

SIAS Qualification Specification

SIAS Level 2 Certificate in the Fundamentals of Paper Technology

Qualification Number: 610/7430/5

Operational Start Date: 1st May 2026

Operational End Date: TBC

Certification End Date: TBC

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Version History

This is a live document and as such will be updated when required. It is the responsibility of the approved centre to ensure the most up-to-date version of the Qualification Specification is in use.

Version	Date	Comments
1.0	30/04/2026	First published

Introduction

Welcome to SIAS

SIAS is an Awarding Organisation regulated in England by the Office of Qualifications and Examinations Regulation (Ofqual) and in Northern Ireland by the Council for Curriculum, Examination and Assessment Regulation (CCEA Regulation).

We exist to drive positive change, and across STEM industries globally, we empower learners to achieve their full potential.

As the leading Awarding Organisation for the technical science, manufacturing, engineering and low carbon sectors, we are disrupting through innovative and collaborative approaches.

Our mission is to deliver transformational experiences and solutions that support the skills agenda.

Feedback

Customer experience and feedback is very important to us. We're always open to suggestions when it comes to enhancing and improving our services. If you have any comments or feedback on our services or products, please contact our team at info@siasuk.com or call us on 01925 515211.

About this Specification

This document has been developed to provide information for learners and centres undertaking, delivering or quality assuring this qualification.

Centre Recognition and Qualification Approval

To deliver this qualification, the centre must be recognised by SIAS.

Recognised centres must apply for approval for each qualification they intend to offer. Qualification approval must be obtained prior to conducting any learner assessments.

For details of our centre recognition and qualification approval process, visit our website or contact us at info@siasuk.com.

About this Qualification

Key Facts

Qualification Title	SIAS Level 2 Certificate in the Fundamentals of Paper Technology
Qualification Number	610/7430/5
Credit Value	16
Guided Learning Hours (GLH)	141
Total Qualification Time (TQT)	160
Assessment Methods	Multiple Choice Question Examination
Operational Start Date	1 st May 2026
Review Date	30 th April 2029
Operational End Date	-
Certification End Date	-
Regulation	This qualification is regulated by Ofqual

Qualification Objective

The aim of the SIAS Level 2 Certificate in the Fundamentals of Paper Technology is to provide learners with a structured introduction to the papermaking industry, including its sectors, organisations and job roles, the main raw materials, chemicals and processes used to make paper, and the final stages of production and quality control. The qualification develops learners' knowledge of how papermaking operations affect product quality, safety, environmental performance and sustainability, and introduces the key legal, regulatory and health and safety responsibilities associated with working in the sector.

The SIAS Level 2 Certificate in the Fundamentals of Paper Technology has been developed by SIAS in collaboration with the Confederation of Paper Industries.

Entry Requirements

This qualification is available for learners aged 16+.

There are no formal entry requirements for the SIAS Level 2 Certificate in the Fundamentals of Paper Technology. However, learners should have a basic understanding of English and mathematics.

Centres should take reasonable steps to ensure learners are able to complete this qualification, for example by carrying out an initial assessment to confirm they can work at the appropriate level.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is the process of recognising previous, informal or experiential learning so that the learner avoids having to repeat learning or assessment within a new qualification. SIAS supports the use of RPL and centres must work to the principles included in the SIAS RPL Policy which is available on the SIAS website. This policy

should be reviewed alongside this guide and all other relevant SIAS qualification documentation.

Qualification Structure

To achieve the SIAS Level 2 Certificate in the Fundamentals of Paper Technology learners must achieve the following:

- All mandatory units contained in the table below.

