

Module Code	CE7T02
Module Name	T2 – Transport Modelling and Planning
ECTS Weighting¹	5 ECTS
Semester taught	Semester 1
Module Coordinator/s	Prof. Brian Caulfield (brian.caulfield@tcd.ie)
<u>Module Learning Outcomes</u> with reference to the <u>Graduate Attributes</u> and how they are developed in discipline	<p>On successful completion of this module, students should be able to:</p> <p>LO1. Evaluate transport networks using the four stage model.</p> <p>LO2. Discuss how transport networks are designed.</p> <p>LO3. Apply discrete choice models to transportation problems.</p> <p>LO4. Understand how activity based transport models link into the traditional four stage model.</p> <p>LO5. Appreciate the links between land use and transport planning.</p> <p>LO6. Design and plan public transport routes.</p> <p>LO7. Model the interactions between transport and emissions.</p> <p>Graduate Attributes: levels of attainment</p> <p>To act responsibly - Not embedded</p> <p>To think independently - Enhanced</p> <p>To develop continuously - Attained</p> <p>To communicate effectively - Enhanced</p>
Module Content	<p>This module is an optional module which runs in the first semester. A comprehensive overview of the different approaches to modelling transportation networks is provided in this module, equipping students with a variety of tools for examining transportation problems. This module covers the following topics: data, four stage transport modelling (including trip generation, distribution, modal split and assignment; user and social equilibrium), discrete choice modelling, activity based models, transport and land use planning, public transport planning.</p>

Teaching and Learning Methods

- Core content via lecture (direct)
- Individual Assignments

Assessment Details²

Please include the following:

- Assessment Component
- Assessment description
- Learning Outcome(s) addressed
- % of total
- Assessment due date

Assessment Component	Assessment Description	LO Addressed	% of total	Week due
	Assignment		30%	
	Examination [3 hours]		70%	

Reassessment Requirements

Reassessment Examination [3 hours] – 100%

Contact Hours and Indicative Student Workload²

Contact hours: Lectures 27 hours

Independent Study (preparation for course and review of materials):

Directed learning 15 hours

Independent Study (preparation for assessment, incl. completion of assessment):

Assignments 26 hours

Recommended Reading List**Module Pre-requisite****Module Co-requisite****Module Website**

Are other Schools/Departments involved in the delivery of this module?
If yes, please provide details.

Module Approval Date

Approved by	
Academic Start Year	1st September 2025
Academic Year of Date	2025/2026