

COMPARABLE STUDY PROGRAMS for KLABS

Study made by Dr Cristian Suau, Date: January 2016

INSTRUCTIONS: Black Letters remain black, blue letters should be replaced by content in black letters. Copy tables if you need more.

STUDIES

Name studies	Sustainable Environmental Design (SED)
Institution	Architectural Association
Department	Graduate School
Credits total	
Duration	16 months (four terms)
Degree	MSc
Homepage	http://www.aaschool.ac.uk/downloads/studentDocuments/2015-16PROGRAMMEGUIDES/Handbooks2015-2016/SED/SEDPGRAMMEGUIDE2015-16.pdf
Other	http://www.aaschool.ac.uk/STUDY/GRADUATE/?name=sed

CURRICULUM

Modul	Re-ference	Field of Topic	Credits pro Field
NAME	A1	Field of topic name	
<i>Design Research Studio 1</i>		<i>London Building Case Studies, Term 1</i> London will serve as the laboratory for field studies of recent buildings and urban spaces, engaging student teams in projects that combine on-site observations and environmental measurements with the use of advanced computational tools for investigating the relationship between building, climate and occupants and the difference between design expectations and real-life environmental performance.	
Credits Field A			
NAME	A2	Field of topic name	
<i>Design Research Studio 2</i>		<i>Refurbishing the City I, Term 2</i> The insights gained from the Term 1 case studies provide starting points for design briefs that will be developed into team projects applying the conceptual and computational tools of adaptive architecturing to respond to climate change, lifestyle trends and technical developments that shape the future of the city.	
Credits Field A			
NAME	A3	Field of topic name	
<i>Design Research Studio 3</i>		<i>Refurbishing the City II, Terms 3 and 4</i> In Term 3 individual agendas for dissertation research combine into thematic groupings that initiate shared research before separating into MSc and MArch projects for the final stage in Term 4	
Credits Field A			

NAME	B1	Field of topic name	
Lecture Courses & Workshops		<i>Sustainable City, Term 1</i>	
		This course reviews theories of urban sustainability, introducing notions of environmental performance for cities and the instruments and tools applied to its assessment. The effects of urban morphology on microclimate, energy consumption and climate change will be investigated at different scales, ranging from the regional to that of the urban block, and illustrated with case studies of new and refurbished schemes in different countries and urban contexts.	
			Credits Field B
NAME	B2	Field of topic name	
Lecture Courses & Workshops		<i>Adaptive Architecturing, Term 1</i>	
		The course shows how knowledge and understanding of environmental processes can provide a new generative framework for architecture. Occupant-centred and strongly contextual in its relationship with climate and site this is an adaptive architecture that is innovative yet has affinity with the vernacular and a symbiotic relationship with the city.	
			Credits Field B
NAME	B3	<i>Environmental Simulation & Performance Assessment Tools, Terms 1 and 2</i>	
Lecture Courses & Workshops		The course introduces the data acquisition equipment and computational tools used on all SED project work. It runs in parallel to Term 1 field studies in weekly all-day sessions that combine formal presentations with hands-on workshops. Starting with field measurements, the course continues with the calibration of software and an introduction to advanced computational tools for modelling and simulation of solar, thermal, airflow and daylight processes in and around buildings. The scale of the tools encompasses a wide range - from individual building elements and room, to city and region. Expertise in the use of the tools for analytic and generative purposes is built over the first two terms of the academic year through daily practice on project work and design research.	
			Credits Field B
NAME	B4	<i>Environmental Design Primer, Terms 1 and 2</i>	
Lecture Courses & Workshops		This course introduces key topics of environmental design research and practice as these relate to architecture and building science. Topics include urban climatology and the theories and practice of environmental comfort; the physics of natural light, airflow and thermal processes; the ecology and environmental performance of materials; renewable energy technologies in the urban environment; and the science and art of measurement and performance assessment.	
			Credits Field B

NAME	B5	<i>Lessons from Practice, Terms 2 and 3</i>	
Lecture Courses & Workshops		Each year a number of practising architects, engineers and researchers are invited to present their approach and practices relating to sustainable environmental design. There will be a study trip to Europe to visit built projects relevant to the programme's interests.	
			Credits Field B
CREDITS TOTAL			180

COURSE CREDITS

Course name	Semester 1
COURSE FORMAT (Mandatory)	Credits
Project 1	25
Research paper	10
Technical studies	10
Credits	45
Content, goal and general description of the Course: Refer to links above	

Course name	Semester 2
COURSE FORMAT (Mandatory)	Credits
Project 2	25
Research paper	10
Technical studies	10
Credits	45
Content, goal and general description of the Course: Refer to links above	

Course name	Semester 3 & 4
COURSE FORMAT (Mandatory)	Credits
Dissertation project	90
Credits	90
Content, goal and general description of the Course: Refer to links above	

ASSESSMENT METHODS

METHOD
<p>Description of method</p> <p>In Term 1, course work submitted for assessment consists of a team project (25 credits for each team member), technical studies (10 credits for each member when submitted as team) and a research paper (individual submission worth 10 credits). Technical studies can be part of project work. The work of each student must be clearly identified in all team work.</p> <p>Term 1 accounts for a total of 450 study hours representing 45 credit units or 25% of the total credit for the MSc / MArch in Sustainable Environmental Design (see above for a breakdown of study hours and credit units). In Term 2 assessed course work consists of team and individual project components (25 credits), technical studies (10 credits) and a research paper (10 credits) as in Term 1.</p>

Term 2 accounts for a total of 450 study hours representing 45 credit units or 25% of the total credit for the MSc / MArch in Sustainable Environmental Design (see above for a breakdown of study hours and credit units).

