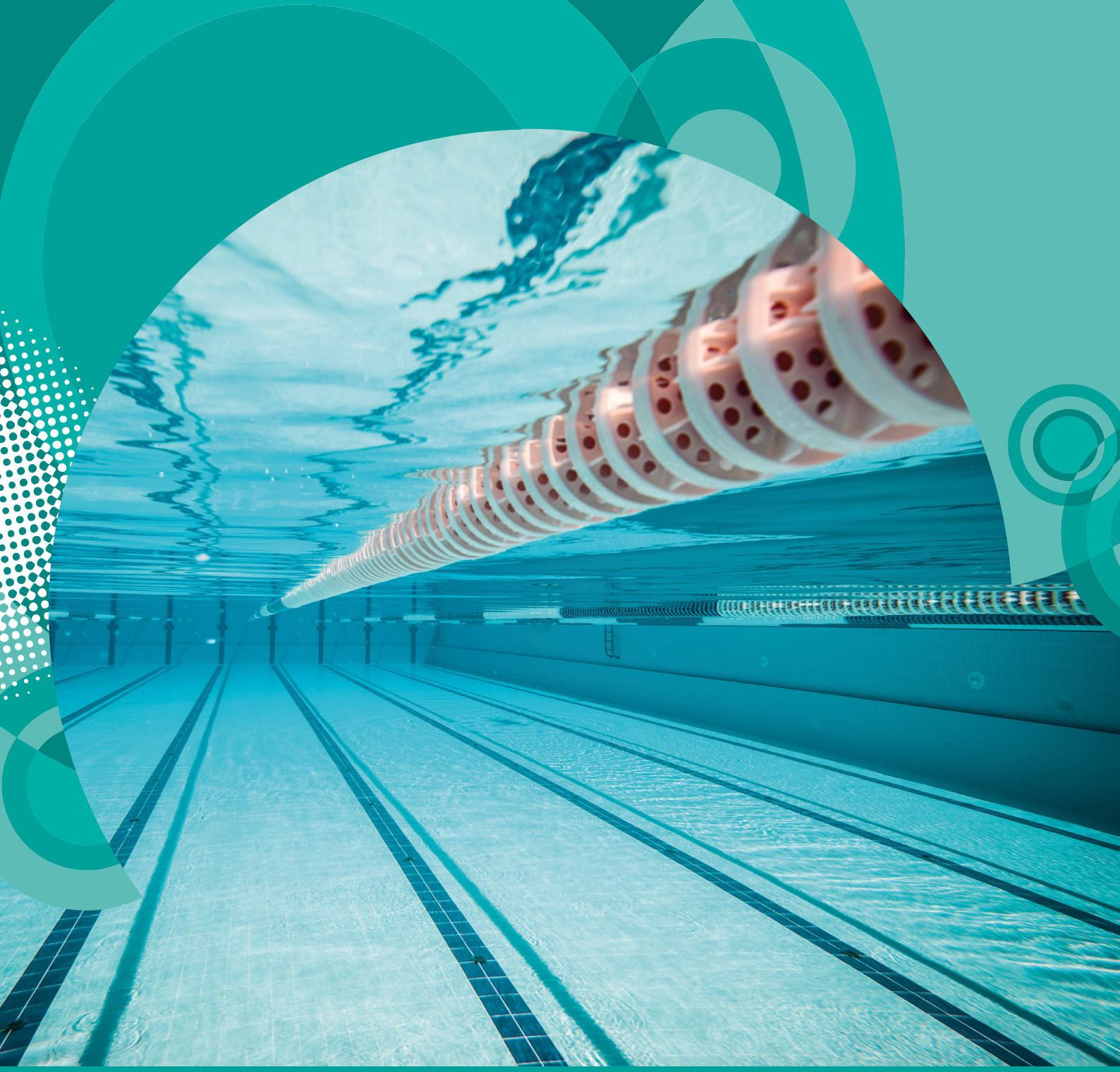

Qualification Specification

STA Level 3 Award in Pool Plant Operations

CIMSPA Endorsed | Professional Standards

Version 20.2

SAFETY TRAINING AWARDS sta SAFETY TRAINING AWARDS

This qualification is regulated by Ofqual (England)

STA Level 3 Award in Pool Plant Operations

Qualification Number: 603/2579/3

Qualification Structure

This qualification consists of 6 mandatory units

Unit Title	Code	Unit Level	GLH	TQT
Principles of healthy and hygienic pool water	A/616/6613	2	2	3
Principles of pool water testing	R/616/6617	2	3	4
Principles of disinfection, pool chemistry and dosing in pool plant operations	T/616/6612	3	4	5
Principles of mechanical pool plant operations	L/616/6616	3	5	6
Swimming pool heating, ventilation and energy efficiency	F/616/6614	3	3	4
Management practices and health and safety in plant operations	J/616/6615	3	4	5

GLH = Guided learning hours
TQT = Total qualification time

Total Qualification Time

27 hours

Qualification Delivery

The recommended contact hours for this qualification is 21 hours which includes direct teaching and assessing but excludes breaks. The course may be run over 3 days but can also be delivered over a period of weeks, with the minimum of each training session being 2 hours.

