Intelligent transport systems and services MSc

JOINED UP SOLUTIONS
journeys.. deliveries.. thinking

www.kingston.ac.uk/pgITSS

Intelligent Transport Systems and Services MSc

About the course

Intelligent Transport Systems and Services are those that move people and goods intelligently. They seek optimal performance by enabling decision-making and dynamic adjustment of parameters and/or configurations in response to, or anticipation of, changing internal or external conditions, including mere usage. They are characterised by the provision and application of effective and reliable information.

People now demand quick solutions to transportation problems and instant help to make journeys a better experience. Intelligent Transport Systems & Services (ITSS) are designed to deliver those solutions via increased choice, better information and integrated planning.

Transport thinking today needs to be as joined up as the journeys themselves, demanding a broad range of knowledge from fundamental engineering through to communication and planning. An understanding of computing, information technology, business, legal issues and social changes emerging from consumer devices such as smart phones are all key attributes for 21st century transport specialists.

Course overview
Initially offered part time, this hands-on course is ideal for those wishing to develop their skills in the rapidly-evolving area of integrated transport services. It aims to provide contemporary knowledge and best practice for intelligent transport systems planners, suppliers, their customers and clients.

The course is broadly based around the information system infrastructures required by modern intelligent transport systems and services. It is particularly focused on road and rail, and integration with other transport modes.

The course is highly practical and will feature real-world and work-based topics, examples and case studies. Students will be encouraged to share their challenges and successes, so that the group can learn from its collective experiences.

Course content

The course is based around the information system infrastructures essential for modern intelligent transport systems and services. It aims to give you a thorough understanding of ITSS, ranging from the technical knowledge necessary to plan, develop and deploy systems to the political and strategic rationales involved. It will use selected case studies to illustrate current methodologies and practices and to inform future developments.

The six core modules are shared by all participants for maximum benefit from cross-disciplinary discussions and collaborations. The project dissertation will typically be work-based, enabling students to apply the knowledge acquired through the taught modules into their own workplace. You can choose one elective module.

Core modules
• Modern Transportation Systems Overview
• Planning, Design and ITSS Architectures
• Design and development of ITSS and IS Infrastructure
• Services and Technologies for Intelligent Transport Systems
• Services Management for Intelligent Transport Systems
• Research Methods
• Project Dissertation

Elective modules
• Transport Systems, Energy Options & Sustainability
• Location enabled web applications

Special features

• Developed in close association with leading practitioners of ITSS
• Reflects current thinking, future needs and best practice in a rapidly evolving discipline.
• Flexible, part-time study designed to fit in with your working life.
• A fast track solution to career development in ITSS.

Teaching staff

The MSc is taught by staff in the Faculty of Computing, Information Systems and Mathematics in partnership with Kingston Business School, who are well experienced in information system design and related disciplines across a wide range of application areas, including the transport sector. The teaching delivery will benefit by input from highly experienced industry experts who will share their expertise and knowledge and reflect their own perspective on professional practice.

Input from industry

This course has been developed in association with members of our Industrial Advisory Panel, which includes senior representatives from the following organisations:

• Department for Transport
• Egis-Mobilité UK
• Railway Industries Association
• Transport for London
• Logica (Intelligent Transport Systems practice)
• Highways Agency
• Transport Research Laboratory

They have strongly influenced the ethos of the course and helped shape the curriculum. Their ongoing input, at both strategic and practical levels, ensures that we can reflect current/future needs and best practice in this rapidly developing field. In particular, they provide valuable insight on potential structural change issues, as well as identifying case studies which focus the learning experience.

Who this course is for

This is a professional development course, especially suitable for organisations who wish to prepare individuals for the key roles of the future.

We would expect graduates to be able to use their enhanced skills and knowledge in their day to day work, bringing a structured approach to planning, design and development in the context of current thinking and future scenarios.

Non-sponsored students are also welcome, as their investment in themselves will be a demonstration to us (and a future employer) of their determination and commitment to succeed.

Students are likely to come from transport authorities and agencies, public and private operating companies (both passenger and freight), government departments, engineering and systems consultancies. They could be managers or graduate transport strategists and planners as well as systems architects, analysts and designers, operational and maintenance specialists.

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After you graduate

The course will provide graduates with enhanced skills and knowledge that will increase their ability to deliver valuable transport solutions for their employers. It will open up employment prospects in both the public and private sectors and help to meet the growing demand for graduate specialists in the area of ITSS.

Entry requirements
- Good honours degree
- Relevant work experience gained in the transport and related industries, government or public sector.

Attendance

The course is designed for part-time study over 2-3 years and, as such, is suitable for combining with your career. Each of the modules is taught either in a week-long block, or over a long weekend, supplemented with online teaching materials, pre-reading, preparation and course work. In this way, you can do most of your studies at a time and place to suit your circumstances.

Course Fees

£3,350 per annum for a 2 year part-time attendance. This is highly competitive when compared with the cost of commercial training programmes for key staff.

Full details on fees and funding are available at www.kingston.ac.uk/pgITSS

Location

Located beside the River Thames, Kingston University is within the London travel-pass zone. Easily accessible from surrounding areas such as Surrey and Middlesex, its local stations (Kingston; Surbiton) are also only 25 minutes from Waterloo.
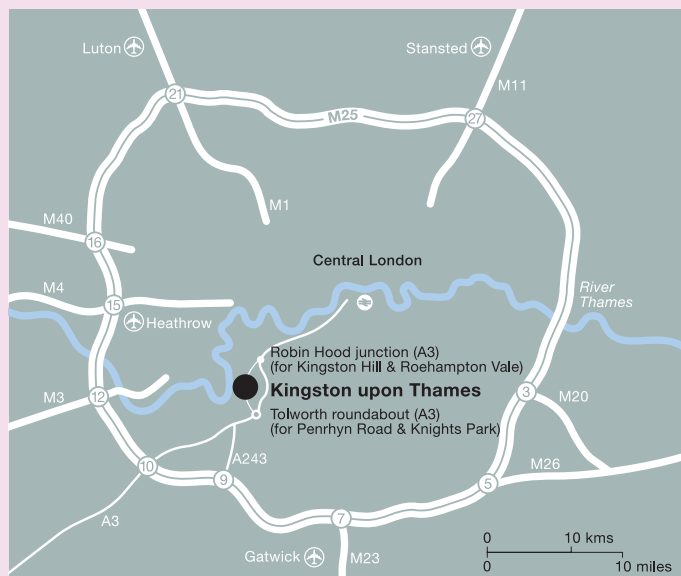
Further information

Please contact the Admissions Office with any further queries, or go to the course page on our website.

Contact details
Admissions Office (Postgraduate Courses)
Faculty of Computing, Information Systems and Mathematics
Kingston University
Penrhyn Road
Kingston upon Thames
Surrey KT1 2EE

T: +44 (0)20 8417 2234
F: +44 (0)20 8417 2887
E: cism@kingston.ac.uk

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