APPLY NOW FOR SEPTEMBER ENTRY

The MRes in Advanced Spatial Analysis and Visualisation (ASAV) reflects the current state of play in geographic, urban and architectural information systems with an emphasis on visualisation, analysis and modelling. Taught at the Centre for Advanced Spatial Analysis, it is an innovative and exciting opportunity to study at UCL - with an MRes acting as a pathway to a PhD or further career in ASAV.

EDUCATIONAL AIMS OF THE PROGRAMME

The programme aims to provide training in the principles and skills of social and spatial research. Its aims include a strong understanding of qualitative and quantitative research methodology and methods of data collection and analysis to support and enable independent and group research projects. In addition to focusing on research skills, subject-specific modules provide students with the opportunity to develop excellence in spatial analysis and visualisation, and the specific skill set to engage and contribute to current debates on social and spatial systems.

ENTRY REQUIREMENTS

A UK Bachelor's degree in an appropriate subject, awarded with First or Upper Second Class Honours, or an overseas qualification of an equivalent standard from a university or educational establishment of university rank is required for entry to this course. 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 to the Degree.

The MRes ASAV teaches students technical, mathematical and programming skills through a series of core and optional modules. There are no prerequisites for these courses - we’re looking for students with the enthusiasm and talent to branch out and absorb new ideas alongside more experienced scientists and programmers.

www.casa.ucl.ac.uk
COURSE CONTENT
There are 6 mandatory modules to the MRes taught over two days for full time students. A suggested route for part-time / flexible study over two years is shown below. The days and times listed are provisional.

TERM ONE

COMMUNICATION SKILLS
Dr Martin Zaltz Austwick & Dr Cliff Elwell
Led by CASA and the UCL Energy Institute, Communication Skills covers the key elements of academic and professional communication: critical reading and citation, academic writing, public presentation, professional communication and online profile, public engagement and rapid dissemination (blogging and social media). 15 credits [Wednesday 10-12pm]

G.I. SYSTEMS AND SCIENCE
Dr James Cheshire
This module presents an overview of the core organising concepts and techniques of Geographic Information Systems, and the software and analysis systems that are integral to their effective deployment in advanced spatial analysis. 15 credits [Wednesday 1-4pm]

KNOWLEDGE POWER
Professor Sir Alan Wilson
The module introduces the students to routes beyond traditional disciplines to explore core interdisciplinary skills relating to the notions of superconcepts and methodologies on new ways to undertake research. 15 credits [Thursday 4-6pm]

TERM TWO

DIGITAL VISUALISATION
Dr Andrew Hudson-Smith & Dr Martin Zaltz Austwick
This module teaches visualisation methods as a way of understanding complex data, developing new modelling tools, and communicating research outcomes. Data-based visualisations using emerging web technologies, model-based visualisation and the use of virtual environments and 3D modelling are explored, providing students with a flexible intellectual toolkit for future research and professional development. 30 credits [Wednesday 10-1pm]

DISSERTATION
The module runs alongside the other modules on the course, to develop the students' ability to devise research proposals, collect, analyse data, communicate findings and ultimately write up a self-standing piece of work. The dissertation is research-based and student-led, ensuring a close fit with students' professional and intellectual interests, and representing a substantial achievement as it draws in every aspect of the candidates’ MRes Studies. 90 credits [Wednesday 3-4pm, self study during Summer]

SPATIAL MODELLING AND SIMULATION
Professor Sir Alan Wilson & Professor Michael Batty
The module introduces a broad spectrum of modelling techniques currently being applied at the city scale. It teaches the model-building process within planning and decision support environments, including examples from land-use transportation modelling, spatial interaction modelling, Cellular Automata and Agent-Based Modelling. 15 credits [Thursday 4-6pm]

TERM THREE

DIGITAL VISUALISATION
Dr Andrew Hudson-Smith & Dr Martin Zaltz Austwick
Continued from Term 2. 30 credits [Wednesday 10-1pm]