ICTQual AB

Qualification Specification

Level 2 Diploma in Civil Engineering
30 Credits – 3 Months

Website
www.ictqualab.co.uk

Email:
Support@ictqualab.co.uk

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Contents

Qualification Specifications about

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About ICTQual AB

ICTQual AB UK 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 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.

The organization prides itself on delivering high-quality educational solutions through a network of Approved Training Centres worldwide. Their robust curriculum and innovative teaching methodologies are designed to 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 continuously evolves its programs to stay ahead of industry trends and technological advancements.

ICTQual AB's vision is to set benchmarks for educational excellence while promoting inclusivity and integrity. Their unwavering focus on quality and accessibility makes them a trusted partner in shaping future-ready professionals and advancing societal progress globally.

Course Overview

The ICTQual Level 2 Diploma in Civil Engineering 30 Credits – 3 Months course is designed for aspiring professionals; this 30-credit program offers a streamlined pathway to develop essential skills and knowledge in just three months. Whether you are starting your career or seeking to enhance your capabilities, this qualification is your gateway to success in the construction and engineering sectors.

This comprehensive program covers the foundational principles of civil engineering, focusing on construction techniques, engineering practices, and site management essentials. With a practical approach, it prepares learners to tackle real-world challenges confidently and effectively.

The ICTQual Level 2 Diploma is an ideal choice for those looking for a fast, efficient, and credible qualification. Its compact structure allows you to balance your studies with other commitments while ensuring a thorough understanding of the subject matter.

With industry relevance and a curriculum designed for impact, this diploma opens doors to career opportunities and sets the foundation for future growth in one of the world’s most dynamic industries.

Certification Framework

Qualification title	**ICTQual Level 2 Diploma in Civil Engineering 30 Credits – 3 Months**
Course ID	CE0005
Qualification Credits	30 Credits
Course Duration	3 Months
Grading Type	Pass / Fail
Competency Evaluation	Coursework / Assignments / Verifiable Experience
Assessment	The assessment and verification process for ICTQual qualifications involves two key stages: **Internal Assessment and Verification:** ✓ Conducted by the staff at the Approved Training Centre (ATC). Ensures learners meet the required standards through continuous assessments. ✓ Internal quality assurance (IQA) is carried out by the center's IQA staff to validate the assessment processes. **External Quality Assurance:** ✓ Managed by ICTQual AB 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 Level 2 Diploma in Civil Engineering 30 Credits – 3 Months, candidates must meet the following entry requirements:

- ✓ Applicants must be at least 16 years old.
- ✓ A minimum of Level 1 qualification (or equivalent) in a related field such as construction, engineering, or science. Alternatively, applicants should have at least GCSEs or equivalent qualifications, including Mathematics and English.
- ✓ While prior work experience in construction or engineering is not mandatory, it can be beneficial for understanding the course material.
- ✓ For non-native English speakers, proof of English language proficiency.

Qualification Structure

This qualification comprises 3 mandatory units, totalling 30 credits. Candidates must successfully complete all mandatory units to achieve the qualification.

Course Code	Unit Title	Credits
CE0005-1	Construction Principles and Techniques	10
CE0005-2	Health, Safety, and Environmental Standards	10
CE0005-3	Civil Engineering Project Planning and Management	10

Centre Requirements

Even if a centre is already registered with ICTQual AB, it must meet specific requirements to deliver the ICTQual Level 2 Diploma in Civil Engineering 30 Credits – 3 Months. These standards ensure the quality and consistency of training, assessment, and learner support.

1. Approval to Deliver the Qualification

- ✓ Centres must obtain formal approval from ICTQual AB to deliver this specific qualification, even if they are already registered.
- ✓ The approval process includes a review of resources, staff qualifications, and policies relevant to the program.

2. Qualified Staff

- ✓ **Tutors:** Must have relevant qualifications in civil engineering or construction at Level 3 or higher, alongside teaching/training experience.
- ✓ **Assessors:** Must hold a recognized assessor qualification and demonstrate expertise in civil engineering
- ✓ **Internal Quality Assurers (IQAs):** Must be appropriately qualified and experienced to monitor the quality of assessments.

