

SIAS Qualification Specification

SIAS Level 3 Award in Process Safety Operations

Qualification Number: 610/4749/1

Operational Start Date: 1st October 2024

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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	20/09/2024	First published
1.1	27/01/2025	Update to Centre Requirements

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 3 Award in Process Safety Operations
Qualification Number	610/4749/1
Guided Learning Hours (GLH)	12
Total Qualification Time (TQT)	30
Assessment Methods	Learner Assessment Workbook
Operational Start Date	1 October 2024
Review Date	30 September 2027
Operational End Date	-
Certification End Date	-
Regulation	This qualification is regulated by Ofqual
Certificate Validity	3 years

Qualification Objective

The SIAS Level 3 Award in Process Safety Operations is designed to develop the learner's knowledge and understanding in the principles of process safety management across an organisation and how the resulting measures are used in operations to maintain safe conditions of plant and equipment. The qualification is aimed operators and technicians who wish to gain a clear understanding of the principles of process safety. Following completion of the qualification, the learner will have a clear understanding of major accident risks, the safety critical equipment and operational practices designed to control them.

The SIAS Level 3 Award in Process Safety Operations has been developed by SIAS in partnership with Cogent Skills with approval from the Process Safety Management Competency Programme Board and is aligned to the Process Safety Management Training Standards.

This qualification is valid for 3 years from the date of award, after which point, learners will need to retake the qualification to demonstrate they have the up-to-date knowledge and understanding of the principles of process safety.

Entry Requirements

This qualification is available for learners aged 16+.

There are no formal entry requirements for the SIAS Level 3 Award in Process Safety Operations. However, learners should have a basic understanding of English and mathematics. Centres should also ensure learners are able to complete this qualification, for example, through completing an initial assessment to ensure 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 which could contribute to a qualification or unit. 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 3 Award in Process Safety Operations learners must achieve the following.

- The 1 mandatory unit listed below:

Ofqual Unit reference	Unit title	Level	GLH	TQT
A/651/3246	Understand Process Safety Management in Operations	3	12	30
TOTAL			12	30

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 practice
- 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 graded as a pass/fail.

Delivery and Assessment

Use of Language

All learners must be assessed in English unless the qualification specification states that another language will be accepted.

Progression Opportunities

Upon successfully completing this qualification learners may choose to further their development and training within process safety management.

Assessment Guidance

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

The SIAS Level 3 Award in Process Safety Operations contains 1 mandatory knowledge unit.

To achieve the qualification, learners must successfully pass:

Unit Title	Assessment Method	Set by	Marked by
Understand Process Safety Management in Operations	Externally set and internally marked Learner Assessment Workbook	SIAS	Centre

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

Learner Assessment Workbook

The SIAS Learner Assessment workbook will be used to assess the learner's knowledge and understanding in the principles of process safety operations. The questions within the SIAS Learner Assessment Workbook will cover all the learning outcomes and assessment criteria from the one mandatory unit within this qualification.

This workbook is internally marked and quality assured by the centre, using the provided marking guidance, and externally quality assured by SIAS. All assessment criteria within the mandatory unit must be met to achieve the qualification. Centres are **NOT** permitted to use

their own workbook and must use the Learner Assessment Workbook provided by SIAS. The SIAS Learner Assessment Workbook and Marking Guide is available to download from Pinnacle.

All knowledge assessment evidence must be retained for a minimum of 3 years for audit purposes and be available to the EQA upon request.

Learners who fail to achieve a pass will be permitted to retake the assessment.

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

Centres are responsible for ensuring assessment decisions are valid and reliable, and that work submitted for assessment by learners is prepared and produced independently and free of plagiarism.

Documentation to support the qualification assessment process can be accessed from the SIAS Pinnacle system.

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.

Centres must:

- evidence of trainer, assessor and IQA competence and knowledge
- details of available resources
- be on the panel of providers approved by the Process Safety Management Competence Programme Board

Centres are responsible for ensuring that their assessors and internal quality assurance staff are:

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

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

Facilities

Training and assessment for approved qualifications must take place in a suitable environment that has been approved by SIAS. The environment must be adequately equipped for training, conducive to effective learning, and must comply with current Health and Safety requirements. Equipment for practical activities must be readily available and fit for purpose.

