

AI 837 Intelligent Transportation Systems (3. 0)

Pre-requisite: None

Recommended Books:

Sussman, Joseph. Perspectives on Intelligent Transportation Systems (ITS). New York, NY:Springer, 2010.

Mashrur A. Chowdhury, and Adel Sadek, Fundamentals of Intelligent Transportation Systems Planning, Artech House, Inc., 2003.

Pradip Kumar Sarkar, Amit Kumar Jain, Intelligent Transport Systems, PHI learning, 2018.

Credit Hours: 3 (3, 0)

Course Objectives:

On completion of the course, the student should be able to:

- explain transport telematics and its increasing significance in transportation planning and management.
- explain scope of transport issues, such as, traffic safety, public transport, advanced vehicle management and control.
- explain the application of information technology and telecommunications to control traffic, inform travelers and drivers, operate public transport, automating payments, handle emergencies and incidents, operate commercial fleets and freight exchange, and automate driving and safety.

Topics / Contents	Allocated Periods
Specific topics to be covered in the course include: Identification of transportation problems and costs, Definition and role of Intelligent Transportation Systems, Policy-perspective ITS, management, Traveler Information Systems, Public transit, bicycles and pedestrians, Eco-friendly and sustainable ITS solutions, ITS technologies: Automated highway systems (AHS), Autonomous Vehicles, Intelligent Infrastructures, Evaluation of technologies and large-scale ITS field tests, benefits and costs assessment of ITS, Learning from ITS deployments in various countries, ITS Challenges and Issues: Technical, institutional, funding, and procurement issues, ITS evaluation software, Public and private sector perspectives (institutional and stakeholder issues) on ITS.	45