CE7T04: T4 Transport Data and Evaluation  [5 credits]

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Module organisation
The module runs for the second half of the academic year and comprises of one three-hour lecture per week.
First Semester: Weeks 1-10
Lectures 24
Assignments 40
Directed Learning 10
Autonomous Learning 26
Total 100
Note: 1 ECTS is 25 hours of student effort

Module Pre-requisites
Engineering or Sciences primary degree

Module description, aims and contribution to programme
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

Learning outcomes
On successful completion of this subject the student will be able to:
1. Critically appraise the role of intelligent transportation Systems
2. Design and evaluate fixed-time traffic signal plan of a junction.
3. Analyse traffic data
4. Utilise microsimulation software to evaluate traffic network design

Module content
This module will include:
· Introduction to intelligent transportation system
· Training of VISSIM
· Traffic data analysis and modelling
· Traffic junction design
· Queue modelling
Teaching strategies
- Core content via lecture (direct)
- Individual Assignments
- Software training session

Assessment
This module is assessed as follows:
- Examination: 90% (formal written three-hour end-of-year examination)
- Assignment: 20%

The aim of the assignment is to give students training on using essential transport modelling based software.

Required textbook
To be provided in the lectures.

Further information
Please refer to Blackboard for any further details on this module. (mymodule.tcd.ie)