

# MSc Space Syntax: Architecture and Cities

## 2016-17

This programme information sheet includes details of the structure and content of the course.



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# MSc Space Syntax: Architecture and Cities

Programme Originator: Dr Sophia Psarra

## OVERVIEW

The MSc Space Syntax: Architecture & Cities (MSc SSAC) cultivates a unique mission for students who arrive from the UK, Europe and many parts of the world, and from all the disciplines of the built environment: to mediate between the desire of architects and urban designers to produce high quality designs, and the imperative of architecture to provide a better place for society. The course runs for twelve months, from September to September.

Integrating theory, practice and design and the disciplines of architecture and the city with the analytical discipline of research, the course maintains a timely relevance to the contemporary world's challenges of inter-disciplinary knowledge, sustainable urbanism, social inclusion and exclusion, informal settlements, architecture and computing, spatial cognition, the physical and immaterial dimensions of social networks, and a user-centred approach to design innovation. Two pathways (optional modules) are offered to students in the second term (from January to April): one for analytical research, and a second one for design research (studio). The two pathways-modules share a programme of seminars, lectures and related events constructing a rich environment for debate that integrates theoretical, analytical and design explorations. Read more about student work, community and the research ethos of the MSc SSAC [here](#)

## STRUCTURE

The MSc Space Syntax: Architecture & Cities (MSc SSAC) programme is primarily theoretical and analytically focused. It is taught through lectures, seminars, site visits and hands-on methodology workshops. Students are encouraged to use the curriculum to develop their theoretical knowledge and analytical skills and deploy these in pursuit of their own research interests. They are trained in using state-of-the-art computer programmes for mapping, analysing and evaluating design choices as well as methodologies for capturing patterns of use and social performance.

MSc SSAC students must complete and pass 180 credits, made up of 120 credits of approved taught modules, and 60 credits of the MSc SSAC Dissertation. In the first term all approved taught modules must be selected from the core course curriculum. In the second term students must take Spatial Cultures (15 credits), choose another 15 credit module (which may be Spatial Justice or another recommended module at the Bartlett) and one of the two 30 credit modules: E-emerging Design Research or Analytical Design Research Project. The third term and summer are spent researching and writing the final dissertation.

### Term 1 (all modules compulsory)

#### **BENVGAAD Design as a Knowledge-Based Process**

Module tutor: [Dr Sam Griffiths](#), [Dr Sean Hanna](#)

Credits: 15

Assessment: coursework - debate and report

**BENVGAAE Building, Organisations and Networks**

Module tutor: [Dr Kerstin Sailer](#)

Credits: 15

Assessment: coursework - blog diary

**BENVGAAL Space Syntax Methodology and Analytical Design**

Module tutor: [Dr Kayvan Karimi](#)

Credits: 15

Assessment: coursework - group project

**BENVGAAI Architectural Phenomena**

Module tutor: [Dr Sophia Psarra](#)

Credits: 15

Assessment: coursework - class-based exercises and poster

Term 2 (compulsory module)

**BENVGAAG Spatial Cultures**

Module tutor: [Dr Sam Griffiths](#)

Credits: 15

Assessment: unseen written examination Term 2

Term 2 (elective modules)

**BENVGAAH Spatial Justice**

Module tutor: [Professor Laura Vaughan](#)

Credits: 15

Assessment: take-home exam

**BENVGAAP E-merging Design Research**

Module tutor: [Dr Sophia Psarra](#)

Credits: 30

Assessment: coursework - studio project

**BENVGAAN Analytical Design Research Project**

Module tutor: [Dr Kayvan Karimi](#)

Credits: 30

Assessment: coursework - individual project report

Term 3 and summer

**BENVGAAK MSc Dissertation (Space Syntax: Architecture & Cities)**

Tutor: Dr Sophia Psarra

Credits: 60

Assessment: dissertation .

## CONTENT

The MSc Space Syntax: Architecture & Cities (MSc SSAC) provides a comprehensive curriculum in the research and analysis of the built environment. This includes research aimed at identifying architectural solutions as well as more traditional modes of academic research. The modules combine a range of teaching and assessment techniques with a focus on project work during the term times. The final report (dissertation) provides students with an opportunity to conduct their own original research into a specific subject of their own choosing.

