



honeyman
TRAINING

Pharmaceutical Water Systems

Principles in Practice®



THE QUEEN'S AWARDS
FOR ENTERPRISE



Who Should Attend?

Personnel involved in the design, management and operation of pharmaceutical, healthcare or biotech water systems from the following disciplines:

Engineering, Quality Assurance, Microbiology, QC, Production, Operations and high purity water

PHARMACEUTICAL WATER SYSTEMS PRINCIPLES IN PRACTICE®

[Click for full details](#)

Overview

The Pharmaceutical Water Systems: Principles in Practice® course provides a holistic view of the design, operation and management of compendial water generation and distribution systems.

This industry leading course has been held all over the world and has received unrivalled feedback. Developed and delivered by recognised experts in water system design, validation and support.

This course involves hands-on exercises, demonstrations and workshops, therefore, this course consists of 50% lectures and 50% practical.

Course Objectives & Learning Outcomes

- Understand the different types of compendial water grades, their applications and how they can be achieved
- Understand regulatory requirements, standards and expectations for pharmaceutical water systems
- Be able to write a valuable URS that not only eliminates ambiguity but also provides a solid foundation for the IQ/OQ and PQ validations
- Understand how to design and build water systems cost effectively
- Be able to validate and manage water systems cost effectively
- Be able to compare different strategies for generation, pre-treatment, storage and distribution of pharmaceutical grade water and select the most appropriate for your application
- Understand how GMP can be implemented at the start, your water system
- Obtain a basic knowledge of microbiology and biofilm formation, and the impact on water systems
- Understand the phenomena of Rouge and how this can be managed
- Be able to develop a strategy to monitor the quality of your water system



PHARMACEUTICAL WATER SYSTEMS PRINCIPLES IN PRACTICE®

Course Programme

Day One

Water Types, Specs Uses and Applications
Purification Methods for Purified Water and Water for Injections (EP/USP)
RO vs Distillation for WFI New EP Proposals
The Purification Train and Pre-Treatments
Storage and Distribution Systems

Day Two

GSK Site Tour of PW/WFI Systems
Basic Microbiology of Water Systems
Compendial Water Testing Requirements
Biofilm and Control Strategies
New Builds, the URS and Water Projects
Workshop and Welding Demo
Problems with Conventional Loops
HydroGienic® Solution

Day Three

Latest ISPE Baseline Guidelines
Rapid Methods for Monitoring
Water Systems
Rouge
Monitoring and Qualification of Systems



Teesside
University

In
partnership
with

Teesside University, the Honeyman Group has introduced the professional qualification **Accredited Specialist**. Candidates completing the **UCPD** option in this course are able to demonstrate technical expertise and competency through a formal qualification.



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All courses can be booked online:

[Cleanrooms: Principles in Practice®](#)

[Pharmaceutical Water Systems](#)

[Microbiology for Non-Microbiologists](#)

[Sterile Product Manufacture](#)

[Cleaning Validation](#)

[Pharmaceutical Sterilisation](#)

[Microbial Risk Management In
Cleanroom Operations](#)

[Biotechnology: Principles in Practice®](#)

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