

The Water Institute of Southern Africa

Presents



Sustainable Operation and Maintenance of Water Treatment Plants

2 CPD Points – WISA/ ECSA/ SACNASP

- 💧 2 Day Course aimed at Process Controllers, Superintendents, Plant Managers, Plant Technicians, and Water Sector Officials.
- 💧 An Assessment will be conducted upon conclusion of the course to ensure quality and a CPD certificate will be awarded to successful learners.
- 💧 Course Presenter: Chris Swartz – B.Eng (Civil), M.Eng (Water Utilisation) Pr. Eng, Senior Fellow of WISA, Chairperson of WISA Water Reuse Division.
- 💧 **Date: 12 and 13 March 2018**
- 💧 **Midrand Training Centre (The Venue at Midrand) - Allandale Junction, 128 Richards Drive, next to Allandale Road, Midrand**
- 💧 **Costs:**
 - WISA Member – R4950 (incl. VAT)**
 - Professional Process Controller (Pr PC Water) – R4500 (incl. VAT)**
 - Non Member – R5950 (incl. VAT)**
- 💧 To register please click [HERE](#) or for any queries please contact Anita Pillay at training@wisa.org.za



Course Overview

The Sustainable Operation and Maintenance of Small Water Treatment Plants short course provides participants with a sound theoretical and practical knowledge base on water treatment, as well as the operation and maintenance of water treatment plants. The course will enable participants to evaluate the operation and control of water treatment plants, and to draw up and implement operational and monitoring programs, as well as maintenance schedules. This course is equivalent to NQF level 5.

Objective

This 2 day course addresses the need that exists in the municipal water treatment sector for managers and supervisors for guidelines and best practices on efficient operation and maintenance of water treatment plants, and that could be used to improve the performance and sustainability of these plants. It will ensure that the management and technical guidelines contained in the course material can be presented to and utilised by water care technical personnel and middle management for on-going in-house training sessions or for self-assessment.

Who should attend?

- 💧 Process Controllers
- 💧 Superintendents
- 💧 Plant Technicians
- 💧 Plant Managers
- 💧 Water sector professionals
- 💧 Officials involved in the operation, maintenance and management of water treatment facilities

Course Outline

Day 1:

- 💧 Overview of the principles and theory of water treatment for potable use
- 💧 Legal requirements for producing drinking water for distribution to the public
- 💧 Overview of conventional water treatment processes
- 💧 Introduction to more advanced water treatment processes
- 💧 Guidelines and best practices for the cost-effective operation of water treatment plants

Day 2:

- 💧 Consideration of the importance of well-designed monitoring programs
- 💧 Guidelines for effective recording, processing, interpretation and communication of plant and water quality data
- 💧 Trouble shooting and corrective actions
- 💧 Overview of water treatment plant maintenance functions and maintenance plans
- 💧 Introduction to risk management in drinking water supply

There will be an open book examination on Day 2 of the course as well as an assignment to be handed in after the course in order for learners to be awarded respective CPD points.

Course Outcomes

On completion of the course, participants should be able to:

- 💧 Understand the basic principles and theory of water treatment for potable use.
- 💧 Describe all the legal and regulatory requirements for the operation of a water treatment plant.
- 💧 Describe the objectives and rationale of the SANS 241 standards for drinking water.
- 💧 Describe all the unit treatment processes used in a conventional as well as an advanced water treatment plant.
- 💧 Perform the operational inputs for each of the unit treatment processes.
- 💧 Draw up and use an operation and maintenance manual for a water treatment plant.
- 💧 Draw up, implement and manage a monitoring program for a water treatment plant (raw water, operational and compliance monitoring).
- 💧 Draw up, implement and manage a water sampling programme.
- 💧 Use the Operational Information Tool to record, process, interpret and communicate plant and water quality data.
- 💧 Perform basic management of a water treatment plant laboratory.
- 💧 Do trouble shooting on a water treatment plant for each of the unit treatment processes and identify all the corrective actions that can be taken.
- 💧 Write weekly and monthly reports on the performance of a water treatment plant, including shortcomings, needs and proposed solutions.
- 💧 List the maintenance requirements of each of the unit treatment processes, including management of plant residuals.
- 💧 Draw up and use maintenance schedules for daily, weekly, monthly, six-monthly and annual maintenance tasks to be performed.
- 💧 Perform a basic risk assessment on a water treatment plant and use the results to develop a water safety plan.

Course Presenter

Core presenter: CD Swartz B.Eng (Civil), M.Eng (Water Utilization), Pr.Eng, SFWISA

Chris Swartz is consulting water utilisation engineer in his consulting engineering firm Chris Swartz Water Utilisation Engineers. He obtained his B.Eng, B.Eng (Hons) and M.Eng degrees in Water Utilisation Engineering at the University of Pretoria in South Africa. He is a registered professional engineer and previously worked in the SATS specialist water office before joining the Council for Scientific and Industrial Research (CSIR), where he worked as senior research engineer and project manager on numerous projects in the drinking water and wastewater treatment fields. He established his consulting engineering practice Chris Swartz Water Utilisation Engineers in 1991, with offices in Cape Town and Mossel Bay. He has been involved with research and capacity building projects in water treatment and water reclamation and reuse, for the South African Water Research Commission, Department of Water and Sanitation, provincial governments, Water Boards and District and Local Authorities. These projects includes evaluation of technologies and treatment systems, drawing up of guideline documents for water treatment technologies, compiling manuals and training material on operation and maintenance of water treatment and water reuse plants,

developing costing models, water quality and monitoring programs, and guidebooks on evaluation and selection of water treatment technologies and water reclamation and reuse systems.

He has presented numerous treatment courses to engineers, managers, and supervisory and operational personnel in the water sector. He works closely with Universities and Water Supply Authorities in many of these projects.

He is a Senior Fellow of the Water Institute of Southern Africa (WISA) and Chairperson of the WISA Water Reuse Division. He is also a member of WaterReuse, IWA and AWWA.

This course is accredited by WISA, ECSA and SACNASP for 2 CPD points.

Course Registration

Please use the link below in order to register for this course and note that space is limited:

<https://www.WISACPD01JHB>

The costs are as follows:

- 💧 WISA Members (in good standing) – R4950 (incl. VAT)
- 💧 Professional Process Controller (Pr PC Water) – R4500 (incl. VAT)
- 💧 Non WISA Members – R5950 (incl. VAT)

Please contact Anita Pillay at training@wisa.org.za or 086 111 9472 should you have any queries.