resaw - hand fed circular rip saw - dimension/tilting arbour circular saw - sliding table panel saw - vertical wall panel saw - pullover cross cut saw - radial arm cross cut saw - straight line edger - multi-rip saw - beam saw - snip saw 	20	2	67

Group B: 28 credits required

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
WM309	D/600/8569	Producing jointed wood and wood-based products in the workplace This unit must be assessed against two of the following endorsements: <ul style="list-style-type: none"> – chisel morticer – chain morticer – slot morticer – dovetailer – vertical spindle moulder – stair router – single-end tenoner – double-end tenoner – round-end tenoner – router 	13	2	43
WM308	H/600/8573	Producing wood and wood-based products using computer numerically controlled/numerically controlled _CNC/NC_ machinery in the workplace This unit must be assessed against the following endorsements (one from list a or two from list b): List a: <ul style="list-style-type: none"> – high-speed router – window centre. List b: <ul style="list-style-type: none"> – single-end tenoner – double-end tenoner – panel saw – morticing machines – lathe – four-sided planer – sanding machine – boring machine – shaping machine – edge bander – spindle moulder – beam saw 	22	2	73
WM307	Y/600/8568	Producing profiled wood and wood-based products in the workplace This unit must be assessed against two of the following endorsements: <ul style="list-style-type: none"> – vertical spindle moulder (straight work) – four sided planer and moulder – high-speed router – double-end tenoner – wood turning lathe – copying lathe – linear shaper – rotary shaper – cnc/nc machines 	21	2	70

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
WM306	R/600/8567	Producing planed wood and wood-based products in the workplace This unit must be assessed against one of the following endorsements: – surface planer and thicknesser – four sided planer and moulder	15	2	50

Group C: 20 Credits required

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
WM201	M/600/8589	Producing bored wood and wood-based products in the workplace This unit must be assessed against two of the following endorsements: – single-head machine – multi-head machine	10	2	33
WM202	K/600/8591	Producing and maintaining wood machining tooling in the workplace	11	2	37
WM203	T/600/9081	Dealing with product enquiries in the workplace	10	2	33
WM204	F/600/8595	Producing edge treatment finishes to wood and wood-based products	11	2	37
WM205	D/503/2649	Marking out from setting out details for routine bench/architectural joinery products in the workplace	12	2	40
WM206	D/503/2652	Marking out from setting out details for routine shopfitting products in the workplace	12	2	40
WM207	H/503/2703	Manufacturing routine bench/architectural products in the workplace	19	2	19
WM208	T/503/2606	Manufacturing routine shopfitting products in the workplace	19	2	63
WM209	K/600/8588	Producing sanded wood and wood-based products in the workplace This unit must be assessed against two of the following endorsements: – wide belt sander – overhead narrow belt sander – disc sander – bobbin sander – finisher – profile sander	10	2	33
WM210	A/600/8594	Maintaining machinery and equipment in the workplace	16	2	53

QUALIFICATION LEVEL

PIABC Level 2 NVQ Diploma in Wood Machining (Furniture) is a Level 2 qualification.

Level 2 Descriptor

Summary

Achievement at Level 2 reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.

Knowledge and Understanding

- Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems.
- Interpret relevant information and ideas.
- Be aware of the types of information that are relevant to the area of study or work

Application and action

- Complete well-defined, generally routine tasks and address straightforward problems
- Select and use relevant skills and procedures
- Identify, gather and use relevant information to inform actions
- Identify how effective actions have been

Autonomy and accountability

- Take responsibility for completing tasks and procedures
- Exercise autonomy and judgement subject to overall direction or guidance

Source: Regulatory arrangements for the Qualifications and Credit Framework OFQUAL 2008

PROGRAMME ORGANISATION

Programmes leading to the PIABC Level 2 NVQ Diploma in Wood Machining (Furniture) can be organised and delivered by providers who have gained centre and qualification approval from PIABC. To achieve this they need to complete the PIABC centre and qualification approval procedures available from www.piabc.org.uk. In completing the documentation and the approval visit, centres need to demonstrate their ability to deliver high quality education leading to the qualification. Centres are expected to employ robust quality assurance processes. PIABC will appoint its own moderators to ensure the effective operation of these processes and the maintenance of standards of quality.

The organisation of the qualification is at the discretion of the centre and will take into account the aims, aspirations and experience of the learners.

Centres are encouraged to choose the most suitable curriculum model for their learners. Whilst the sequential delivery of parts of the unit is a possibility and may provide the most straightforward way of determining completion, it may be that some degree of integration of elements will occur, or that other methods of delivery are more appropriate to meet the needs of learners. It should be noted however that the whole unit and all the learning outcomes will be assessed.

Centres must ensure that adequate arrangements are in place for supporting learners. This could be either through separate tutorial sessions or through the use of time within structured study sessions. Centres using on-line or other forms of open learning must ensure that appropriate tutorial support is provided for learners.

The employer's engagement in learning and assessment opportunities will be paramount in securing timely achievement and a participative role should be encouraged.

In relevant circumstances, centres are recommended to provide career related information and guidance to their learners.

GUIDANCE ON LEARNING AND TEACHING

Some learners will have undertaken a related learning course prior to or in conjunction with this qualification – especially if they are following a nationally recognised Apprenticeship. However, those learners employed in the timber and related industries, completing this qualification without following a recognised training programme will come to the qualification with varying levels of existing knowledge and/or practical experience of some parts of the syllabus. Training needs should be identified and gaps in knowledge and competency should be filled with a planned delivery of an individual learning plan. This should be utilised in preparing for teaching and assessment. The sharing of knowledge which has the potential to lead to a high level of understanding should be encouraged by the use of staff with direct experience in the wood machining and related industries. This must, of course, be balanced against a sound understanding of the theoretical understanding.

The relationship between theory and practice is a theme that should be reflected in the assessments for the programme. Therefore in structured learning and individual work, learners should be aware of the requirement to develop a theoretical understanding to their practical work and a practical application to their theoretical understanding.

Those developing learning programmes should expect to achieve all the learning outcomes. It may be useful to have workbooks for use either at home or in the workplace.

QUALIFICATION DESCRIPTION

The PIABC Level 2 NVQ Diploma in Wood Machining (Furniture) follows the QCF principles for designing units and qualifications and contains the features listed as follows:

- Unit QCF reference number, title, level, guided learning hours and credit value.
- Each unit consist of:
 - Learning Outcomes that show what the learners will be able to understand, know or demonstrate.
 - Assessment Criteria that show what the learners can do or produce in order to show that they have met the learning outcome.
 - Some Units also indicate the intended scope of the performance criteria
- To successfully complete a Unit, learners must meet all the learning outcomes by showing that they have achieved all the assessment criteria with consideration to the intended scope.

UNIT CONTENT: LEARNING OUTCOMES AND ASSESSMENT CRITERIA

The PIABC Level 2 NVQ Diploma in Wood Machining (Furniture) is a nationally recognised qualification which requires the learner to possess or acquire the competencies and knowledge of the basic wood machining tasks (on traditional machines and /or CNC) with some use of simple jigs etc. The qualification also requires knowledge of health and safety in a machine shop environment. Those achieving the qualification will be able to apply this knowledge in the production of components and/or products in a commercial setting, choosing appropriate machinery.

The qualification prepares learners for the PIABC Level 2 NVQ in Wood Machining (Furniture).

Learners who have already obtained relevant units can claim APL for the units already achieved.

MAKE SURE YOUR ACTIONS REDUCE RISKS TO HEALTH AND SAFETY WITHIN YOUR WORKPLACE

PIABC Unit No: PI001
Unit Accreditation No: F/503/8136
Unit Level: 2

Guided Learning Hours: 27
Unit Credits: 6

Assessment Guidance

This unit is for everyone at work (whether paid, unpaid, full or part-time). It is about having an appreciation of significant risks in your workplace, knowing how to identify and deal with them.

This unit is about the health and safety responsibilities for everyone in your workplace. It describes the competences required to make sure that:

- your own actions do not create any health and safety hazards
- you do not ignore significant risks in your workplace, and
- you take sensible action to put things right, including: reporting situations which pose a danger to people in the workplace and seeking advice

Fundamental to this unit is an understanding of the terms "hazard", "risk" and "control".