Ofqual Unit reference	Unit title	Level	Credit	GLH	TQT
D/652/1437	Unit 1: Introduction to the Papermaking Industry	2	4	35	40
F/652/1438	Unit 2: Fundamental Materials and Chemical Influences on Papermaking	2	2	16	20
H/652/1439	Unit 3: The Papermaking Process and Operations	2	7	65	70
L/652/1440	Unit 4: Post-production and Quality Control in Papermaking	2	3	25	30
TOTAL			16	141	160

Total Qualification Time (TQT) and Guided Learning Hours (GLH)

Note: Values for Total Qualification Time, including Guided Learning Hours, are calculated by considering the different activities that learners would typically complete to achieve and demonstrate the learning outcomes of a qualification. They do not include activities which are required by a learner's teacher based on the requirements of an individual learner and/or cohort. Individual learners' requirements and individual teaching styles mean there will be variation in the actual time taken to complete a qualification. Values for Total Qualification Time, including Guided Learning, are estimates.

Some examples of activities which can contribute to Total Qualification Time include:

- independent and unsupervised research/learning
- unsupervised compilation of a portfolio of work experience
- unsupervised e-learning
- unsupervised e-assessment
- unsupervised coursework
- watching a pre-recorded podcast or webinar
- unsupervised work-based learning
- all guided learning.

Some examples of activities which can contribute to Guided Learning include:

- classroom-based learning supervised by a teacher
- work-based learning supervised by a teacher
- live webinar or telephone tutorial with a teacher in real time
- e-learning supervised by a teacher in real time
- all forms of assessment which take place under the immediate guidance or supervision of a lecturer, supervisor, tutor or other appropriate provider of education or training, including where the assessment is competence-based and may be turned into a learning opportunity.

Grading

This qualification is assessed as a pass/fail.

Delivery and Assessment

Geographical Coverage

This qualification is regulated in England.

Use of Language

All learners must be assessed in English.

Progression Opportunities

Upon successfully completing this qualification, learners may wish to progress into further development and training in paper technologies.

Assessment Guidance

All SIAS assessments will be accessible and produce results that are valid, reliable, transparent and fair.

Centres should have systems in place to verify a learner is ready to undertake their assessment.

Centres must ensure that no part of the assessment of a learner including internal quality assurance and invigilation, is conducted by anyone with a personal interest in the assessment outcome.

The SIAS Level 2 Certificate in the Fundamentals of Paper Technology contains 4 mandatory knowledge units.

Unit No.	Unit title
1	Introduction to the Papermaking Industry
2	Fundamental Materials and Chemical Influences on Papermaking
3	The Papermaking Process and Operations
4	Post-production and Quality Control in Papermaking

These units are assessed as follows:

Component	Set by	Marked by	Assessment Method	Pass Requirement	Grading
Unit 1	SIAS	SIAS	One MCQ examination Duration: 45 minutes Number of questions: 30	Minimum 21/30 correct	Pass/Fail
Unit 2	SIAS	SIAS	One MCQ examination Duration: 25 minutes Number of questions: 15	Minimum 10/15 correct	Pass/Fail
Unit 3	SIAS	SIAS	One MCQ examination Duration: 60 minutes Number of questions: 40	Minimum 28/40 correct	Pass/Fail
Unit 4	SIAS	SIAS	One MCQ examination Duration: 25 minutes Number of questions: 15	Minimum 10/15 correct	Pass/Fail
Overall Award	SIAS	SIAS	Four MCQ examinations	All units must be passed.	Pass/Fail

Multiple-choice and Examinations

Multiple-choice and short answer question examinations as set out in the table above are externally set and marked by SIAS. These assessments are available paper-based or online through the SIAS XAMS platform.

The multiple-choice and short answer question examinations must be undertaken in controlled conditions. This means:

- learners must complete the assessment unaided
- books and other training aids must not be accessed by the learners
- all assessments must be invigilated to maintain authenticity and security.

Resits and retakes

Learners who fail to achieve a pass will be permitted to retake the assessment in accordance with the table below.

Assessment Type	Resit Arrangements
Multiple Choice Test	A resit can be taken up to two times

Learners may only seek a resit for any previously failed assessment.

ID requirements

It is the responsibility of the centre to have systems in place to ensure that the person taking an assessment is the person they are claiming to be. All centres are therefore required to ensure that each learner's identification is checked before they undertake the assessment.

SIAS recommends the following as proof of a learner's identity:

- a valid passport (any nationality)
- a photocard driving licence
- another photographic ID card, e.g. employee ID card, student ID card, travel card etc.

