ProQual Level 3 Award in Understanding Water Production

Qualification Specification

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Introduction

The ProQual Level 3 Award in Understanding Water Production qualification provides a nationally recognised qualification for those working as Water Production Technicians and Operators, to develop their technical skills and understanding of Water Production.

The awarding body for this qualification is ProQual Awarding Body (www.proqualab.com) and the regulatory body is the Office of Qualifications and Examinations Regulation (Ofqual).

The qualification has been accredited onto the Regulated Qualifications Framework (RQF) and is published on Ofqual's Register of Qualifications.

Qualification Profile
Level 3 Award in Understanding Water Production

Qualification title	**ProQual Level 3 Award in Understanding Water Production**
Ofqual qualification number	610/4116/6
Level	3
Total qualification time	60 hours
Guided learning hours	50 hours
Assessment	Pass or fail Internally assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	22/04/2024
Qualification end date	

Entry Requirements

There are no formal entry requirements for this qualification.

Centres should carry out an **initial assessment** of candidate skills and knowledge to identify any gaps and help plan the assessment.

Qualification Structure

To achieve the qualification candidates must complete all of the Mandatory units.

Mandatory Units – candidates must complete all units in this group			
Unit Reference Number	**Unit Title**	**Unit Level**	**GLH**
R/651/1272	Introduction to Water Production	3	50

Centre Requirements

Centres must be approved to offer this qualification. If your centre is not approved please complete and submit form **ProQual Additional Qualification Approval Application**.

Staff
Staff delivering this qualification must be appropriately qualified and/or occupationally competent.

Assessors/Internal Quality Assurance
Assessors for each unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Assessors and internal quality assurance verifiers for competence-based units or qualifications will normally need to hold appropriate assessor or internal quality assurance qualifications.

Support for Candidates

Materials produced by centres to support candidates should:

- Enable them to track their achievements as they progress through the learning outcomes and assessment criteria;
- Provide information on where ProQual's policies and procedures can be viewed;
- Provide a means of enabling Internal and External Quality Assurance staff to authenticate evidence

Assessment

Candidates must demonstrate the level of knowledge and/or skills described in the units. Assessment is the process of measuring a candidate's knowledge and understanding against the standards set in the qualification.

This qualification must be internally assessed by an appropriately experienced and qualified assessor.

Each candidate is required to produce a portfolio of evidence which demonstrates their achievement of all of the learning outcomes and assessment criteria for each unit.

Evidence can include:

- Observation report by assessor
- Assignments/projects/reports
- Professional discussion
- Witness testimony
- Candidate product
- Worksheets
- Record of oral and written questioning
- Recognition of Prior Learning

Learning outcomes set out what a candidate is expected to know, understand or be able to do.

Assessment criteria specify the standard a candidate must meet to show the learning outcome has been achieved.

Learning outcomes and assessment criteria can be found from page 8.

Additional information for assessment and requirements for unit **endorsements** where relevant is included after all of the learning outcomes and assessment criteria for each unit.

Internal Quality Assurance

An internal quality assurance verifier confirms that assessment decisions made in centres are made by competent and qualified assessors, that they are the result of sound and fair assessment practice and that they are recorded accurately and appropriately.

Adjustments to Assessment

Adjustments to standard assessment arrangements are made on the individual needs of candidates. ProQual's Reasonable Adjustments Policy and Special Consideration Policy sets out the steps to follow when implementing reasonable adjustments and special considerations and the service that ProQual provides for some of these arrangements.

Centres should contact ProQual for further information or queries about the contents of the policy.

Results Enquiries and Appeals

All enquiries relating to assessment or other decisions should be dealt with by centres, with reference to ProQual's Enquiries and Appeals Procedures.

Certification

Candidates who achieve the requirements for this qualification will be awarded:

- A certificate listing all units achieved, and
- A certificate giving the full qualification title -

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Claiming certificates

Centres may claim certificates for candidates who have been registered with ProQual and who have successfully achieved the qualification. All certificates will be issued to the centre for successful candidates.

Unit certificates

If a candidate does not achieve all of the units required for a qualification, the centre may claim a unit certificate for the candidate which will list all of the units achieved.

Replacement certificates

If a replacement certificate is required a request must be made to ProQual in writing. Replacement certificates are labelled as such and are only provided when the claim has been authenticated. Refer to the Fee Schedule for details of charges for replacement certificates.

Learning Outcomes and Assessment Criteria

Title:	Introduction to Water Production
Unit Number:	R/651/1272

Learning outcomes *The learner will be able to:*		**Assessment criteria** *The learner can:*	
1	Understand regulatory compliance with respect to water production.	1.1	Explain the regulatory framework with regards to the water industry.
		1.2	Identify water production legislation and environmental requirements.
		1.3	Identify water quality regulations pertaining to the treatment and supply of potable water.
		1.4	Identify relevant industry health and safety standards.
2	Understand the principles of and best practice associated with the operation of successful water production.	2.1	Explain raw water types and their characteristics and the processes and plant involved in the abstraction of raw water.
		2.2	Explain the statutory monitoring requirements of large raised reservoirs.
		2.3	Identify processes within the water production range, including: - Raw water types and methods of abstraction - Clarification processes - Filtration processes - Disinfection - Sludge Treatment and Recycling
		2.4	Explain the purpose of processes within the water production range.
		2.5	Describe different types of plant in use for processes within the water production range.
		2.6	Explain the key design criteria for processes within the water production range.
		2.7	Describe best practice for operation of processes within the water production range.
		2.8	Describe common failures modes for processes within the water production range.

2	continued	2.9	Describe and explain how the processes within the water production range can be made more resilient with respect to the identified failure modes.
		2.10	Explain the operation of at least two chemical clarification processes.
3	Understand the importance of disinfection as a water treatment process, the design requirements and reporting requirements in the event of disinfection failure.	3.1	Explain the reasons for disinfection and a range of processes available.
		3.2	Explain disinfection mechanisms for a range of processes.
		3.3	Describe the variables which influence disinfection performance.
		3.4	Describe the monitoring and testing of supplies to demonstrate disinfection success.
		3.5	Understand the causes of disinfection failures and the requirements for reporting.
4	Understand the operation of ancillary treatments in water production.	4.1	Explain the principles and mechanisms of the range of ancillary water treatment processes including activated carbon, ozone and wash water handling systems.
		4.2	Describe the hazards of chemicals used in the treatment process and the range of PPE which may be used.
		4.3	Describe safe working procedures for delivery storage and handling a range of chemicals.
		4.4	Describe a range of sensors and instruments used in process control.
		4.5	Describe the principles and mechanisms for process control of water treatment.
		4.6	Describe a range of different types of process control mechanisms and why they are chosen.
5	Understand the need for the water industry to become more resilient.	5.1	Explain the customer and regulatory drivers for increased resilience.
		5.2	List the potential impacts of a changing climate.
		5.3	Describe the effect of climate change on a risk and resilience strategy.

Tel: 01430 423822

www.proqualab.com

enquiries@proqualab.com

ProQual AB Limited, ProQual House, Unit 1, Innovation Drive, Newport HU15 2HG
Company Registration Number: 07464445