<table>
<thead>
<tr>
<th>Module Code</th>
<th>CE7T02</th>
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<tbody>
<tr>
<td>Module Name</td>
<td>T2 – Transport Modelling and Planning</td>
</tr>
<tr>
<td>ECTS Weighting¹</td>
<td>5 ECTS</td>
</tr>
<tr>
<td>Semester taught</td>
<td>Semester 1</td>
</tr>
<tr>
<td>Module Coordinator/s</td>
<td>Assoc. Prof. Brian Caulfield (<a href="mailto:brian.caulfield@tcd.ie">brian.caulfield@tcd.ie</a>)</td>
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**Module Learning Outcomes with reference to the Graduate Attributes and how they are developed in discipline**

On successful completion of this module, students should be able to:

- LO1. Evaluate transport networks using the four stage model.
- LO2. Discuss how transport networks are designed.
- LO3. Apply discrete choice models to transportation problems.
- LO4. Understand how activity based transport models link into the traditional four stage model.
- LO5. Appreciate the links between land use and transport planning.
- LO7. Model the interactions between transport and emissions.

**Graduate Attributes: levels of attainment**

- To act responsibly - Not embedded
- To think independently - Enhanced
- To develop continuously - Attained
- To communicate effectively - Enhanced

**Module Content**

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.
### Teaching and Learning Methods

- Core content via lecture (direct)
- Individual Assignments

### Assessment Details

<table>
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<tr>
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<th>Assessment Description</th>
<th>LO Addressed</th>
<th>% of total</th>
<th>Week due</th>
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<tr>
<td>Assignment</td>
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<tr>
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### Reassessment Requirements

- 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

### Contact Hours and Indicative Student Workload

- 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.

<table>
<thead>
<tr>
<th>Module Approval Date</th>
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<tbody>
<tr>
<td>Approved by</td>
<td></td>
</tr>
<tr>
<td>Academic Start Year</td>
<td>28th September 2020</td>
</tr>
<tr>
<td>Academic Year of Date</td>
<td>2020/2021</td>
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