

# Water Resources Engineering & Waste-Water Treatment

## COURSE OVERVIEW

This course presents fundamental engineering concepts and management approaches for sustainable water resource and wastewater systems. It addresses surface and groundwater hydrology, wastewater treatment processes, infrastructure design, and integrated water resource management. The curriculum blends technical knowledge with environmental and policy considerations, equipping professionals to tackle climate-driven water challenges. Participants will develop expertise in analyzing, designing, and managing resilient water and wastewater systems that support community health and ecosystem sustainability.

## WHO SHOULD ATTEND?

Ideal for water resources engineers, civil and environmental engineers, hydrologists, wastewater treatment specialists, and public works professionals involved in planning, designing, and managing water supply, wastewater treatment, flood control, and environmental protection programs.

## COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Analyze watershed hydrology and interactions between surface water and groundwater.
- Design water supply, conveyance, and wastewater treatment infrastructure.
- Implement flood risk reduction and drought resilience measures.
- Apply integrated water resource management and sustainable wastewater strategies.
- Use hydraulic and water quality modelling tools for system evaluation.
- Assess water quality impacts and manage environmental flow requirements effectively.

## KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Principles of watershed hydrology and hydrological modelling.
- Techniques for assessing surface and groundwater resources.
- Design fundamentals for water infrastructure and wastewater treatment facilities.
- Floodplain management and hydraulic structure design essentials.
- Strategies for water allocation, conflict resolution, and stakeholder engagement.
- Approaches to climate change adaptation in water and wastewater planning.
- Frameworks for sustainable water governance and regulatory compliance.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded