ICTQual AB

Qualification Specification

ICTQual AB Level 3 Diploma in Electrical Safety

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ICTQual AB's

Level 3 Diploma in Electrical Safety

Contents

Qualification Specification about

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About ICTQual AB's

ICTQual AB's Ltd. 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

The ICTQual AB Level 3 Diploma in Electrical Safety is developed to support learners in mastering the key principles and practices associated with managing electrical hazards in the workplace. The programme is aligned with international safety standards and structured around practical safety objectives that promote hazard identification, risk management, safe system implementation, and compliance with legal and regulatory requirements. The course focuses on enhancing understanding of safe isolation procedures, equipment inspection, fault detection, emergency preparedness, and incident reporting. Emphasis is also placed on developing a culture of prevention and continuous improvement in electrical safety management. This qualification serves as a robust foundation for professionals working around electrical systems and helps build the capability to reduce electrical incidents and promote a safer operational environment.

Course Aim

The aim of the course is to empower learners with the knowledge and practical skills needed to maintain high standards of electrical safety in diverse work environments. The course ensures learners understand the hazards posed by electrical energy and are equipped to apply appropriate control measures and good practices that protect people, equipment, and assets.

Course Objectives

Upon successful completion of this course, learners will be able to:

- Identify and Evaluate Electrical Hazards
- Recognise common sources of electrical risks across different environments.
- Conduct structured assessments to determine risk severity and control priorities.
- Interpret and Apply Electrical Safety Regulations
- Demonstrate understanding of legal duties and industry standards related to electrical safety.
- Ensure operational compliance with local and international safety requirements.
- Implement Safe Working Procedures and Isolation Techniques
- Apply safe systems of work including permit-to-work, lockout/tagout (LOTO), and isolation procedures.
- Verify safety before conducting live or non-live work on electrical systems.
- Carry Out Electrical Inspections and Equipment Testing
- Conduct visual inspections, insulation resistance testing, earth continuity testing, and other routine checks.
- Maintain and record findings to support preventative maintenance and compliance.
- Respond to Electrical Incidents and Emergencies
- Act promptly and effectively in case of electric shock, arc flash, fire, or equipment failure.
- Carry out post-incident reviews and implement corrective actions to prevent recurrence.
- Promote a Culture of Electrical Safety
- Support training, supervision, and communication to foster safety awareness.
- Encourage continuous improvement in electrical safety performance through audits, reviews, and best practice sharing.

Who Should Take This Course

This diploma is suitable for:

- Electricians, technicians, and supervisors responsible for the operation, maintenance, and inspection of electrical systems.
- Safety professionals wishing to extend their knowledge into the field of electrical risk control.
- Maintenance personnel and facility managers working in environments where electrical systems are integral to operations.
- Apprentices, trainees, and new entrants aiming to gain formal training in electrical safety practices.

The course is designed for individuals across sectors such as construction, utilities, engineering, transportation, manufacturing, and facilities management where electrical risks are present and must be managed effectively.

Certification Framework

Qualification title	**ICTQual AB Level 3 Diploma in Electrical Safety**
Course ID	HSE0114
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

To enrol in the ICTQual AB Level 3 Diploma in Electrical Safety, learners must meet the following requirements:

- **Minimum Age:** Learners must be at least 18 years of age at the time of enrolment.
- **Educational Background:** A minimum of a Level 2 qualification (or equivalent) in a related field such as electrical engineering, health and safety, or a technical discipline is recommended. Learners should also possess a good standard of literacy and numeracy to effectively comprehend course materials and complete assessments.
- **Experience:** While formal experience is not mandatory, it is strongly recommended that learners have prior exposure to electrical work or health and safety responsibilities in a professional setting. This may include roles such as maintenance technicians, site supervisors, health and safety assistants, or similar positions where electrical safety awareness is relevant.
- **English Language Competency**: Learner should possess basic English reading, writing, and comprehension skills to understand training materials and participate in assessments.

Qualification Structure

This qualification comprises 6 mandatory units. Candidates must successfully complete all mandatory units to achieve the qualification.

