Our MSc in Urban Informatics and Analytics addresses the need to integrate practical skills, such as data analytics, with cutting edge theoretical and methodological understanding of urban systems.

Dr João Porto de Albuquerque, Convenor of the Urban Informatics and Analytics MSc

MSc in Urban Informatics and Analytics

As the digital revolution unfolds within urban systems, the ability to extract insights from data, and use these insights to achieve real-world solutions is of immense value to a wide variety of stakeholders – from citizens and governments to businesses and think tanks.

Urban systems are of ever increasing importance. In 1950, the urban population was approximately 746 million, now it stands at 4 billion, and is expected to exceed 6 billion by 2050 (United Nations Department of Economic and Social Affairs). In response, urban informatics and analytics have emerged as a new interdisciplinary approach to addressing the world's urban challenges. This growth in Urban Informatics has also been fuelled by opportunities that big data and open data offer when understanding the socio-economic profiles and socio-technological structures of cities.

Within the MSc in Urban Informatics and Analytics you will learn to articulate the theory and science of urban systems and smart cities using cutting edge analytical skills. This course, a collaboration between the Centre for Interdisciplinary methodologies (CIM) and the Warwick Institute for the Science of Cities (WISC), offers a uniquely interdisciplinary approach to urban studies. You will develop the skills to understand, support, and manage urban systems, and harness the opportunities that sensor, mobile and internet technologies offer within smart-cities.

This combination of skills and knowledge is in great demand across government, urban planning and business. You will be amongst a new generation of urban scientists who can critically apply methods of data capture, curation, storage, analysis and visualisation to develop solutions for the many urban challenges that society, business and government face.

"For the first time in history, more than half of the World's population lives in urban areas; in just a few decades the World's population will exceed 9 billion, 70% of whom will live in cities. Enabling those cities to deliver services effectively, efficiently and sustainably, while keeping their citizens safe, healthy, prosperous and well-informed, will be among the most important undertakings of this century."

(UN-HABITAT), 2012.

COURSE COMPOSITION

We have designed this course in collaboration with industry, government and academic stakeholders. Topics include methods and techniques in urban science, tools and statistical techniques for data analysis, geo-visualisation and spatial data analysis, urban data ecosystems, and quantitative and computational approaches for modelling complex systems.

Core modules: Methods and Practice in Urban Science; Urban Data -Theory and Methodology; Dissertation Project in Urban Science.

Optional modules are drawn from courses across several university departments and faculties and include: Foundations of Data Analytics; Social Informatics; The Concepts of the Digital; Complexity in the Social Sciences; Digital Objects, Digital Methods; Digital Sociology; Visualisation; Data Mining; Foundations of Computing; Information Theory and Coding. Students may also select modules offered across the departments at Warwick.

UNIQUE INTERNATIONAL SETTING

We have developed the MSc in Urban Informatics and Analytics as part of our collaboration with the New York *Center for Urban Science and Progress* (CUSP) – a partnership between five world-class universities: Carnegie Mellon University, IIT Mumbai, New York University, University of Toronto and the University of Warwick.

Center for Urban Science and Progress, New York

Our MSc in Urban Informatics and Analytics is a core element in a portfolio of urban science courses offered by CUSP and Warwick's EPSRC Centre for Doctoral Training (CDT) in Urban Science and Progress. Signing up for the MSc in Urban Informatics and Analytics as part of the CDT therefore gives you a gateway to a unique international experience.

As part of the CDT, you will take part in multi-institutional collaboration, will have unprecedented access to industry experts both in the UK and overseas, will have the opportunity to visit and work with other international laboratories, and will be part of a wider global cohort working on real-world problems and solutions.

"Students conduct applied research and development in this growing and vital area and graduate with all the skills, both technical and complementary, to make immediate impact and thus gain a flying start to their careers."
IBM

A number of competitive scholarships are available for this Masters programme and are awarded in May/June prior to October entry. Opportunities also exist for follow-on PhD scholarships, funded through the EPSRC Centre for Doctoral Training in Urban Science and Progress, which is based at Warwick. Apply any time throughout the year by emailing enquiries@wisc.warwick.ac.uk. We are always pleased to hear from potential applicants.

Find out more at **www.wisc.warwick.ac.uk**.

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