3. Learning Facilities

Centres must have access to appropriate learning facilities, which include:

- ✓ **Classrooms:** Modern classrooms equipped with multimedia tools to deliver engaging theoretical instruction on structural design, construction methods, and sustainable engineering practices.
- ✓ **Practical Areas**: Hands-on training areas with advanced equipment for material testing, surveying instruments, concrete mixing, and structural analysis, providing practical experience in real-world civil engineering applications.
- ✓ **Technology Access:** High-performance computers with industry-standard software (e.g., AutoCAD, STAAD.Pro, Revit, and GIS tools) and reliable internet connectivity for drafting, modelling, and project management tasks.

4. Health and Safety Compliance

- ✓ Centres must ensure that practical training environments comply with relevant health and safety regulations.
- ✓ Risk assessments must be conducted regularly to maintain a safe learning environment.

5. Resource Requirements

- ✓ Learning Materials: Approved course manuals, textbooks, and study guides aligned with the curriculum.
- ✓ Assessment Tools: Templates, guidelines, and resources for conducting and recording assessments.
- ✓ E-Learning Systems: If offering online or hybrid learning, centres must provide a robust Learning Management System (LMS) to facilitate remote delivery.

6. Assessment and Quality Assurance

- ✓ Centres must adhere to ICTQual's assessment standards, ensuring that all assessments are fair, valid, and reliable.
- ✓ Internal quality assurance (IQA) processes must be in place to monitor assessments and provide feedback to assessors.
- ✓ External verification visits from ICTQual will ensure compliance with awarding body standards.

7. Learner Support

- ✓ Centres must provide learners with access to guidance and support throughout the program, including:

- ✓ Academic support for coursework.
- ✓ Career guidance for future progression.
- ✓ Additional support for learners with specific needs (e.g., disabilities or language barriers).

8. Policies and Procedures

Centres must maintain and implement the following policies, as required by ICTQual:

- ✓ Equal Opportunities Policy.
- ✓ Health and Safety Policy.
- ✓ Safeguarding Policies and Procedures.
- ✓ Complaints and Appeals Procedure.
- ✓ Data Protection and Confidentiality Policy.

9. Regular Reporting to ICTQual

- ✓ Centres must provide regular updates to ICTQual AB on learner enrolment, progress, and completion rates.
- ✓ Centres are required to maintain records of assessments and learner achievements for external auditing purposes.

Support for Candidates

Centres should ensure that materials developed to support candidates:

- ✓ Facilitate tracking of achievements as candidates progress through the learning outcomes and assessment criteria.
- ✓ Include information on how and where ICTQual'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

CE0005 -1: Construction Principles and Techniques

The aim of this unit is to provide students with a comprehensive understanding of the core concepts, processes, and techniques involved in construction and civil engineering. This includes an exploration of construction materials, their functions, and characteristics, alongside practical skills such as surveying and measurement for site preparation. The unit emphasizes the importance of sustainable construction methods and their impact on project outcomes.

Learning Outcome	Assessment Criteria
1. Understand the fundamental concepts and processes of construction and civil engineering.	1.1. Demonstrates comprehensive understanding of core construction and civil engineering principles. 1.2. Accurately explains key processes involved in construction and civil engineering projects. 1.3. Effectively identifies the interrelationship between various construction and civil engineering concepts. 1.4. Applies theoretical knowledge to practical construction and civil engineering scenarios. 1.5. Evaluates the impact of different construction methods and processes on project outcomes. 1.6. Integrates knowledge of industry standards and regulations into the understanding of construction and civil engineering.
2. Identify and explain the functions and characteristics of various construction materials.	2.1 Demonstrates a thorough understanding of the functions of different construction materials. 2.2 Clearly explains the characteristics of common construction materials and their applications. 2.3 Identifies material properties that affect performance and durability in construction projects. 2.4 Evaluates the suitability of materials for specific construction tasks or conditions. 2.5 Assesses the environmental impact of various construction materials. 2.6 Integrates knowledge of material selection criteria into practical construction decision-making.
3. Demonstrate basic surveying and measurement techniques for site preparation.	3.1. Accurately applies basic surveying tools and techniques for site assessment. 3.2. Demonstrates proper measurement techniques for determining site boundaries and elevations.