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|---|--|
| 1. Be able to identify the hazards and evaluate the risks in your workplace: | 1.1 Identify which workplace instructions are relevant to your job role |
| | 1.2 Identify those working practices in your job role which could harm you or others |
| | 1.3 Identify those aspects of your workplace which could harm you or others |
| | 1.4 Check which of the potentially harmful working practices and aspects of your workplace present the highest risks to you or to others |
| | 1.5 Deal with hazards in accordance with workplace instructions and legal requirements |
| | 1.6 Correctly name and locate the people responsible for health and safety in your workplace |
| | 1.7 Report to the people responsible for health and safety in your workplace those hazards which present the highest risks |
| 2. Know how to identify the hazards and evaluate the risks in your workplace: | 2.1 Define what "hazards" and "risks" are |
| | 2.2 State your responsibilities for health and safety as required by the law covering your job role |
| | 2.3 Describe the hazards which exist in your workplace and the safe working practices which you must follow. |
| | 2.4 Describe the particular health and safety hazards which may be present in your own job role and the precautions you must take |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- | | |
|--|--|
| 3. Be able to reduce the risks to health and safety in your workplace: | 2.5 Explain the importance of remaining alert to the presence of hazards in the whole workplace |
| | 2.6 Explain the importance of dealing with, or promptly reporting, risks |
| | 2.7 Define the responsibilities for health and safety in your job role/description |
| | 2.8 Describe the safe working practices for your own job role |
| | 2.9 Identify the responsible people you should report health and safety matters to. |
| | 2.10 State where and when to get additional health and safety assistance |
| 3.1 Carry out your work in accordance with your level of competence, workplace instructions, suppliers or manufacturer's instructions and legal requirements | |
| 3.2 Control those health and safety risks within your capability and job responsibilities | |
| 3.3 Pass on suggestions for reducing risks to health and safety to the responsible people | |
| 3.4 Make sure your behaviour does not endanger the health and safety of you or others in your workplace | |
| 3.5 Follow the workplace instructions and suppliers' or manufacturers' instructions for the safe use of equipment, materials and products | |
| 3.6 Report any differences between workplace instructions and suppliers' or manufacturers' instructions | |
| 3.7 Make sure that your personal presentation and behaviour at work: | |
| | <ul style="list-style-type: none">• protects the health and safety of you and others,• meets any legal responsibilities, and• is in accordance with workplace instructions |
| 3.8 Make sure you follow environmentally-friendly working practices | |
| 4. Know how to reduce the risks to health and safety in your workplace: | 4.1 Define and describe your scope and responsibility for controlling risks |
| | 4.2 State the workplace instructions for managing risks which you are unable to deal with |
| | 4.3 Identify the suppliers' and manufacturers' instructions for the safe use of equipment, materials and products which you must follow |
| | 4.4 Explain the importance of personal presentation in maintaining health and safety in your workplace |
| | 4.5 Explain the importance of personal behaviour in maintaining the health and safety of you and others |
| | 4.6 Describe the risks to the environment which may be present in your workplace and/or in your own job role |

CONTRIBUTE TO THE EFFECTIVENESS OF WORK IN A COMMERCIAL SETTING

PIABC Unit No: PI002

Unit Accreditation No: F/503/5995

Unit Level: 2

Guided Learning Hours: 30

Unit Credits: 5

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|---|--|
| 1. Plan and organise own work | 1.1 Ensure you have the required authority to complete the required activity
1.2 Comply with current legislation including working safely
1.3 Check that you understand the particular work activity and your role within it
1.4 Check that the area is clean, tidy and free from hazards before starting work
1.5 Check that required resources and equipment are ready before starting work
1.6 Check the job documentation prior to starting work
1.7 Complete the activity as planned without any undue delay
1.8 Complete all documentation accurately and legibly and pass it on to the next stage |
| 2. Know how to plan and organize their work | 2.1 Describe your job roles, responsibilities and levels of authority
2.2 List the current legislation and describe how it applies to your role
2.3 Describe the work activity and your role in that activity
2.4 Explain how you would check that the area is clean, tidy and free from hazards including listing the hazards and possible consequences
2.5 List the resources required for the activity
2.6 Describe how to check that the equipment is ready for use
2.7 Identify the documentation and show how it is used
2.8 Describe the workplace procedures for monitoring the progress of the activity and keeping others informed
2.9 Show how the documentation is completed and describe the next stage |
| 3. Work effectively with other team members | 3.1 Treat others with respect at all times
3.2 Communicate with others using the appropriate method
3.3 Give constructive support and feedback to appropriate personnel
3.4 Receive support and feedback from personnel |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- | | |
|--|---|
| 4. Know how the work effectively with others | 4.1 Explain how treating others with respect contributes to workplace efficiency
4.2 State what methods of communication to use and when to use them
4.3 Describe how to identify when assistance may be needed and the how this may be given
4.4 Explain why it is important to receive feedback and support
4.5 Describe how to give constructive feedback and support
4.6 Explain why it is important to give constructive feedback and support |
| 5. Contribute to problem solving and improvements | 5.1 Respond to any problems that occur during the work activity
5.2 Report any problems that occur and the actions taken
5.3 Identify and share opportunities for improving workplace practices and procedures using the appropriate method |
| 6. Know how to contribute to problem solving and improvement | 6.1 Describe the most common problems that may occur and how these are solved
6.2 Describe the reporting procedure for problems
6.3 Describe how to identify opportunities for improvement
6.4 Describe how suggestions for improvements should be made and to whom
6.5 Explain how the identification of improvements can benefit you and the organisation |

ASSIST WITH THE OPERATION OF FURNITURE PRODUCTION MACHINERY

PIABC Unit No: WM2M

Guided Learning Hours: 49

Unit Accreditation No: L/600/8129

Unit Credits: 11

Unit Level: 2

Assessment Guidance

Danger - Danger may arise from malfunction, breakages of materials or from an operator becoming trapped by some moving part.

Damage - Damage to materials and components can take several forms. In the case of hardwood, softwood, composite board materials and veneer panels there may be warping, twisting, splitting or bruising or there may be shakes, surface gouges or dead knots.

Machinery - The type of machinery covered by this unit includes wood machining equipment and veneer presses.

Operations - The machine operations covered by this unit include feeding of woods into wood machining equipment, and the mechanical spreading of adhesives during veneering.

Materials - The materials relevant to wood machining are lengths of hard and soft woods, and composite boards. The materials in the case of veneering presses are the veneers and cores to which the veneer is to be applied.

Personal Protective Equipment - This covers eye protection, ear protection, gloves, overalls, boots and dust mask.

Report - Reporting of progress may involve telling the operator or supervisor as well as completing required records, either in written form or electronically.

Specification - The set of instructions which describe the materials to be loaded and the nature and expected progress of the operations to be carried out.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|--|--|
| 1. Be able to load machinery | 1.1 Ensure there is a specification of the required materials |
| | 1.2 Refer aspects of the specification which are unclear or incomplete to a supervisor |
| | 1.3 Confirm that the machine has been set and is ready to receive the materials |
| | 1.4 Select and load materials of the required quality and quantity to meet the specification |
| | 1.5 Ensure loaded materials are secure in the correct position |
| | 1.6 Ensure work holding devices and guards are in place |
| | 1.7 Report that loading is complete |
| | 1.8 Reject and report materials which are damaged or of unacceptable quality |
| 2. Know how to load machinery | 2.1 Explain terms used to describe materials used in furniture production |
| | 2.2 Describe how to check different types of materials against a specification |
| | 2.3 State authorised personnel to set machines for operation |
| | 2.4 Describe how to handle and load materials to prevent them being damaged |
| | 2.5 Explain how to recognise damaged or poor quality materials |
| | 2.6 Describe how to recognise different types of damage that can occur |
| 3. Be able to assist with machinery operation | 3.1 Assist with start up of machinery |
| | 3.2 Operate the machinery within safe working limits |
| | 3.3 Monitor progress of the operation against specifications |
| | 3.4 Adjust the operation as necessary to ensure the required outcome |
| | 3.5 Report deviations from progress which are outside your control and responsibility |
| | 3.6 Maintain accurate and complete records of the operation and outputs |
| | 3.7 Effect an emergency stop if machine operation constitutes a danger |
| | 3.8 Report emergency actions to a supervisor |
| | 3.9 Report operational progress using required procedures |
| 4. Know how to assist with machinery operation | 4.1 Describe pre-start up checks |
| | 4.2 Explain the importance of carrying out pre-start up checks |
| | 4.3 State the safe working limits for the machinery |
| | 4.4 Explain how to adjust the controls to keep machinery within safe working limits |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

