



Water Quality Management and Effluent Treatment

Presented by the Department of Chemical Engineering, University of Pretoria

5 ECSA CPD Points

5 SACNASP CPD Points

The **Water Quality Management and Effluent Treatment** short course provides you with a comprehensive overview of and practical insights into the various processes that are involved in the evaluation of drinking water quality, as well as water and wastewater treatment. The course covers topics of basic water microbiology and chemistry, biological treatment processes, sludge treatment and effluent disposal, as well as biological, chemical and physical water quality parameters, the flow of material and mass balances, among others. The course will ultimately empower you to make more informed decisions around the treatment, operation and control of water and wastewater treatment plants.

The course will help us address the following challenges facing the water sector of South Africa:

- Managing the emergence of the Water Availability crisis in Southern Africa
- Evaluation of Water Fitness for Use
- Management and design for resilience
- Litigation against impacts of climate change
- Paradigm shift from Wastewater Treatment to Water and Resource Recover
- Integration of ecological system during wastewater and effluent treatment
- Countering the increasing incident of emerging pollutants and EDCs

The course includes a day visit at a water treatment facility and hands on analytical laboratory training.

NEXT PAGE 

Shifting knowledge to insight



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Course content

Background aspects

- South African water sources, hydrology and geohydrology
- Basic water microbiology
- Basic water chemistry
- Biological, chemical and physical water quality parameters
- Point and diffuse sources of pollution
- National Water Act and other regulatory requirements

Treatment processes

- Overview of water and wastewater treatment processes
- Flow of material and mass balances
- Physical–chemical treatment processes
- Municipal wastewater
- Biological treatment processes
- Sludge treatment and disposal

Learning outcomes

After successfully completing this course, you will have a better understanding of the basic sciences involved in water quality management.

Who should enrol?

This course is ideal for you if you are an engineer, scientist or technologist involved in water quality management and control, or the operation of water and wastewater treatment plants.

Course fees

R14 550.00 per delegate (VAT incl.)

Course fees include all course material, refreshments and lunch during contact days.

Admission requirements

Prospective delegates should at least have a relevant bachelor's degree in Science or Engineering, with a reasonable background in maths, physics or chemistry. Relevant work experience in water resource planning, treatment processes and/or operation is recommended.

Accreditation and certification

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Registration and enquiries

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Shifting knowledge to insight

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