**BENVGAAD Design as a Knowledge-Based Process** introduces theories of design as a knowledge-based or evidence-based process and provides a range of concepts that suggest how the nature of design may itself become the object of research. The course explores contrasting perspectives in architecture, theories of scientific knowledge, linguistics, social theory and theories of technology via student debate on issues of design practice, the nature of collaboration, machine intelligence and creativity. The module is intended to get students reflecting on what they do as practitioners by asking them to consider design as a knowledge domain with a particular knowledge base - rather than simply in terms of a tacit community of practice.

**BENVGAAE Building, Organisations and Networks** establishes a distinctive theoretical framework for the research and analysis of the relationship between architectural morphology, organisations and social networks in complex buildings such as hospitals, offices and laboratories. This framework is brought to bear on the consideration of a range of contemporary, historical and cross-cultural case studies that explore themes such as emergent organisational behaviours, innovation and sustainability. An important component of the module is a programme of London-based site visits which provides students with a range of examples to encourage them to reflect on the theoretical arguments and themes presented in the seminars.

**BENVGAAL Space Syntax Methodology and Analytical Design** provides a well-defined methodology for the description and analysis of form-function relations in architecture at all scales from the individual dwelling to the urban region. It introduces 'space syntax' research methods aimed at investigating spatial morphology and its social implications by a practical, hands-on programme of lectures and workshops, supported by a wide range of specialist learning materials. The emphasis is on space syntax as an innovative paradigm of evidence-based enquiry in which students learn how to experiment and test spatial hypotheses and think strategically about the role of spatial configuration in the design process and in relation to pressing questions such as the sustainability of the built environment. A series of lectures based on case-study examples will showcase how these methods have been deployed in architectural practice. The curriculum combines grounded qualitative methods with quantitative descriptive methods of spatial and configurational analysis and observation, to answer specific questions relating to the built environment. BENVGAAL is prerequisite for BENVGAO

**BENVGAO Analytical Design Research Project** provides instruction in the theory and principles of advanced analytical and research-based design using space syntax techniques, agent analysis and Geographical Information Systems as a basis for developing rigorous methods that can be applied to real-world built environment research questions and design problems at all architectural scales from the individual dwelling to the urban region. Lectures introduce the theoretical principles of these methodological approaches and others (for example parametric approaches), in the context of topical questions in architectural and urban research and design including complex buildings, informal settlements, neighbourhood design, drawing on a range of examples from professional practice. Methodological expertise is developed through a series of hands-on workshops supported by a wide range of specialist learning materials. The module requires students to combine

grounded qualitative methods with quantitative descriptive methods of spatial and configurational analysis and observation, to provide substantive research-based responses to issues relating to the built environment. Where appropriate analysis-based design solutions are presented as an outcome of the project work.

**BENVGAAQ Spatial Cultures** introduces a series of important concepts intended to provide students with the theoretical basis for researching the relationship between space and society - with an emphasis on the urban scale. It draws on theoretical perspectives from a range of disciplinary domains and explains the contribution each has to make. The module investigates the theoretical possibility of developing a distinctive spatial ontology of society through a range of case studies of different spatial cultures.

**BENVGAAH Spatial Justice** examines the interface between urban form and social outcomes. To explore these issues, the module offers an overview of the key factors in social exclusion and presents research into the relationship between urban design and crime, poverty, health and other issues of 'disurban' space.

**BENVGAAI Architectural Phenomena** is a theory module that explores theoretically, morphologically, and politically the evolution of ideas that have influenced architecture and its relationship with the city from the 1960s to the present. It looks at the conceptual frameworks that attempted to radically rethink what it takes to produce architectural and urban projects, and how these frameworks fit within the disciplines of architecture and urbanism. The module equips students with skills for radically re-thinking canonical texts and contemporary ideas on how buildings and cities are produced, and the role of various agents in their production (from Alexander's 'A City Is Not A Tree' and Koolhaas' 'City of Congestion' to Latour's 'Actor Network Theory', ANT, and Aureli's 'Absolute Architecture'). It is organised around a series of themes such as 'space', 'form', 'design intuition' and 'design logic', 'function', 'cognition', 'perception', 'consumption', 'power', 'narrative' and 'cultural meaning', and developed from a range of contrasting or complementary theoretical perspectives, historical and contemporary examples, live research and design projects. More than addressing what constitutes successful designs, it engages students in thinking how to redefine the discourse of architecture and urbanism.

Note: Architectural Phenomena is complementary with E-merging Design Research, BENVGAAQ, which is a studio-based module. It has no prerequisite modules and can be taken independently of BENVGAAQ.