5. Understand health and safety procedures in the workplace
- 4.5 Outline the expected progress of the operation in terms of timing, stages and outputs
 - 4.6 State reporting procedures and why it is important to do this promptly
 - 4.7 Describe the information recorded about the operation
 - 4.8 Explain the implications of not keeping accurate and complete records
 - 4.9 Explain the importance of maintaining work schedules
 - 5.1 Use safe handling and lifting techniques when loading materials
 - 5.2 Follow safe working procedures when loading and working near powered equipment
 - 5.3 Wear the appropriate personal protective equipment for the machine and materials
 - 5.4 Explain how to recognise materials that are damaged or of poor quality
 - 5.5 Describe personal limitations in respect of the Provision and Use of Work Equipment Regulations (PUWER) regulations 1998
 - 5.6 Describe the work implications of the Health and Safety at Work Act (HASAWA), Control of Substances Hazardous to Health (COSHH) regulations
 - 5.7 Explain where to find organisation risk assessment details and control strategies
 - 5.8 Describe personal protective equipment to be worn
 - 5.9 Explain the importance of using personal protective equipment
 - 5.10 Describe situations that would constitute a danger and require use of an emergency stop

PRODUCING SAWN WOOD AND WOOD-BASED PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM305

Guided Learning Hours: 67

Unit Accreditation No: L/600/8566

Unit Credits: 20

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing sawn wood and wood-based products to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against **three** of the following endorsements:

- Band resaw
- Narrow band saw
- Parallel band saw
- Band mill
- Twin line resaw
- Hand fed circular rip saw
- Dimension/tilting arbour circular saw
- Sliding table panel saw
- Vertical wall panel saw
- Pullover cross cut saw
- Radial arm cross cut saw
- Straight line edger
- Multi-rip saw
- Beam saw
- Snip saw

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

1. Interpret the given information relating to the work and resources when producing sawn wood and wood-based products.
 - 1.1 Interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information.
 - 1.2 Comply with information and/or instructions derived from risk assessments and method statement.
 - 1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
 - 1.4 Describe different types of information, their source and how they are interpreted in relation to:
 - drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and legislation governing wood machining.
2. Know how to comply with relevant legislation and official guidance when producing sawn wood and wood-based products.
 - 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
 - in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and by manual and mechanical lifting.
 - 2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.
 - 2.3 State what the accident reporting procedures are and who is responsible for making reports.
3. Maintain safe working practices when producing sawn wood and wood-based products.
 - 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when producing sawn wood and wood-based products.
 - 3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing sawn wood and wood-based products, and the types, purpose and limitations of each type.
 - 3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards.
4. Select the required quantity and quality of resources for the methods of work to produce sawn wood and wood-based products.
 - 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
 - sawing machinery
 - wood materials
 - wood-based materials
 - lubricants
 - hand tools and ancillary equipment.
 - 4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment, and dimensional control aids as appropriate.

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- | | |
|---|---|
| 5. Minimise the risk of damage to the work and surrounding area when producing sawn wood and wood-based products. | 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
4.4 Outline potential hazards associated with the resources and method of work.
4.5 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to produce sawn wood and wood-based products. |
| 6. Complete the work within the allocated time when producing sawn wood and wood-based products. | 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
5.2 Minimise damage and maintain a clean work space.
5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
5.4 Remove waste in accordance with legislation.
5.5 State why the removal of waste should be carried out in relation to the work. |
| 7. Comply with the given contract information to produce sawn wood and wood-based products to the required specification. | 6.1 Demonstrate completion of the work within the allocated time.
6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
– types of progress charts, timetables and estimated times
– organisational procedures for reporting circumstances which will affect the work programme.
7.1 Demonstrate the following work skills when producing sawn wood and wood-based products:
– measuring, marking out, adjusting, fitting, finishing, positioning and securing.
7.2 Prepare, set up, operate and maintain at least three of the following machines to produce sawn wood and wood-based products to given working instructions:
– band resaw
– narrow band saw
– parallel band saw
– band mill
– twin line resaw
– hand fed circular rip saw
– dimension/tilting arbour circular saw
– sliding table panel saw
– vertical wall panel saw
– pullover cross cut saw
– radial arm cross cut saw
– straight line edger
– multi-rip saw
– beam saw
– snip saw.
7.3 Set up and change appropriate tooling to meet the requirements. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- 7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- prepare and set up the sawing machinery
 - operate the sawing machinery
 - maintain the sawing machinery
 - identify the compatibility of materials with machines
 - identify how damage to materials and machines can be avoided
 - identify the correct use of lubricants
 - identify the relevant dimensional control aids and their uses
 - identify and report defects and discrepancies in materials and machines
 - set up and change appropriate tooling
 - identify the types and suitability of tooling
 - identify the scope and limitations of the machine
 - select the appropriate machine for the work to be carried out
 - use hand tools and equipment.
- 7.5 Safely use and store hand tools and ancillary equipment.
- 7.6 State the needs of other occupations and how to communicate within a team when producing sawn wood and wood-based products.
- 7.7 Describe how to maintain the tools and equipment used when producing sawn wood and wood-based products.

PRODUCING JOINTED WOOD AND WOOD-BASED PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM309

Guided Learning Hours: 43

Unit Accreditation No: D/600/8569

Unit Credits: 13

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing sawn wood and wood-based products to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against **two** of the following endorsements:

- Chisel morticer
- Chain morticer
- Slot morticer
- Dovetailer
- Vertical spindle moulder
- Stair router
- Single-end tenoner
- Double-end tenoner
- Round-end tenoner
- Router

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|---|--|
| 1. Interpret the given information relating to the work and resources when producing jointed wood and wood-based products. | 1.1 Interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and legislation governing wood machining. |
| 2. Know how to comply with relevant legislation and official guidance when producing jointed wood and wood-based products. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and by manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when producing jointed wood and wood-based products. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current legislation and approved Codes of Practice when producing jointed wood and wood-based products.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing jointed wood and wood-based products, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to produce jointed wood and wood-based products. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– jointing machinery
– wood materials
– wood based materials
– lubricants
– hand tools and ancillary equipment.
4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
- 4.4 Outline potential hazards associated with the resources and method of work.
- 4.5 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to produce jointed wood and wood-based products.
5. Minimise the risk of damage to the work and surrounding area when producing jointed wood and wood-based products.
- 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
- 5.2 Minimise damage and maintain a clean work space.
- 5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
- 5.4 Remove waste in accordance with legislation.
- 5.5 State why the removal of waste should be carried out in relation to the work.
6. Complete the work within the allocated time when producing jointed wood and wood-based products.
- 6.1 Demonstrate completion of the work within the allocated time.
- 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
- types of progress charts, estimated times and deadlines
 - organisational procedures for reporting circumstances which will affect the work programme.
7. Comply with the given contract information to produce jointed wood and wood-based products to the required specification.
- 7.1 Demonstrate the following work skills when producing jointed wood and wood-based products:
- measuring, marking out, adjusting, fitting, finishing, positioning and securing.
- 7.2 Prepare, set up, operate and maintain at least two of the following machines to produce jointed wood and wood-based products to given working instructions:
- chisel morticer
 - chain morticer
 - slot morticer
 - dovetailer
 - vertical spindle moulder (attachments for dovetailing, finger jointing, stair trenching and tenoning)
 - stair router
 - single-end tenoner
 - double-end tenoner
 - round-end tenoner
 - router.
- 7.3 Set up and change appropriate tooling to meet requirements.

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- 7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- prepare and set up the jointing machinery
 - operate the jointing machinery
 - maintain the jointing machinery
 - identify how damage to materials and machinery can be avoided
 - identify the correct use of lubricants
 - identify the compatibility of materials with machines

 - identify the relevant dimensional control aids and their uses
 - identify and report defects and discrepancies in materials and machines
 - set up and change appropriate tooling
 - identify the types and suitability of tooling
 - identify the scope and limitations of the machine
 - select the appropriate machine for the work to be carried out
 - use hand tools and equipment.
- 7.5 Safely use and store hand tools and ancillary equipment.
- 7.6 State the needs of other occupations and how to communicate within a team when producing jointed wood and wood-based products.
- 7.7 Describe how to maintain the tools and equipment used when producing jointed wood and wood-based products.