Mandatory Units	
Unit Ref#	**Unit Title**
HSE0114-01	Electrical Safety Management and Program Development
HSE0114-02	Advanced Electrical Risk Assessments and Mitigation Plans
HSE0114-03	Designing and Implementing Electrical Safety Programs
HSE0114-04	Working Safely with Energized and De-Energized Equipment
HSE0114-05	Electrical Accident Investigation and Safety Reporting
HSE0114-06	Developing Electrical Safety Culture in the Workplace

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 possess a recognised qualification in Health and Safety or a related field at Level 4 or above (e.g. Occupational Health and Safety, Risk Management, Environmental Health, or Engineering Safety).
- ✓ **Assessors:** Must hold a recognized assessor qualification (e.g., CAVA, AVRA) or equivalent)
- ✓ **Internal Quality Assurers (IQAs):** Must be appropriately qualified and experienced 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 Resources and Infrastructure

The centre must provide learners with access to adequate academic resources, including:

- ✓ Virtual Learning Environment (VLE) or Learning Management System (LMS)
- ✓ Engineering and safety case studies, simulation tools, and software.
- ✓ Access to digital libraries, e-books, and relevant professional standards (ISO, OSHA, HSE, etc.)

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 proficiency as defined in the qualification units. The assessment evaluates the candidate's skills, knowledge, and understanding against the set standards. Key details include:

1. **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.

2. **Types of Evidence:**

   - ✓ Observation reports by the assessor.
   - ✓ Assignments, projects, or reports.
   - ✓ Professional discussions.
   - ✓ Witness testimonies.
   - ✓ Candidate-produced work.
   - ✓ Worksheets.
   - ✓ Records of oral and written questioning.
   - ✓ Recognition of Prior Learning (RPL).

3. **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.

This framework ensures rigorous and consistent evaluation of candidates' competence in line with the qualification's objectives.

Unit Descriptors

HSE0114-01- Electrical Safety Management and Program Development

This unit introduces learners to the key principles of managing electrical safety within a workplace. It covers the structure and responsibilities of electrical safety management systems and how these systems ensure compliance with safety standards. Learners will explore how to identify roles, allocate responsibilities, and develop safety objectives within an organisation. The unit also teaches how to build an effective electrical safety programme, including policy development, standard operating procedures, documentation, and continuous improvement. Learners will understand how leadership and planning contribute to a safer working environment where electrical risks are controlled and reduced.

Learning Outcome:	Assessment Criteria:
1. Understand the components of an effective electrical safety management system	1.1 Identify the key elements of an electrical safety management system. 1.2 Explain the role of leadership in ensuring effective safety performance. 1.3 Describe how planning, implementation, and evaluation contribute to safety success. 1.4 Analyse the interrelationship between hazard identification, control, and documentation.
2. Develop structured electrical safety policies, procedures, and protocols	2.1 Draft a written policy outlining electrical safety principles and objectives. 2.2 Outline procedures for equipment inspection, maintenance, and incident response. 2.3 Structure permit-to-work systems and authorisation protocols. 2.4 Ensure procedural alignment with operational needs and legal obligations 2.5 Review the effectiveness of policies through feedback and internal audits.
3. Identify roles and responsibilities in managing electrical safety across an organization	3.1 Define the responsibilities of supervisors, technicians, and senior management. 3.2 Illustrate how responsibilities are delegated and communicated. 3.3 Explain the importance of competence and training in fulfilling safety roles. 3.4 Assess the impact of unclear roles on overall electrical safety performance.

4. Implement monitoring and continuous improvement strategies for safety programs	4.1 Set measurable objectives and safety targets. 4.2 Implement systems for ongoing performance review and inspection. 4.3 Introduce a method for gathering employee feedback on safety measures. 4.4 Modify the safety program based on data analysis and incident trends.
5. Ensure compliance with relevant national and international safety standards	5.1 Identify key national and international standards for electrical safety. 5.2 Conduct a compliance gap analysis for the organisation. 5.3 Recommend updates to procedures to reflect evolving legislation. 5.4 Maintain audit-ready documentation and evidence of compliance.

HSE0114-02- Advanced Electrical Risk Assessments and Mitigation Plans

This unit focuses on how to carry out detailed risk assessments for electrical systems and tasks. Learners will learn how to identify hazards, evaluate risks, and prioritise control measures. The unit goes beyond basic assessments by introducing advanced techniques for assessing complex electrical systems, such as switchgear, transformers, and high-voltage installations. Learners will also develop mitigation plans that include both technical and administrative controls, ensuring that electrical hazards are properly managed. This includes understanding residual risks and ensuring that measures are kept up-to-date and effective.

