

ICTQual AB



Qualification Specification

ICTQual AB Level 3 Diploma in Industrial Fire Safety Management



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ICTQual AB's

Level 3 Diploma in Industrial Fire Safety Management

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Qualification Specification about

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About ICTQual AB's

ICTQual AB is a distinguished awarding body based in the United Kingdom, dedicated to fostering excellence in education, training, and skills development. Committed to global standards, ICTQual AB's provides internationally recognized qualifications that empower individuals and organizations to thrive in an increasingly competitive world. Their offerings span diverse industries, including technical fields, health and safety, management, and more, ensuring relevance and adaptability to modern workforce needs.

ICTQual AB's delivers high-quality educational solutions through a network of Approved Training Centres worldwide. Their robust standards and innovative teaching methodologies equip learners with practical knowledge and skills for personal and professional growth. With a mission to inspire lifelong learning and drive positive change, ICTQual AB's continuously evolves its programs to stay ahead of industry trends and technological advancements.

Course Overview

Industrial fire safety is not just a regulatory requirement; it is a fundamental pillar of operational integrity, essential for safeguarding human life, protecting valuable assets, and ensuring seamless business continuity. In environments where heavy machinery, volatile chemicals, combustible materials, and high-voltage systems are commonplace, the stakes are exceptionally high. A single thermal event or fire outbreak can lead to catastrophic human, financial, and environmental consequences, making proactive fire safety management a top priority for organizations worldwide.

The **ICTQual Level 3 Diploma in Industrial Fire Safety Management** is a premier, specialized qualification meticulously designed to meet this exact industry need. Serving as a crucial bridge between basic fire safety awareness and high-level hazard management, this diploma empowers individuals to take on critical leadership roles in workplace safety. It provides comprehensive, industry-aligned training that covers a broad spectrum of essential topics, from understanding the chemistry of industrial fires to navigating complex legal frameworks. By undertaking this qualification, professionals are prepared to effectively manage, strategize,

and oversee robust fire safety protocols, ultimately fostering a resilient safety culture within the most demanding industrial environments.

Course Aims

The primary aims of this diploma are to:

- Equip professionals with a thorough, foundational understanding of fire safety principles specific to industrial settings.
- Develop the expertise required to design, implement, and manage highly effective fire safety strategies.
- Ensure participants can confidently navigate, apply, and enforce compliance with current workplace safety regulations and legislation.

Learning Objectives

By the end of this qualification, learners will be able to successfully:

- **Analyze Fire Risks:** Identify and understand complex fire hazards inherent to various industrial processes.
- **Conduct Risk Assessments:** Execute thorough and practical fire risk assessments to mitigate potential workplace dangers.
- **Manage Emergencies:** Develop, implement, and oversee robust emergency response plans to protect life and property during a crisis.

Targeted Audience

This qualification is highly valuable for anyone responsible for or interested in workplace safety, including:

- **Current Safety Professionals:** Individuals already involved in managing fire safety or occupational health and safety in industrial environments who want to formalize or advance their skills.
- **Facility and Operations Managers:** Leaders responsible for the physical security, compliance, and operational continuity of industrial plants and facilities.
- **Aspiring Fire Safety Officers:** Individuals seeking a specialized qualification to step into dedicated fire safety management roles.

Certification Framework

Qualification title	ICTQual AB Level 3 Diploma in Industrial Fire Safety Management
Course ID	FS0004
Total Qualification Time	300 Hours
Guided Learning Hours	150 Hours
Grading Type	Pass / Fail
Competency Evaluation	Coursework / Assignments / Verifiable Experience
Assessment	The assessment and verification process for ICTQual AB's qualifications involves two key stages: Internal Assessment and Verification: ✓ Conducted by the staff at the Approved Training Centre (ATC) to ensure learners meet the required standards through continuous assessments. ✓ Internal Quality Assurance (IQA) is carried out by the centre's IQA staff to validate the assessment process. External Quality Assurance: ✓ Managed by ICTQual AB's verifiers, who periodically review the centre's assessment and IQA processes. Verifies that assessments are conducted to the required standards and ensures consistency across centres

Entry Requirements

Entry requirements for an ICTQual Level 3 Diploma in Industrial Fire Safety Management may vary depending on the institution offering the program. However, typical entry requirements for such a course may include:

- ✓ Candidates must be at least 18 years old.
- ✓ Candidates are often required to have a minimum level of education, such as a high school diploma or equivalent.
- ✓ Participants should have basic literacy and numeracy skills. This is important as the course materials, including the training manual and assessment, require reading, comprehension, and basic mathematical understanding.
- ✓ Since the course is in English, participants should have proficient English language skills to engage with course materials effectively, participate in discussions, and complete written assignments.

