



Dept. of Civil Engineering | CPD Courses

Urban Catchment Management

Towards water sensitive cities

presented in person and online, 15 - 17 July 2025

F&TURE
WATER



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD



Course Objectives



This course has been designed to equip critical thinkers to consider increasingly complex water challenges. An inter-and transdisciplinary (IDTD) approach is adopted so that participants are empowered to engage with the environmental, technical, socio-cultural, economic and political challenges around urban catchment management to create an understanding of water's diverse role in society and in sustaining livelihoods. This course will challenge participants to consider water in new ways and equip them with the skills to apply their learnings in different contexts.

Course Format

This course will be presented in a hybrid format. i.e. face-to-face, and online over 3 days. The face-to-face presentations/lectures will take place in the Postgraduate Seminar Room, level 3, New Engineering Building, upper campus, UCT. Online participants are expected to have access to a computer and good Wi-Fi or data reception and will be responsible for ensuring they have backup power systems during loadshedding. Further information will be available in the week before the course starts.

Course Content

This course adopts an IDTD approach to examine the complexity of current water crises, trends and conditions, with specific examples from South Africa. It aims to provide the necessary contextual information to allow people from any background to participate meaningfully. While considering water demand, supply and treatment, it addresses the need to derive maximum benefit from water resources while incurring minimum burden and the need to secure 'new taps' in a Water Sensitive Design context. The course will facilitate critical thinking and analysis to foster paradigm shifts through engagement with both practical applications and intractable problems.

Topics include:

- Water Sensitive Design and Water Sensitive Cities
- Urban streams, groundwater and stormwater management
- Wastewater treatment and resource recovery from domestic wastewaters
- Water and socio-cultural aspects and responses
- Impact of climate change and nature-based responses aimed at building resilience
- Water quality monitoring and public health impacts



Who Should Attend

This course is aimed at all professionals such as Engineers, Environmental Scientists, Planners, Architects/Landscape Architects, Urban designers, Chemists, Biologists. It is offered as an interdisciplinary course that will benefit from a cohort of students from diverse educational backgrounds and level of qualifications. Candidates should be able to communicate well in English.

Course Convenor



Kirsty Carden has over 35 years of experience working in academia, for government and the private sector in the field of urban water management in South Africa. She is an Associate Professor in the Department of Civil Engineering at the University of Cape Town (UCT) and is currently Director of UCT's transdisciplinary research institute, Future Water. Her research interests include integrated approaches geared towards sustainable urban water management and the transition towards water sensitive and resilient cities. She has a specific interest in the opportunities and challenges related to enabling governance for blue-green infrastructure and nature-based interventions in urban areas as well as in Communities of Practice and social learning related to water sensitive design. A/Prof Carden has led several national and internationally-funded research projects in the field of integrated urban water management.

Course Overview

Name	Urban Catchment Management	
Dates	15 – 17 July 2025	
Venue	Postgraduate seminar Room, New Engineering Building, UCT <u>OR</u> online	
CPD	3 CPD points, ECSA Validation No: UCTUCM25	
Participants	Engineers, Environmental Scientists, Planners, Architects / Landscape Architects, Urban designers, Chemists, Biologists	
Fees	Standard delegate: R12 000	UCT students and staff: R6 000

* A 10% discount will apply to the standard rate if the course is attended online only

Lecture Programme

Time	Tuesday 15 July – Day 1	Wednesday 16 July – Day 2	Thursday 17 July – Day 3
09h00 – 09h45	Cape Town and Johannesburg Water Sensitive City benchmarking	Climate change impacts on water	Rehabilitating urban rivers
09h45 to 10h45	Water Sensitive Design and Water Sensitive Cities overview	Informal settlement planning	Groundwater management and MAR
10h45 to 11h00	<i>Tea/coffee break</i>	<i>Tea/coffee break</i>	<i>Tea/coffee break</i>
11h00 – 12h00	Water and Socio-cultural aspects	'Shit flow diagrams' / water quality impacts of poor service provision in informal settlements	Wastewater treatment and Resource recovery from domestic wastewaters
12h00 – 13h00	Urban streams – drainage, flooding, water quality	Alternative sewerage, slum drainage, greywater management	Water Demand Management, avoiding Day Zero
13h00 – 14h00	<i>Lunch break</i>	<i>Lunch break</i>	<i>Lunch break</i>
14h00 – 15h00	Stormwater management / SuDS / stormwater harvesting	Public health aspects related to water	Water quality monitoring and impact
15h00 to 16h00	Landscape architecture as stormwater management	Thematic discussion session – Pressing issues facing municipalities	Thematic discussion session – changing the way we think about urban catchments
16h00 to 17h00	Recommended and supplementary readings; course preparation	Recommended and supplementary readings; course preparation	Recommended and supplementary readings; course preparation



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](#)

The ECSA validation number for this course is UCTUCM25

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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