

ALLIED TRAININGS

Course Description

The transition of traditional water utilities into proactive, future-ready organizations requires a seamless integration of strategic management, digitalization, and climate resilience to overcome administrative bottlenecks, extreme weather events, and urban expansion. To navigate these challenges, this comprehensive Allied Training Course equips utility professionals and engineering leadership with advanced administrative, financial, and hydrogeological expertise, bridging the gap between regulatory policy and practical project execution through step-by-step public procurement training, meticulous rate analysis, and the complete PC-I to PC-IV lifecycle. Furthermore, the program promotes digital transformation and resource protection by training participants in spatial asset management via GIS, SCADA telemetry integration, Disaster Risk Reduction (DRR) tools, urban flood vulnerability mapping, and Managed Aquifer Recharge (MAR) technologies. Ultimately, by integrating these technical and strategic frameworks, the course empowers decision-makers to mitigate environmental stressors, eliminate budget shortfalls, and deliver transparent, accountable, and citizen-centric services.

About This Course

Below are the trainings aligned with this course category, along with their respective modules. These have been designed to systematically address the outlined objectives and enhance participant capacity.

<i>Training 1</i>	<i>Streamlining Public Procurement: Rules, E-Procurement Systems, and E-PADS for Efficient and Transparent Government Procurement</i>
<p>Module 1: PPRA Frameworks & Digital E-Procurement (Legal landscape, compliant SBD drafting, audit risk mitigation, vendor registration, digital signatures, and approval streamlining).</p> <p>Module 2: Mastering E-PADS & Bid Evaluation (Dashboard navigation, tender management, technical/financial evaluation, digital comparative statements, and grievance handling).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> • Navigate PPRA frameworks and mitigate audit risks through compliant Standard Bidding Document (SBD) drafting. • Execute end-to-end digital procurement utilizing E-Procurement systems and the E-PADS digital platform. • Conduct technical and financial bid evaluations to ensure transparency and streamline contract finalization. 	
<i>Training 2</i>	<i>Water Supply and Sanitation Infrastructure Costs: Rate Analysis, Project Costing, and PC-I to PC-IV Preparation</i>
<p>Module 1: Rate Analysis & PC-I Preparation (MRS navigation, direct/indirect cost calculation, project proposal structuring, feasibility justification, and budget alignment).</p> <p>Module 2: Project Execution, Monitoring & Completion (PC-II to PC-IV lifecycle, SMDP Portal navigation for project monitoring, bottleneck resolution, closure documentation, and digital audit trails).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> • Perform meticulous rate analysis using the Market Rate System (MRS) to calculate comprehensive project costs. 	

	<ul style="list-style-type: none"> • Draft and structure step-by-step PC-I to PC-IV proposals to align budgets and secure project feasibility approvals. • Monitor physical and financial project progress to resolve bottlenecks and ensure financially accountable project closures.
<i>Training 3</i>	<i>Water & Wastewater Management: Treatment Technologies, Quality Testing & Standards, Flow Measurement, and Disposal Station Operations</i>
<p>Module 1: Treatment Technologies & NEQS Compliance (Overview of primary/secondary/tertiary treatment processes, drinking water purification standards, and strict NEQS implementation).</p> <p>Module 2: Water Quality Testing & Lab Administration (BOD, COD, TSS, and fecal coliform laboratory testing, lab equipment calibration, and establishing robust Quality Assurance/Quality Control (QA/QC) practices).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> • Evaluate water and wastewater treatment technologies to ensure administrative alignment with primary, secondary, and tertiary environmental management strategies. • Execute stringent water quality testing protocols (BOD, COD, TSS) and manage laboratory QA/QC to ensure strict facility compliance with NEQS environmental standards. 	
<i>Training 4</i>	<i>Training for Professionals on Behaviour Management in Workplace, Effective Office Management and Presentation Skills</i>
<p>Module 1: Behavioral & Office Management (Workplace behavior, stress/anger management, emotional intelligence, document/file management, and professional presentation skills).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> • Cultivate professional workplace behavior, stress management, emotional intelligence, and effective office administration/presentation skills. 	
<i>Training 5</i>	<i>Effective Project Delivery: Project Management Tools and Risk Management Practices through Results-Based Risk Management Planning (RMP)</i>
<p>Module 1: Fundamentals of Project Delivery & Scheduling (Scope definition, WBS, critical path methods, MS Project and Primavera P6 software usage, dynamic Gantt charts, and baseline tracking).</p> <p>Module 2: Results-Based Risk Management & Handover (Identifying financial/operational risks, risk matrix construction, KPIs, and managing scope creep).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> • Define project scopes, construct Work Breakdown Structures (WBS), and apply critical path methods for effective project delivery. • Develop dynamic Gantt charts and perform resource leveling utilizing project management software like MS Project. • Construct comprehensive risk matrices and Results-Based Risk Management Plans (RMP) to mitigate financial and operational bottlenecks. 	
<i>Training 6</i>	<i>Urban Flood Management and Water Utility Resilience during Monsoons</i>
<p>Module 1: Urban Hydrology & Pre-Monsoon Preparedness (GIS-based flood mapping, peak discharge prediction, desilting operations, and outfall inspections).</p> <p>Module 2: Infrastructure Safeguarding & Rapid Dewatering (Flood-proofing pumping stations, elevating electrical panels, monsoon control room setup, and mobile pump deployment).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> • Execute GIS-based vulnerability assessments and historical rainfall analyses to map urban flood risks accurately. • Implement rapid dewatering strategies, monsoon control room setups, and pre-monsoon drainage maintenance to protect critical infrastructure. 	

