Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aaticd.co.za · Website: www.aaticd.co.za

COURSE BROCHURE

Water & Wastewater Management

Custom Courses / Health, Safety and Environment (HSE)

Unit Standard AATICD-0311 · NQF Level 5 · 10 Credits · 5 Days

COURSE OVERVIEW

This course equips participants with the knowledge and practical skills to manage water and wastewater systems effectively, ensuring compliance with South African regulations and promoting environmental sustainability. It focuses on the principles of water treatment, wastewater processes, and the implementation of safety and quality standards.

Category	Custom Courses
Subfield	Health, Safety and Environment (HSE)
Unit Standard	AATICD-0311
Accreditation	SAQA Accredited · NQF Level 5 · 10 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply the principles of water and wastewater treatment processes to ensure safe and efficient operations.
- Analyze water quality parameters and interpret results to make informed treatment decisions.
- Evaluate the performance of treatment systems and implement corrective actions to maintain compliance.
- Design monitoring and sampling programs to ensure regulatory compliance and environmental protection.
- Implement health and safety protocols in water and wastewater facilities to minimize risks to personnel and the environment.
- Demonstrate effective management of water and wastewater resources, including conservation and sustainability practices.

WHO SHOULD ATTEND

- This course is designed for water and wastewater treatment plant operators, process controllers, technicians, and supervisors who are responsible for the operation, maintenance, and management of water and wastewater systems.

COURSE OUTLINE

Day 1: Introduction to Water and Wastewater Management

- Overview of the water cycle and water scarcity issues in South Africa.
- Introduction to the National Water Act (Act 36 of 1998) and Water Services Act (Act 108 of 1997).
- Key stakeholders: Department of Water and Sanitation, municipalities, water boards, and industries.
- Basic water quality parameters: physical, chemical, and biological.
- Types of water sources: surface water, groundwater, and reclaimed water.
- Introduction to wastewater: sources, characteristics, and environmental impacts.
- Overview of the course structure and assessment criteria.

Day 2: Water Treatment Processes

- Intake and screening: removing large debris.
- Coagulation and flocculation: chemical processes to aggregate particles.
- Sedimentation and clarification: gravity settling.
- Filtration: rapid sand, multimedia, and membrane filtration.
- Disinfection: chlorination, UV, and ozonation.
- pH adjustment and corrosion control.
- Advanced treatment: activated carbon, ion exchange, and reverse osmosis.
- Case studies of typical water treatment plants in South Africa.

Day 3: Wastewater Treatment and Management

- Preliminary treatment: screening, grit removal, and flow equalization.
- Primary treatment: sedimentation and flotation.
- Secondary treatment: activated sludge, trickling filters, and oxidation ponds.
- Nutrient removal: nitrogen and phosphorus.
- Tertiary treatment: polishing, disinfection, and advanced processes.
- Sludge treatment: thickening, digestion, dewatering, and disposal.
- Effluent discharge standards and the impact on receiving water bodies.
- Introduction to decentralized and on-site sanitation systems.

Day 4: Water Quality Monitoring and Regulation

- Water quality sampling: grab, composite, and automatic sampling.
- Field measurements: pH, turbidity, dissolved oxygen, and conductivity.
- Laboratory analysis: BOD, COD, TSS, and microbiological parameters.
- Data interpretation and reporting.
- South African Water Quality Guidelines and SANS 241 for drinking water.
- Regulatory compliance: permits, audits, and enforcement.
- Risk assessment and emergency response planning.
- Case studies on water quality incidents and lessons learned.

Day 5: Sustainable Practices and Integrated Management

- Water conservation: leak detection, water-efficient fixtures, and reuse.
- Rainwater harvesting and greywater recycling.
- Integrated water resource management (IWRM) and catchment management.
- Green infrastructure: constructed wetlands, permeable pavements, and green roofs.
- Environmental impact assessment and sustainable development.
- Stakeholder engagement and community involvement.

- Emerging trends: smart water networks and digital monitoring.
- Group exercise: developing a water management plan.

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **10 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 17,700.00	**R 17,700.00**
1	In-House	R 23,900.00	**R 23,900.00**
1	On-Campus (Pretoria)	R 26,700.00	**R 26,700.00**

UPCOMING SESSIONS

Start	End	Method	Venue
07 Dec 2026	11 Dec 2026	Online	—
07 Dec 2026	11 Dec 2026	On-Campus	Maseru, Lesotho
07 Dec 2026	11 Dec 2026	On-Campus	Kigali, Rwanda
07 Dec 2026	11 Dec 2026	On-Campus	Accra, Ghana
07 Dec 2026	11 Dec 2026	On-Campus	Cape Town, South Africa
07 Dec 2026	11 Dec 2026	On-Campus	Abu Dhabi, UAE
07 Dec 2026	11 Dec 2026	On-Campus	Victoria Falls, Zimbabwe
14 Dec 2026	18 Dec 2026	On-Campus	Mbabane, Eswatini

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard AATICD-0311) and click **Get A Quotation**. Select your training method and number of delegates — your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to **apply@aaticd.co.za** — our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call **+27 12 004 8389** or WhatsApp **+27 65 077 6310** and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically — the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

Accredited Africa Training Institute for Capacity Development
Unit FO409, Hatfield Plaza, 1122 Burnett St, Hatfield 0028, Pretoria, Gauteng, South Africa
Tel: +27 12 004 8389 · WhatsApp: +27 65 077 6310 · apply@aaticd.co.za · www.aaticd.co.za