



Dept. of Civil Engineering | Masters module | CPD course

## Transport Modelling

3 – 7 February 2025



# Introduction



## The Master's Programme

The master's programme offers degrees specialising in transport studies, with a specific focus on the planning and management of urban passenger transport systems. The primary aim is to produce graduates from a range of undergraduate disciplines with the necessary knowledge and skills to engage effectively with the challenge of creating affordable, efficient, sustainable, safe, equitable and environmentally sound urban transport systems, and to contribute to the implementation of new and demanding policy directives. Curriculum content is crossdisciplinary in

orientation and exposes students to a broad range of the analytical, evaluative, planning and management issues they are likely to encounter in the field. For further information on the master's programme please see the website: [Transport Studies | University of Cape Town \(uct.ac.za\)](https://transportstudies.uct.ac.za)

## Continuing Professional Development

Modules of this master's programme are offered to Continuing Professional Development delegates. Ten individual block release modules are offered in 2025. Continuing Professional Development students may take each module as a separate certificate course. CPD students are required to attend the lectures but are not required to submit assignments or write the exam.

## Who Should Attend

The programme has been designed to be accessible to people in full-time employment as well as fulltime students. Applicants may register for the individual master level courses offered by the programme as Continuing Professional Development students. These students will be awarded a Certificate of Attendance. University credits will not be awarded to CPD students. Courses are typically attended by consultants or government officials working within the transportation field.

## Format

Each module is structured in the following way: a week of intensive contact time at UCT, comprising formal lectures, class assignments and seminars/tutorials.

Please note: these courses are currently planned to be presented face-to-face over 5 days, but it may be necessary to change the format of a course to an online or hybrid format.

## Course Content

This course aims to develop an advanced understanding of principles and skills in working with these models. Topics include transport modelling types and scales, theory of travel demand modelling, including the four-step transport model (i.e., trip generation, trip distribution, mode choice and traffic assignment), output analysis, land use – transport interaction models, as well as theory of traffic flow dynamics, including capacity assessment, LOS assessment, shockwave analysis, dynamic traffic management and elementary traffic control design. The course ends with a discussion about the link between models and the analytical questions raised by different policy environments.

## Course Presenter



**Prof. Mark Zuidgeest** is the SANRAL Chair of Transport Planning and Engineering in the Department of Civil Engineering at the University of Cape Town. He also serves as the Head of Department. Prof Zuidgeest obtained his master's degree in 1997 from the University of Twente in the Netherlands and, in 2005 he successfully completed his PhD at The Netherlands Research School for Transport, Infrastructure, and Logistics (TRAIL) at the University of Twente. Prof Zuidgeest's research interests primarily revolve around transport in developing countries. He specializes in various areas such as transport modelling, transport-related social exclusion, transport geography, choice modelling, (public) transport network design, location-allocation optimization, walkability assessment, and the impact of climate change on cities and transport systems. Prof Zuidgeest actively participates in the scholarly community; he serves as the co-Editor in Chief for the Journal of Transport Geography, the deputy-Editor in Chief of African Transport Studies and is an associate editor for the Journal of the South African Institution of Civil Engineering (SAICE).

## Overview

<b>Course Dates</b>	3 – 7 February 2025
<b>Delivery format</b>	PG Seminar Room, NEB, Upper Campus, University of Cape Town <b>or</b> online
<b>CPD</b>	5 CPD points, ECSA registration number: <i>UCTTSPTPM25</i>
<b>Fees</b>	Standard fee: R17 300 UCT student fee: R8 650
<b>Transport CPD courses 2025</b>	<p>Transport Modelling CIV5133Z: 3 - 7 Feb</p> <p>Discrete Choice Modelling and Stated Choice Survey Design CIV5127Z: 3 - 7 Mar</p> <p>Transport Demand Analysis and Project Assessment CIV5132Z: 24 - 28 Mar</p> <p>Integrated Land Use-Transport Planning CIV5038Z: 19 - 23 May</p> <p>Local Area Transport Planning, Management &amp; Design CIV5036Z: 28 Jul - 1 Aug</p> <p>Transport Systems Simulation; CIV5165Z: 25 - 29 Aug</p> <p>Management of Transport Supply &amp; Demand CIV5035Z: 1 - 5 Sep</p> <p>Public Transport System Design CIV5071Z: 6 - 10 Oct</p> <p>Big Data Analytics and Transport CIV5164Z: 20 - 24 Oct</p> <p>Public Transport Policy and Regulation CIV5070Z: 17 - 21 Nov</p>

# 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](http://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 *UCTTSPTPM25*.

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

**E-mail:** [ebe-cpd@uct.ac.za](mailto:ebe-cpd@uct.ac.za)

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