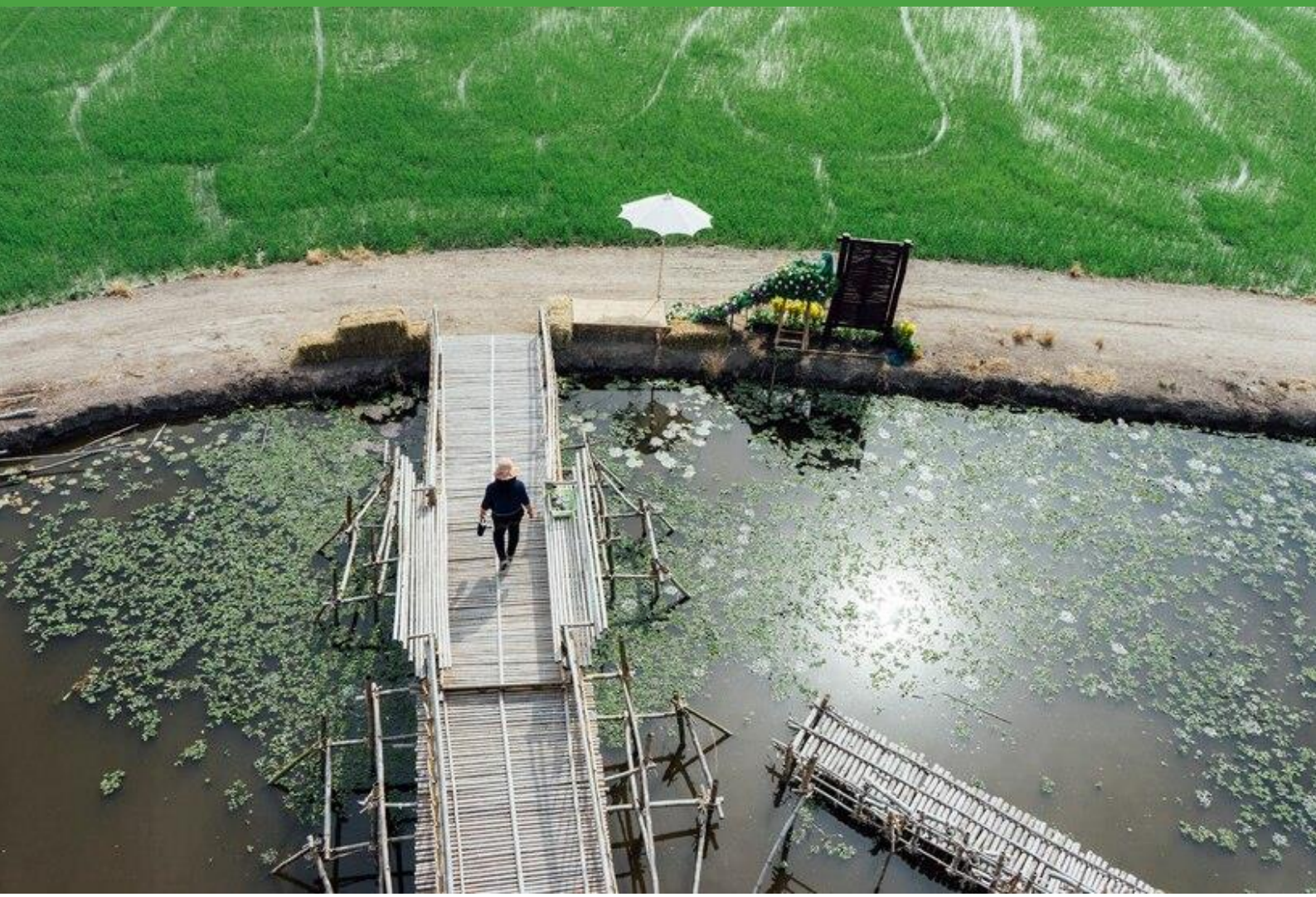
FACULTY OF
ENGINEERING &
THE BUILT ENVIRONMENT

CPD
CONTINUING PROFESSIONAL DEVELOPMENT



Dept. of Civil Engineering | Masters module | CPD course

Integrated Wastewater Treatment Plant Design

17- 18 June 2025

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 in a hybrid format i.e. face-to-face, and online over 5 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 computer access with good Wi-Fi or data reception and will be responsible for ensuring they have backup systems during loadshedding. Further information will be available in the week before the course starts.

Course Content

This advanced course in integrated wastewater treatment plant design includes: calculating daily composite average flow and loads from diurnal data; influent flow balancing; integrated wastewater treatment plant modelling and design; major project brief; economic evaluation of different wastewater treatment plant layouts to achieve different technical, and environmental and economic objectives.

Course Convenor

A/Prof David Ikumi, a senior lecturer in the Department of Civil Engineering at UCT, is a leader in sustainable water resource management. His expertise lies in developing and applying mathematical models to optimize Water Resource Recovery Facilities (WRRFs). Prof Ikumi's research focuses on creating WRRFs that are not only efficient but also environmentally friendly, with consideration for social and economic factors alongside environmental impact.

Overview

Course	Integrated Wastewater Treatment Plant Design, CIV5192Z
Duration	17 – 18 June 2025
Venue	PG Seminar Room, NEB, Upper Campus, University of Cape Town **or** online
CPD	2 CPD points, ECSA registration number: *UCTWQEIWTPD25*
Fees	Standard fee: R17 300 (5-day course) * UCT student fee: R8 650
Entrance requirements	Level 8 qualification in Engineering (or science fields related to water). Applicants should provide a CV upon registration.

*10% discount will apply if the course is attended online only

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 UCTWQEIWTPD25.

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.

Web: www.cpd.uct.ac.za **Email:** 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