PRODUCING WOOD AND WOOD-BASED PRODUCTS USING COMPUTER NUMERICALLY CONTROLLED/NUMERICALLY CONTROLLED (CNC/NC) MACHINERY IN THE WORKPLACE

PIABC Unit No: WM308
Unit Accreditation No: H/600/8573
Unit Level: 2

Guided Learning Hours: 73
Unit Credits: 22

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the following endorsements (one from List A or two from List B):

List A:

- High-speed router
- Window centre

List B:

- Single-end tenoner
- Double-end tenoner
- Panel saw

- Morticing machines
- Lathe
- Four-sided planer
- Sanding machine
- Boring machine
- Shaping machine
- Edge bander
- Spindle moulder
- Beam saw

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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|---|---|
| 1. Interpret the given information relating to the work and resources when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery. | 1.1 Interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and legislation governing wood machining. |
| 2. Know how to comply with relevant legislation and official guidance when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, with movement of materials and by manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current legislation and approved Codes of Practice when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to produce wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– CNC machinery
– NC machinery
– wood materials
– wood-based materials
– lubricants
– hand tools and ancillary equipment. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

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|--|--|
| 5. Minimise the risk of damage to the work and surrounding area when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery. | 4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate.
4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
4.4 Outline potential hazards associated with the resources and method of work.
4.5 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to produce wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery. |
| 6. Complete the work within the allocated time when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery. | 5.1 Protect the work, equipment and its surrounding area from damage.
5.2 Minimise damage and maintain a clean work space.
5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
5.4 Remove waste in accordance with legislation.
5.5 State why the removal of waste should be carried out in relation to the work. |
| 7. Comply with the given contract information to produce wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to the required specification. | 6.1 Demonstrate completion of the work within the allocated time.
6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
– types of progress charts, estimated times and deadlines
– organisational procedures for reporting circumstances which will affect the work programme.
7.1 Demonstrate the following work skills when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery:
– measuring, marking out, adjusting, fitting, finishing, positioning and securing.
7.2 Prepare, set up, operate and maintain the following CNC/NC machines (one from list A or two from list B) to produce wood and wood-based products to given working instructions:
List A:
– high-speed router
– window centre.
List B:
– single-end tenoner
– double-end tenoner
– panel saw
– morticing machines
– lathe
– four-sided planer |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- sanding machine
 - boring machine
 - shaping machine
 - edge bander
 - spindle moulder
 - beam saw.
- 7.3 Set up and change appropriate tooling to meet the requirements.
- 7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- prepare and set up the CNC/NC machinery
 - operate the CNC/NC machinery
 - maintain the CNC/NC machinery
 - identify the compatibility of materials with machines
 - identify how damage to materials and machines can be avoided
 - identify the correct use of lubricants
 - identify the relevant dimensional control aids and their uses
 - identify and report defects and discrepancies in materials and machines
 - set up and change appropriate tooling
 - identify the types and suitability of tooling
 - identify the scope and limitations of the machine
 - select the appropriate machine for the work to be carried out
 - use hand tools, power tools and equipment.
- 7.5 Safely use and store hand tools and ancillary equipment.
- 7.6 State the needs of other occupations and how to communicate within a team when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery.
- 7.7 Describe how to maintain the tools and equipment used when producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery.

PRODUCING PROFILED WOOD AND WOOD-BASED PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM307

Guided Learning Hours: 70

Unit Accreditation No: Y/600/8568

Unit Credits: 21

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against **two of the following** endorsements:

- Vertical spindle moulder (straight work)
- Four sided planer and moulder
- High-speed router
- Double-end tenoner
- Wood turning lathe
- Copying lathe
- Linear shaper
- Rotary shaper
- CNC/NC machines

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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| 1. Interpret the given information relating to the work and resources when producing profiled wood and wood-based products. | 1.1 Interpret and extract information from drawings, specifications, cutting lists, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and legislation governing wood machining. |
| 2. Know how to comply with relevant legislation and official guidance when producing profiled wood and wood-based products. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and by manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when producing profiled wood and wood-based products. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when producing profiled wood and wood-based products.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing profiled wood and wood-based products, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to produce profiled wood and wood-based products. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– profiling machinery
– wood materials
– wood-based materials
– lubricants
– hand and/or powered tools and ancillary equipment.
4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment, and dimensional control aids as appropriate.
4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

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|---|---|
| 5. Minimise the risk of damage to the work and surrounding area when producing profiled wood and wood-based products. | 4.4 Outline potential hazards associated with the resources and method of work.
4.5 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to produce profiled wood and wood-based products. |
| 6. Complete the work within the allocated time when producing profiled wood and wood-based products. | 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
5.2 Minimise damage and maintain a clean work space.
5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
5.4 Remove waste in accordance with legislation.
5.5 State why the removal of waste should be carried out in relation to the work. |
| 7. Comply with the given contract information to produce profiled wood and wood-based products to the required specification. | 6.1 Demonstrate completion of the work within the allocated time.
6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
– types of progress charts, estimated times and deadlines
– organisational procedures for reporting circumstances which will affect the work programme.
7.1 Demonstrate the following work skills when producing profiled wood and wood-based products:
– measuring, marking out, adjusting, fitting, finishing, positioning and securing.
7.2 Prepare, set up, operate and maintain at least two of the following machines to produce profiled wood and wood-based products to given working instructions:
– vertical spindle moulder (straight work)
– four sided planer and moulder
– high-speed router
– double-end tenoner
– wood turning lathe
– copying lathe
– linear shaper
– rotary shaper
– CNC/NC machines.
7.3 Set up and change appropriate tooling to meet the requirements.
7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
– prepare and set up the profiling machinery
– operate the profiling machinery
– maintain the profiling machinery
– identify how damage to materials and machines can be avoided
– identify the correct use of lubricants
– identify the compatibility of materials with machines |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- identify the relevant dimensional control aids and there uses
- identify and report defects and discrepancies in materials and machines
- set up and change appropriate tooling
- identify the types and suitability of tooling
- identify the scope and limitations of the machine
- select the appropriate machine for the work to be carried out
- use hand tools and equipment.

7.5 Safely use and store hand tools and ancillary equipment.

7.6 State the needs of other occupations and how to communicate within a team when producing profiled wood and wood-based products.

7.7 Describe how to maintain the tools and equipment used when producing profiled wood and wood-based products.

PRODUCING PLANED WOOD AND WOOD-BASED PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM306

Guided Learning Hours: 20

Unit Accreditation No: R/600/8567

Unit Credits: 15

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against **one** of the following endorsements:

- Surface planer and thicknesser
- Four sided planer and moulder

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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|---|--|
| <p>1. Interpret the given information relating to the work and resources when producing planed wood and wood-based products.</p> | <p>1.1 Interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information.</p> <p>1.2 Comply with information and/or instructions derived from risk assessments and method statement.</p> <p>1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.</p> <p>1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and legislation governing wood machining.</p> |
| <p>2. Know how to comply with relevant legislation and official guidance when producing planed wood and wood-based products.</p> | <p>2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, with movement of materials and by manual and mechanical lifting.</p> <p>2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.</p> <p>2.3 State what the accident reporting procedures are and who is responsible for making reports.</p> |
| <p>3. Maintain safe working practices when producing planed wood and wood-based products.</p> | <p>3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when producing planed wood and wood-based products.</p> <p>3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing planed wood and wood-based products, and the types, purpose and limitations of each type.</p> <p>3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards.</p> |
| <p>4. Select the required quantity and quality of resources for the methods of work to produce planed wood and wood-based products.</p> | <p>4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– planing machinery
– wood materials
– wood based materials
– lubricants
– hand tools and ancillary equipment.</p> <p>4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment, and dimensional control aids as appropriate.</p> <p>4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.</p> |

- 4.4 Outline potential hazards associated with the resources and method of work.
- 4.5 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to produce planed wood and wood-based products.
- 5. Minimise the risk of damage to the work and surrounding area when producing planed wood and wood-based products.
 - 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational requirements.
 - 5.2 Minimise damage and maintain a clean work space.
 - 5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
 - 5.4 Remove waste in accordance with legislation.
 - 5.5 State why the removal of waste should be carried out in relation to the work.
- 6. Complete the work within the allocated time when producing planed wood and wood-based products.
 - 6.1 Demonstrate completion of the work within the allocated time.
 - 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
 - types of progress charts, timetables and estimated times
 - organisational procedures for reporting circumstances which will affect the work programme.
- 7. Comply with the given contract information to produce planed wood and wood-based products to the required specification.
 - 7.1 Demonstrate the following work skills when producing planed wood and wood-based products:
 - measuring, marking out, adjusting, fitting, finishing, positioning and securing.
 - 7.2 Prepare, set up, operate and maintain at least one combination of the following machines to produce wood and wood-based products to given working instructions:
 - surface planer and thicknesser (can be a combined machine)
 - four sided planer and moulder (for planed all round).
 - 7.3 Set up and change appropriate tooling to meet the requirements.
 - 7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - prepare and set up the planing machinery
 - operate the planing machinery
 - maintain the planing machinery
 - identify how damage to materials and machines can be avoided
 - identify the correct use of lubricants
 - identify the compatibility of materials with machines
 - identify the relevant dimensional control aids and their uses
 - identify and report defects and discrepancies in materials and machines
 - set up and change appropriate tooling
 - identify the types and suitability of tooling
 - identify the scope and limitations of the machine
 - select the appropriate machine for the work to be carried out
 - use hand tools and equipment.