**BENVGAAQ E-merging Design Research** Contrary to the disciplinary separation of architecture and urbanism, this programme advances a new studio-based model that integrates both fields. It prepares participants for a comprehensive design domain in which architecture, the social, and the city are framed as one thing. The module engages design as a form of research and interacts with theoretical and analytical modules in the SD:AC MSc. It takes the view that design innovation comes from the diversity of knowledge held by buildings, cities and the multiple actors involved in their production, rather than a-priori ideas of novelty and a tabula rasa approach, or nostalgia for an urbanity that mimics the old. More than training students how to produce expressive buildings, it embraces design as a catalyst of urban change, and a dynamically changing field. The module consists of a design studio, which debates its findings in individual tutorials, juries, exhibitions, publications, workshops, and feedback reviews. It is accompanied by a detailed programme of lectures, seminars, and a network of academics and professionals from the rich design industry in London, the UK and across the world. A one-week field trip to a city abroad forms a platform for exploring the key issues related to the course. During the field trip students investigate life styles and modes of production in situ that help broaden

individual perspectives through global issues, while also focusing on a specific contemporary context.

Note: E-merging Design Research is complementary with Architectural Phenomena, BENVGAAL, a theory module, which explores the evolution of theories that have influenced the relationship between architecture and the city from the 1960s to the present. Architectural Phenomena or any other module in the SD:AC MSc are not prerequisites for taking the E-merging Design Research module.

**BENVGAAK MSc Dissertation** equips students to plan and conduct a research topic of their choosing. Students following the MSc SSAC are required to submit a 10,000 word dissertation on a subject agreed with the course director and assigned tutor. Dissertations are produced between March and September and will be supervised by the most appropriate member of staff for the topic in question.

**STAFF** MSc Space Syntax: Architecture & Cities (MSc SSAC) staff are actively involved in academic and applied research, as well as the application of research to design through consultancy projects with architectural and urban design practitioners from the UK and overseas.

**Staff teaching on the programme currently include:**

**Dr Sam Griffiths** – Lecturer

Sam is a member of the Space Research Group at UCL BSGS and a Co-Investigator on two EPSRC sponsored projects into the relationship of morphology and social sustainability in the suburbs. His research addresses questions of 'historical space' from an architectural perspective.

Modules: Spatial Cultures, Design as a Knowledge Based Process

**Dr Kayvan Karimi** – Senior Lecturer

Kayvan is a member of the Space Research Group at UCL BSGS, and a Director of Space Syntax Limited, a UCL Spin-off company. Kayvan is an architectural and urban designer with more than twenty years of academic and professional experience. Kayvan has been developing advanced methods for evidence-based design and planning as a consultant and his parallel research activities involve organic cities and naturally-evolved urban systems, informal settlements and slum regeneration, as well as strategic planning and large scale developments.

Modules: Analytical Design Research Project, Space Syntax Methodology and Analytical Design

**Dr Sophia Psarra** – Course Director, MSc Space Syntax: Architecture and Cities, Reader in Architectural and Space Syntax

Dr Sophia Psarra's research explores spatial morphology through computer modelling; the interaction between the conceptual aspects of architecture and the perceptual dimensions of the user's experience; de-industrialisation and urban regeneration; and design research that combines intuition with design intelligence. Her activities in these areas have resulted in publications, (*Architecture and Narrative – The Formation of Space and Cultural Meaning*, Routledge 2009), creative installations and design projects. As a practicing architect, Sophia has won first prizes in international architectural competitions. Her work has been exhibited in Venice Biennale, the George Pompidou Center, NAI Rotterdam, London, Berlin, Milan and Athens in Europe.

She has also collaborated with leading cultural institutions on layout design, exhibition narratives and visitors' experience (The Museum of Modern Art, MoMA, New York, The Natural History Museum, London). In 2007 she led an interdisciplinary studio exploring the role of narrative, and memory in space, text, music and dance ('Arts and the Brain', in the context of the 'Arts on Earth' initiative, University of Michigan). Sophia is external examiner in the BA course at the School of Architecture, Planning and Landscape, Newcastle University, and the MA Architecture and Associated Pathways at Westminster University. She was Editor (2011-2015) and is currently serving as Associate Editor of the Journal of Space Syntax (JOSS).

Modules: Architectural Phenomena, E-merging Design Research, MSc SSAC Dissertation

[Architecture and Narrative: The Formation of Space and Cultural Meaning](#)

**[Dr Kerstin Sailer](#)** - Reader of Spatial and Social Networks

Kerstin is a trained architect and has developed as a professional a business process examining links between space and effectiveness in the workplace at Spacelab Architects. Kerstin's research interests include complex building and workplace environments, organisational theory and organisational behaviour, Social Network Analysis, and evidence-based practices.