Centre Requirements

All SIAS centres must be approved by SIAS to deliver the qualification(s) they wish to offer. This is to ensure centres have the processes and resources in place to deliver the qualification(s). Further information can be found in the SIAS Centre Handbook.

When a centre applies to offer a qualification, they will need to provide evidence that they have sufficient resources and infrastructure in place for delivery of that qualification:

- evidence of trainer competence and knowledge
- details of available resources

For the SIAS Level 2 Certificate in the Fundamentals of Paper Technology centres are responsible for ensuring that their staff:

- are occupationally competent and/or knowledgeable in the role they are carrying out
- have current experience of training, assessing or internal quality assuring as appropriate to the role they are carrying out
- have access to appropriate training and support.

Information regarding induction and continuing professional development must be made available to SIAS by centres through the external quality assurance process.

Tutor/Trainer requirements

For the SIAS Level 2 Certificate in the Fundamentals of Paper Technology tutors/trainers are required to demonstrate they:

- have relevant occupational knowledge and competence.
- hold a recognised education and training qualification or have equivalent training experience.
- have completed recent, relevant CPD activities for the subject area.

Evidence includes:

- CV and relevant occupational qualifications and experience
- up-to-date CPD record including certification from any courses attended.

SIAS recommends as best practice for tutors/trainers to hold or be working towards a relevant education and training qualification. This includes:

- Level 3 Award in Education and Training or equivalent including Preparing to Teach in the Lifelong Sector (PTLLS), CertEd/PGCE, L4 Certificate in Education and Training, L5 Diploma in Education and Training.

Where this is not the case, SIAS will look at alternative sources of evidence for training competence, such as professional qualifications, relevant work experience or internal training records. For further guidance, please contact us.

Continuing Professional Development (CPD)

Centres are expected to support their staff, ensuring that their subject knowledge remains current and is up to date with best practice.

Quality Assurance Guidance

All SIAS qualifications require centres to have in place a robust mechanism for the quality assurance of training delivery and invigilated assessment arrangements.

External Quality Assurance

External quality assurance will be undertaken by SIAS. Centres will be required to provide documentation and other evidence to support this process upon request. Please refer to our Centre Handbook for further details.

Equality and Diversity

Delivery of SIAS qualifications must comply with equality and diversity legislation. Learners should not experience any barriers to achievement in respect of:

- age

- disability
- gender
- gender reassignment
- marriage and civil partnerships
- pregnancy and maternity
- race
- religion and belief
- sexual orientation.

Reasonable Adjustments

All learners must be treated fairly and equally and be provided with every opportunity to achieve our qualification(s). For more information or guidance, please refer to the SIAS Reasonable Adjustments Policy available on our website.

Health and Safety

SIAS are committed to ensuring the safety and wellbeing of learners. Due to the nature of some of the sectors SIAS work in, there can be a high level of risk which we expect centres to manage effectively. Centres must take appropriate measures to assess and manage these risks and implement procedures so that qualifications are delivered safely, minimising risks to learners and those involved in the assessment process as much as possible. Working environments must comply with all required health and safety standards.

Qualification Content

Unit 1: Introduction to the Papermaking Industry

Unit Reference	D/652/1437	
Level	2	
Credit Value	4	
GLH	35	
Aim	To provide learners with an understanding of the papermaking industry, including its sectors, organisations, processes, and roles, and to introduce the legal, regulatory, environmental and health and safety responsibilities associated with working in the industry.	
Assessment Methodology	Multiple-Choice Question Examination	
Learning Outcomes	Assessment Criteria	
<i>The learner will:</i>	<i>The learner can:</i>	
1. Understand the history of papermaking and its importance in today's global industry.	1.1	Identify key stages in the history of papermaking from its origins to modern industrial production.
	1.2	Identify main paper products and their typical markets and applications.
	1.3	Identify ways in which papermaking contributes to national and global economies.
	1.4	Identify current trends in paper consumption and production.
2. Know the main stages, and organisations involved in the papermaking industry.	2.1	Identify the main stages of the papermaking process.
	2.2	Identify the types of organisations involved in each stage in the papermaking process.
	2.3	State the key roles of industry bodies and associations that support the papermaking sector.
3. Know the key legal and regulatory requirements that relate to papermaking operations.	3.1	Identify key UK legislation and regulations relevant to papermaking operations.
	3.2	Identify examples of legal obligations on papermaking organisations and operators arising from relevant legislation.
	3.3	Identify where information on legal and regulatory requirements can be obtained within the workplace.
4. Understand the different job roles and their key	4.1	Identify the key job roles in the papermaking sector.

