



Dept. of Civil Engineering | Master's Module | CPD
Course

Urban Hydrology and Modelling Urban Drainage Systems

Cape Town and online, 15 – 19 April 2024



Introduction



The course

The course is part of the MSc in Water Engineering and contributes to the knowledge in the field of surface water hydrology in general and specifically urban hydrology and modelling urban drainage systems

The aim of this course is to provide a structured and practical training in surface water hydrology and modelling of urban drainage systems.

Continuing Professional Development

The course is 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 Civil Engineers, Water professionals, Consultants, Bridge Engineers, Landscape Architects, Contractors, Project managers, City and Public Works Officials, Urban Planners, and other design professionals who deal with flood related issues in an urban area.

Format

Please note: the course will be presented in a hybrid format i.e., face-to-face, and online over a 5-day period.

Course Content

1. The first part of the course presents aspects of surface water hydrology, conventional design of urban drainage systems, SuDS and WSD. The topics to be covered in the first 3.5-day period include
 - i. Rainfall – runoff mechanisms
 - ii. Introduction to modelling approaches in hydrology i.e., linear reservoir methods, conceptual models, stochastic models, physically based and distributed models
 - iii. Design of urban drainage systems
 - iv. Sustainable urban Drainage System (SuDS) and Water Sensitive Design (WSD)
2. The second part of the course (1.5-day period) will focus on the use of SWMM and HydroSWMM for modelling urban drainage systems. The period will largely be a modelling workshop where delegates work on a specific task with the assistance and guidance of the course organizers.

Course Overview

Name	Urban Hydrology and Modelling Urban Drainage Systems: CIV5158Z
Duration	15 – 19 April 2024
Venue	Post-graduate Seminar Room, Level 3, New Engineering Building <u>and</u> online
CPD	5 CPD points, ECSA Validation No: UCTWQEUHMUD22
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.
Fees	Standard delegate: R16 500 UCT student or staff fee: R8 250

*A 10% discount to the standard delegate fee is applicable if the course is attended online only

Course Presenter



Dr. John Okedi has over 15 years' experience in industry and academia. He is a full-time employee of the University of Cape Town where he is a convener of two undergraduate courses *i.e.*, Engineering Hydrology and Urban Water Services. He is also convener of 3 post-graduate courses *i.e.*, Groundwater, Urban Hydrology & Modelling Urban Drainage Systems, and Hydrological measurements with IoT. Research interests include groundwater, alternative 'non- conventional' water resources for water scarce countries, research with big data, Internet of Things (IoT), application of Real-Time Control on hydrological systems, and coastal reservoirs. He is a professional engineer registered with ECSA (Reg No. 202001361), with key industry experience including civil engineering design and project management, construction supervision and operations, quantitative data analysis and modelling. Work on groundwater is mainly focused on Managed Aquifer Recharge for abstraction and water supply.

Registration

Registration and Cancellation

- [Register online](#)
- Registration covers attendance of all sessions of the course and course material.
- Registrations close 3 working days before the start of the course. Confirmation of acceptance 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/cpd/applications

Certificates and CPD Points

- A certificate of attendance will be awarded to CPD participants for each course. Participants need to attend 80% of the lectures to qualify for an attendance certificate.
- 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 UCTWQEUHMUD24
- 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.
- CPD participants can also request a formal university transcript, which will show this course as part of a Professional Development Career.

Contact details

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

Web: <http://www.cpd.uct.ac.za>

E-mail: ebe-cpd@uct.ac.za

Physical address
CPD Programme
Room 6.10, 6th Floor
New Engineering Building
Upper Campus
University of Cape Town
South Africa

Postal address
CPD Programme
EBE Faculty
University of Cape Town
Private Bag X3
Rondebosch 7701
South Africa

Programme administrators
Gillian Williams: +27 (0)21 650 7239
Sandra Jemaar: +27 (0)21 650 5793
Heidi Tait: +27 (0)21 650 4922
