



Loughborough
University

MSc Intelligent Transport Systems

School of Architecture, Building and Civil
Engineering

Marcus Enoch

Professor of Transport Strategy

Programme context

- Huge advances in technology mean autonomous, connected and intelligent systems can learn, adapt, take decisions and act independently of humans.
- Broader drivers like climate change and rapid urbanisation are affecting the world we live in, and hence the operational context of the transport system.
- These forces are revolutionising how people and goods are moved – hence the transport system of 2050 could be significantly different to that of today.
- This MSc will help you make sense of this new world.
- You will learn about Intelligent Transport Systems and associated technologies, and be able to apply state-of-the-art data management and analysis techniques.

Programme aim

The aim of the programme is to consider Intelligent Transport System concepts within a real-world context through the application and development of:

- a range of technologies;
- advanced approaches to collecting and managing large and multi-faceted datasets;
- state-of-the-art techniques for modelling and presenting data, for example machine learning, artificial intelligence, data visualisation and simulation; and
- cutting-edge research and problem-solving methods.

Programme structure

Semester 1.

Module Code	Module Title	Weight
CVPZZ1	Fundamentals of Intelligent Transport Systems	15
CVP319	Research methods	15
CVPZZ2	Modelling the Built Environment	15
CVPZZ3	Smart Cities and Urban Mobility	15

Semester 2.

Module Code	Module Title	Weight
CVPZZ4	Connected and Autonomous Transport	15
	Option 1	
CVPZZ5	Simulation and Visualisation	15
	Option 2	

- Optional modules in Semester 2 up to a value of 30 credits are from CVP329 Organisation and People (15); CVPXX1 Infrastructure Operation and Maintenance (15) and CVPXX2 Real-case Project Development (30).
- CVPZZ6 Research Dissertation (60) would also run through Semesters 1 and 2 and the summer term.

Transport and Planning Group

Active since 1972 in both teaching and researching transport and planning-related topic areas.
Core strand of the School of Architecture, Building and Civil Engineering.

Comprises 10 academic staff members:

- Professor Mohammed Quddus, Professor of Intelligent Transport Systems
- Professor Marcus Enoch, Professor of Transport Strategy
- Dr Andrew Timmis, Lecturer in Transport
- Dr Craig Morton, Lecturer in Transport
- Dr Akis Theofilatos, Lecturer in Transport Systems
- Dr Haitao He, Lecturer in Urban Mobility and Intelligent Transport
- Dr Taimaz Larimian, Lecturer in Urban Planning
- Dr Asya Natapov, Lecturer in Urban Planning and Design
- Mr James Richardson, University Teacher in Air Transport Management
- Dr Andy Taylor, University Teacher in Air Transport Management

Plus 6 research associates and 20 PhD researchers.

All staff are research active, across 4 research themes relating to Intelligent Transport Systems.

1. Autonomous and Intelligent transport

2. Passenger transport

3. Air transport

4. Smart and sustainable cities



Accolades



**1ST IN THE UK
FOR BUILDING**

THE TIMES AND SUNDAY TIMES
GOOD UNIVERSITY GUIDE 2021



**1ST IN THE UK FOR BUILT
ENVIRONMENT**

FOR THE VITALITY AND SUSTAINABILITY OF
THE RESEARCH ENVIRONMENT REF 2014

Our graduates and collaborations

- Recent graduates of BSc, MSc and PhD programmes taught by the Transport and Urban Planning Group currently work for organisations including: Highways England, Atkins, Go Ahead Group, WSP, Tracsis, Transport for London, Jacobs and Masabi.
- We have strong links to organisations including:
 - HS2
 - AECOM
 - Highways England
 - Go Ahead Group

Accreditation

- Seeking accreditation from the leading professional institution in this area, **the Chartered Institute of Logistics and Transport (CILT)**.
- Aim to secure before programme starts in October 2021.



5 key reasons to study

- Brand new niche MSc in an exciting, **growing** and continuously changing sector
- Clear focus on developing **data science skills** within an applied discipline
- Taught by research-active transport academics in an **established built environment School**
- Based in a **Top 10** UK university
- Excellent **employment** prospects



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Thank you

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