- 7.5 Safely use and store hand tools and ancillary equipment.
- 7.6 State the needs of other occupations and how to communicate within a team when producing planed wood and wood-based products.
- 7.7 Describe how to maintain the tools and equipment used when producing planed wood and wood-based products.

PRODUCING BORED WOOD AND WOOD-BASED PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM201

Guided Learning Hours: 33

Unit Accreditation No: M/600/8589

Unit Credits: 10

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against two of the following endorsements:

- Single-head machine
- Multi-head machine

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|---|--|
| 1. Interpret the given information relating to the work and resources when producing bored wood and wood-based products. | 1.1 Interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and legislation governing wood machining. |
| 2. Know how to comply with relevant legislation and official guidance when producing bored wood and wood-based products. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and by manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when producing bored wood and wood-based products. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when producing bored wood and wood-based products.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing bored wood and wood-based products, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to produce bored wood and wood-based products. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– boring machinery
– wood materials
– wood-based materials
– lubricants
– hand and ancillary equipment.
4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

5. Minimise the risk of damage to the work and surrounding area when producing bored wood and wood-based products.
6. Complete the work within the allocated time when producing bored wood and wood-based products.
7. Comply with the given contract information to produce bored wood and wood-based products to the required specification.
- 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
- 4.4 Outline potential hazards associated with the resources and method of work.
- 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
- 5.2 Minimise damage and maintain a clean work space.
- 5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
- 5.4 Remove waste in accordance with legislation.
- 5.5 State why the removal of waste should be carried out in relation to the work.
- 6.1 Demonstrate completion of the work within the allocated time.
- 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
– types of progress charts, estimated times and deadlines
– organisational procedures for reporting circumstances which will affect the work programme.
- 7.1 Demonstrate the following work skills when producing bored wood and wood-based products:
– measuring, marking out, adjusting, fitting, finishing, positioning, and securing.
- 7.2 Prepare, set up, operate and maintain at least two machines from the following categories to produce bored wood and wood-based products to given working instructions:
– single-head machine
– multi-head machine.
- 7.3 Set up and change appropriate tooling to meet the requirements.
- 7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
– prepare and set up the boring machinery
– operate the boring machinery
– maintain the boring machinery
– identify the compatibility of materials with machines
– identify how damage to materials and machines can be avoided
– identify the correct use of lubricants
– identify the relevant dimensional control aids and their uses
– identify and report defects and discrepancies in materials and machines
– set up and change appropriate tooling
– identify the types and suitability of tooling
– identify the scope and limitations of the machine

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- select the appropriate machine for the work to be carried out
 - use hand tools and equipment.
- 7.5 Safely use and store hand tools and ancillary equipment.
- 7.6 State the needs of other occupations and how to communicate within a team when producing bored wood and wood-based products.
- 7.7 Describe how to maintain the tools and equipment used when producing bored wood and wood-based products.

PRODUCING AND MAINTAINING WOOD MACHINING TOOLING IN THE WORKPLACE

PIABC Unit No: WM202
Unit Accreditation No: K/600/8591
Unit Level: 2

Guided Learning Hours: 37
Unit Credits: 11

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|--|--|
| 1. Interpret the given information relating to the work and resources when producing and maintaining wood machining tooling. | 1.1 Interpret and extract information from drawings, specifications, schedules, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, risk assessments, manufacturers' information and legislation governing wood machining. |
| 2. Know how to comply with relevant legislation and official guidance when producing and maintaining wood machining tooling. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and by manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when producing and maintaining wood machining tooling. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when producing and maintaining wood machining tooling.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing and maintaining wood machining tooling, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to produce and maintain wood machining tooling. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– grinding machinery: bench/pedestal grinder, profile grinder, universal grinder, universal saw grinder, straight knife grinder
– templates/template maker
– cutter blocks
– setting-up stands
– balancing equipment
– retaining and securing equipment
– wheel dressing equipment
– optical measuring devices
– chip limiters |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- lubricants/coolants
 - hand and/or powered tools and equipment.
- 4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate.
- 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
- 4.4 Outline potential hazards associated with the resources and method of work.
- 4.5 Describe how to calculate quantity, weight and wastage associated with the method/procedure to produce and maintain wood machining tooling.
- 5. Minimise the risk of damage to the work and surrounding area when producing and maintaining wood machining tooling.
 - 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
 - 5.2 Minimise damage and maintain a clean work space.
 - 5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
 - 5.4 Remove waste in accordance with legislation.
 - 5.5 State why the removal of waste should be carried out in relation to the work.
- 6. Complete the work within the allocated time when producing and maintaining wood machining tooling.
 - 6.1 Demonstrate completion of the work within the allocated time.
 - 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
 - types of progress charts, timetables, estimated times and deadlines
 - organisational procedures for reporting circumstances which will affect the work programme.
- 7. Comply with the given contract information to produce and maintain wood machining tooling to the required specification.
 - 7.1 Demonstrate the following work skills when producing and maintaining wood machining tooling:
 - measuring, marking out, fitting, finishing, positioning, balancing, securing and cleaning.
 - 7.2 Produce the following tooling to meet the requirements of the given working instructions relating to:
 - moulding cutters
 - straight knives.
 - 7.3 Maintain tooling (at least one of the following) to meet the requirements of the given working instructions relating to:
 - saws
 - drills.
 - 7.4 Store tooling in the correct manner.

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- 7.5 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- identify the operating systems for profiling machines and equipment
 - identify and report defects and discrepancies in materials and machines
 - identify how damage to tooling and machines can be avoided
 - identify how to produce and maintain tooling correctly
 - identify how to mount and set tooling correctly
 - identify the scope and limitations of the machine
 - select the appropriate machine for the work to be carried out
 - identify the wheel dressing/removing procedures
 - identify the types of abrasive wheel
 - store tooling correctly
 - identify the types and suitability of tooling
 - adopt the correct procedure for processing tooling
 - identify the principles of cutter development
 - use and apply chip limiters correctly
 - use ...
- 7.6 ... hand tools and equipment.
- 7.7 Safely use and store hand tools and ancillary equipment.
- 7.8 State the needs of other occupations and how to communicate within a team when producing and maintaining wood machining tooling.
- 7.9 Describe how to maintain the tools and equipment used when producing and maintaining wood machining tooling.

DEALING WITH PRODUCT ENQUIRIES IN THE WORKPLACE

PIABC Unit No: WM203

Guided Learning Hours: 33

Unit Accreditation No: T/600/9081

Unit Credits: 10

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|--|--|
| 1. Provide relevant and accurate information to customers/colleagues relating to the work. | 1.1 Provide written and/or spoken information to customers/colleagues related to the products and services relevant to the work.
1.2 Describe the organisational procedures developed to provide accurate information relevant to the work in relation to:
– providing information
– solving information related problems
– dealing with enquiries or complaints
– dealing with internal or external customers
– recording and reporting information concerning the enquiry or complaint.
1.3 Describe different types of information, their source and how they are interpreted in relation to:
– written and/or spoken information
– customer awareness related to relevant the products and services provided.
1.4 Describe the organisational procedures to solve problems with the information and why it is important they are followed. |
| 2. Develop and maintain working relationships with customers/colleagues. | 2.1 Record meetings, conversations and correspondence with customers/colleagues, whilst maintaining confidentiality in accordance with organisational requirements.
2.2 Describe the organisational procedures for dealing with people within and outside the organisation who require products or services. |
| 3. Follow organisational procedures when dealing with a product enquiry. | 3.1 Deal with product enquiries within the limits of given authority and organisational guidelines.
3.2 Refer issues to the appropriate people when unable to deal with them.
3.3 Describe how to deal with enquiries and complaints relating to the products or services provided, within the limits of their authority and organisational guidelines, in relation to written and/or spoken correspondence from customers/colleagues. |
| 4. Comply with organisational procedures when dealing with difficult customer/colleague relationships. | 4.1 Deal with difficulties in relationships with customers/colleagues within the limits of their authority.
4.2 Describe the organisational procedures to deal with difficulties in working relationships with customers. |
| 5. Ensure that customers/colleagues are informed on the progress of the enquiry. | 5.1 Inform customers/colleagues of any changes to the delivery of products and/or services.
5.2 Describe how to carry out effective communications with customers, and the methods used, to inform them of any changes and the progress of the enquiry and/or complaint in relation to:
– written
– oral
– visual |

**Learning Outcome –
The learner will:**

6 Ensure that reports and records meet the organisational requirements.

Assessment Criterion - The learner can:

– electronic.