Module: Buildings, Organisations and Networks

[Space and Organisation](#), [twitter](#)

**[Professor Laura Vaughan](#)** - Professor of Urban Form and Society

Laura Vaughan is Director of the Space Syntax Laboratory and Departmental Graduate Tutor for the PhD programme in Architectural Space and Computation. Her research interests lie in the relationship between urban form and society and she has been principal/co-investigator for UK government funded research totalling over £6 million. Her recently completed interdisciplinary '[Adaptable Suburbs](#)' research investigated London's outer suburban evolution since 1890 and she is currently working with public health experts and transport engineers to conduct research into [community severance and walkability](#). A third branch of research investigates ethnic settlement patterns and '[contested cities](#)'.

Module: Spatial Justice

[Suburban Urbanities: Suburbs and the Life of the High Street](#)

[Mapping Urban Form and Society](#), [twitter](#)

**[Kinda Al-Sayed](#)** - Teaching Fellow

Kinda teaches on the MSc Space Syntax: Architecture & Cities at UCL, and is a research associate on PROXIES. She has studied in Damascus University, University of Applied Arts Vienna, the Academy of Fine Arts Vienna, TU Wien and UCL. Her main research interests falls into developing a model of city growth and modelling cognitive and drawing activities in design process. Kinda's research record exceeds twelve publications in areas that are predominantly centered on complexity modelling of artificial and natural phenomena as well as design behaviour and communications.

Modules: Principles of Analytical Design, Design as a Knowledge Based Process

### **Additional staff who regularly teach on modules**

**[Dr Sean Hanna](#)** - Reader in Space and Adaptive Architecture

Module Leader: Design as a Knowledge Based Process

**Professor Bill Hillier**

Modules: Introduction to MSc SSAC, various MSc SSAC modules

[Professor Alan Penn](#) – Dean of the Faculty

Modules: various MSc SSAC modules

**Occasional teaching staff**

[Professor Phillip Steadman](#), Ros Diamond, Professor Lars Marcus, Dr Daniel Koch, Mr Tim Stonor, [Professor Muki Haklay](#), Anna Sabina Rose, Max Martinez, Dr Falli Palaiologou, Dr Tasos Varoudis

The MSc Space Syntax: Architecture & Cities programme is also able to draw on the expertise of a wide range of other academics and guest lecturers who give occasional talks and advice on student work.

Students also benefit from expert guidance and support from BSGS postgraduate research students, many of whom have substantial teaching and/or professional experience.

External examiners for the programme have similarly been drawn from a variety of renowned institutions, architectural practices and individuals. In recent years these have included Sue McGlynn and Sarah Chaplin. Currently the external examiner is [Professor Gordana Fontana-Giusti](#).

MSc SSAC staff are actively involved in academic and applied research, as well as the application of research to design through consultancy projects with architectural and urban design practitioners from the UK and overseas. As experienced teachers, these staff also lead seminars, give lectures, offer one-to-one tutorials and generally engage directly with the students on the MSc Space Syntax: Architecture & Cities.

**APPLYING**

Please click through to the [UCL graduate prospectus page](#) for this course, from where you can find information on application fees, eligibility, tuition fees, scholarships, and then complete the online application process.

Applicants should also review the [faculty specific admissions information](#) and the [FAQ on admissions](#).

**Entry Requirements**

A second-class Honours degree from a UK university or an equivalent overseas qualification in an architectural or urban design related subject is usually required, although consideration will be given to applicants from other fields, such as: Architectural History, Art History, Mathematics, Engineering, Human Geography, Anthropology, and Archaeology.”

A second acceptable qualification is a degree of lower than second-class Honours standard, or an equivalent overseas qualification, in a subject appropriate to the programme, plus extensive background and experience in the field. The latter implies considerable experience as a professional at a senior level.

For applicants without a first degree or full professional membership, but with relevant and substantial work experience in the field, a special qualifying

examination may be set. Details are available from the Bartlett's Graduate Faculty Office.

### **Relevant Work Experience:**

Relevant work experience would normally be as a built environment professional in architecture, urban design and planning, or in a related field such as public policy or design consultancy. We are looking for experience that demonstrates an aptitude and enthusiasm for built environment research, as well as practice, and for examining the role of architecture in society.