The ratio for this qualification is a maximum of 16 learners to 1 tutor.

Introduction:

The STA Level 3 Award in Pool Plant Operations provides learners with the skills and knowledge to maintain and operate a pool, spa and interactive water feature plant, ensuring safe, clear and hygienic water.

Qualification Objective:

The objective of the Pool Plant Operations qualification is to enable learners to develop the skills, knowledge and understanding required to ensure the safety of swimmers, users, operators and other persons. The qualification provides the theory behind pool plant operations and maintenance, as well as providing learners with information on best practice principles and information on health, safety and legal responsibilities.

Target Learners

This qualification is for people who have a specific responsibility for pool plant operations, maintaining plant rooms, ensuring safe bather conditions and water testing.

Some examples of sites where this qualification is required include:

- Swimming Pools
- Sports and Leisure Centres
- Health Clubs
- Spas (Including those displayed in retail outlets / distributors / installers)
- Hotels
- Holiday Parks
- Hydrotherapy Pools
- Schools
- Parks
- Lidos
- Interactive Water Features
- Swim Schools.

Progression

The STA Level 3 Award in Pool Plant Operations qualification may be a requirement of a particular job role such as a pool manager. It can also be used as a progression route for job roles such as lifeguards or swimming teachers wishing to progress to a leisure management role.

Following completion of the qualification and gaining experience of running a pool plant learners may want to share their knowledge and experiences by training to become a pool plant tutor.

Revalidation Requirements

This qualification is valid for a period of 5 years. The learner needs to retake the qualification before the certificate expiry date to remain qualified.

Learners revalidating an STA Level 3 Award in Pool Plant Operations or converting from an equivalent qualification may be able to have a reduction in guided learning hours. The number of guided learning hours needed for revalidations and conversions differs from learner to learner based on their individual experience, skills, knowledge and understanding. Some learners revalidating or converting will not require any guided learning hours whereas others may benefit from the full number of recommended guided learning hours. There is also the option of doing the course via distance learning without any guided learning hours. Learners revalidating or converting should be made aware of the different options.

Regardless of the number of guided learning hours on a revalidation or conversion course the assessment requirements remain the same.

Expired Pool Plant Qualifications

Employers and learners should be aware that there is an increased risk of failing to achieve the required standard if previous certification has expired by a considerable period (HSE defines this as in excess of 1 month). If this is the case, HSE recommends *"it may be prudent to complete a 3-day course".*

Industry Standards

The Pool Plant Operations qualification meets CIMSPA's employer-led pool plant operative professional standard and follows principles set out in the Pool Water Treatment Advisory Group's (PWTAG) code of practice and publication 'Swimming Pool Water'. It follows a range of Health and Safety guidance documents including:

- BS EN 15288-1
- BS EN 15288-2
- HSG 179
- HSG 274
- HSG 282
- NOS SKA PPO1.

Literacy and Numeracy

Learners must be 16 years of age or above on the first day of the course. It is advisable that learners have a minimum of level 2 in literacy or numeracy.

Reasonable Adjustments and Special Considerations Policies

STA have put measures in place for learners requiring additional support whilst undertaking STA courses.

For further information on these, please refer to https://www.safetytrainingawards.co.uk/policies/reasonable-adjustments-and-special-considerations-policy/

Grading Format

Pass / Fail

Awarding Organisation Policies

A full list of awarding organisation policies are available on our website: https://www.safetytrainingawards.co.uk/policies/

Assessment Methods

This qualification is assessed through a practical demonstration of water testing and completion of a multiple-choice assessment.

All practical elements must be completed and performed independently by the learner without prompting by the tutor or other approved competent person, acting as the assessor (cannot be another learner).

The multiple-choice assessment is to be completed independently by each learner under exam conditions, with the tutor or other approved person, acting as the invigilator (cannot be another learner).