responsibilities within the papermaking sector.	4.2	Identify the main responsibilities typically associated with key job roles in papermaking.
	4.3	Identify the typical health and safety responsibilities associated with key roles in papermaking.
5. Understand the environmental impacts associated with papermaking.	5.1	Identify the main environmental impacts associated with papermaking operations.
	5.2	State how different processes contribute to environmental impact.
	5.3	Identify ways the industry can reduce environmental impact.
6. Know strategies for reducing waste and improving sustainability in energy use.	6.1	Identify ways to minimise waste and support recycling in papermaking operations.
	6.2	Recognise how staff education and training can support energy savings and more sustainable behaviour.
	6.3	Identify examples of good environmental and sustainability practice in papermaking.
	6.4	Identify common eco-labelling schemes relevant to paper products and what they indicate.
	6.5	Recognise how public perception and customer demand can influence the opportunity to replace alternative materials.

Unit 2: Fundamental Materials and Chemical Influences on Papermaking

Unit Reference	F/652/1438	
Level	2	
Credit Value	2	
GLH	16	
Aim	The aim of this unit is to provide learners with knowledge of the main raw materials and chemicals used in papermaking, their purposes and simple practical applications. The unit also introduces the basic effects of these chemicals and water quality on pulp and paper properties, and the key principles for handling papermaking chemicals safely in the workplace.	
Assessment Methodology	Multiple-Choice Question Examination	
Learning Outcomes <i>The learner will:</i>	Assessment Criteria <i>The learner can:</i>	
1. Know the main materials and chemicals used in papermaking.	1.1	Identify main fibrous raw materials used in papermaking.
	1.2	Identify common process, functional and cleaning chemicals used in papermaking.
	1.3	State the purpose of common process chemicals used in papermaking.
2. Know the basic effects of chemicals and water quality on pulp and paper.	2.1	Identify how the following affect pulp and paper properties: • Electrical properties • Water • Pulp quality.
	2.2	Recognise observable effects of chemical use on pulp and paper.
3. Know safe handling principles for chemicals used in papermaking.	3.1	Recognise potential hazards associated with chemicals used in papermaking.
	3.2	Identify basic safety considerations when handling chemicals used in papermaking.
4. Know simple practical applications of chemicals in papermaking.	4.1	Identify when and why chemicals are added in the papermaking process.

Unit 3: The Papermaking Process and Operations

Unit Reference	H/652/1439	
Level	2	
Credit Value	7	
GLH	65	
Aim	The aim of this unit is to provide learners with knowledge of the main stages in the papermaking process and operations, from fibre receipt and stock preparation through sheet formation, pressing, drying and finishing. Learners will understand the purpose of key equipment, how operating conditions affect paper quality, and how to identify and rectify common process faults.	
Assessment Methodology	Multiple-Choice Question Examination	
Learning Outcomes	Assessment Criteria	
<i>The learner will:</i>	<i>The learner can:</i>	
1. Know the main papermaking processes and their sequence within mill operations.	1.1	Identify the key papermaking processes from fibre receipt to finished paper.
	1.2	State the purpose of each stage in the papermaking process.
	1.3	Identify ways in which the operating conditions of each process can affect paper quality.
	1.4	Identify the main inputs and outputs at each process step.
2. Know how fibrous raw materials influence papermaking operations and paper quality.	2.1	Identify the differences between virgin and recycled fibres and how they can affect papermaking operations.
	2.2	Recognise how fibre type affects pulp quality and paper properties.
	2.3	Identify the main pulping methods and their effect on pulp quality and cost.
3. Know the key equipment and processes used in stock preparation.	3.1	Identify common equipment used for pulp and stock preparation.
	3.2	State the purpose of mechanical treatment methods in stock preparation.
	3.3	Recognise how water properties and treatment affect pulp and process performance.
	3.4	Recognise common water contaminants and their effects.

