

**TRAINING TITLE**

**UTILITIES WATER SYSTEMS OPERATION**

**Training Duration**

**5 day**

**Training Venue and Dates**

<b>Ref. No.</b> PE171	<b>Utilities water systems operation</b>	<b>5</b>	<b>07-11 July 2025</b>	<b>\$5,500</b>	<b>DUBAI, UAE</b>
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**In any of the 4 or 5-star hotels. The exact venue will be informed later.**

**Training Fees**

- **\$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

**Training Certificate**

**Define** Management Consultants Certificate of course completion will be issued to all attendees.

**TRAINING DESCRIPTION**

This training program is designed to equip participants with the knowledge and practical skills required to effectively operate, maintain, and manage utilities water systems in industrial and commercial settings. Participants will learn about the different types of water systems used in various industries, including potable water, process water, cooling water, and wastewater treatment systems. The course covers essential aspects of water treatment, distribution, quality control, and troubleshooting to ensure the efficient operation and compliance with environmental and safety standards.

**TRAINING OBJECTIVES**

**By the end of the course, participants will be able to understand**

- Understand the types of water systems used in industrial and commercial facilities.
- Operate and maintain key components of water treatment and distribution systems.
- Monitor water quality and implement corrective actions when necessary.
- Identify and troubleshoot common problems in utilities water systems.
- Apply safety and environmental regulations related to water systems operations.

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## **WHO SHOULD ATTEND?**

- Operators and technicians working in utilities, water treatment, and distribution systems.
- Facility managers and engineers involved in water system design and maintenance.
- Maintenance personnel seeking knowledge in water systems operation.
- Environmental health and safety (EHS) personnel.

## **TRAINING METHODOLOGY**

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

## **COURSE PROGRAM:**

### **Day 1: Introduction to Utilities Water Systems**

- Overview of utilities water systems in industrial settings
- Types of water systems: potable water, process water, cooling water, and wastewater systems
- Basic principles of water treatment and distribution
- Key components of water systems: pumps, tanks, filters, pipes, valves
- Water quality standards and regulations

### **Day 2: Water Treatment Process**

- Overview of water treatment processes: coagulation, flocculation, sedimentation, filtration, and disinfection
- Understanding water quality parameters: pH, turbidity, hardness, chlorine levels
- Water treatment chemicals and dosing systems

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- Troubleshooting common water treatment issues
- Safe handling of chemicals used in water treatment

**Day 3: Water Distribution and Storage Systems**

- Design and operation of water distribution systems
- Pumps and pipelines in water distribution
- Water storage tanks and reservoirs: operation and maintenance
- Pressure management and flow control in distribution systems
- Monitoring water usage and leakage detection

**Day 4: Cooling Water Systems and Wastewater Treatment**

- Operation of cooling water systems: types and functions
- Heat exchangers and cooling towers
- Wastewater treatment fundamentals: primary, secondary, and tertiary treatment
- Effluent discharge and environmental compliance
- Sludge handling and disposal methods

**Day 5: Maintenance, Troubleshooting, and Safety in Water Systems**

- Routine maintenance procedures for water treatment and distribution systems
- Identifying and troubleshooting common system failures (e.g., pump failure, pipe leakage, clogging)
- Monitoring water quality: sampling, testing, and analysis
- Water system safety protocols and handling emergencies (e.g., chemical spills, system failures)
- Environmental regulations and reporting requirements

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**NOTE:**

**Pre-& Post Tests will be conducted.**

**Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.**

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P.O BOX 45304  
ABU DHABI, U.A.E

T +971 2 6264455  
F +971 2 6275344

[www.definettraining.com](http://www.definettraining.com)