Qualification Structure

This qualification comprises 7 mandatory units, totalling 30 Credits. Candidates must successfully complete all mandatory units to achieve the qualification.

Mandatory Units	
Unit Ref#	Unit Title
FS0004-01	Introduction to Industrial Fire Safety Management
FS0004-02	Fire Science and Behavior
FS0004-03	Fire Risk Assessment
FS0004-04	Fire Safety Legislation and Standards
FS0004-05	Fire Prevention Strategies
FS0004-06	Emergency Preparedness and Response
FS0004-07	Fire Investigation and Analysis

Centre Requirements

To ensure quality training delivery, centres must adhere to the following standards:

1. Centre Approval

- ✓ Centres must be formally approved by ICTQual AB's before delivering this qualification.
- ✓ Approval involves a review of facilities, policies, and staff qualifications.

2. Qualified Staff

- ✓ **Tutors:** Must hold a Bachelor's Degree (Level 6) or higher in Fire Safety Engineering, Occupational Health and Safety, or a related industrial discipline, and possess a minimum of 3 years of practical, professional experience in industrial fire safety management or emergency response.
- ✓ **Assessors:** Must hold a recognized assessor qualification (e.g., CAVA, AVRA) or equivalent)
- ✓ **Internal Quality Assurers (IQAs):** Must hold a recognized IQA qualification (e.g. Level 4 Award in the IQA and Level 4 Certificate in Leading the IQA) and experience to oversee assessment standards.

3. Learning Facilities

Centre must offer:

- ✓ Private study areas and internet-enabled workspaces (for blended or physical delivery)
- ✓ Academic and pastoral support for learners
- ✓ Administrative support must be available to manage enrolment, tracking, and learner queries efficiently

4. Health and Safety Compliance

- ✓ All training facilities must comply with health and safety regulations.

- ✓ Centres must conduct regular risk assessments for practical activities.

5. Learning Resources

- ✓ **Course Materials:** Approved textbooks, study guides, and digital content must align with the qualification standards.
- ✓ **Assessment Tools:** Templates and guidelines must be provided to ensure standardized evaluation processes.
- ✓ **E-Learning Support:** Centres offering online or blended learning must implement an effective Learning Management System (LMS).

6. Assessment and Quality Assurance

- ✓ Centres must ensure assessments meet ICTQual AB's competency standards.
- ✓ Internal quality assurance (IQA) must be conducted to maintain consistency.
- ✓ External verifiers from ICTQual AB's will review assessment and training practices.

7. Learning Support

- ✓ **Qualification Guidance:** Support for coursework and assignments.
- ✓ **Career Pathway Assistance:** Information on progression opportunities in industrial fire safety management or emergency response sectors.
- ✓ **Accessibility Support:** Accommodations for learners with disabilities or language barriers.

8. Policies and Compliance

Centres must uphold the following policies in accordance with ICTQual AB's standards:

- ✓ Equality, Diversity, and Inclusion Policy.
- ✓ Health and Safety Policy.
- ✓ Safeguarding and Learner Protection Policy.
- ✓ Complaints and Appeals Procedure.
- ✓ Data Protection and Confidentiality Policy.

9. Reporting Requirements

- Centres must provide ICTQual AB's with regular reports on learner registrations, progress, and certification outcomes.
- Assessment records must be maintained for external auditing and quality assurance purposes.

Support for Candidates

Centres should ensure that materials developed to support candidates:

- ✓ Facilitate tracking of achievements as candidate's progress through the learning outcomes and assessment criteria.
- ✓ Include information on how and where ICTQual AB's policies and procedures can be accessed.
- ✓ Provide mechanisms for Internal and External Quality Assurance staff to verify and authenticate evidence effectively.

This approach ensures transparency, supports candidates' learning journeys, and upholds quality assurance standards.

Assessment

This qualification is competence-based, requiring candidates to demonstrate high-level strategic proficiency as defined in the qualification units. The assessment evaluates the candidate's skills, knowledge, and understanding against the set standards. Key details include:

Assessment Process:

- Must be conducted by an experienced and qualified assessor.
- Candidates compile a portfolio of evidence that satisfies all learning outcomes and assessment criteria for each unit.

