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201100006

Traffic Management

Course info 

Course module	201100006	Starting block	2B
Credits (ECTS)	7.5	Application procedure	You apply via OSIRIS Student
Course type	Course	Registration using OSIRIS	Yes
Language of instruction	English	Number of insufficient tests	-
Contact person	prof.dr.ir. E.C. van Berkum		
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Lecturer(s)			
Lecturer	prof.dr.ir. E.C. van Berkum		
Lecturer	dr. T. Thomas		

Learning goals

Course objectives:

- Gain insight in several traffic management measures, including the operation of the measures themselves, but also in the behavioural background.
- Gain insight in statistical methods to assess the impact of traffic measures
- Gain insight in methods to design a traffic management plan

Content

Course Description

Background and context:

An important aspect of traffic engineering is the study of traffic operations, i.e. speed, density and flow, and in particular temporal and spatial variations and correlations. With this knowledge it is possible to manage the traffic system, i.e. influence traffic flows without actually changing the infrastructure. Based on the actual traffic situation travellers are informed or guided and several traffic control systems are implemented in order to obtain a safer, cleaner, faster, more reliable traffic system.

Course content:

This course is about traffic modelling and traffic management. The course starts with the concept of regional traffic monitoring. Then qualities of the transport system such as traffic safety, reliability, robustness, and environmental impact are discussed, together with some statistical properties of the transport system. Then traffic control and its properties, locally, in a string and in a network is discussed. Then important measures as Ramp Metering, Motorway Traffic Management system and Traffic Information and Pricing measures are discussed. Then a framework on how to design a regional traffic management plan. This course further contains an assignment where students design, implement and evaluate a traffic management system in a simulated environment.

Required materials

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Recommended materials

Handouts

Instructional modes

Instruction/lecture (Required)

Lecture (Required)

Project (Required)

Tests

Test

Assumed previous knowledge

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