Learning Outcome:	Assessment Criteria:
1. Conduct detailed risk assessments for complex and high-voltage electrical systems	1.1 Apply hazard identification techniques for high-voltage environments. 1.2 Document risk assessments in line with legal and industry expectations. 1.3 Evaluate exposure, frequency, and consequences for electrical activities. 1.4 Involve appropriate personnel in risk assessment processes. 1.5 Justify chosen control measures in the assessment.
2. Identify and evaluate electrical hazards in a variety of industrial settings	2.1 Inspect site-specific equipment for potential electrical faults. 2.2 Classify hazards based on voltage level, moisture, and operational conditions. 2.3 Differentiate between static and dynamic electrical risks. 2.4 Recommend control measures appropriate to specific industry sectors.
3. Develop effective hazard mitigation and control strategies	3.1 Select suitable engineering and administrative controls for identified risks. 3.2 Create an implementation timeline for proposed mitigation strategies. 3.3 Evaluate the effectiveness of new controls in reducing hazard severity. 3.4 Prepare contingency plans in case control measures fail.
4. Prioritize risks using risk matrices and regulatory frameworks	4.1 Construct and apply a risk matrix relevant to the work setting. 4.2 Rank risks based on severity and likelihood. 4.3 Reference legal thresholds and standards in the prioritisation process. 4.4 Allocate resources based on risk ranking outcomes.

5. Prepare detailed reports and documentation for risk management activities	5.1 Compile clear, structured reports for internal and external stakeholders. 5.2 Include photographic or graphical evidence to support findings. 5.3 Use consistent terminology and format across documents. 5.4 Maintain confidentiality and data accuracy in report content.

HSE0114-03- Designing and Implementing Electrical Safety Programs

In this unit, learners will explore how to create structured electrical safety programs tailored to the needs of different workplaces. It covers how to define program goals, select safety strategies, allocate resources, and engage stakeholders in program development. Learners will understand how to ensure successful implementation, monitoring, and review of the program. Key topics include training, inspection routines, electrical permits, emergency preparedness, and performance monitoring. The unit prepares learners to lead or contribute to safety programmes that improve compliance and reduce incidents related to electricity.

Learning Outcome:	Assessment Criteria:
1. **Design customized electrical safety training programs for different job roles**	1.1 Identify training needs based on task analysis. 1.2 Create content tailored to different competency levels. 1.3 Include both theoretical and practical training elements. 1.4 Ensure the programme includes assessment and refresher intervals.
2. **ntegrate legal requirements and industry best practices into safety programs**	2.1 Map programme content to relevant legislation and codes of practice. 2.2 Include emerging technologies and updated safe working practices. 2.3 Reference lessons learned from incidents and audits. 2.4 Align training and operations with best-practice benchmarks. 2.5 Periodically review programme relevance to current standards.
3. **Plan and execute step-by-step implementation strategies**	3.1 Develop an action plan with defined timelines and responsibilities. 3.2 Secure management support and allocate resources. 3.3 Launch the programme through structured on boarding and briefings. 3.4 Monitor implementation milestones and adjust as needed.
4. **Measure program effectiveness using audits, KPIs, and employee feedback**	4.1 Select meaningful key performance indicators for electrical safety. 4.2 Conduct periodic internal audits to assess programme compliance. 4.3 Analyse feedback from staff at different organisational levels. 4.4 Recommend adjustments based on audit and feedback data.

5. Align safety programs with organizational goals and operational needs	5.1 Identify how safety performance supports business continuity. 5.2 Align training schedules with production demands. 5.3 Ensure management systems integrate safety as a core objective. 5.4 Measure how safety initiatives contribute to operational efficiency.

HSE0114-04- Working Safely with Energized and De-Energized Equipment

This unit teaches learners how to work safely with both live (energised) and dead (de-energised) electrical systems. It covers preparation, risk controls, and the use of personal protective equipment (PPE). Learners will study procedures for lockout/tagout (LOTO), verifying isolation, and ensuring the system is safe to work on. The unit also explains how to safely test live circuits when necessary and how to handle equipment that must remain energised. Safe use of tools, avoidance of arc flash and electric shock, and adherence to regulations are also included.

Learning Outcome:	Assessment Criteria:
1. Apply correct lockout/tagout (LOTO) procedures for energy isolation.	1.1 Identify energy sources and isolation points. 1.2 Follow standardised LOTO protocols step-by-step. 1.3 Use appropriate lockout devices and signage. 1.4 Confirm LOTO effectiveness through verification methods.
2. Use appropriate PPE and insulated tools for energized work	2.1 Select PPE based on task and voltage classification. 2.2 Inspect PPE and tools for defects before use. 2.3 Demonstrate proper use and storage of electrical PPE. 2.4 Explain the limitations of PPE in electrical environments.
3. Perform verification tests to ensure equipment is de-energized	3.1 Use testing equipment safely and accurately. 3.2 Follow verification sequence according to procedures. 3.3 Confirm zero-energy state before work begins. 3.4 Document testing results as part of work permits.
4. Understand the dangers of arc flash and shock exposure	4.1 Explain arc flash and electric shock mechanisms. 4.2 Identify tasks with high exposure risk. 4.3 Recognise warning signs and safe approach boundaries. 4.4 Describe methods to reduce arc flash severity.
5. Follow safety protocols for maintenance and troubleshooting tasks.	5.1 Complete job safety analysis before commencing tasks. 5.2 Use correct troubleshooting sequences for electrical faults. 5.3 Maintain workspace housekeeping during tasks. 5.4 Restore systems safely following repairs.