Types of Evidence:

- Assignments, detailed research projects, or strategic reports.
- Professional discussions.
- Candidate-produced strategic work (e.g., policy drafts, financial models).
- Recognition of Prior Learning (RPL).

Learning Outcomes and Assessment Criteria:

- **Learning Outcomes:** Define what candidates should know, understand, or accomplish upon completing the unit.
- **Assessment Criteria:** Detail the standards candidates must meet to demonstrate that the learning outcomes have been achieved.

Unit Descriptors

FS0004-01- Introduction to Industrial Fire Safety Management

This foundational unit explores the critical role of fire safety management within industrial environments. Learners will examine the historical context, core principles, and key responsibilities of safety professionals. It highlights the severe impact of industrial fires on human life, property, and business continuity, establishing a solid framework for developing proactive safety cultures and implementing effective organizational fire safety management systems.

Learning Outcome:	Assessment Criteria:
1. Understanding the Role of Fire Safety Management: Grasp the essential principles and objectives of fire safety management within industrial settings.	1.1 Explain the core principles and primary objectives of fire safety management within a typical industrial workplace. 1.2 Outline a practical procedure to apply a specific fire safety objective to a well-defined, yet complex, industrial task. 1.3 Evaluate the effectiveness of an existing fire safety management approach and suggest methods for improvement.
2. Recognizing the Importance of Fire Safety: Appreciate the critical importance of fire safety and its impact on industrial operations, employee safety, and overall business continuity.	2.1 Describe the potential impact of industrial fire hazards on employee safety, daily operations, and long-term business continuity. 2.2 Interpret workplace information or data to identify how a specific fire risk could disrupt non-routine business operations. 2.3 Review and select appropriate practical measures to protect business continuity and minimize operational downtime in the event of a fire.
3. Identifying Key Stakeholders: Identify the various stakeholders involved in fire safety management, including regulatory bodies, internal safety teams, and emergency services.	3.1 Identify the key internal and external stakeholders in industrial fire safety (e.g., regulatory bodies, safety teams, emergency services) and describe their specific responsibilities. 3.2 Explain the proper procedures for initiating effective communication and coordination with external emergency services during a complex incident. 3.3 Take responsibility for drafting a clear, routine guide that instructs other employees on how to report to and interact with internal safety teams.

FS0004-02- Fire Science and Behavior

This crucial unit delves into the fundamental chemical and physical processes of combustion. Learners will investigate the fire triangle, ignition sources, heat transfer methods, and the stages of fire development. By fully understanding how different industrial materials ignite and burn, professionals can accurately predict fire behavior, assess potential hazards, and select the most effective suppression mediums for specific industrial environments.

Learning Outcome:

Assessment Criteria:

- | | |
|---|---|
| 1. Fundamental Concepts of Fire Science: Understand the basic principles of fire chemistry and physics, including the process of ignition, combustion, and the various stages of fire development. | 1.1 Explain the basic chemistry and physics of fire, detailing the elements of the fire triangle and the process of ignition.
1.2 Describe the sequential stages of fire development within an industrial setting.
1.3 Use fundamental fire science principles to identify and document potential ignition sources and vulnerable combustible materials in a designated work area. |
| 2. Analyzing Fire Behavior: Analyze how fire spreads in different industrial environments and identify the factors influencing fire behavior. | 2.1 Identify and describe the primary methods of heat transfer (convection, conduction, radiation) and how they contribute to fire spread.
2.2 Examine a specific industrial environment layout to identify how structural or environmental factors directly influence fire spread.
2.3 Investigate a specific industrial work activity to determine how the hazardous materials involved could alter typical fire behavior. |
| 3. Applying Fire Dynamics: Apply knowledge of fire dynamics to predict fire behavior and assess potential impacts on industrial operations. | 3.1 Apply practical concepts of fire dynamics to predict the likely path and growth rate of a fire originating in a specific industrial zone.
3.2 Describe the potential physical and operational impacts of a predicted fire scenario on essential industrial operations.
3.3 Propose practical, workplace-specific control measures that would effectively limit fire growth based on fire dynamics predictions. |

FS0004-03- Fire Risk Assessment

This practical unit provides comprehensive training on conducting systematic fire risk assessments in complex industrial settings. Learners will master practical methodologies to identify fire hazards, evaluate risks to people and assets, and determine appropriate control measures. The curriculum emphasizes documenting findings, prioritizing corrective actions, and continuously reviewing assessments to ensure ongoing operational safety and compliance within dynamic modern workplace environments.

