



PIABC LEVEL 3 CERTIFICATE IN UNDERSTANDING THE WOOD AND TIMBER INDUSTRIES

Qualification Number: 601/4136/0

Qualification Specification

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EXECUTIVE SUMMARY

This qualification is nationally recognised and is designed to enable the candidate to understand the principle constraints affecting the industry together with an understanding of materials and how these combine in both legislation and practical operations. It will prepare the learner to operate as a competent team member and will greatly assist them in their career development

To achieve the qualification, learners need to successfully pass a portfolio based assessment centred upon on learning outcomes and the assessment criteria.

Programmes leading to the qualification can be organised and delivered by providers who have gained centre and qualification approval from PIABC Limited. To achieve this they need to complete the PIABC Limited centre and qualification approval procedures available from PIABC Limited's website (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. The actual style of delivery is up to the centre but could include taught sessions, tutor support, distance learning, work books, mentor support or any other method that the centre considers appropriate. In choosing their delivery method centres are expected to employ robust quality assurance processes. PIABC Limited will appoint its own moderators to ensure the effective operation of these processes and the maintenance of standards of quality.

There is no necessity for any formal entry requirement to this course beyond the basic literacy and numeracy expected from anyone entering office or craft roles.

Overall, it is expected that courses leading to the qualification will take a approximately 154 taught or guided learning hours. Students will also be expected to carry out additional reading and other work to complete each unit and prepare for assessment.

AIM

This qualification is nationally recognised and is designed to enable the candidate to understand the principle constraints affecting the industry together with an understanding of materials and how these combine in both legislation and practical operations. It will prepare the learner to operate as a competent team member and will greatly assist them in their career development

OUTCOMES

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

1. Enhance the knowledge and job satisfaction of *Candidates*.
2. Provide *employers* with an open and transparent basis for judging the suitability of candidates for employment and promotion.

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

TARGET GROUP

This qualification is appropriate for those wanting to enhance their employment and progression opportunities in the timber and panel products sector.

There are four broad target groups:

1. People recently employed in the industry who want to gain a sound foundation to the material that is central to the sector, to enable them to operate more effectively.
2. People who have been in the industry for some time who want to extend their knowledge and gain a recognised qualification.
3. Those pursuing a competence based qualification that requires underpinning knowledge.
4. Finally, the qualification will appeal to people who are not currently employed in the industry, but who wish to gain a basic qualification as a step towards getting a job and progressing in the sector.

Typically, candidates are likely to be working in any of the following disciplines:

Trade Counter: Responsible for customer service to Trade and Public on product knowledge and pricing and communicating effectively with customers ensuring their requirements are met.

Estimator: Responsible for pricing accurately potential orders making sure the correct products are being used for new and existing customers.

Sales Representative: Promotes/sells/ secures orders from existing and new customers.

Yard/Warehouse Operative: Ensuring safe movement of materials within a timber based workplace, responsible for the selecting and packaging of finished materials and products ready for shipping to customer specifications.

Timber fabricator: Manufacturing timber components and assemblies.

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 these qualifications. As a guide those with the following are likely to indicate the potential to succeed: a minimum of 5 Standard grades, National Qualifications at Access 3, Intermediate 1 and Intermediate 2 or experience that indicates ability to succeed. 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 industry to a position where they can assume some level of responsibility or gain further qualifications.

QUALIFICATION STRUCTURE

This qualification comprises 5 mandatory units. To achieve the qualification, candidates need to successfully meet the learning outcomes via the assessment criteria.

QUALIFICATION LEVEL

This qualification is Level 3; as such it requires candidates to be aware of a range of product information and legislation in order to work effectively in the industry.

Candidates may work alone or have direct responsibility for others, or may have responsibilities within a team.

This qualification requires the candidate to understand the principle constraints affecting the industry together with an understanding of materials and how these combine in both legislation and practical operations. It will prepare the learner to operate as a competent team member and will greatly assist them in their career development.

PROGRAMME ORGANISATION

This qualification consists of 5 mandatory units (28 Credits) and it is anticipated that the qualification will require 154 Guided Learning Hours for satisfactory completion.

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.

In relevant circumstances, centres are recommended to provide information and guidance to their candidates on the availability and type of employment the programme may lead to and on the progression routes available for further education and training in the timber industry.

GUIDANCE ON LEARNING AND TEACHING STRATEGY, METHODS AND ASSESSMENT

As far as possible, it is important that the course is taught by relating the underlying theory to practical examples and applications. Three factors which will help in this regard are:

1. The use of staff with direct experience in the industry. This must, of course, be balanced against a sound understanding of the theoretical principles, as anecdotal experience alone is unlikely to meet the requirements of the course.
2. Practical and commercial examples that underpin a more theoretical understanding should be used to show the link between theory and practice. DVD illustrations of processes could also be used as part of the teaching regime. A further and invaluable source of information is the Internet and there are many web sites which demonstrate important aspects of timber processing and use. Learners should be encouraged to research this material.
3. Practical experience of workplace.