	3.3. Identifies and uses appropriate instruments for accurate site preparation measurements. 3.4. Interprets survey data to guide site layout and preparation activities. 3.5. Ensures measurements are precise and within acceptable tolerance limits. 3.6. Complies with safety standards and industry best practices during surveying and measurement tasks.
4. Apply sustainable construction methods and evaluate their impact on project outcomes.	4.1. Identifies key sustainable construction methods and their relevance to project goals. 4.2. Applies sustainable practices in construction processes to reduce environmental impact. 4.3. Assesses the effectiveness of sustainable methods in improving resource efficiency. 4.4. Evaluates the long-term environmental, social, and economic benefits of sustainable construction. 4.5. Demonstrates the ability to integrate sustainable methods into overall project planning. 4.6. Monitors and reports on the outcomes of sustainable construction practices in relation to project success.
5. Solve practical problems related to structural components and material selection.	5.1. Identifies common structural problems and determines appropriate solutions. 5.2. Evaluates the properties of materials to select the most suitable options for specific structural applications. 5.3. Applies technical knowledge to solve material-related challenges in construction projects. 5.4. Considers environmental, economic, and safety factors when selecting materials for structural components. 5.5. Demonstrates critical thinking in addressing material compatibility and performance issues. 5.6. Communicates solutions effectively, ensuring alignment with project specifications and standards.

CE0005 -2: Health, Safety, and Environmental Standard

The aim of this unit is to provide students with a comprehensive understanding of the health, safety, and environmental standards essential for the successful management of construction projects. The unit focuses on equipping students with the knowledge and skills to navigate key health and safety legislation, conduct risk assessments, evaluate the environmental impact of construction activities, and implement sustainable practices.

Learning Outcome	Assessment Criteria
1. Explain the key health and safety legislation relevant to construction projects.	1.1. Identifies key health and safety legislation that applies to construction projects. 1.2. Explains the legal responsibilities of employers, employees, and contractors under relevant legislation. 1.3. Demonstrates an understanding of health and safety regulations aimed at protecting workers on construction sites. 1.4. Assesses the impact of health and safety laws on construction project planning and execution. 1.5. Applies knowledge of legislation to identify potential health and safety risks in construction activities. 1.6. Ensures compliance with health and safety legislation through the development and implementation of appropriate safety measures.
2. Conduct risk assessments and propose measures to mitigate potential site hazards.	2.1 Identifies potential site hazards through systematic risk assessment processes. 2.2 Evaluates the severity and likelihood of identified risks to determine priority levels. 2.3 Proposes effective risk mitigation strategies to minimise potential hazards. 2.4 Demonstrates the ability to develop a comprehensive risk assessment report. 2.5 Applies appropriate safety measures and controls to reduce the likelihood of accidents. 2.6 Ensures compliance with health and safety standards when proposing risk mitigation solutions.
3. Evaluate the environmental impact of construction activities and recommend sustainable practices.	3.1 Identifies and assesses the environmental impact of various construction activities. 3.2 Evaluates the effects of construction processes on local ecosystems, air quality, and natural resources. 3.3 Proposes sustainable construction practices to reduce environmental harm.

	3.4 Recommends measures for waste reduction, energy efficiency, and resource conservation. 3.5 Demonstrates understanding of environmental regulations and their application to construction projects. 3.6 Integrates sustainability principles into construction planning and decision-making to enhance project outcomes.
4. Implement waste management strategies to minimize environmental footprints.	4.1 Identifies key waste streams generated during construction activities. 4.2 Evaluates the environmental impact of construction waste and its management. 4.3 Implements waste segregation and recycling strategies to reduce landfill use. 4.4 Proposes effective waste reduction measures to optimise resource utilisation. 4.5 Ensures compliance with waste management regulations and industry best practices. 4.6 Monitors and reports on the effectiveness of waste management strategies in reducing environmental footprints.
5. Apply safety protocols and procedures effectively in simulated or real-life scenarios.	5.1 Identifies relevant safety protocols and procedures for specific construction scenarios. 5.2 Demonstrates the correct application of safety measures to prevent accidents and injuries. 5.3 Assesses potential hazards in simulated or real-life situations and responds appropriately. 5.4 Ensures compliance with health and safety regulations during all phases of construction. 5.5 Communicates safety protocols clearly to team members and stakeholders. 5.6 Evaluates the effectiveness of safety measures and makes recommendations for improvement.

