

Wastewater Treatment

Manchester (UK) -

16-11-2026

Wastewater Treatment

Course code: SC267 From: 16-11-2026 Venue: Manchester (UK) - Course Fees: 5150 £

Introduction

Wastewater treatment is an essential process in protecting public health and the environment. As the world faces increasing water scarcity, urbanization, and industrialization, effective wastewater treatment becomes critical to ensure the availability of clean water and the prevention of environmental pollution. This course provides an in-depth understanding of wastewater treatment processes, technologies, and management practices, focusing on both municipal and industrial wastewater treatment.

Participants will explore the complexities of wastewater treatment, from the fundamental principles to the latest advancements in technology. The course covers biological, chemical, and physical treatment methods, as well as emerging trends in wastewater reuse and resource recovery. Special emphasis is placed on sustainable practices that minimize environmental impact and promote the circular economy. By the end of this program, participants will be equipped with the skills and knowledge necessary to design, operate, and manage wastewater treatment systems effectively.

Course Objectives of Wastewater Treatment

Upon completing this program, participants will be able to:

- Understand the fundamental principles of wastewater treatment and its importance.
- Learn about various treatment processes, including biological, chemical, and physical methods.
- Explore advanced technologies in wastewater treatment and their applications.
- Gain insights into regulatory frameworks, environmental compliance, and sustainability.
- Develop strategies for wastewater reuse and resource recovery.
- Enhance skills in the design, operation, and maintenance of wastewater treatment plants.

Course Methodology of Wastewater Treatment

- Lectures and Expert Insights: Leading industry experts will share their insights and best practices.
- Case Studies: Analyze real-world talent acquisition challenges and solutions.
- Group Discussions: Engage in meaningful discussions and share experiences with peers.
- Role-Playing and Simulations: Practice recruitment scenarios to enhance skills.
- Hands-on Workshops: Gain practical experience in using recruitment tools and techniques.

Organizational Impact of Wastewater Treatment

This training program will have a positive impact on organizations by:

- Improved efficiency in wastewater treatment operations, leading to cost savings and compliance with environmental regulations.
- Enhanced capacity to implement sustainable water management practices.
- Increased ability to manage industrial and municipal wastewater treatment projects.
- Strengthened reputation as a leader in environmental stewardship and sustainability.
- Contribution to the global efforts in water conservation and pollution reduction.

Personal Impact of Wastewater Treatment

Participants will experience personal growth and development, including:

- Develop expertise in a critical area of environmental management.
- Enhance technical skills in wastewater treatment and plant operations.
- Gain a comprehensive understanding of regulatory and compliance issues.
- Build a professional network with experts and practitioners in the field.
- Increase career opportunities in environmental engineering, water management, and sustainability.

Who Should Attend

This training program is ideal for:

- Environmental engineers and water treatment professionals.
- Plant managers and operators of wastewater treatment facilities.
- Environmental consultants and sustainability officers.
- Government regulators and policymakers in water and environmental management.
- Academics and researchers in environmental science and engineering.
- Industrial professionals responsible for managing wastewater.

Course Outlines

Day 1

Introduction to Wastewater Treatment

- Overview of Wastewater Treatment: Importance and Challenges
- Types of Wastewater: Municipal vs. Industrial
- Regulatory Frameworks and Environmental Compliance
- Wastewater Treatment Process Overview
- Case Study: Successful Wastewater Treatment Projects

Day 2

Biological Treatment Processes

- Introduction to Biological Treatment Methods
- Activated Sludge Process: Principles and Design
- Aerobic and Anaerobic Treatment
- Biofilm Processes and Membrane Bioreactors
- Workshop: Designing a Biological Treatment System

Day 3

Chemical and Physical Treatment Processes

- Chemical Treatment Methods: Coagulation, Flocculation, and Disinfection
- Advanced Oxidation Processes (AOPs)
- Physical Treatment Methods: Sedimentation, Filtration, and Screening

- Sludge Treatment and Management
- Field Visit: Local Wastewater Treatment Plant (if applicable)

Day 4

Advanced Technologies and Sustainability

- Emerging Technologies in Wastewater Treatment
- Wastewater Reuse and Resource Recovery
- Energy Efficiency and Optimization in Treatment Plants
- Sustainability Practices in Wastewater Management
- Case Study: Implementing Sustainable Wastewater Solutions

Day 5

Design, Operation, and Maintenance

- Designing Wastewater Treatment Plants: Key Considerations
- Operation and Maintenance Best Practices
- Monitoring and Control Systems
- Troubleshooting and Problem-Solving in Treatment Plants