SPATIAL DATA SCIENCE AND VISUALISATION MSc / 2019/20 ENTRY

www.ucl.ac.uk/graduate/
The Spatial Data Science and Visualisation MSc teaches cutting-edge data analysis, mining, modelling and visualisation techniques for spatial systems. Students carry out their own research project, supported by academics, researchers and other students in one of the most exciting, interdisciplinary research teams in the field. The programme takes place within The Bartlett, UCL’s Faculty of the Built Environment.

**Degree summary**

Students gain a grounding in the principles and skills of spatial research, data analysis and visualisation, agent-based models and virtual environments, and develop an understanding of research methodology for data collection and analysis. Subject-specific modules provide students with the opportunity to develop skills in spatial analysis and to contribute to current debates in the field. They will learn programming skills in Java/Processing, Python, R, JavaScript and SQL, and the ability to use a range of interactive geospatial and visualisation tools (ArcGIS, Unity, Mapbox and CityEngine).

The Centre for Advanced Spatial Analysis (CASA) is a research centre specialising in computational and mathematical approaches, with cutting-edge research in GIS, urban simulation, mapping, data visualisation, and 3D environments in cities and space.

Students on this programme will be exposed to a range of programming languages (Java/Processing, R, Python and MySQL), 3D visualisation packages, and be given a substantive grounding in GIS, programming structure, mathematical methods and data design.

The combination of skills involved in this programme is unique – graduates will be able to lead institutions and companies in new directions and be involved in changing cultures across the sector.

The programme is delivered through a combination of lectures, seminars, tutorials and practical-based workshops and classes. The interlinked laboratory research-based mini project with data collection focuses on ‘remote data mining’ rather than fieldwork in the traditional planning/geographical/architectural sense. Assessment is through group and individual projects and the dissertation.

**Degree structure**

Mode: Full-time: 1 year; Flexible: up to 5 years

Location: London, Bloomsbury

Full-time students study for 37.5 hours per week during term time. Typically, lectures and seminars occur on two days per week. Flexible students normally attend half this amount.

The programme consists of four core modules (60 credits), a group mini-project (30 credits), two elective modules (30 credits), and a dissertation (60 credits).

Please note that the list of modules given here is indicative. This information is published a long time in advance of enrolment and module content and availability is subject to change.

**COMPULSORY MODULES**

- Data Science for Spatial Systems
- Geographic Information Systems and Science
- Introduction to Programming for Spatial Analysts
- Quantitative Methods
- Group Mini Project: Digital Visualisation

**ELECTIVE MODULES**

Students select two elective modules from a wide range available at UCL, subject to approval.

**DISSERTATION/REPORT**

All students submit a dissertation of 10-12,000 words.
Your career

Recent graduates of our related Spatial Data Science and Visualisation MRes have gone on to work as developers, in spatial analysis, and a number have continued to PhDs. Through our PhD partners, Knowledge Transfer Partnerships and substantial outreach, graduates will be able to take advantage of CASA’s links to the world outside academia.

Employability

The Spatial Data Science and Visualisation MSc provides a unique skill set in computation mapping, visualisation and spatial research. Research-led skills are increasingly a key element in our understanding of complex spatial functions, particularly as vast amounts of previously unused data are becoming available either from changes in accessibility regulation or more widely as a result of new mass data collection methodologies.
Entry requirements

A minimum of a second-class Bachelor's degree in a relevant discipline from a UK university, or an overseas qualification of an equivalent standard.

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

When we assess your application we would like to learn:

// why you want to study Spatial Data Science and Visualisation at graduate level
// why you want to study Spatial Data Science and Visualisation at UCL
// what particularly attracts you to the chosen programme
// how your academic and professional background meets the demands of this challenging programme
// 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.

There is an application processing fee for this programme of £75 for online applications and £100 for paper applications. Further information can be found at: www.ucl.ac.uk/prospective-students/graduate/taught/application.

FEES AND FUNDING 2019/20 ENTRY

// UK: £14,610 (FT)
// EU: £14,610 (FT)
// Overseas: £26,660 (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 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

All applicants: 26 July 2019

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

CONTACT

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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/brexit