	3.5	Identify basic safety and environmental controls used in stock preparation.
4. Know the main features of sheet formation and the influence of machine operation.	4.1	Identify the main components of the paper machine up to the press section.
	4.2	Identify how machine settings can influence sheet formation and quality.
	4.3	Identify actions used to check and correct common sheet formation faults.
	4.4	Identify health, safety, and environmental considerations in sheet formation areas.
5. Know the purpose and basic operation of pressing systems.	5.1	Identify the purpose of the press section in papermaking.
	5.2	Recognise key pressing equipment.
	5.3	Identify safety and energy considerations in pressing.
6. Know the purpose and basic operation of drying systems.	6.1	State the purpose of the drying section.
	6.2	Identify main types of drying systems used in papermaking.
	6.3	Identify safety and energy considerations in drying.
	6.4	Recognise how energy efficiency and heat recovery are achieved in pressing.
7. Know how faults arise and are managed in papermaking operations.	7.1	Identify common process faults at each main stage of papermaking.
	7.2	Identify basic checks or adjustments that can be used to rectify faults.
	7.3	Identify the reporting and escalation procedures for process faults.
	7.4	Recognise how fault prevention supports quality, safety, and efficiency.
8. Know how process control supports quality and sustainability.	8.1	Identify key process variables monitored in papermaking.
	8.2	State why monitoring and control of process variables are essential for quality and sustainability.
	8.3	Recognise examples of good operating practice that support effective process control.

Unit 4: Post-production and Quality Control in Papermaking

Unit Reference	L/652/1440	
Level	2	
Credit Value	3	
GLH	25	
Aim	The aim of this unit is to provide learners with knowledge of the final stages of papermaking and post-production processes, the methods used for quality control, and the importance of maintaining quality throughout production. The unit also introduces common post-production issues and how they can be addressed, and the impact of quality control on safety, efficiency and customer satisfaction.	
Assessment Methodology	Multiple-Choice Question Examination	
Learning Outcomes	Assessment Criteria	
<i>The learner will:</i>	<i>The learner can:</i>	
1. Know the final stages of papermaking and post-production processes.	1.1	Identify the key stages involved in papermaking following production.
	1.2	Recognise the purpose of each post-production stage.
	1.3	Outline the common issues that can occur during post-production.
	1.4	Identify methods commonly used to address post-production issues.
2. Know the methods used for quality control in papermaking.	2.1	Identify common methods used for testing and sampling paper.
	2.2	Recognise relevant national standards used in paper quality control.
3. Understand the importance of quality control in papermaking.	3.1	State why quality control is essential in papermaking.
	3.2	Identify possible consequences of poor-quality control.
	3.3	State the safety implications of poor-quality control.
	3.4	Identify the impact of poor-quality control on customer satisfaction.

Resources

SIAS provides the following additional resources for this qualification:

- Centre Qualification Guide
- Qualification Learner Logbook
- Mock Assessment Materials
- Externally Set Assessments

Please see below examples of sample assessment questions:

Sample Question 1
Which fibre type is commonly used in security paper grades?
A. Cotton
B. Hardwood
C. Softwood
D. RCF

Sample Question 2
What paper fault can occur if too much vacuum is applied at the couch roll?
A. Shadow marking
B. Barring
C. Stamp marking
D. Blow marking

Further Information

For information about SIAS and general enquiries please see our website: www.siasuk.com
or contact:

Telephone: 01925 515211

Email: info@siasuk.com



Floor 1, 720 Mandarin Court
Centre Park, WARRINGTON
WA1 1GG

T: 01925 515211
E: info@siasuk.com
W: www.siasuk.com