- 6.1 Report and record the actions taken to meet organisational requirements whilst dealing with the product enquiry.
- 6.2 Describe the organisational procedures for reporting and recording how enquiries or complaints have been dealt with in accordance with statutory requirements.
- 6.3 Describe the methods for reporting and recording any problems that may have occurred.

PRODUCING EDGE TREATMENT FINISHES TO WOOD AND WOOD-BASED PRODUCTS

PIABC Unit No: WM204

Guided Learning Hours: 37

Unit Accreditation No: F/600/8595

Unit Credits: 11

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

- | | |
|--|---|
| 1. Interpret the given information relating to the work and resources when producing edge treatment finishes to wood and wood-based products. | 1.1 Interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and regulations governing wood machining. |
| 2. Know how to comply with relevant legislation and official guidance when producing edge treatment finishes to wood and wood-based products. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools and equipment, with materials and substances, movement of materials and by manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when producing edge treatment finishes to wood and wood-based products. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when producing edge treatment finishes to wood and wood-based products.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing edge treatment finishes to wood and wood-based products, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to produce edge treatment finishes to wood and wood-based products. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– edge treatment machinery
– wood materials
– wood-based materials
– plastic materials
– lubricants
– adhesives
– hand tools and ancillary equipment.
4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- | | |
|---|---|
| 5. Minimise the risk of damage to the work and surrounding area when producing edge treatment finishes to wood and wood-based products. | 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
4.4 Outline potential hazards associated with the resources and method of work.
4.5 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to produce edge treatment finishes to wood and wood-based products. |
| 6. Complete the work within the allocated time when producing edge treatment finishes to wood and wood-based products. | 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
5.2 Minimise damage and maintain a clean work space.
5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
5.4 Remove waste in accordance with legislation.
5.5 State why the removal of waste should be carried out in relation to the work. |
| 7. Comply with the given contract information to produce edge treatment finishes to wood and wood-based products to the required specification. | 6.1 Demonstrate completion of the work within the allocated time.
6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
– types of progress charts, timetables and estimated times
– organisational procedures for reporting circumstances which will affect the work programme. |
| | 7.1 Demonstrate the following work skills when producing edge treatment finishes to wood and wood-based products:
– measuring, marking out, adjusting, fitting, finishing, positioning and securing.
7.2 Prepare, set up, operate and maintain an edgebander (single and/or double sided) to apply the following edge treatment finishes to wood and wood-based products to given working instructions:
– solid lippings
– profiled foil.
7.3 Set up and change appropriate tooling to meet the requirements.
7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
– prepare and set up the edge treatment machinery
– operate the edge treatment machinery
– maintain the edge treatment machinery
– identify the methods and precautions of the curing processes
– prepare adhesives for application
– identify the compatibility of materials with machines |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- identify how damage to materials and machines can be avoided
- identify the correct use of lubricants
- identify the relevant dimensional control aids and their uses
- identify and report defects and discrepancies in materials and machines
- set up and change appropriate tooling
- identify the types and suitability of tooling
- identify the scope and limitations of the machine
- select the appropriate machine for the work to be carried out
- use ...

7.5 ... hand tools and equipment.

7.6 Safely use and store hand tools and ancillary equipment.

7.7 State the needs of other occupations and how to communicate within a team when producing edge treatment finishes to wood and wood-based products.

7.8 Describe how to maintain the tools and equipment used when producing edge treatment finishes to wood and wood-based products.

MARKING OUT FROM SETTING OUT DETAILS FOR ROUTINE BENCH/ ARCHITECTURAL JOINERY PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM205
Unit Accreditation No: D/503/2649
Unit Level: 2

Guided Learning Hours: 40
Unit Credits: 12

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome - The learner will:

1. Interpret the given information relating to the work and resources when marking out from setting out details for routine bench/architectural joinery products.
2. Know how to comply with relevant legislation and official guidance when marking out from setting out details for routine bench/architectural joinery products.

Assessment Criterion - The learner can:

- 1.1 Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, cutting lists and manufacturers' information.
- 1.2 Comply with information and/or instructions derived from risk assessments and method statement.
- 1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
- 1.4 Describe different types of information, their source and how they are interpreted in relation to:
 - drawings, specifications, schedules, method statements, risk assessments, cutting lists, manufacturers' information, component standards and regulations governing buildings (animal welfare).
- 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
 - in the workplace, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
- 2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
- 2.3 Explain what the accident reporting procedures are and who is responsible for making reports.

**Learning Outcome -
The learner will:**

3 Maintain safe working practices when marking out from setting out details for routine bench/architectural joinery products.

4 Select the required quantity and quality of resources for the methods of work to mark out from setting out details for routine bench/architectural joinery products.

Assessment Criterion - The learner can:

3.1 Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when marking out from setting out details for routine bench/architectural joinery products.

3.2 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to marking out from setting out details for routine bench/architectural joinery products, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:

- collective protective measures
- personal protective equipment (PPE)
- respiratory protective equipment (RPE)
- local exhaust ventilation (LEV).

3.3 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.

3.4 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.

4.1 Select resources associated with own work in relation to materials, components, fixings, tools and equipment.

4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:

- timber, manufactured sheet material, setting out rods, glass, plastic, fabric, non-ferrous metal, ironmongery, adhesives, fixings and associated ancillary items
- marking and testing tools and equipment.

4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.

4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.

4.5 Describe any potential hazards associated with the resources and method of work.

4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to mark out from setting out details for routine bench/architectural joinery products.

**Learning Outcome -
The learner will:**

- 5 Minimise the risk of damage to the work and surrounding area when marking out from setting out details for routine bench/architectural joinery products.
- 6 Complete the work within the allocated time when marking out from setting out details for routine bench/architectural joinery products.
- 7 Comply with the given contract information to mark out from setting out details for routine bench/architectural joinery products to the required specification.

Assessment Criterion - The learner can:

- 5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
- 5.2 Minimise damage and maintain a clean work space.
- 5.3 Dispose of waste in accordance with legislation.
- 5.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
- 5.5 Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
- 6.1 Demonstrate completion of the work within the allocated time.
- 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
 - types of progress charts, timetables and estimated times
 - organisational procedures for reporting circumstances which will affect the work programme.
- 7.1 Demonstrate the following work skills when marking out from setting out details for routine bench/architectural joinery products:
 - measuring, marking out and drawing.
- 7.2 Mark out from setting out rods (template) routine bench/architectural joinery products to given working instructions; two of the following:
 - doors
 - windows with opening lights
 - units and/or fitments (panelling/cladding)
 - staircases.
- 7.3 Safely use and handle materials.
- 7.4 Safely use marking and testing tools and ancillary equipment.
- 7.5 Safely store the materials, tools and equipment used when marking out from setting out details for routine bench/architectural joinery products.
- 7.6 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
 - mark out from setting out details and cutting lists
 - produce straight in plan and elevation: doors, frames (glazed and non-glazed), windows with opening lights, linings, units, fitments and panelling/cladding, staircases
 - take site and workplace dimensions
 - proportion joints associated with the product and construction method

**Learning Outcome -
The learner will:**

Assessment Criterion - The learner can:

- use marking and testing tools
 - requisition material.
- 7.7 Describe the needs of other occupations and how to communicate within a team when marking out from setting out details for routine bench/architectural joinery products.
- 7.8 Describe how to maintain the tools and equipment used when marking out from setting out details for routine bench/architectural joinery products.

MARKING OUT FROM SETTING OUT DETAILS FOR ROUTINE SHOPFITTING PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM206
Unit Accreditation No: D/503/2652
Unit Level: 2

Guided Learning Hours: 40
Unit Credits: 12

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against one of the following endorsements:

- Timber
- Non-ferrous metal

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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|--|--|
| <p>1. Interpret the given information relating to the work and resources when marking out from setting out details for routine shopfitting products.</p> | <p>1.1 Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, cutting lists and manufacturers' information.</p> <p>1.2 Comply with information and/or instructions derived from risk assessments and method statement.</p> <p>1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.</p> <p>1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, method statements, risk assessments, cutting lists, manufacturers' information, component standards and regulations governing buildings (animal welfare).</p> |
| <p>2. Know how to comply with relevant legislation and official guidance when marking out from setting out details for routine shopfitting products.</p> | <p>2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</p> <p>2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.</p> |

**Learning Outcome –
The learner will:**

3. Maintain safe working practices when marking out from setting out details for routine shopfitting products.

4. Select the required quantity and quality of resources for the methods of work to mark out from setting out details for routine shopfitting products.

5. Minimise the risk of damage to the work and surrounding area when marking out from setting out details for routine shopfitting products.

