Module Code | CE7T04
---|---
Module Name | T4: Intelligent Transportation Systems
ECTS Weighting | 5 ECTS
Semester taught | Semester 1
Module Coordinator/s | Asst. Prof. Bidisha Ghosh (bghosh@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. Critically appraise the role of intelligent transportation systems.
- LO2. Analyse traffic data.
- LO3. Develop understanding of advanced, data-driven accident management systems
- LO4. Utilise microsimulation software (VISSIM) to evaluate traffic network design.

**Graduate Attributes: levels of attainment**

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

**Module Content**

This module focusses on the role of data, analysis and evaluation in transportation engineering.

The objectives are:

- Introduction to Intelligent Transportation Systems
- Modelling traffic using software and theories
- Traffic data modelling

This module will include:

- Introduction to intelligent transportation system
- Training of VISSIM
- Traffic data analysis and modelling
- Incident Management Scheme Design
- Traffic Forecasting
Teaching and Learning Methods

Teaching strategies
- Core content via lecture (direct)
- Individual Assignments
- Software training session

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>Examination</td>
<td></td>
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<tr>
<td>Assignment</td>
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Reassessment Requirements

None

Contact Hours and Indicative Student Workload

<table>
<thead>
<tr>
<th>Contact hours: Lectures 24 hours</th>
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<tbody>
<tr>
<td>Independent Study (preparation for course and review of materials): Directed Learning 10 hours</td>
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<tr>
<td>Independent Study (preparation for assessment, incl. completion of assessment): Assignments 40 hours Autonomous Learning 26 hours</td>
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Recommended Reading List

To be provided in the lectures

Module Pre-requisite

Engineering or Sciences Primary Degree

Module Co-requisite

Module Website

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<tr>
<th><strong>Are other Schools/Departments involved in the delivery of this module?</strong></th>
<th>No</th>
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<td><strong>Module Approval Date</strong></td>
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<tr>
<td><strong>Approved by</strong></td>
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<tr>
<td><strong>Academic Start Year</strong></td>
<td>28th September 2020</td>
</tr>
<tr>
<td><strong>Academic Year of Date</strong></td>
<td>2020/2021</td>
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