Smart Cities and Urban Analytics MSc

This programme is unique in its focus on the core challenges facing our increasingly 'smart' cities, from their operational functions and planning through to management and control. The programme reflects the changes that technology is making to the operation of, and our understanding of, the city, and gives students the technical and theoretical skills needed to make a difference to the cities of today and tomorrow.

Degree summary

Students are equipped with key quantitative practical skills such as mathematical and statistical modelling, computer programming, spatial analysis and cartographic visualisation, underpinned by broad theoretical perspectives on the demographics, economics, form, function, network interactions, governance, policy, planning and crucially science of cities across the world.

The UCL Bartlett Centre for Advanced Spatial Analysis (CASA) is one of the leading research centres in the science of cities, generating new knowledge and insights for use in city planning, policy and design, and drawing on the latest geospatial methods and ideas in computer-based visualisation and modelling.

Smart Cities is a key area of future innovation and investment in the UK, and Smart Cities and Urban Analytics is currently the only UK-based Master's programme available.

Companies such as Intel, IBM, ARUP and CISCO all have strategies around smart city development, creating a demand for skilled personnel. CASA has well-established links with these companies and the Head of Department sits on the newly-created Smart Cities Board at the Greater London Authority to advise the Mayor on developments.

The technical aspects of the programme will be delivered through traditional workshops, lectures and practicals, but we will seek to incorporate novel assessment methods such as blog posts, and shared outputs such as visualisations/maps and web apps. Assessment is through a variety of written coursework assignments and final dissertation, presentation of researched material and practical investigations, and participation in dedicated skills modules.

Degree structure

Mode: Full-time: 1 year; Flexible: up to 5 years
Location: London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of six core modules (105 credits), one optional module (15 credits) and a dissertation/report (60 credits).

A Postgraduate Diploma, six core modules (105 credits), one optional module (15 credits), is offered.

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<th>CORE MODULES</th>
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<td>Geographic Information Systems and Science</td>
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<td>Quantitative Methods</td>
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<td>Smart Cities: Context, Policy and Government</td>
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<td>Urban Systems Theory</td>
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<td>Spatial Data Capture, Storage and Analysis</td>
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<td>Urban Simulation</td>
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<th>OPTIONAL MODULES</th>
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<td>Introduction to Programming</td>
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<th>DISSERTATION/REPORT</th>
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<td>All students undertake an independent research project which culminates in a dissertation of 10,000-12,000 words.</td>
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Your career

This programme gives students the skillset and knowledge base to embark on a professional or academic path through the highly interdisciplinary field of spatial science.

Employability

Students will graduate with an extremely broad range of new transferable practical skills including computer programming, database management, (big) data mining and web-visualisation, along with an understanding of mathematical and statistical analysis methods, geographic information science, spatial analysis and urban modelling. All of these skills are developed in parallel with a wider appreciation of the problems and challenges facing contemporary cities and how the latest data and analysis methods can help address them.
Entry requirements

Normally a minimum of a second-class UK Bachelor’s degree in an appropriate subject, or an overseas qualification of an equivalent standard. Candidates who hold a professional or other qualification obtained by written examinations and approved by UCL together with at least three years of appropriate professional experience may also be admitted.

English language proficiency level

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency.

The level of English language proficiency for this programme is: Standard.

Information about the evidence required, acceptable qualifications and test providers is provided at:
www.ucl.ac.uk/graduate/english-requirements

Your application

Students are advised to apply as early as possible due to competition for places. Those applying for scholarship funding (particularly overseas applicants) should take note of application deadlines.

When we assess your application we would like to learn:
// why you want to study Smart Cities and Urban Analytics at graduate level
// why you want to study Smart Cities and Analytics at UCL
// what particularly attracts you to this programme
// how your personal, academic and professional background meets the demands of a challenging academic environment
// where you would like to go professionally with your degree

Together with essential academic requirements, the personal statement is your opportunity to illustrate whether your reasons for applying to this programme match what the programme will deliver.

FEES AND FUNDING 2017/18 ENTRY

// UK: £13,770 (FT)
// EU: £13,770 (FT)
// Overseas: £25,130 (FT)

The tuition fees shown are for the year indicated above. Fees for subsequent years may increase or otherwise vary. Further information on fee status, fee increases and the fee schedule can be viewed on the UCL Current Students website.

Fees for flexible, modular study are charged pro-rata to the appropriate full-time Master’s fee taken in an academic session.

Full details of funding opportunities can be found on the UCL Scholarships website:
www.ucl.ac.uk/scholarships

APPLICATION DEADLINE

Full-time: 28 July 2017
Flexible/Modular applicants: 28 July 2017

Details on how to apply are available on the website at:
www.ucl.ac.uk/graduate/apply

CONTACT

Miss Lisa Cooper, Teaching & Learning Administrator

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Telephone: +44 (0)20 3108 3327

EU referendum

For up-to-date information relating to specific key questions following the UK’s decision to leave the EU, please refer to
www.ucl.ac.uk/eu-referendum