PIABC LEVEL 2 AWARD IN COMPOSITE MANUFACTURING

Qualification Number: 610/5936/5

Qualification Specification

Updated: 20 November 2025

PURPOSE

PIABC Level 2 Award in Composite Manufacturing is a regulated qualification. Its main purpose is to provide candidates with a basic introduction of composite materials and some of the manufacturing and repair techniques used in industry.

The qualification has been designed to be used by a range of different composite manufacturing sectors.

GENERAL OUTCOMES

The general objectives of the PIABC Level 2 Award in Composite Manufacturing are to:

1. Provide those employed in composite manufacturing sectors with the skills, knowledge and understanding to underpin and enhance job experience
2. Provide candidates with a portable qualification to enable job movement throughout the industry
3. Provide candidates with a means of progression to higher level qualifications
4. Provide employers throughout the composite manufacturing sectors and related industries with a firm basis for judging suitability of candidates
5. Raise the status of those employed in the composite manufacturing sector

TARGET GROUP

This Level 2 qualification is appropriate for those candidates wanting to enhance their employment and progression opportunities in composite manufacturing industries.

For example, candidates may be those who are:

- From composite manufacturing sectors (such as marine, automotive, aerospace etc.)
- Working within the supply chain of composite materials
- Liaising with packaging suppliers
- New recruits to composite manufacturing, who require an introduction to the basics of composite materials and manufacturing processes
- Those looking for a broad qualification in composite manufacturing as a basis for career development
- Candidates not currently employed in the industry, but wish to start career in composite manufacturing

ENTRY REQUIREMENTS

There are no entry qualifications or age limits required for this qualification. However, centres must ensure that candidates have the potential and opportunity to gain the qualification successfully.

STAFFING

It is expected that staff involved with the delivery of the course will be appropriately qualified and/or experienced in composite manufacturing. The PIABC Limited (PIABC) approval process requires prospective centres to provide details of the staff involved in delivery and assessment including their qualifications and relevant training/employment experience, plus staff development arrangements. Whilst these details are passed on to the external moderator appointed by PIABC, it is the centre's responsibility to ensure tutors' qualifications are both bona fide and appropriate to the level of the qualification.

QUALITY ASSURANCE

PIABC requires that each centre has a quality assurance and enhancement procedure in respect of the programme, and a means of monitoring its implementation.

There should be a team that is responsible for preparing an annual self-assessment of the programme and for monitoring the improvement measures resulting from this.

This self-assessment process should use evidence from different sources including:

- Candidate self-evaluation
- The views of external individuals and organisations, for example those companies sending candidates
- Staff working on the award
- In addition, it is also expected that there will be an internal moderation procedure to ensure standardisation of unit delivery. This will include the following elements:
    - Classroom observation
    - Peer review of award materials
    - Moderation of any internally assessed elements

There should be a named and appropriately qualified individual (Centre Co-ordinator) who has the necessary authority, with whom the awarding body can liaise directly on all matters of management, administration and quality assurance.

EXTERNAL MODERATION

PIABC will appoint external centre monitors to visit centres to ensure the maintenance of standards of quality. The role of the centre monitor includes:

- Liaison between the centre and PIABC to ensure standardisation in terms of the quality of award delivery
- Providing advice and support for the centre in understanding and implementing the requirements of the units and the PIABC

An External Quality Assurance (EQA) desktop monitoring exercise is required for centres that have registered candidates and will formally report on the outcome of this visit to the centre and PIABC. All items contained in the report will be discussed with the centre and any action(s) that the centre needs to take will be agreed at that stage. Any visits in addition to the annual visit may incur an additional fee. The scope and frequency of assessment monitoring activities will be in part determined by the centre assessment standard strategy for this qualification.

PIABC's monitoring strategy will ensure that all centre marked assessments remain fit for purpose and that criteria against which candidates' performance is differentiated are being accurately and consistently applied for this qualification regardless on assessor, candidate, or centre.

The focus of EQA for this qualification is the detailed examination of candidate evidence. The sample selection will be determined by PIABC in line with its centre assessment standard strategy and external quality assurance sampling policy. During this exercise, the EQA will be able to agree to certification claims and sign off documentation relating to certification claims.

This EQA is conducted remotely as PIABC does not want to add additional financial burden to its centres which can be caused by EQA physical monitoring visits.

PROGRAMME ORGANISATION

PIABC Level 2 Award in Composite Manufacturing is designed to provide candidates with a basic introduction to manufacturing and repairing composite components including, materials and consumables used to produce composite parts and different methods of manufacturing composite parts.

To achieve the qualification, candidates need to successfully gain 5 credits.

It is expected that courses leading to the qualification will take a minimum of 32 guided learning hours (GLH), which is the average hours a candidate may require guidance and support from teaching, learning and assessment professional to achieve the qualification. Candidates may be expected to carry out additional reading and other work to complete each unit and prepare for the assignments.

It is anticipated that the qualification will require a minimum of 40 hours of total qualification time (TQT) for satisfactory completion for an average candidate.

The organisation of the award is at the discretion of the centre and will consider the aims, aspirations and experience of the candidates.

