FACULTY OF
ENGINEERING &
THE BUILT ENVIRONMENT

Dept. of Civil Engineering | Masters module | CPD course

# Urban Hydrology and Modelling Urban Drainage Systems

13 – 17 April 2026

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

# Introduction

## The Master's Programme

The primary aim of the M (Eng) and MSc (Eng) specialising in Water Quality Engineering is to produce graduates with the necessary knowledge and skills to engage effectively in theory, design, modelling and operation of biological and chemical wastewater and sludge treatment systems.

The primary objective of the M(Eng) and MSc(Eng) specialising in Water Quality Engineering is to produce engineers and scientists with high-level and in-depth knowledge and understanding of bioprocess engineering so that they can competently and effectively use steady state and dynamic simulation models for the design and operation of municipal wastewater treatment plants comprising primary treatment, BNR activated sludge, secondary settling tanks, flotation thickening and stabilisation of waste sludge by aerobic and/or anaerobic digestion unit operations in a plant wide integrated way.

Upon completion of this curriculum the modern approach of modelling and simulation to wastewater treatment plant design and operation can be embraced with deeper insight, advanced knowledge, and greater confidence.

## Continuing Professional Development

Modules of this master's programme are offered to Continuing Professional Development delegates from which a participant can obtain CPD credits. Please note: If you are interested in attending this course for credit purposes towards MSc degree, you will need to formally register for the MSc Programme or as an occasional student. If you attend the course as a CPD participant, credit cannot be claimed in retrospect. A certificate of attendance will be awarded to CPD participants. Participants need to attend 80% of the lectures to qualify for an attendance certificate.

# Who Should Attend

The course is best suited for Water and Wastewater Treatment Professionals, including Engineers and Scientists, Consultants, Contractors, Operators, Project managers, City and Public Works Officials, Urban Planners, and other design professionals who deal with issues related to wastewater treatment. A level 8 qualification in Engineering (or science fields related to water) is required.

# Format

This course will be presented over 5 days in hybrid format. The face-to-face presentations/lectures will take place in the New Engineering Building, upper campus, UCT and online participants will engage via the learning platform. Further information will be available in the week before the course starts.

# Course Content

This course introduces key concepts in urban hydrology, with a focus on the modelling of urban drainage systems. Topics include Sustainable Urban Drainage Systems (SuDS), Stormwater Harvesting (SWH), and flood modelling as part of urban hydrology and modelling.
The course forms part of the MSc in Water Engineering and builds foundational knowledge in surface water hydrology, with a specific focus on urban environments and drainage system modelling.
*Please note: This course does not cover wastewater modelling.*

# Course Convenor

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|  | Ms Teboho Mofokeng is lecturer in the Department of Civil Engineering at UCT and teaches hydraulics to undergraduate students. Currently she is a PhD candidate in the Water Research Group at UCT. Her research interests include water management and reuse in the context of drought, water security, and water food and energy nexus. |

# Overview

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| Course | Urban Hydrology and Modelling Urban Drainage Systems, CIV5158 |
| Duration | 13 – 17 April 2026 |
| Venue | University of Cape Town or online. |
| CPD | 5 CPD points, ECSA registration number: *UCTWQEUHMUD26* |
| Fees | Standard fee: R18 100 (5-day course) *<br>UCT student fee: R9 050 |
| Participants | Civil Engineers, Consultants, Bridge Engineers, Landscape Architects, Contractors, Project managers, City and Public Works Officials, City Planners, and other design professionals who deal with flood related issues in an urban area. |

# Registration

## Registration and Cancellation

- Register for this course
- Registration covers attendance of all sessions of the course and course material.
- Registrations close one week before the start of the course. Confirmation of registration will be sent on receipt of a registration form.
- Cancellations must be received one week before the start of a course, or the full course fee will be charged.
- For more information on application and registration procedures, please visit our website: www.cpd.uct.ac.za

## Certificates and CPD Points

A digital certificate of attendance will be awarded to CPD participants. Participants need to attend 80% of the lectures to qualify for an attendance certificate. For further information on digital certificates please visit Digital Certificates at UCT

According to guidelines set out by the Engineering Council of South Africa, attendance of this course will earn participants 5 points towards Category 1 (Developmental Activities). The ECSA validation number for this course is UCTWQEUHMU26.

Please note: If you are interested in attending this course for credit purposes, you will need to register for the Master's Programme or as an occasional student. If you attend the course as a CPD participant, credit cannot be claimed in retrospect.

## Contact details

For more information or details on CPD courses, visit our website or contact us.

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