Candidates will come to the course with varying levels of existing knowledge and/or practical experience of some parts of the syllabus. This should be utilised in preparing for the assessment. The sharing of knowledge which has the potential to lead to a high level of understanding should be encouraged.

The relation of theory and practice is a theme that will be reflected in the assessments for the programme. Therefore in structured learning and individual work, candidates should be aware of the requirement to develop a practical dimension to their 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. The addition of diagrams and photographs may enhance learning.

QUALIFICATION DESCRIPTION

This qualification follows the PIABC Limited principles for designing units and qualifications and contains the features listed as follows:

- Unit reference number, title, guided learning hours and assessment guidance.
- 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.
- To successfully complete, learners must meet all the learning outcomes and gained an overall pass mark of 60%.

Overview

The qualification is designed to provide industry related knowledge appropriate for the job roles within the timber supply industry. By the end of the learning, the learner should be familiar with the main aspects of the timber and panel products industry.

Learning Outcomes and Assessment Criteria

Reference	Unit Title	Level	Credit	Guided Learning
Mandatory units: 28 credits required				
L5066344	Understanding compliance with legal, regulatory, ethical and social requirements in wood operations	3	5	32
J5066343	Environmental and waste management in the wood industry	3	5	32
D5039858	Timber and panel products and their uses	2	10	40
D5035826	Understanding how to carry out problem solving activities	3	5	20
K6021647	Health and safety in the workplace	3	3	30

Understanding compliance with legal, regulatory, ethical and social requirements in wood operations

Unit Accreditation No: L5066344
Unit Level: 3

Guided Learning Hours: 32
Unit Credits: 5

1. Understand an organisations approach to compliance with legal, regulatory, ethical and social requirements in wood operations

- 1.1. Explain the importance of having an ethical and value based approach to governance and how to put this into practice
- 1.2. Describe the culture and values of your organisation and what effect they have on corporate governance
- 1.3. Explain the relevant organisational and operational procedures
- 1.4. Describe the organisations approach to current and emerging social attitudes to management and leadership practice and the importance of being sensitive to these
- 1.5. Describe the regulatory, ethical and operational requirements both national and international
- 1.6. Suggest ways in which other organisations deal with current and emerging social concerns and expectations

2. Understand an organisations compliance with legal, regulatory, ethical and social requirements in wood operations

- 2.1. Describe the methods of monitoring developments in legislation and regulations
- 2.2. State the procedures to follow if you do not meet the requirements
- 2.3. Explain how policies and procedures make sure people meet the requirements
- 2.4. Describe the processes for maintaining the relevant policies and procedures and making sure they continue to be effective and sustainable
- 2.5. Describe the different ways in which people may not meet the requirements and the risks of these actually happening
- 2.6. State the procedures for dealing with people who do not meet the requirements, including requirements for reporting

Environmental and waste management in the wood industry

Unit Accreditation No: J5066343
Unit Level: 3

Guided Learning Hours: 32
Unit Credits: 5

1. Understand the risks to the environment that could arise during the production of wood based components

- 1.1. Identify the issues relating to materials, products and equipment used in the production of woodbased components which could cause harm to the environment
- 1.2. Identify the global and local environmental effects which can occur as a result of production of woodbased components
- 1.3. Define hazards and risks in the production of woodbased components
- 1.4. Explain the importance of risk assessments in the identification of hazards to the environment

2. Know how to minimise risks to the environment that could arise during the production of wood based components

- 2.1. Describe the legislation relating to environmental matters when producing woodbased components
- 2.2. Identify manufacturers and workplace instructions for the safe use and storage of materials, products and equipment
- 2.3. Identify driving forces which encourage good environmental practice
- 2.4. Explain the benefits to the environment of using woodbased products from sustainable sources
- 2.5. Explain the benefits of sustainable development

3. Know how to manage the waste produced during the production of woodbased components

- 3.1. Describe types of waste that is generated by the woodworking sector
- 3.2. Outline the key features of the legislation relating to Waste
- 3.3. Outline how "trade effluent" should be managed under specific key legislation
- 3.4. Identify ways of managing energy consumed in operations such as machinery operation, compressed air generation, heating and lighting
- 3.5. Identify ways of managing transport
- 3.6. Explain the key features of the waste management hierarchy
- 3.7. Outline the benefits to the organisation of controlling waste