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

Centres must ensure that adequate arrangements are in place for supporting candidates. This could be either through separate tutorial sessions or through the use of time within structured study sessions.

GUIDANCE ON LEARNING AND TEACHING STRATEGY, METHODS AND ASSESSMENT

Composite manufacturing is a practical subject, based on theoretical principles. As far as possible, it is important that the course is taught by relating the underlying theory to practical examples and applications.

Two factors which will help in this regard are:

1. The use of lecturers with direct experience in the composite manufacturing industry is likely to offer the most appropriate level of practical knowledge. 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. Those candidates employed in the composite manufacturing industries, will come to the course with varying levels of existing knowledge and/or practical experience of some parts of the syllabus. Lecturers should utilise this, through group work and other structured interactive activities, thus encouraging the sharing of knowledge which has the potential to lead to a better level of understanding.

The relation of theory and practice is a theme that will be reflected in the assessments for each unit and for the programme as a whole. Therefore, in structured learning and individual work, candidates should be aware of the requirement to develop a practical dimension to their understanding.

QUALIFICATION LEVEL

PIABC Level 2 Award in Composite Manufacturing has been developed as a Level 2 qualification. When working for this qualification it is important to realise that evidence will be sought which demonstrates the following features:

Level 2 Descriptor

Summary
The descriptors set out the generic knowledge and skills associated with the typical holder of a qualification at Level 2. The level descriptors are framed as outcomes, and each category starts with a stem statement ("the holder can...") which then links into the outcomes associated with each level of the framework.

Knowledge descriptor (the holder...)
- Has knowledge and understanding of facts, procedures and ideas in an area of study or field of work to complete well-defined tasks and address straightforward problems.
- Can interpret relevant information and ideas.
- Is aware of a range of information that is relevant to the area of study or work.

Skills descriptor (the holder...)
- Select and use relevant cognitive and practical skills to complete well-defined, generally routine tasks and address straightforward problems.
- Identify, gather and use relevant information to inform actions.
- Identify how effective actions have been.

Source: Ofqual Handbook: General Conditions of Recognition (Updated 20/02/2025)

QUALIFICATION STRUCTURE

The unit design of each unit includes an informative title, a level, a credit value, learning outcomes and assessment criteria. The assessment process is based on those learning outcomes and assessment criteria. The learning and teaching strategy must be designed so that candidates can meet the learning outcomes in an effective manner by demonstrating that they can achieve the assessment criteria.

To complete this qualification, candidates must complete the three mandatory units and a minimum of one optional unit.

Mandatory/ Optional	Ofqual Unit Ref.	Unit Ref.	Unit Title	Level	GLH	TUH	Credits
M	M/651/6556	CM1	Introduction to Composite Materials	2	7	7	1
M	R/651/6557	CM2	Effective Engineering in Composite Manufacturing	2	7	7	1
M	T/651/6558	CM3	Curing Composite Components	2	4	4	1
O	Y/651/6559	CM4	Resin Infusion Techniques	2	14	18	2
O	F/651/6560	CM5	Introduction to Prepreg Techniques	2	14	18	2
O	H/651/6561	CM6	Composite Assembly	2	14	18	2
O	J/651/6562	CM7	Introduction to Wet Lay-Up Techniques	2	14	18	2
O	K/651/6563	CM8	Composite Repair	2	14	18	2
O	L/651/6564	CM9	Composite Mould Tool Production	2	14	18	2
Qualification Level				2			
Minimum Guided Learning Hours (GHL)					32		
Minimum Total Qualification Time (TQT)						40	
Minimum Total Credits							5

ASSESSMENT & GRADING

PIABC Level 2 Award in Composite Manufacturing is assessed by completing theory tests and practical assessments depending on the units chosen.

Mandatory Units (CM1, CM2 & CM3)

These mandatory units are assessed by multiple choice questions test papers with a pass mark of 70%. The pass threshold of these mandatory units is not subject to change.

These tests should be designed for a holistic approach to the assessments and confirm learners have a full contextualised understanding of all the assessment criteria.

Optional Units (CM4, CM5, CM6, CM7, CM8 & CM9)

The optional units are assessed by a practical assessment (with additional questioning where appropriate) to confirm competence and have no grading; candidates need to pass all assessment criteria.

These assessments should be designed for a holistic approach to the assessments and confirm learners have a full contextualised understanding of all the assessment criteria. The assessments should be monitored and evaluated by the centre to ensure a consistent skills standard is maintained.

The tests and practical assessments are set, internally assessed and internal quality assured by the centre.

Both assessment methods and their management are externally quality assured by PIABC. A sample selection of the tests/assessments will be externally quality assured by PIABC. For each cohort a sample selection will be external quality assured by PIABC. The sample selection will be determined by PIABC in line with its centre assessment standard strategy and external quality assurance sampling policy. This will be undertaken before qualification certification.

PIABC's centre assessment standard strategy will ensure that all centre devised and marked assessments remain fit for purpose and that criteria against which candidates' performance is differentiated are being accurately and consistently applied for this qualification.

QUALIFICATION CERTIFICATION

This is not a graded qualification, and the full award is only available at *Pass* to candidates who successfully complete the qualification.

FURTHER INFORMATION

Please contact PIABC Limited directly at:
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