To pass the qualification learners must satisfactorily complete the practical assessment and meet the minimum competency deemed by the minimum pass marks for each unit in the multiple-choice assessment.

Tutors and assessors should refer to the STA pool plant assessment guidance document for the fully detailed assessment process.

Tutor / Assessor Requirements

All tutors / assessors must have the skills, knowledge and experience to be able to teach / assess and demonstrate the subject.

Each tutor must be approved by Safety Training Awards and provide evidence of:

1. A relevant vocational pool plant operations qualification and/or experience
2. Attend a STA pool plant tutors course or experience of delivering for another awarding organisation
3. Maintaining their technical competence within the subject area.

IQA Requirements

Internal Quality Assurers (IQAs) of this qualification must have knowledge and competency in pool plant operations as well as knowledge and competency in internal quality assurance.

An IQA must hold:

1. An STA Level 3 Award in Pool Plant Operations qualification (or acceptable equivalent) and/or experience
2. Attend a STA IQA training day or hold a recognised internal quality assurance qualification
3. Attend an IQA CPD day.

Note: IQAs cannot quality assure a course for which they were a learner, the tutor and / or assessor.

Resource Requirements

Course resources:

- STA Pool Plant Operations resource manual - Each learner is required to have their own copy of the resource manual to have access to theoretical and practical knowledge.

Venue:

- Room size: Adequate space for all learners on the course to undertake theory and practical work
- Seats: One per learner
- Writing surfaces - Adequate for each learner to make notes
- Toilets: Separate facilities for male and female learners
- Ventilation - Should be adequate
- Lighting: Should be suitable for reading, combining a mixture of natural and artificial light
- Heating - Should maintain a 'short sleeve' environment, minimum temperature 16°C
- Access / Exits: Should be safe, well lit and cater for people with special needs
- Cleanliness: Maintain a clean, tidy and hygienic environment
- Noise: Consider whether there is noise that may distract learners from training

Location:

- Where possible the lecture venue should be in close proximity to the pool plant room.

Minimum requirements:

- Laptop
- PowerPoint presentation
- Projector
- Pool testing equipment: Photometer or comparator - ratio 1:8
  (1 to every 8 learners on the course)
  (Sufficient number of tablets and test tubes for the number of learners on the course).

Recommended:

- Dry wipe board
- Flipchart.

Equipment Service and Maintenance

Ensure all electrical equipment is in safe working order, serviced and maintained in line with statutory requirements, such as Portable Appliance Test (PAT), Provision and Use of Work Equipment Regulations (PUWER).

Follow manufacturers guidance on regular in-service and ongoing maintenance requirements for all course equipment.

It is important to be aware of the trip hazards associated with electric cables and reduce such risks.

Unit Specification

Unit Title:	Principles of healthy and hygienic pool water
Learning Outcome - The learner will:	**Assessment Criteria - The learner can:**
1. Know the different types of commercial pools and recreational water systems associated with pool plant operations	1.1 List a range of commercial pool and recreational water system types
2. Know the different types of pollution found in swimming pools and recreational water	2.1 State the categories of pollution found in swimming pools and recreational water 2.2 Give examples of pollution for each category 2.3 Identify the diseases and infections that can be contracted in the swimming pool and recreational water environment
3. Understand the practices recommended to promote healthy, hygienic swimming / bathing	3.1 Describe the actions to promote healthy swimming 3.2 Summarise the advantages of good bather hygiene
4. Know how to deal with contamination of faeces, blood and vomit	4.1 Explain the dangers of *Cryptosporidium* in swimming pools and its key characteristics 4.2 Identify the procedures for dealing with the following contamination in the pool: • Solid faeces • Runny faeces • Vomit • Blood
5. Understand the importance of cleanliness and hygiene in the pool environment	5.1 State the recommended frequency that the pool surround should be cleaned 5.2 State the methods and frequency for cleaning the pool bottom 5.3 Identify ways of preventing algae in the pool