Assessment Criterion - The learner can:

2.3 Explain what the accident reporting procedures are and who is responsible for making reports.

3.1 Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when marking out from setting out details for routine shopfitting products.

3.2 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to marking out from setting out details for routine shopfitting products, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:

- collective protective measures
- personal protective equipment (PPE)
- respiratory protective equipment (RPE)
- local exhaust ventilation (LEV).

3.3 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.

3.4 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.

4.1 Select resources associated with own work in relation to materials, components, fixings, tools and equipment.

4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:

- timber, manufactured sheet material, setting out rods, glass, plastic, fabric, non-ferrous metal, ironmongery, adhesives, fixings and associated ancillary items
- marking and testing tools and equipment.

4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.

4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.

4.5 Describe any potential hazards associated with the resources and method of work.

4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to mark out from setting out details for routine shopfitting products.

5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.

5.2 Minimise damage and maintain a clean work space.

5.3 Dispose of waste in accordance with legislation.

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

6. Complete the work within the allocated time when marking out from setting out details for routine shopfitting products.
7. Comply with the given contract information to mark out from setting out details for routine shopfitting products to the required specification.
- 5.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
- 5.5 Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
- 6.1 Demonstrate completion of the work within the allocated time.
- 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
- types of progress charts, timetables and estimated times
 - organisational procedures for reporting circumstances which will affect the work programme.
- 7.1 Demonstrate the following work skills when marking out from setting out details for routine shopfitting products:
- measuring, marking out and drawing.
- 7.2 Mark out from setting out rods (template) routine shopfitting products (timber and/or non-ferrous metal based) to given working instructions; two of the following:
- shop doors
 - frames and linings
 - shopfront sashes including associated elements
 - panelling/cladding
 - wall and floor units.
- 7.3 Safely use and handle materials.
- 7.4 Safely use marking and testing tools and ancillary equipment.
- 7.5 Safely store the materials, tools and equipment used when marking out from setting out details for routine shopfitting products.
- 7.6 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- mark out from setting out details and cutting lists
 - produce straight in plan and elevation: doors, frames (glazed and/or non-glazed), windows with opening lights, linings, units, fitments and panelling/cladding, staircases
 - take site and/or workplace dimensions
 - proportion joints associated with the product and construction method
 - use marking and testing tools
 - requisition material.
- 7.7 Describe the needs of other occupations and how to effectively communicate within a team when marking out from setting out details for routine shopfitting products.
- 7.8 Describe how to maintain the tools and equipment used when marking out from setting out details for routine shopfitting products.

MANUFACTURING ROUTINE BENCH/ARCHITECTURAL JOINERY PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM207

Unit Accreditation No: H/503/2703

Unit Level: 2

Guided Learning Hours: 63

Unit Credits: 19

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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| <p>1. Interpret the given information relating to the work and resources when manufacturing routine bench/architectural joinery products.</p> | <p>1.1 Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, cutting lists and manufacturers' information.</p> <p>1.2 Comply with information and/or instructions derived from risk assessments and method statements.</p> <p>1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.</p> <p>1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, method statements, risk assessments, cutting lists manufacturers' information, component standards and regulations governing buildings (animal welfare).</p> |
| <p>2. Know how to comply with relevant legislation and official guidance when manufacturing routine bench/architectural joinery products.</p> | <p>2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</p> <p>2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.</p> <p>2.3 Explain what the accident reporting procedures are and who is responsible for making reports.</p> <p>2.4 State the types of fire extinguishers available when manufacturing routine bench/architectural joinery products and describe how and when they are used.</p> |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

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| 3. Maintain safe working practices when manufacturing routine bench/architectural joinery products. | 3.1 Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when manufacturing routine bench/architectural joinery products. |
| | 3.2 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to manufacturing routine bench/architectural joinery products, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none">– collective protective measures– personal protective equipment (PPE)– respiratory protective equipment (RPE)– local exhaust ventilation (LEV). |
| | 3.3 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions. |
| | 3.4 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to manufacture routine bench/architectural joinery products. | 4.1 Select resources associated with own work in relation to materials, components, fixings, tools and equipment. |
| | 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none">– timber, manufactured sheet material, pre-machined components, setting out rods, non-ferrous metal, fabric, metal and rubber rims, glass, plastic, ironmongery, adhesives, fixings and associated ancillary items– hand and/or powered tools and equipment. |
| | 4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported. |
| | 4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources. |
| | 4.5 Describe any potential hazards associated with the resources and method of work. |
| | 4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to manufacture routine bench/architectural joinery products. |
| 5. Minimise the risk of damage to the work and surrounding area when manufacturing routine bench/architectural joinery products. | 5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures. |
| | 5.2 Minimise damage and maintain a clean work space. |
| | 5.3 Dispose of waste in accordance with legislation. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

6. Complete the work within the allocated time when manufacturing routine bench/architectural joinery products.
7. Comply with the given contract information to manufacture routine bench/architectural joinery products to the required specification.
- 5.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
- 5.5 Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
- 6.1 Demonstrate completion of the work within the allocated time.
- 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
- types of progress charts, timetables and estimated times
 - organisational procedures for reporting circumstances which will affect the work programme.
- 7.1 Demonstrate the following work skills when manufacturing routine bench/architectural joinery products:
- measuring, marking out, fitting, finishing, positioning and securing.
- 7.2 Fit and assemble to form routine manufactured bench/architectural joinery products to given working instructions; two of the following:
- doors
 - windows with opening lights
 - units and/or fitments (panelling/cladding)
 - staircases.
- 7.3 Safely use and handle materials.
- 7.4 Safely use hand tools, portable power tools and ancillary equipment.
- 7.5 Safely store the materials, tools and equipment used when manufacturing routine bench/architectural joinery products.
- 7.6 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- fit and assemble routine products
 - produce straight in plan and elevation: doors, windows with opening lights, units, fitments and panelling/cladding, staircases
 - take site and workplace dimensions
 - form joints associated with the product and construction method
 - use hand tools, power tools and equipment
 - requisition material.
- 7.7 Describe the needs of other occupations and how to effectively communicate within a team when manufacturing routine bench/architectural joinery products.
- 7.8 Describe the methods of sharpening the hand tools used when manufacturing routine bench/architectural joinery products.

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

7.9 Describe how to maintain the tools and equipment used when manufacturing routine bench/architectural joinery products.

MANUFACTURING ROUTINE SHOPFITTING PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM208

Guided Learning Hours: 63

Unit Accreditation No: T/503/2706

Unit Credits: 19

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against one of the following endorsements:

- Timber
- Non-ferrous metal.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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|--|---|
| 1. Interpret the given information relating to the work and resources when manufacturing routine shopfitting products. | 1.1 Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, cutting lists and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, method statements, risk assessments, cutting lists manufacturers' information, component standards and regulations governing buildings (animal welfare). |
| 2. Know how to comply with relevant legislation and official guidance when manufacturing routine shopfitting products. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

3. Maintain safe working practices when manufacturing routine shopfitting products.
- 3.1 Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when manufacturing routine shopfitting products.
- 3.2 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to manufacturing routine shopfitting products, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:
- collective protective measures
 - personal protective equipment (PPE)
 - respiratory protective equipment (RPE)
 - local exhaust ventilation (LEV).
- 3.3 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.
- 3.4 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
4. Select the required quantity and quality of resources for the methods of work to manufacture routine shopfitting products.
- 4.1 Select resources associated with own work in relation to materials, components, fixings, tools and equipment.
- 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:
- timber, manufactured sheet material, pre-machined components, setting out rods, non-ferrous metal, fabric, metal and rubber rims, glass, plastic, ironmongery, adhesives, fixings and associated ancillary items
 - hand and/or powered tools and equipment.
- 4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- 4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
- 4.5 Describe any potential hazards associated with the resources and method of work.
- 4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to manufacture routine shopfitting products.