Timber and panel products and their uses

Unit Accreditation No: D5039858
Unit Level: 2

Guided Learning Hours: 40
Unit Credits: 10

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| 1. Understand the characteristics and nature of wood | 1.1. Describe the difference between softwoods and hardwoods
1.2. List the major commercial species and their countries of origin for softwoods and hardwoods
1.3. Explain how a knot is formed
1.4. Illustrate the difference between a live knot and a dead knot
1.5. Explain what is meant by natural durability in timber |
| 2. Understand the factors affecting the marketing and utilisation of timber | 2.1. List the main trade sizes for sawn square-edged timber
2.2. Explain the factors that influence the pricing of timber
2.3. Calculate prices for timber purchases and sales
2.4. Summarise the differences between the principal systems for grading sawn timber
2.5. Describe the end use applications for strength graded timber and appearance graded timber |
| 3. Understand the processes that improve the properties of wood | 3.1. Explain the reasons for drying timber
3.2. State the recommended moisture content for end uses of timber
3.3. List the methods used to improve the durability of timber
3.4. Describe one type of timber preservation |
| 4. Understand the types of wood-based panel products | 4.1. Describe the manufacturing processes and construction of the main types of wood-based panels
4.2. Explain the categories of adhesive used
4.3. Explain how the grading systems for wood-based panels relate to their properties and application |
| 5. Understand the functions and applications of solid timber and wood-based panels in buildings and related uses | 5.1. Explain the differences between carcassing and joinery timber
5.2. Name the main load bearing timbers and their functions in a domestic dwelling
5.3. List and describe strength reducing characteristics in timber
5.4. Describe visual strength grading
5.5. Describe the principals involved in machine strength grading
5.6. Recognise the key differences between a strength grade and a strength class
5.7. Describe a manufactured joinery product used in a domestic dwelling
5.8. Draw and name typical profiles for moulded joinery |
| 6. Understand the importance of care, storage and handling of wood products | 6.1. Explain the reasons why it is important to ensure that wood products are handled and stored correctly |

Understanding how to carry out problem solving activities

Unit Accreditation No: D5035826
Unit Level: 3

Guided Learning Hours: 20
Unit Credits: 5

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| 1. Know how to identify the nature and extent of a problem | 1.1. Specify the methods used to detect a problem that has occurred within a work area/product range
1.2. Explain how a non-conforming product or process would be contained
1.3. Explain how to select and apply a structured procedure for problem solving to a product or process |
| 2. Understand how to obtain data and information relevant to the problem | 2.1. Explain the use of performance measurement and analysis to direct and focus the problem solving effort
2.2. Specify the techniques used to obtain data and information on problems within a work area/product range |
| 3. Understand how to establish the root cause of a problem | 3.1. Specify the methods and techniques used in evaluating information and the importance of getting to the root cause
3.2. Explain the methods and techniques used in root cause analysis
3.3. Explain how to determine criticality and establish priorities |
| 4. Know how to implement corrective actions to problems | 4.1. Specify the methods used to choose and implement corrective actions and the factors that would need to be taken into account within a work area/product range
4.2. Explain who would need to be informed of the corrective actions and what reporting procedures and documentation would be used |
| 5. Know how to monitor the effectiveness of the corrective actions | 5.1. Specify the range of methods that could be used to monitor the effectiveness of the corrective actions
5.2. Explain how to review the problem solving process in order to achieve further improvements |

Health and safety in the workplace

Unit Accreditation No: K6021647
Unit Level: 3

Guided Learning Hours: 30
Unit Credits: 3

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| 1. Understand the requirements for health, safety and welfare in the workplace | 1.1. Outline the main legal framework and laws relating to health and safety at work
1.2. Outline the welfare provisions that should be made by the employer
1.3. Describe the sources and nature of information that demonstrate compliance and best practice with health and safety requirements
1.4. Outline ways that health and safety information can be communicated
1.5. Define the terms 'incident', 'accident' and 'occupational ill health'
1.6. Describe the main causes of injuries and ill health at work |
| 2. Understand the benefits of using a safety management system | 2.1. Outline the costs associated with accidents and ill health
2.2. Summarise the typical elements of a safety management system
2.3. Outline the benefits of using a safety management system |
| 3. Understand the principles of risk assessment | 3.1. Outline the benefits of assessing and controlling risks at work
3.2. Describe the different types of risk assessment that can be used
3.3. State where specific risk assessments may be required
3.4. State the steps to be taken to complete a simple risk assessment |
| 4. Understand the risks and control methods for common workplace hazards | 4.1. Explain how the risks from different hazards may be affected by occupational, environmental, human and organisational factors
4.2. Explain how injuries, ill health and other damage may result following exposure to common workplace hazards
4.3. Identify suitable risk control measures using the principles of the hierarchy of control |
| 5. Understand how to manage the effects of accidents and incidents | 5.1. Describe the actions that need to be taken following an accident or incident in the workplace
5.2. Describe how simple accident investigation techniques can reveal immediate and root causes |

ASSESSMENT

This qualification is assessed by observation, questioning and the submission of a portfolio of evidence.

If a student is unsuccessful in an assessment then candidates can re-submit amended documents.

QUALIFICATION CERTIFICATION

The qualification is available as a pass or fail.

The pass mark for this qualification is 60%.

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 Limited for the purposes of preparing learners for assessment.