

# Transport Modelling: Theory and Practice

Presented by the Department  
of Civil Engineering, University  
of Pretoria

5 ECSA CPD Points

## Brief Description

Transport modelling is a basic tool for the planning and evaluation of transport infrastructure. This course is aimed at providing delegates with a basic introduction to transport modelling concepts and techniques, as well as more advanced topics that delegates involved in the transport planning and engineering fields will find useful.

We will explore the basic four-step modelling framework, supported by practical examples, demonstrations, and opportunities for practicing skills to solve basic modelling problems. We will also look at the impact of new (big) data sources and new model types like agentbased models on modelling practice. The course concentrates on understanding the why and how of modelling, but does not teach delegates how to use specific software platforms.

## Course content

- ✓ Understanding transport models
- ✓ Data and surveys
- ✓ Four-step modelling techniques
- ✓ Introduction to choice modelling and SP surveys
- ✓ Traffic assignment and network flows
- ✓ Advanced topics

## Learning Outcomes

Delegates will be able to:



Describe the basic principles and theory of transport demand data collection, analysis and modelling;



See practical examples of traffic and transport model applications, software, and practices, presented by instructors and guest speakers;



Gain practical experience in using models to solve simple transport problems using Excel; and



Understand the limitations of transport modelling in developing countries, and emerging approaches and big data.



*Shifting knowledge to insight*





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## Course delivery mode options:

Contact Sessions

## Who should enrol?

Transport planners, Transport and Traffic Engineers, Town planners with quantitative skills. Suitable for new professionals and as a refresher for the more experienced.

## Requirements:

Basic knowledge of statistics and probability at an undergraduate level. Familiarity with a spreadsheet software package like Excel (no programming skills needed).

## Course dates

13 – 15 May 2024 (Part 1)  
26 – 28 August 2024 (Part 2)

## Programme fees

**Face to face in Pretoria:**  
**R17 250.00 per delegate (VAT incl.)**  
Course fees include all course material for Parts 1 and 2, refreshments and lunch during contact days.

Course fees must be paid in full 14 days prior to course start dates. Proof of payment can be submitted to [enrolments@enterprises.up.ac.za](mailto:enrolments@enterprises.up.ac.za).

## Accreditation and certification

Enterprises University of Pretoria (Pty) Ltd is wholly owned by the University of Pretoria. As a public higher education institution, the University of Pretoria functions in accordance to the Higher Education Act 101 of 1997. Enterprises University of Pretoria offers short courses on behalf of the University and these short courses are not credit-bearing, and do not lead to formal qualifications on the National Qualifications Framework (NQF) – unless stated otherwise. Delegates who successfully complete a short course and comply with the related assessment criteria (where applicable) are awarded certificates of successful completion and/or attendance by the University of Pretoria.

## Registration and enquiries

### Client Information Centre

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## Programme leader

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