## **OPPORTUNITIES**

The international reputation of the MSc Space Syntax: Architecture & Cities (previously MSc Advanced Architectural Studies) at the Space Syntax Laboratory is reflected in the wide range of nationalities of its student cohort. The course offers knowledge and skills that can enable students to develop successful careers in a wide range of fields from architecture, urban design and planning, to journalism, public policy, management and consultancy. For those wishing to pursue an academic career it provides a foundation for a PhD degree and for research into the theory and analysis of architecture and urbanism.

Over the past decade members of the Space Syntax Laboratory, [Space Syntax Ltd](#) (a UCL spin-off practice), and SSAC (previously MSc AAS) students have worked on major projects with some of the world's leading architects including Terry Farrell, Norman Foster, Zaha Hadid, Rick Mather and Richard Rogers, as well as a number of internationally acclaimed academics.

The course's success is measured by a large number of SSAC (previously MSc AAS) graduates forming an international community and an open-ended laboratory that debate regularly in the biennial [space syntax symposia](#), events and international workshops.

## **STUDENT WORK AND COMMUNITY**

The ethos of our MSc Space Syntax: Architecture and Cities programme is reflected in the range of topics explored by its students and their membership of an active research community supported by the alumni of the programme (previously MSc Advanced Architectural Studies) over nearly four decades.

### **Alumni event**

The MSc Advanced Architectural Studies has been running since the mid 1970s. To celebrate its 40th birthday and formally announce the change of name to MSc Space Syntax: Architecture and Cities, the current course team held an alumni social event on Tuesday, 3rd September 2013. Many previous alumni and 'friends' (for example PhD students, colleagues, guest speakers) attended.

[A report of the alumni event and selection of photos can be viewed in the gallery.](#)

### **Student Work**

[Dissertation archive](#)

MSc SSAC (previously AAS) students address a wide range of built environment topics from domestic architecture to urban regional analysis. A selection are available for download here; a list of all dissertations can be downloaded here.

## Community

### Field Trip

A one-week field trip to a city abroad forms a platform for exploring the key issues related to the course. During the field trip students investigate life styles and modes of production in situ that help broaden individual perspectives through global issues, while also focusing on a specific contemporary context.

### Buildings, Organisations and Networks site visits

Site visits are an integral part of the Buildings, Organisations and Networks module, they are also good opportunities to get to know your fellow students. Photographs of some previous site visits are available [here](#).

### Architectural Phenomena Exhibition

Each year students on the Architectural Phenomena module exhibit their posters, a good opportunity for opening a bottle of wine! [Photos](#)

### The history and ethos of the MSc Space Syntax: Architecture & Cities

Since it began in 1974, as the MSc Advanced Architectural Studies (MSc AAS), the MSc Space Syntax: Architecture and Cities (MSc SSAC) has provided a stimulating programme focused on the research and analysis of buildings and cities as patterns of space inhabited by individuals, communities and organisations. Instead of confining architecture to the role of designing iconic buildings - and the city to economic development and policy - leaving the question of the public realm unanswered, the MSc SSAC course takes a conjoint theoretical and analytical approach to architecture, urban design and planning in the service of building a better built environment for society.

Integrating theory and practice and the disciplines of architecture and the city with the analytical discipline of research, the course maintains a timely relevance to the contemporary world's challenges of inter-disciplinary knowledge, sustainable urbanism, social inclusion and exclusion, informal settlements, architecture and computing, spatial cognition, the physical and immaterial dimensions of social networks, and a user-centred approach to design innovation. The MSc SSAC cultivates a unique mission for students who arrive from the UK, Europe and many parts of the world, and from all the disciplines of the built environment: to mediate between the desire of architects and urban designers to produce high quality designs, and imperative of architecture to provide a better place for society.

Central to the curriculum is a powerful approach called 'space syntax', a theory and a method that studies buildings, cities and opens spaces in relation to use patterns and cultural meaning. Space syntax augments design intuition, informs the design team and engages constructively in the design process by contributing theoretical and analytical knowledge about spatial, formal, social, functional and aesthetic considerations. It provides an established methodology that can be used to explore different scales of architectural space from the smallest domestic setting to whole urban regions and the relationship between them.

The MSc SSAC engages critically with space syntax alongside a wide range of social and architectural theory and methods. The emphasis is on encouraging architects, urban designers and others with a specialist interest in the built environment to reflect critically and creatively on architectural form as a social entity and on design as a knowledge-based process. More than training students on how to produce remarkable designs, or a certain kind of architecture, the course invites them to think differently, and redefine the role of the designer in a constantly changing society.