WARWICK INSTITUTE FOR THE SCIENCE OF CITIES

"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 undertaking of this century." [UN-HABITAT]

Addressing the challenges of an increasingly urban world will be one of the most important undertakings of this century. Our centre for doctoral training in urban science employs city, industry and academic professionals to provide sector-leading training and research supervision. The centre also provides an international student experience through its collaboration with the CUSP urban science laboratory in New York.

Professor Stephen Jarvis, Director of the Warwick Institute for the Science of Cities

EPSRC Centre for Doctoral Training in Urban Science and Progress

"The CDT will provide EPSRC-funded PhD students with an unprecedented opportunity to work with industry experts and alongside our city officials on real-world urban science problems. Seldom have so many international academic institutions, leading businesses and city agencies been focused on one activity; seldom has the opportunity arisen to develop scientific solutions that will have a direct impact on billions of the world’s population."

Deputy Mayor New York City

The EPSRC Centre for Doctoral Training (CDT) in Urban Science and Progress offers students an integrated four-year doctoral training programme, which combines PhD research with supporting taught courses in foundational subjects and in transferable skills.

The CDT provides a training environment that is part of a wider international programme (see cusp.nyu.edu), that offers training alongside international city experts, and that benefits from the support of leading industry practitioners. CDT students will have the opportunity to work alongside a larger student cohort from New York University, CUNY, Carnegie Mellon University, University of Toronto and IIT Mumbai. The CDT will allow students unprecedented access, both in the UK and overseas, to city operations, to utilize existing and newly emerging data streams in order to tackle urban challenges.
CDT PROGRAMME
We have designed this doctoral training programme with industry, government and academic stakeholders. Each student will enrol on the integrated four-year doctoral training programme, which combines PhD research with supporting taught courses in foundational subjects and in transferable skills.

The programme begins with the City Challenge Programme at CUSP in New York, which provides an introduction to research and ongoing projects at CUSP, and an overview of urban informatics and city operations. This week-long intensive placement will also introduce you to fellow students, city agencies and to CUSP partners. During year 1 students will also undertake: cohort training in methods and practice in urban science; lectures from practitioners on the science of cities; training in research methods, and applied project work with industry and city professionals. Students will enter one of three streams (Data Analytics, Information Engineering, Urban Informatics) for specialized training to support their research discipline. In most cases this training will also lead to a Masters degree. A city-based ‘data dive’ with a city or industry partner will take place in term 3.

PhD research projects will involve city stakeholders and industry partners and through CUSP, students will have access to expertise from other world cities. All students will graduate at the end of the four-year programme with a PhD in Urban Science as well as a Postgraduate Certificate in Transferable Skills in Science.

UNIQUE INTERNATIONAL SETTING
This CDT forms part of Warwick’s collaboration with the New York Center for Urban Science and Progress (CUSP).

CUSP is a partnership between five world-class universities: Carnegie Mellon University, IIT Mumbai, New York University, University of Toronto and the University of Warwick. Signing up for the CDT in Urban Science and Progress therefore gives you a gateway to a unique international experience.

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.

A number of competitive scholarships are available to UK and EU students and are awarded in May/June prior to October entry. 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.

CURRICULUM (YEAR 1)

LATE SUMMER PRE TERM
+ City Challenge
Intensive 1-week introduction to CUSP fellow students, city agencies and partners

AUTUMN TERM 1
Spacial Methods and Practice in Urban Science

Data Analytics Stream
Foundations of Data Analytics

Information Engineering Stream
Wireless systems, Information theory

Urban Informatics Stream
Urban Data - Theory and Methodology

OPTION
Winter week with CUSP partner

SPRING TERM 2
Research Methods
Seminar Series on the Science of Cities

Data Analytics Stream
Data Mining

Information Engineering Stream
Signal and Image processing

Urban Informatics Stream
Geographic Information Systems

SUMMER TERM 3
Dissertation Project in Urban Science/Urban Informatics
+ Data Dive
with a city agency or industry partner