Learning Outcome:	Assessment Criteria:
1. Conducting Fire Risk Assessments: Develop the ability to conduct comprehensive fire risk assessments in industrial settings, identifying potential hazards and evaluating risks.	1.1 Describe the systematic process of conducting a comprehensive fire risk assessment within an industrial setting. 1.2 Carry out a practical fire risk assessment for a designated industrial work area, identifying hazards and recording findings. 1.3 Review and update an existing fire risk assessment to ensure it accurately reflects recent changes in the workspace or procedures.
2. Evaluating Fire Hazards: Recognize and assess fire hazards specific to industrial environments, considering factors such as materials, processes, and equipment.	2.1 Explain how specific industrial factors, such as hazardous material storage and high-temperature processes, contribute to increased fire risks. 2.2 Inspect a specific industrial workspace to identify, categorize, and document specific fire hazards. 2.3 Assess the severity and likelihood of identified fire hazards to prioritize areas requiring immediate safety interventions.
3. Implementing Risk Mitigation Strategies: Formulate and implement effective risk mitigation strategies to minimize fire hazards and enhance safety.	3.1 Describe a variety of practical risk mitigation strategies that can be utilized to minimize specific fire hazards. 3.2 Develop a practical fire risk mitigation plan tailored to reduce hazards associated with a defined industrial manufacturing process. 3.3 Outline the implementation of a chosen risk reduction strategy, including how to communicate new safety procedures to relevant employees.

FS0004-04- Fire Safety Legislation and Standards

This essential unit examines the complex legal frameworks governing industrial fire safety. Learners will navigate local, national, and international regulations, including critical building codes and occupational health standards. By understanding legal obligations, liabilities, and the role of regulatory enforcement agencies, professionals can ensure strict organizational compliance, avoid costly legal penalties, and uphold the highest ethical standards in workplace safety management.

Learning Outcome:	Assessment Criteria:
1. Understanding Fire Safety Legislation: Gain a thorough understanding of the legal framework governing fire safety in industrial settings, including relevant laws and regulations.	1.1 Describe the key components of the national legal framework and specific regulations governing industrial fire safety. 1.2 Interpret a specific piece of fire safety legislation to determine how its rules apply to daily operations of a facility. 1.3 Review a provided workplace scenario to identify potential breaches of established fire safety laws and suggest corrective actions.
2. Ensuring Compliance: Develop the skills to ensure compliance with fire safety standards and regulatory requirements, minimizing legal liabilities and enhancing safety.	2.1 Explain the potential legal liabilities, financial penalties, and safety consequences for failing to comply with fire safety regulations. 2.2 Conduct a practical compliance review of a specific industrial work procedure against required regulatory standards. 2.3 Develop a straightforward monitoring checklist to help workplace supervisors maintain daily compliance with fire safety rules.
3. Applying International Standards: Familiarize with and apply key international fire safety standards, such as those from NFPA, OSHA, and ISO, to local industrial contexts.	3.1 Identify and describe the primary purpose of key international fire safety standards (e.g., NFPA, OSHA, ISO) relevant to heavy industry. 3.2 Compare a specific international fire safety standard with current local workplace practices to identify safety gaps. 3.3 Apply a relevant section of a recognized international standard to develop a localized safety procedure for a high-risk activity.

FS0004-05- Fire Prevention Strategies

This unit focuses on proactive measures designed to eliminate or minimize dangerous fire risks in industrial facilities. Learners will explore safe storage of hazardous materials, electrical safety protocols, hot work permit systems, and equipment maintenance. The course emphasizes designing robust preventative strategies, implementing effective safety policies, and utilizing advanced technological solutions to drastically reduce the likelihood of industrial fire incidents.