CE0005 -3: Civil Engineering Project Planning and Management

The aim of this study unit is to equip students with the knowledge and practical skills necessary to effectively plan, schedule, and manage civil engineering projects. This unit will help students understand key principles of project management, including resource allocation, budgeting, and timeline creation. Through hands-on experiences, students will learn how to work collaboratively within teams, monitor project progress, apply quality control measures, and analyse common challenges faced in the industry. By the end of the unit, students will be able to propose practical solutions to overcome these challenges and successfully deliver civil engineering projects.

Learning Outcome	Assessment Criteria
1. Understand the principles of project planning, scheduling, and resource allocation in civil engineering.	1.1. Demonstrates an understanding of key principles in project planning, scheduling, and resource allocation. 1.2. Explains how to develop and manage project timelines and milestones effectively. 1.3. Identifies resource requirements and allocates them efficiently to ensure project success. 1.4. Applies project management tools and techniques to plan and track civil engineering projects. 1.5. Assesses risks and adjusts project plans to accommodate changes in resources or schedules. 1.6. Ensures that project planning aligns with industry standards and best practices.
2. Create basic project plans, including timelines and budgets, to meet specified objectives.	2.1 Develops clear and achievable project plans with defined objectives and outcomes. 2.2 Creates detailed timelines outlining key milestones and deadlines for project tasks. 2.3 Prepares budgets that account for all project costs, ensuring financial resources are allocated appropriately. 2.4 Identifies potential project risks and incorporates contingency plans within timelines and budgets. 2.5 Ensures that project plans align with overall project goals and stakeholder requirements. 2.6 Monitors and adjusts project plans as needed to ensure timely completion and cost efficiency.
3. Collaborate effectively within a team to achieve project goals.	3.1 Demonstrates strong communication skills to share ideas and project updates within the team. 3.2 Actively listens to and considers input from team members to enhance collaborative decision-making.

	3.3 Contributes to team problem-solving and decision-making processes to achieve project goals. 3.4 Fosters a positive and cooperative team environment, encouraging mutual support and respect. 3.5 Demonstrates flexibility and adaptability when working with diverse team members and roles. 3.6 Ensures that individual contributions align with overall project objectives and timelines.
4. Monitor project progress and apply quality control measures to ensure standards are met.	4.1 Tracks project progress against established timelines and milestones. 4.2 Identifies any deviations from the project plan and implements corrective actions. 4.3 Applies quality control measures to ensure work meets industry standards and specifications. 4.4 Conducts regular inspections and reviews to assess the quality of materials and workmanship. 4.5 Collaborates with team members to address any quality concerns or issues promptly. 4.6 Ensures that project documentation accurately reflects progress and quality standards.
5. Analyse common challenges in civil engineering project management and propose effective solutions.	5.1 Identifies common challenges faced in civil engineering project management, such as resource allocation and scheduling issues. 5.2 Analyses the root causes of project delays, budget overruns, and quality control problems. 5.3 Proposes practical and effective solutions to mitigate risks and address identified challenges. 5.4 Assesses the impact of external factors, such as weather or regulatory changes, on project timelines and resources. 5.5 Evaluates the feasibility and potential outcomes of proposed solutions in real-world scenarios. 5.6 Implements strategies to improve overall project efficiency and ensure successful project completion.

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Yew Tree Avenue, Dagenham,

London East,United Kingdom RM10 FN
+44 744 139 8083
Support@ictqualab.co.uk | www.ictqualab.co.uk

Visit Official Web page