Tutor/Trainer Requirements

Both tutor/trainer and assessor roles may be performed by the same person providing that the qualification requirements for both roles are met.

For the SIAS Level 3 Award in Process Safety Operations tutors/trainers are required to demonstrate they:

- have relevant occupational knowledge and competence, including relevant experience working within a process safety management role
- hold a recognised education and training qualification or have equivalent training experience
- have completed recent, relevant CPD activities for the subject area
- have gained approval from the Process Safety Management Competence Programme Board to deliver against the Process Safety Management Training Standards

Evidence includes:

- CV and relevant occupational qualifications and experience
- Up-to-date CPD Record including certification from any courses attended
- Confirmation from the Process Safety Management Competence Programme Board to deliver against the Process Safety Management Training Standards

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

- 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.

Assessor Requirements

Both tutor/trainer and assessor roles may be performed by the same person providing that the qualification requirements for both roles are met.

For the SIAS Level 3 Award in Process Safety Operations assessors are required to demonstrate they:

- have relevant occupational knowledge and competence

- hold or be working towards a recognised assessor qualification or have equivalent assessing 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 that as best practice for assessors to hold or be working towards a relevant assessor qualification. These include:

- Level 3 Award in Assessing Vocationally Related Achievement or equivalent including A1, Award D32 and D33, L3 Award in Assessing Competence in the work Environment, L3 Certificate in Assessing Vocational Achievement

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

Internal Quality Assurance Requirements

SIAS requires that centres implement a strong system for the internal quality assurance of their assessment processes and training delivery. This internal quality assurance must be carried out by a suitably qualified individual who has not participated in the delivery or assessment of the course they are evaluating.

For the SIAS Level 3 Award in Process Safety Operations IQAs are required to demonstrate they:

- hold or be working towards a recognised internal quality assurance qualification or have equivalent internal quality assurance experience
- have completed recent, relevant CPD activities

Evidence includes:

- CV and relevant occupational qualifications and experience
- Up-to-date CPD Record including certification from any courses attended

SIAS recommends that as best practice for IQAs to hold or be working towards a relevant IQA qualification. These include:

- Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice or equivalent including D34 or V1

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

Continuing Profession Development (CPD)

Centres are expected to support their staff, ensuring that their subject knowledge remains current and is up to date to best practice in delivery, assessment and quality assurance.

Quality Assurance Guidance

All SIAS qualifications require centres to have in place a robust mechanism for the quality assurance of training delivery and 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: Understand Process Safety Management in Operations

Unit Reference	A/651/3246	
Level	3	
GLH	12	
Aim	The aim of this unit is to provide the learner with a clear understanding of the principles of process safety across an organisation and how the resulting measures are used in operations to maintain safe conditions of plant and equipment.	
Assessment Methodology	Learner Assessment Workbook	
Learning Outcomes	Assessment Criteria	
<i>The learner will:</i>	<i>The learner can:</i>	
1. Understand the meaning and importance of process safety management.	1.1	Outline the importance and key requirements of process safety management.
	1.2	Explain the difference between occupational safety and process safety.
	1.3	Summarise significant major accident events which have occurred as a result of poor process safety management.
	1.4	Outline the recurring root cause failures of major accidents that highlight the key issues associated with poor process safety management.
	1.5	Outline process safety leadership including the Process Safety Leadership Group (PSLG) Principles of Process Safety Leadership.
	1.6	Summarise relevant health, safety and environmental legislation and other requirements relating to process safety management.
	1.7	Explain the background to relevant health, safety and environmental legislation and key individual legal responsibilities.
	1.8	Explain the need for an integrated, complete process safety management system to be in place.
	1.9	Explain the implications of process safety management on the complete lifecycle of the plant from design to decommissioning.
	1.10	Explain the differences between prevention, control and mitigation of process safety incidents.