Learning Outcome:	Assessment Criteria:
1. Developing Fire Prevention Plans: Design and implement effective fire prevention plans tailored to the specific needs of industrial facilities.	1.1 Explain the essential components and legal requirements of a comprehensive facility fire prevention plan. 1.2 Develop a tailored, practical fire prevention plan for a defined industrial work area. 1.3 Review an existing facility fire prevention plan to identify potential weaknesses and propose realistic improvements.
2. Incorporating Fire Prevention in Design and Maintenance: Ensure that fire prevention principles are integrated into the design, construction, and maintenance of industrial facilities.	2.1 Describe how core fire prevention principles are applied during the design and maintenance of an industrial workspace. 2.2 Interpret facility maintenance schedules to ensure critical physical fire safety features are routinely inspected. 2.3 Create a practical checklist to guide maintenance staff in identifying and correcting physical building hazards during routine inspections.
3. Utilizing Fire Protection Systems: Understand the various fire protection systems available, including active and passive measures, and ensure their effective implementation and maintenance.	3.1 Distinguish between active and passive fire protection systems, explaining how each function within an industrial environment. 3.2 Select and justify appropriate active and passive fire protection equipment for a specific high-risk industrial work zone. 3.3 Outline a step-by-step procedure for the routine testing and maintenance of a designated active fire protection system.

FS0004-06- Emergency Preparedness and Response

This essential unit equips learners with the skills to develop and execute comprehensive emergency response plans. Topics include designing safe evacuation routes, establishing effective communication protocols, and coordinating with external emergency services. Professionals will learn to conduct realistic drills, manage crisis situations confidently, and ensure that all personnel are trained to respond swiftly and safely during a critical fire emergency.

Learning Outcome:	Assessment Criteria:
1. Creating Emergency Response Plans: Develop comprehensive emergency response plans that address the unique challenges of industrial settings.	1.1 Explain the essential components required in a comprehensive workplace emergency response plan. 1.2 Develop a clear emergency response procedure tailored to address a well-defined industrial emergency, such as a localized chemical fire. 1.3 Review a provided industrial emergency response plan to identify practical gaps and recommend specific improvements.
2. Conducting Evacuation Drills: Plan and execute effective evacuation drills to ensure all personnel are prepared for emergencies.	2.1 Describe the necessary stages of safely planning, executing, and officially recording a full-scale workplace evacuation drill. 2.2 Organize the logistics of a simulated evacuation drill for a specific industrial work zone. 2.3 Review the outcome of a completed evacuation drill to identify physical bottlenecks and propose actionable solutions to improve response times.
3. Implementing Fire Suppression Techniques: Gain proficiency in the use of fire suppression equipment and techniques, ensuring prompt and effective response to fire incidents.	3.1 Identify the different classes of fire and explain which types of portable fire extinguishers are safe and appropriate for each class. 3.2 Demonstrate the correct practical procedure for safely operating a standard portable fire extinguisher (e.g., PASS method). 3.3 Review a simulated industrial fire scenario to determine whether it is safe to attempt initial fire suppression or if immediate evacuation is required.

FS0004-07- Fire Investigation and Analysis

This final unit introduces the methodologies used to investigate industrial fire incidents and determine their root causes. Learners will explore scene preservation techniques, evidence collection, and post-incident analysis procedures. By understanding how and why fires occur, professionals can implement targeted corrective actions, prevent future recurrences, and provide valuable insights that continuously improve the organization's overall industrial fire safety management strategy.

Learning Outcome:	Assessment Criteria:
1. Investigating Fire Incidents: Acquire the skills to conduct thorough investigations of fire incidents, determining causes and contributing factors.	1.1 Explain the standard procedures and legal requirements for securing an industrial fire scene to preserve critical evidence. 1.2 Carry out a step-by-step physical examination of a simulated post-fire scene to systematically identify potential points of origin. 1.3 Gather and review physical evidence and witness statements from a workplace fire incident to determine likely causes.
2. Analyzing Fire Data: Analyze data from fire incidents to identify trends, root causes, and areas for improvement in fire safety practices.	2.1 Describe the methods used to collect, organize, and analyze historical fire incident data to identify common safety failures. 2.2 Review a provided dataset of previous workplace fire incidents to identify recurring patterns and underlying root causes. 2.3 Interpret findings from a fire data analysis to pinpoint specific weaknesses in current practices and propose areas for improvement.
3. Reporting and Recommendations: Prepare detailed investigation reports and make informed recommendations for enhancing fire safety and preventing future incidents.	3.1 Outline the essential structure, required content, and target audience for a formal post-fire investigation report. 3.2 Prepare a factual fire investigation report based on a simulated industrial incident, documenting findings and event timelines. 3.3 Propose actionable, realistic recommendations based on investigation findings to enhance workplace fire safety and prevent recurrences.

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