Unit Specification

Unit Title:	Principles of pool water testing
Learning Outcome - The learner will:	**Assessment Criteria - The learner can:**
1. Be able to carry out pool water testing	1.1 Demonstrate how to conduct a range of water tests and record results 1.2 Calculate and record combined chlorine levels
2. Understand basic pool water testing	2.1 Identify the different types of test equipment 2.2 State the methods for taking pool water samples 2.3 Interpret test results that are acceptable and what action to take for unacceptable results 2.4 State how long records should be kept for
3. Understand other chemical factors to be tested in swimming pools and recreational water systems	3.1 Describe the importance of knowing the properties of the source water 3.2 State the factors that must be tested to conduct a balanced water / langelier test 3.3 Explain the objectives of acceptable water balance parameters 3.4 State the ideal range for total alkalinity 3.5 State the ideal range for calcium hardness 3.6 State the recommended maximum TDS level above the source water 3.7 State the recommended frequency for various required tests to be undertaken 3.8 State the recommended levels for various required tests to be kept to
4. Understand the requirements for microbiological testing	4.1 Describe the purpose of microbiological testing 4.2 State the frequency pools should be microbiologically tested 4.3 Identify how *E-coli, Pseudomonas aeruginosa* and *Legionella* can be prevented in the pool and recreation environment 4.4 Identify what action to take upon receiving unsatisfactory microbiological results, indicating gross contamination

Unit Specification

Unit Title:	Principles of disinfection, pool chemistry and dosing in pool plant operations
Learning Outcome - The learner will:	**Assessment Criteria - The learner can:**
1. Understand the principles of pool chemicals	1.1 Explain the purpose of residual disinfection in pools 1.2 Explain breakpoint chlorination 1.3 Explain the significance of pH to disinfection 1.4 Categorise the different chemicals used in pools
2. Understand the systems used for non-residual disinfection	2.1 State the systems used for non-residual disinfection 2.2 Describe the effects of non-residual disinfection
3. Understand the key principles in dosing chemicals	3.1 Summarise dosing practices 3.2 Describe how to recalibrate an automatic dosing unit 3.3 Work out dose strength calculations 3.4 Identify when manual dosing might be required

Unit Specification

Unit Title:	Principles of mechanical pool plant operations
Learning Outcome - The learner will:	**Assessment Criteria - The learner can:**
1. Understand the design considerations for the operation of swimming pools, spas and interactive water features	1.1 Indicate on a schematic diagram of a pool plant system: • The direction of water flow • Key features 1.2 Identify the equipment in a spa plant system 1.3 Identify the equipment in an interactive water feature plant system
2. Understand the principles of circulation	2.1 Work out the following: • Maximum bather load • Operational daily maximum bather load • Circulation Rate • Turnover 2.2 Evaluate the methods of surface water removal 2.3 Describe the function of a balance tank 2.4 Explain the dangers of inlets and outlets 2.5 Summarise the checks that should be carried out on inlets and outlets 2.6 Identify different types of valves
3. Know the temperature recommendations for different pools	3.1 Identify the water temperature recommendations for different pools
4. Understand the principles of filtration	4.1 Summarise the importance of maintaining the clarity of the water 4.2 Identify the different features of medium and high rate filters 4.3 Identify the different parts of a filter 4.4 Identify the processes involved when backwashing 4.5 Describe the flocculation / coagulation process: 4.6 State the recommended dilution rate per bather
5. Understand the hazards associated with spa pools and interactive water features	5.1 Summarise the hazards commonly associated with spa pools and interactive water features

Unit Specification

Unit Title:	Swimming pool heating, ventilation and energy efficiency
Learning Outcome - The learner will:	**Assessment Criteria - The learner can:**
1. Understand the principles of heating and air circulation	1.1 Summarise the recommendations for pool hall temperature and relative humidity 1.2 Summarise the potential problems operators could face if they don't monitor and maintain the water and air temperature at the recommended levels
2. Understand the environmental considerations and implications of operating a pool plant	2.1 Describe the environmental implications of operating a pool plant 2.2 Explain how operators can improve energy efficiency 2.3 State systems that can be used to run an economic, energy efficient and effective pool plant

Unit Specification

Unit Title:	Management practices and health and safety in pool plant operations
Learning Outcome - The learner will:	**Assessment Criteria - The learner can:**
1. Know about the management practices and training requirements for safe operation	1.1 State the documents recommended to be included in a pool safety operating procedure 1.2 Summarise the training requirements to safely operate a pool plant
2. Understand how to work safely with pool chemicals	2.1 State the HSE's five steps to risk assessment 2.2 List the control measures that must be in place to ensure the safe use of chemicals
3. Understand PPE requirements	3.1 Explain why PPE is used 3.2 Describe how PPE should be stored
4. Know the operators' responsibilities under the Health and Safety at Work Act 1974	4.1 List health and safety legislation/ regulation pool operators should be aware of
5. Know the maintenance procedures and timelines for effective operation of pool plant equipment	5.1 Identify the recommended minimum frequency various maintenance tasks should be carried out 5.2 Summarise the importance of recording maintenance tasks