2. Understand the hazards, risks and consequences associated with hazardous substances and processes.	2.1	Describe the typical properties of hazardous substances.
	2.2	Describe the types of major accidents and consequences related to poor process safety management.
	2.3	Describe the main initiators or-causes of major accidents including: <ul style="list-style-type: none"> • corrosion • impact • incorrect installation • incorrect maintenance • mal-operation
	2.4	Explain the integrated nature of process safety management and how major accidents are prevented.
	2.5	Illustrate how the integrated nature of process safety management fit together emphasising where employees have key roles and responsibilities.
3. Understand the hazards, consequences and safeguards in the specific process or plant you operate or maintain.	3.1	Explain the nature of the process safety hazards for the plant in which you operate or maintain.
	3.2	Describe engineering safeguards used in the specific process or plant you operate or maintain.
	3.3	Describe operational safeguards used in the specific process or plant you operate or maintain, including adherence to operating procedures and safe systems of work, standards of isolations, elimination of sources of ignition.
	3.4	Explain the potential impact of major accident hazards on people, environment and the business, both on and off site.
4. Understand the role of operations (Operator and Maintenance) in ensuring effective process safety.	4.1	Explain the concept of prevention, control and mitigation using multiple independent layers of protection provided by: <ul style="list-style-type: none"> • Plant • Process • People
	4.2	Explain the importance of ensuring all protective barriers/layers of protection remain effective.
	4.3	Explain where the highest risks are including: <ul style="list-style-type: none"> • start up, shut down, deviations from the safe operating envelope • non-standard operations • intrusive maintenance • plant handover
	4.4	Explain the importance of: <ul style="list-style-type: none"> • situational awareness and communication • proactive monitoring and control

		<ul style="list-style-type: none"> defined proper limits managing alarms and alerts managing abnormal situations
	4.5	Explain the importance of a formal and comprehensive shift handover.
5. Understand emergency planning and the need for effective measures to limit the consequences of process incidents.	5.1	Explain the role of operations staff in responding to and dealing with incidents.
	5.2	Explain the importance of conducting exercises to mitigate potential incident scenarios.
	5.3	Explain the role of operational staff in regular exercises of mitigating potential incident scenarios.
	5.4	Explain the need for operations and individuals to understand their role in the on-site and off-site emergency plans.
	5.5	Explain the importance of maintaining the effectiveness of emergency response equipment.
6. Understand the role of operations in applying learning from incidents and near misses.	6.1	Explain the value of capturing process safety near misses and the key role of operations staff in reporting them.
	6.2	Identify examples to demonstrate the difference between occupational and process safety incidents.
	6.3	Outline the benefits of an open culture in promoting the reporting of incidents and near misses.
	6.4	Describe basic investigation and root cause techniques and the importance of involving operations staff in investigations.
	6.5	Describe the importance in operations staff receiving feedback from near miss reports or incident investigations.
	6.6	Outline some relevant case studies of actual incidents/near misses from within the company, across the industry, and from other sectors using examples where lessons have not been learnt.
7. Understand the concept of continual improvement in process safety performance, and operations role in this.	7.1	Explain how learning from less serious pre-cursor events provides opportunities to prevent major incidents.
	7.2	Explain the value of measuring process safety performance.
	7.3	Explain the verification methods used to assure effective process safety performance that prevent and limit major accidents, including: <ul style="list-style-type: none"> Process Safety Performance Indicators Supervision and monitoring Audit
	7.4	Explain the value of communicating and providing proactive input and feedback to management and the importance of positive involvement in a process safety improvement plan.

Resources

SIAS provides the following additional resources for this qualification:

- Qualification Learner Logbook
- Centre Qualification Guide
- SIAS Learner Assessment Workbook
- SIAS Learner Assessment Workbook Marking Guidance

Sample Assessment Material

Please see below a sample assessment question:

Question 1: Why is process safety management important, and what are the key requirements needed to implement it effectively?			
Unit Number: 1		Assessment Criteria: 1.1	
Answer:			
Pass:		Fail:	
Assessor Comments:			

Further Information

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

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