MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

OPERATION AND CONTROL OF BIOLOGICAL WASTEWATER TREATMENT SYSTEMS

"Optimizing Biological Processes for Efficient Wastewater Treatment"

Schedule

Date	Venue	Fees (Online)
12 – 13 May 2026	Online	USD 700 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Biological wastewater treatment is a critical component of modern environmental management, providing effective removal of organic pollutants while supporting sustainability. This course equips participants with practical knowledge and skills to operate, monitor, and control biological treatment systems efficiently. Participants will learn techniques to enhance system performance, maintain regulatory compliance, and reduce environmental impact.

Through interactive sessions, practical exercises, and case studies, participants will gain insights into the biological treatment processes, including activated sludge systems, biofilm reactors, and nutrient removal. Emphasis is placed on operational control, troubleshooting, and optimization to achieve reliable and sustainable wastewater treatment outcomes.

Objectives

By the end of this course, participants will be able to:

- Understand the principles and processes of biological wastewater treatment
- Operate and control various biological treatment systems effectively
- Monitor system performance using key process indicators
- Troubleshoot operational problems and optimize treatment efficiency
- Ensure compliance with environmental regulations and standards
- Apply best practices for sustainable wastewater management
- Promote operational excellence and environmental responsibility

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Why Attend

- Gain practical knowledge of biological wastewater treatment systems
- Learn to monitor and optimize system performance for efficiency
- Improve compliance with environmental and regulatory requirements
- Reduce operational risks and environmental impact
- Enhance sustainability and operational reliability in wastewater treatment

Target Audience

This program is designed for:

- Environmental and wastewater engineers
- Operations and process engineers in wastewater treatment plants
- HSE and environmental compliance officers
- Laboratory and process control staff
- Consultants and professionals responsible for biological wastewater treatment

Individual Benefits

Key competencies that will be developed include:

- Mastery of biological wastewater treatment principles and processes
- Skills in operating and controlling activated sludge and biofilm systems
- Ability to monitor key performance indicators and troubleshoot issues
- Competence in optimizing treatment efficiency and reliability
- Knowledge of regulatory compliance and sustainability practices

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Efficient operation and control of biological wastewater treatment systems
- Reduced environmental impact and improved compliance with regulations
- Optimized operational efficiency and resource utilization
- Enhanced sustainability practices within wastewater operations
- Strengthened organizational capacity for process improvement and risk management

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Overview of biological treatment processes, systems, and control strategies
- Case Studies – Real-world examples of system optimization and operational challenges
- Workshops – Hands-on exercises for process monitoring, control, and troubleshooting
- Peer Exchange – Discussions on operational challenges, lessons learned, and best practices
- Tools – Templates for performance monitoring, reporting, and process optimization

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Course Outline

Detailed 2-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Principles and Operation of Biological Treatment Systems

Module 1: Introduction to Biological Wastewater Treatment (07:30 – 09:30)

- Overview of biological treatment processes and objectives
- Key system types: activated sludge, biofilm reactors, sequencing batch reactors
- Role of microorganisms in pollutant removal

Module 2: Process Control and Monitoring (09:45 – 11:15)

- Key performance indicators and process parameters
- Sampling, testing, and monitoring techniques
- Operational strategies for maintaining system stability

Module 3: Troubleshooting and Optimization (11:30 – 01:00)

- Identifying common operational problems
- Troubleshooting approaches and corrective actions
- Techniques for optimizing treatment efficiency

Module 4: Compliance and Safety Considerations (02:00 – 03:30)

- Regulatory and environmental compliance requirements
- Safety and operational best practices
- Record-keeping, reporting, and documentation

Day 2: Advanced Operational Strategies and Case Studies

- Advanced control strategies for enhanced nutrient removal
- Case studies of successful biological wastewater treatment operations
- Workshop exercises on process optimization and troubleshooting
- Group discussions on operational challenges, lessons learned, and sustainability practices

Certification

Participants will receive a Certificate of Completion in Operation and Control of Biological Wastewater Treatment Systems, validating their expertise in operating, monitoring, and optimizing biological wastewater treatment processes while ensuring compliance and sustainability.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**