CE7T01: T1 – Transportation [5 credits]

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Module organisation
Department of Civil, Structural and Environmental Engineering

Module description, aims and contribution to programme
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.

Learning outcomes
On successful completion of this subject the student will be able to:
1. Develop an overview of transportation and traffic engineering.
2. Develop an understanding of queuing models and traffic paradoxes.
3. Discuss and design the layout of a traffic junction.
4. Design and evaluate fixed-time traffic signal plan of a junction.
5. Implement land-use models to manage traffic demand.
6. Develop knowledge and understanding of urban transportation management policies.
7. Evaluate the impact of public transport policies.

Module content
First Semester: Weeks 1-10
Lectures 27
Assignments 26
Directed Learning 15
Autonomous Learning
Total 100
Note: 1 ECTS is 25 hours of student effort

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

Assessment
Continuous Assessment.
- Homework Assignment
Required textbook
Calibri 12

Further information
School of Engineering weblink.