<table>
<thead>
<tr>
<th><strong>Module Code</strong></th>
<th>CE7T01</th>
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<tbody>
<tr>
<td><strong>Module Name</strong></td>
<td>T1: Transportation</td>
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<tr>
<td><strong>ECTS Weighting</strong></td>
<td>5 ECTS</td>
</tr>
<tr>
<td><strong>Semester taught</strong></td>
<td>Semester 1</td>
</tr>
</tbody>
</table>
| **Module Coordinator/s** | Prof. Bidisha Ghosh ([bghosh@tcd.ie](mailto:bghosh@tcd.ie))  
Lecturer(s): Prof. Margaret O’Mahony ([Margaret.omahony@tcd.ie](mailto:Margaret.omahony@tcd.ie))  
Prof. Brian Caulfield ([brian.caulfield@tcd.ie](mailto:brian.caulfield@tcd.ie)) |

**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. Develop an overview of transportation and traffic engineering.
- LO2. Develop an understanding of queuing models and traffic paradoxes.
- LO3. Discuss and design the layout of a traffic junction.
- LO4. Design and evaluate fixed-time traffic signal plan of a junction.
- LO5. Implement land-use models to manage traffic demand.
- LO6. Develop knowledge and understanding of urban transportation Management policies.
- LO7. Evaluate the impact of public transport policies.

**Graduate Attributes: levels of attainment**

To act responsibly - Enhanced  
To think independently - Enhanced  
To develop continuously - Introduced  
To communicate effectively - Enhanced

**Module Content**

The students will be given an introduction to transportation engineering, covering traffic flow theory, queuing theory, traffic paradoxes, junction design and traffic signal designing. The module will also cover urban transportation policies, land-use modelling and public transport quality and benchmarking.

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1 TEP Glossary
Teaching and Learning Methods

- Core content via lecture (direct).
- Research paper and case study based group discussion.
- Individual Assignments.

Assessment Details

Please include the following:

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

<table>
<thead>
<tr>
<th>Assessment Component</th>
<th>Assessment Description</th>
<th>LO Addressed</th>
<th>% of total</th>
<th>Week due</th>
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<tbody>
<tr>
<td>Continuous Assessment</td>
<td></td>
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<td>50%</td>
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<tr>
<td>Take Home Examination</td>
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Reassessment Requirements

100% Take Home Examination

Contact Hours and Indicative Student Workload

Contact hours: 27 lectures
Directed learning 15 hours

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

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

Recommended Reading List

Module Pre-requisite

Module Co-requisite

Module Website

Are other Schools/Departments involved in the delivery of this

No

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2 TEP Guidelines on Workload and Assessment
module? If yes, please provide details.

<table>
<thead>
<tr>
<th>Module Approval Date</th>
<th>Approved by</th>
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<tbody>
<tr>
<td><strong>Academic Start Year</strong></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; September 2020</td>
</tr>
<tr>
<td><strong>Academic Year of Date</strong></td>
<td>2020/2021</td>
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