


[< Previous](#) [Help](#) [Print](#)  [Search for course module](#) > [Select course module](#) > [Course catalog](#) > [Course module: 201100010](#)

201100010

Intelligent Transport Systems

Course info

Course module	201100010	Starting block	1A
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. M.H. Martens		
E-mail	m.h.martens@utwente.nl		
Lecturer(s)	prof.dr. M.H. Martens		
Lecturer			

Learning goals

Course objectives:

- Recognise the interaction between ICT (information and communication technology) and the traffic and transport system
- Identify, describe and design the potential intelligent transport systems and services (ITS) for car drivers
- Assess the impact of ITS applications on the traffic and transport system
- Evaluate the impact on the business of ITS suppliers
- Examine and analyze the behavior of car drivers in the design and evaluation of ITS applications

Content

Course Content

Intelligent Transport Systems (ITS) is the area where information and communication technology (ICT) meets the traffic and transport system. It comprises a wide range of intelligent tools for managing transport networks and services for travellers. Applied effectively, ITS can save lives, time, and money as well as reduce threats to our environment and create new business opportunities. Great strides in ITS technology have already been made to:

- improve the safety of our roads
- decrease journey times
- encourage multimodal transport
- alleviate the impact of transport on the environment

ITS and its related technologies have been widely accepted by both the public and private sectors as the way forward to achieving the goal of sustainable mobility - while at the same time improving quality of life.

This course gives a state of the art overview on ITS and will teach you how to apply ITS tools for the design and evaluation of ITS systems and services.

ITS systems and services are emerging through the application of ICT in the traffic and transport system.

The collection, processing and distribution of information related to traffic and transport enable infrastructure operators, supplier of systems and services and end users with new options to improve network operation, business and travel.

The course starts with an introduction on Intelligent Transport Systems where various application areas of ITS of existing and future applications are outlined. Application areas include:

- Driver assistance and information systems (navigation)
- Traffic information systems (traffic queue warnings)
- ITS and public transport (intelligent traveller support)
- Cooperative systems (car-to-car communication, with one car warning the other for upcoming events)

The course provides basic fundamental theories and tools that can be used to design, develop, and assess the ITS system. These include the analysis on user aspects, analysis on traffic and transport impact, behavioural changes and risk analysis. Participating students will select their interested area and formulate

an ITS case study for their further assignment. In groups of 2, students apply these tools in their case study and present their results. Several guest lecturers will focus on special issues.

Assessment:

- home assignments (30%)
- written exam (70%)

An overall score of minimum 5,5 is sufficient to pass the course.

Assumed previous knowledge

Gewenst: 201100005 Traffic Operations, 201100006 Traffic Management

PARTICIPATING STUDY

M-CEM

[< Previous](#) [Help](#) [Print](#) 