

INTELLIGENT TRANSPORT SYSTEMS



THE PURPOSE OF THIS COURSE

To provide students with a working knowledge of ITS in general (including technology and communication options). Sustainable ITS implementation will be approached from a Systems Engineering perspective, with more detailed knowledge obtained in certain application areas (including freeway management systems and public transport applications). Several design tutorials and operational scenario development will supplement the practical learning experience of attendees.

Intended Audience

Officials of implementing authorities, traffic and toll operational managers and personnel, consultants, service providers and Transportation Engineering post-graduate students.

Language

This course will be conducted in English. However, questions, assignments and examinations may be presented in either English or Afrikaans.

Academic Credit

This course forms part of the Stellenbosch University post-graduate programme. It carries fifteen (15) SAQA credits for academic purposes and/or continuing education based upon an extensive exercise and written examination. Certificates will be awarded to all delegates participating satisfactorily in the course. CPD credits = 5 Course

Arrangements

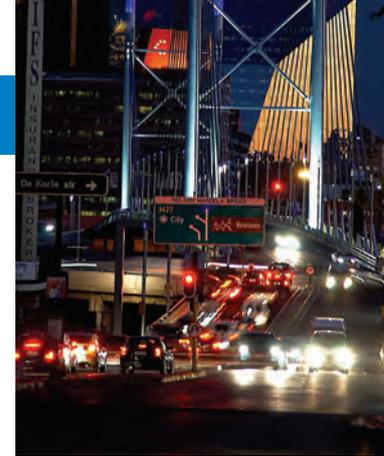
This course will be presented online. Online platforms will be communicated before the start of the lectures. Participants should have access to on-line platforms (MSTeams) and data usage.

Online course presented by



Also offered as part of the post-graduate course in Transportation Engineering at Stellenbosch University

In association with ITSSA



Course fee
R 9500.00

Enquiries

The Course administrator
Janine Myburgh
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CPD Points = 5

[REGISTER HERE](#)

2-6 August 2021

COURSE CONTENT

ITS Fundamentals

This includes basic ITS elements, architecture, standards, lifecycle approach, procurement, policy, benefits & evaluation.

Systems engineering for ITS

This covers the SE process, Systems engineering Management plan, Concept of operations, Defining System and subsystem requirements, configuration management, project design, implementation, integration & verification, Validation, operation, change management, retirement & replacement.

Technology & communications

Overview of various ITS technology & communications systems utilised in ITS deployment

Freeway Management Systems, Public Transport Systems and Arterial Management Systems

Overview will be provided on components that FMS is comprised of, and will include topics such as operational centres, incident management systems, “toolbox” for deployment.

Connected Vehicle, Autonomous Vehicle and Smart City and other technology applications

Overview of various developments in the field of transport technology and how that will impact on our environment in the future

Big Data

Overview of Big Data in Transportation. Worked examples in probe data application.

Practical discussions

Big Data Analysis, ITS Concept of Operations development, ITS FMS design and ITS operational scenario development.



ABOUT THE PRESENTERS

Pierre Pretorius, P.E., has recently retired and was a Principal at Kimley-Horn and Associates, Inc., USA. He has more than 30 years of ITS, traffic management, and transportation planning and operations experience. He also served as Vice-Chair of AASHTO/FHWA 511 Technical Working Group; President of ITS Arizona; Chair of ITS America Information Forum; and on the FHWA ITS Deployment Technical Advisory Committee (DTAG) and ITS America Coordinating Council. Pierre was also part of the team that developed the course work for nine 5-day Regional Operations Forums attended by over 300 individuals from more than 30 states in the U.S. He also served as Forum leader and instructor.

Johann Andersen, PrEng (also course coordinator) is an industry Associate Professor: Intelligent Transport Systems at Stellenbosch University and instrumental in the establishment of the Stellenbosch Smart Mobility Laboratory. He is also the Chief Executive Officer of Techso, a consultant company providing services in Transportation Engineering and Intelligent Transport Systems. He has more than 30 years of industry experience, and specialises in ITS (planning, design, operations, implementation), traffic engineering and transportation planning. He acts as the first president of ITS South Africa, and served on its Board for a number of years. He acts as supervisor for a number of post graduate students, and endeavours to align education and training in ITS with industry needs.

Megan Bruwer is a transportation engineer with a background in civil engineering. She joined the Civil Engineering Department of Stellenbosch University in 2015 as a lecturer and project coordinator of the Stellenbosch Smart Mobility Laboratory (SSML) researching ITS Solutions for developing countries. Prior to joining Stellenbosch University, Megan worked as a transport engineering consultant, involved in the implementation and operational design of public transport systems and road-based traffic accommodation for new developments. Her research interests include traffic flow theory and the application of ITS to improve traffic data collection for transport planning and traffic management. She is currently completing a PhD in this field.



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