HSE0114-05- Electrical Accident Investigation and Safety Reporting

This unit develops the skills needed to investigate electrical accidents and near-miss events. Learners will understand how to collect evidence, identify root causes, and document findings clearly. It covers both reactive and proactive reporting and highlights the importance of learning from incidents to improve safety. The unit also explains how to write investigation reports, communicate outcomes, and implement corrective actions. Learners will gain confidence in handling incident reviews professionally, ensuring that future risks are minimised through analysis and learning.

Learning Outcome:	Assessment Criteria:
1. **Respond appropriately to electrical incidents and emergencies**	1.1 Identify symptoms of electric shock and arc injuries. 1.2 Apply emergency shutdown and first aid procedures. 1.3 Notify appropriate personnel and regulatory bodies. 1.4 Preserve the scene for investigation.
2. **Conduct structured accident investigations using root cause analysis**	2.1 Select suitable investigation models (e.g., 5 Whys, Fishbone). 2.2 Interview witnesses professionally and sensitively. 2.3 Link findings to unsafe acts or systemic failings. 2.4 Use timeline reconstruction to trace events.
3. **Collect and analyze evidence from the incident scene**	3.1 Gather physical, photographic, and digital evidence. 3.2 Secure and tag evidence to prevent tampering. 3.3 Interpret data from equipment logs and sensors. Maintain a secure evidence chain of custody.
4. **Document findings clearly in reports for internal and regulatory use**	4.1 Structure reports with summary, findings, and conclusions. 4.2 Use neutral and factual language. 4.3 Include diagrams or site plans where necessary. 4.4 Submit reports in accordance with company and legal timelines.
5. **Recommend preventive measures to avoid recurrence of incidents**	5.1 Suggest engineering and procedural improvements. 5.2 Identify training gaps and corrective action needs. 5.3 Monitor the implementation of recommendations. 5.4 Evaluate the effectiveness of preventive actions over time.

HSE0114-06- Developing Electrical Safety Culture in the Workplace

This unit explores how to build and maintain a strong safety culture around electrical work. Learners will examine the behaviours, attitudes, and practices that contribute to a safety-focused environment. The unit includes techniques for promoting awareness, encouraging reporting, delivering effective training, and involving staff in safety improvements. It also looks at leadership commitment, open communication, and the importance of setting a positive example. Learners will understand how to influence colleagues and create lasting improvements in how electrical safety is valued and practiced across an organisation.

Learning Outcome:	Assessment Criteria:
1. **Promote awareness and accountability in workplace electrical safety**	1.1 Conduct regular awareness campaigns and briefings. 1.2 Clarify the link between individual behaviour and overall safety. 1.3 Use signage and reminders to reinforce safety messages. 1.4 Recognise and reward safe behaviour.
2. **Lead safety discussions, toolbox talks, and employee engagement activities**	2.1 Prepare relevant and timely discussion topics. 2.2 Facilitate open, inclusive conversations with all team members. 2.3 Record participation and follow up on concerns raised. 2.4 Involve workers in setting safety goals.
3. **Establish communication channels for reporting hazards and near misses**	3.1 Set up anonymous and direct reporting systems. 3.2 Promote a no-blame culture for reporting issues. 3.3 Monitor reports for patterns and trends. 3.4 Respond to reports with visible corrective action.
4. **Foster a proactive, team-based approach to safety management**	4.1 Build cross-functional safety teams or committees. 4.2 Include employees in the development of safety procedures. 4.3 Share safety successes and challenges in team meetings. 4.4 Empower workers to stop unsafe activities.

5. **Evaluate and improve the safety culture using behavioral metrics and surveys.**

5.1 Design and distribute culture assessment surveys.
5.2 Interpret metrics such as incident reports and engagement levels.
5.3 Compare results against targets and benchmarks.
5.4 Implement changes and reassess at regular intervals.

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