<i>Training 7</i>	<i>GIS Mapping & Asset Management for Water & Sanitation and SCADA Systems & IT Interventions for Water Utilities</i>
<p>Module 1: GIS for Strategic Planning & Vulnerability Mapping (GIS principles for executive oversight, spatial data analysis for urban flood risks, and macro-level asset lifecycle prediction).</p> <p>Module 2: Centralized IT Dashboards & Data Analytics (Overview of executive HMI dashboards and control room operations, interpreting SCADA data analytics for strategic optimization, and integrating cross-departmental digital reporting).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> Promote data-driven decision-making at the executive level by leveraging GIS spatial mapping for macro-level vulnerability assessments and long-term asset planning. Utilize centralized SCADA IT dashboards and complex data analytics to optimize utility-wide operational efficiency and resolve bottlenecks. 	
<i>Training 8</i>	<i>Mastering Energy Audits, Efficiency Planning, and Electric Panel Management for Optimized Performance</i>
<p>Module 1: Utility Energy Auditing & Baseline Mapping (Baseline development, utility bill analysis, power quality measurement, and asset energy mapping).</p> <p>Module 2: Financial Impact & ROI of Energy Optimization (Savings estimation, ROI analysis for high-efficiency motor transitions, evaluating the financial impact of poor power factor, and SCADA-integrated smart metering for cost tracking).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> Conduct comprehensive energy audits to map asset energy consumption and establish precise utility baselines for pumping stations. Evaluate the financial impact of energy optimization strategies, integrating smart metering to track operational cost reductions. 	
<i>Training 9</i>	<i>Water Sector Capacity Building: Groundwater Management and Climate Resilience in Water & Sanitation Sector</i>
<p>Module 1: Climate Impacts & Integrated Water Governance (Extreme weather effects, WASH infrastructure vulnerability, climate financing, DRR, basin-wide water governance, mitigating GHG emissions, and stakeholder engagement).</p> <p>Module 2: Hydrogeological Assessment & MAR Techniques (Aquifer mapping, groundwater flow, monitoring wells, safe yield calculations, rainwater harvesting, infiltration basins, and contamination risk mitigation).</p>	
<p>Objectives</p> <ul style="list-style-type: none"> Assess climate change impacts on the WASH sector to identify infrastructure vulnerabilities and implement Disaster Risk Reduction (DRR) strategies. Formulate Integrated Water Resources Management (IWRM) policies integrating climate financing frameworks and basin-wide stakeholder engagement. Execute comprehensive hydrogeological assessments, mapping aquifer types, monitoring groundwater flow, and calculating safe extraction yields. Design and implement Managed Aquifer Recharge (MAR) systems, including rainwater harvesting and infiltration basins, while mitigating contamination risks. 	

Provisions

The following details outline the delivery format, practical tools, and safety equipment provided to support participants throughout this hands-on training module.

Operational Aspect	Details
Mode of Delivery	Face-to-Face, Hands-on Computer Lab, Tabletop Policy & Emergency Simulations, Financial Calculations, Laboratory Demonstrations, and Guided Field Site Visits.
Target Audience	WASAs Officials (Procurement Specialists, Directors of Finance, Planning Engineers, XENs, SDOs, Plant Managers, Chemists), Local Government Officials, HUD & PHED Officials.
Language	English & Urdu.
Teaching Methods	Presentations in addition with activities, group discussions, hands-on E-PADS/MS Project/GIS software exercises, mock bidding scenarios, financial rate analysis drills, tabletop climate & flood risk simulations, lab water testing, pump efficiency calculations, and guided field visits to MAR sites and disposal stations.
Tools & Equipment	<p>Desktop Computers/Laptops with internet & MS Excel, Projector & Screen, E-PADS training portal, sample SBDs/PPRA rulebooks, Current MRS documents, Sample PC-I to PC-IV templates, MS Project & GIS/SCADA Software, Water quality testing kits (pH, DO, turbidity), lab glassware, BOD incubators, spectrophotometers, Water Level Indicators, Dip Meters, ultrasonic flow meters, Power Analyzers (Kyoritsu KEW-6315), Power Meters with PF Capability, Insulation Testers, Clamp Meters, Mobile Dewatering Pumps, Suction Hoses, Vacuum Trucks, Sandbags, Emergency Radios, and Sectional Models (pumping systems, recharge wells, harvesting units).</p> <p>Personal Protective Equipment (PPE) Includes: Not applicable for administrative modules. For Lab/Site Visits/Flood Demonstrations: Safety Helmets, Safety Shoes, Waterproof Safety Boots/Rain Boots, High-Visibility Rain Gear/Vests, Chemical-Resistant/Heavy-Duty Gloves, Electrical Insulated Gloves, Safety Goggles, Lab Coats, and Arc Flash Face Shields.</p>
Residence Facilities	On-campus hostel facilities are available for out-of-station participants attending the training.