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

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|--|---|
| 5. Minimise the risk of damage to the work and surrounding area when manufacturing routine shopfitting products. | 5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
5.2 Minimise damage and maintain a clean work space.
5.3 Dispose of waste in accordance with legislation.
5.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
5.5 Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance. |
| 6. Complete the work within the allocated time when manufacturing routine shopfitting products. | 6.1 Demonstrate completion of the work within the allocated time.
6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none">– types of progress charts, timetables and estimated times– organisational procedures for reporting circumstances which will affect the work programme. |
| 7. Comply with the given contract information to manufacture routine shopfitting products to the required specification. | 7.1 Demonstrate the following work skills when manufacturing routine shopfitting products: <ul style="list-style-type: none">– measuring, marking out, fitting, finishing, positioning and securing. 7.2 Fit and assemble to form routine manufactured shopfitting products (timber and/or non-ferrous metal based) to given working instructions; two of the following: <ul style="list-style-type: none">– shop doors– frames and linings– shopfront sashes including associated elements– panelling/cladding– wall and floor units. 7.3 Safely use and handle materials.
7.4 Safely use hand tools, portable power tools and ancillary equipment.
7.5 Safely store the materials, tools and equipment used when manufacturing routine shopfitting products.
7.6 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none">– fit and assemble routine products– produce straight in plan and elevation: doors, windows with opening lights, units, fitments and panelling/cladding, staircases– take site and workplace dimensions– form joints associated with the product and construction method– use hand tools, power tools and equipment– requisition material. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- 7.7 Describe the needs of other occupations and how to effectively communicate within a team when manufacturing routine shopfitting products.
- 7.8 Describe the methods of sharpening the hand tools used when manufacturing routine shopfitting products.
- 7.9 Describe how to maintain the tools and equipment used when manufacturing routine shopfitting products.

PRODUCING SANDED WOOD AND WOOD-BASED PRODUCTS IN THE WORKPLACE

PIABC Unit No: WM209

Guided Learning Hours: 33

Unit Accreditation No: K/600/8588

Unit Credits: 10

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against two of the following endorsements:

- Wide belt sander
- Overhead narrow belt sander
- Disc sander
- Bobbin sander
- Linisher
- Profile sander

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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|--|---|
| 1. Interpret the given information relating to the work and resources when producing sanded wood and wood-based products. | 1.1 Interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information and legislation governing woodmachining. |
| 2. Know how to comply with relevant legislation and official guidance when producing sanded wood and wood-based products. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and by manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when producing sanded wood and wood-based products. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all statutory legislation and approved Codes of Practice when producing sanded wood and wood-based products.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to producing sanded wood and wood-based products, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to produce sanded wood and wood-based products. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– sanding machinery/abrasives
– wood materials
– wood-based materials
– lubricants
– bondings
– hand and ancillary equipment.
4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
- 4.4 Outline potential hazards associated with the resources and method of work.
5. Minimise the risk of damage to the work and surrounding area when producing sanded wood and wood-based products.
- 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
- 5.2 Minimise damage and maintain a clean work space.
- 5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
- 5.4 Remove waste in accordance with legislation.
- 5.5 State why the removal of waste should be carried out in relation to the work.
6. Complete the work within the allocated time when producing sanded wood and wood-based products.
- 6.1 Demonstrate completion of the work within the allocated time.
- 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
- types of progress charts, estimated times and deadlines
 - organisational procedures for reporting circumstances which will affect the work programme.
7. Comply with the given contract information to produce sanded wood and wood-based products to the required specification.
- 7.1 Demonstrate the following work skills when producing sanded wood and wood-based products:
- measuring, marking out, adjusting, fitting, finishing, positioning and securing.
- 7.2 Prepare, set up, operate and maintain at least two of the following machines to produce sanded wood and wood-based products to given working instructions:
- wide belt sander
 - overhead narrow belt sander
 - disc sander
 - bobbin sander
 - finisher
 - profile sander.
- 7.3 Set up and change appropriate belts to meet the requirements.
- 7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- prepare and set up the sanding machinery
 - operate the sanding machinery
 - maintain the sanding machinery
 - identify how damage to the materials and machines can be avoided
 - identify the correct use of lubricants
 - identify the compatibility of materials with machines
 - identify the relevant dimensional control aids and their uses
 - identify and report defects and discrepancies in materials and machines

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- set up and change abrasives
 - identify types and suitability and construction of abrasives
 - identify the scope and limitations of the machine
 - select the appropriate machine for the work to be carried out
 - use hand tools and equipment.
- 7.5 Safely use and store hand tools and ancillary equipment.
- 7.6 State the needs of other occupations and how to communicate within a team when producing sanded wood and wood-based products.
- 7.7 Describe how to maintain the tools and equipment used when producing sanded wood and wood-based products.

MAINTAINING MACHINERY AND EQUIPMENT IN THE WORKPLACE

PIABC Unit No: WM210

Guided Learning Hours: 53

Unit Accreditation No: A/600/8594

Unit Credits: 16

Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessors for this unit must use a combination of the following assessment methods:

- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of producing wood and wood-based products using computer numerically controlled/numerically controlled (CNC/NC) machinery to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against three of the following endorsements:

- Sawing machinery
- Planing machinery
- Profiling machinery
- Jointing machinery
- Sanding machinery
- Boring machinery
- CNC/NC machinery

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:

Assessment Criterion - The learner can:

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|---|--|
| 1. Interpret the given information relating to the work and resources when maintaining machinery and equipment. | 1.1 Interpret and extract information from drawings, specifications, schedules, risk assessments and manufacturers' information.
1.2 Comply with information and/or instructions derived from risk assessments and method statement.
1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
1.4 Describe different types of information, their source and how they are interpreted in relation to:
– drawings, specifications, schedules, risk assessments, manufacturers' information and legislation governing wood machining. |
| 2. Know how to comply with relevant legislation and official guidance when maintaining machinery and equipment. | 2.1 Describe their responsibilities under current legislation and official guidance whilst working:
– in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and manual and mechanical lifting.
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
2.3 State what the accident reporting procedures are and who is responsible for making reports. |
| 3. Maintain safe working practices when maintaining machinery and equipment. | 3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when maintaining machinery and equipment.
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to maintaining machinery and equipment, and the types, purpose and limitations of each type.
3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards. |
| 4. Select the required quantity and quality of resources for the methods of work to maintain machinery and equipment. | 4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:
– lubricants
– hand and/or powered tools and equipment.
4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate.
4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
4.4 Outline potential hazards associated with the resources and method of work. |

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

5. Minimise the risk of damage to the work and surrounding area when maintaining machinery and equipment.
6. Complete the work within the allocated time when maintaining machinery and equipment.
7. Comply with the given contract information to maintain machinery and equipment to the required specification.
- 4.5 Describe how to calculate quantity associated with the method/procedure to maintain machinery and equipment.
- 5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
- 5.2 Minimise damage and maintain a clean work space.
- 5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
- 5.4 Remove waste in accordance with legislation.
- 5.5 State why the removal of waste should be carried out in relation to the work.
- 6.1 Demonstrate completion of the work within the allocated time.
- 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:
- types of progress charts, estimated times and deadlines
 - organisational procedures for reporting circumstances which will affect the work programme.
- 7.1 Demonstrate the following work skills when maintaining machinery and equipment:
- checking, cleaning, adjusting, lubricating, recording, repairing, replacing and testing.
- 7.2 Prepare and maintain wood machinery and equipment in accordance with organisational/manufacturers routine service requirements for at least three of the following:
- sawing machinery
 - planing machinery
 - profiling machinery
 - jointing machinery
 - sanding machinery
 - boring machinery
 - CNC/NC machinery.
- 7.3 Set up and change appropriate tooling to meet the requirements.
- 7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:
- prepare and maintain wood machinery
 - identify documentation and processing requirements
 - use and maintain maintenance logs as appropriate
 - identify machine principal parts and their functions
 - identify safe working limits of machines
 - identify defects and discrepancies
 - identify requirements of maintenance programmes
 - use and maintain hydraulics and pneumatics correctly
 - identify influencing factors and their implications
 - identify correct lubricants to meet the maintenance requirements
 - identify the techniques of risk assessment
 - use hand tools, power tools and equipment.

**Learning Outcome –
The learner will:**

Assessment Criterion - The learner can:

- 7.5 Safely use and store hand tools, portable power tools and ancillary equipment.
- 7.6 State the needs of other occupations and how to communicate within a team when maintaining machinery and equipment.
- 7.7 Describe how to maintain the tools and equipment used when maintaining machinery and equipment.

ASSESSMENT

Assessment principles should follow recognised good practice. The qualification is made up of units from different standard setting bodies and their Assessment Strategies should be used.

All learning outcomes and assessment criteria should be met.

Simulation is not permitted.

QUALIFICATION CERTIFICATION

All learning outcomes and assessment criteria are to be achieved. Whilst there is no grading to this qualification (pass, credit, etc.), the training delivery and feedback should promote the notion of continued improvement and craftsmanship.

GLOSSARY

Term	Definition
Learning Outcome	This describes what a learner needs to know, understand or do as a result of the process of learning.
Assessment Criteria	These are the requirements learners are expected to meet to demonstrate that a learning outcome has been achieved.
Centre	The organisation that is approved by PIABC for the purposes of preparing learners for assessment.

SUGGESTED SOURCE MATERIAL

A comprehensive list of source materials and references that may be used to support learning for qualification is available from the PIABC web site (www.piabc.org.uk).