In Terms 3 & 4 assessed work consists of the Dissertation Projects, which are undertaken individually or in teams of 2-4 students. Dissertation Projects account for a total of 900 study hours representing 90 credit units or 50% of the total credit for the MSc / MArch degree. (*) 1 credit = 10 hours

RESEARCH & TEACHING STRATEGIES

DESCRIPTION

The programme's courses are complementary and practice-oriented. In conjunction with the weekly workshops, seminars and tutorials they provide the knowledge, analytic tools and guidance needed for undertaking real-life project work. On the SED programme, projects are cross-course vehicles focused on different aspects of the design, making, experience and assessment of architectural spaces indoors and outdoors. Term 1 and 2 Projects are undertaken in teams of four. Dissertation research is started collaboratively by grouping topics; projects are then developed and completed individually thus allowing each student to contextualise his/her projects to climatic and other particularities of their chosen urban environment.

A. Lecture Courses

Attendance of lectures and other formal events offered by the programme is compulsory for Phase I students registered for the Advanced Master in Sustainable Environmental Design. In Term 1 the lecture input provides a common cognitive background and the skills and tools needed for project work. In addition, lectures address current issues and professional concerns, and provide overviews of research directions pursued by the programme and by the field as a whole. Term 1 lectures are given by the programme's regular teaching staff and visiting lecturers so as to ensure continuity and provide direct support to project work. In Terms 2 and 3 some of the lectures are given by invited researchers and designers. This provides diversity of opinion, variety of input, and links with research and practice outside the programme. Throughout the year lecture topics are selected so as to feed directly into each term's project agendas. The structure and overall contents of the taught programme are reviewed and updated annually. The sequence and contents of each lecture course are further revised at the beginning and end of each term. Lectures are made available in printed or electronic forms following their delivery.

B. Seminars & Workshops

The *Research Seminar* is a weekly forum on information sources and research methods. The *Modelling & Simulation Workshop* provides hands-on training in the use of a wide range of specialist tools and software; it aims to develop analytical and research skills required for field studies and project work.

C. Study Trips & Special Events

Study trips involve visits to buildings of interest, meetings with designers and researchers and taking part in international conferences and other events. In the early weeks of the year visits will be for fieldwork within London. A first study trip abroad will take place at the beginning of Term 3.

D. Studio Projects

On the MSc / MArch Sustainable Environmental Design, projects are the vehicles for integrating the inputs of all of the taught programme's lectures and workshops. Projects are based on realistic briefs and sites closely related to the kind of work the programme's graduates may be expected to undertake in practice after graduation. Project work is supported by weekly tutorials in the Studio and monitored by regular presentations and review sessions.

E. Research Papers

Research papers are mostly in the form of literature reviews on selected topics relating to the programme's lecture courses and project briefs. A research paper of 3,000 words represents 10 credit units (a nominal 100 hours of student effort including attendance of related courses). Papers are assessed as part of course work.

F. Technical Studies

Technical studies involve fieldwork and the application of analytic tools and software introduced by the course on Instrumentation & Computation Tools. Applications of selected tools are submitted as part of project work. A Technical Studies submission represents 10 credits.

4.7 Dissertation Projects

The Dissertation Project represents 90 credit units, 50% of the total credit for the MSc and MArch in Sustainable Environmental Design. Dissertation Projects are vehicles for undertaking a significant piece of research that reflects the programme's areas of specialisation and students' personal interests, background, special skills and plans for the future. For the MArch dissertation research is expected to lead to a design application that candidates are expected to develop in some detail. MSc dissertations deal with design applicability of their research topic and as such have a broader scope than the MArch. Dissertation topics are decided by the end of Term 2 and confirmed with the submission of written outlines providing evidence that the proposed topic is within the student's grasp, capabilities and work plan. Early stages of the research for dissertation projects are undertaken in teams. This greatly expands the capabilities for consulting literature and built precedents. Supervision of dissertation work is through weekly group and individual tutorials.

4.8 Tutorials

The overall direction and progress of student work within the Masters programme, and the development of projects and other course work are monitored and supported by individual and team tutorials. Projects and dissertations are tutored by the programme's regular teaching staff on a weekly basis. Staff are available for tutorials by appointment and/or at pre-arranged times.

4.9 Project Presentations & Reviews

Project presentations by individual students and project teams are regular events aimed at monitoring progress as well as developing students' oral and visual presentation skills.

4.10 Student Feedback

Student feedback to the taught programme's structure, content, delivery and teaching methods is sought throughout the year. Such feedback is important in helping to plan forthcoming events of following terms, as well as for improvement and updating of the

contents of the programme from year to year. At the end of the year a questionnaire form is distributed for written feedback by outgoing students.

(*) 1 credit = 10 hours

OTHER

OTHER

Sustainable Environmental Design engages with real-life problems affecting buildings and cities throughout the world. Providing alternatives to the global architecture and brute force engineering that are still the norm in most large cities requires new knowledge on what makes a sustainable environment and the role architecture can play. Design research is driven by strict performance criteria following a process of adaptive architecture that proceeds from inside to outside, attuning the built form and its constituents to natural rhythms and inhabitant activities. Key objectives of all projects are to improve environmental conditions and quality of life in cities, achieve independence from non-renewable energy sources and develop an environmentally sustainable architecture able to adapt and respond to changing urban environments.

The SED taught programme is structured in two consecutive phases. Phase I is organised around two team projects combining MSc and MArch students. In Phase II, MSc and MArch projects are developed separately, following individual research agendas. MSc students complete the 12-month course with a dissertation project that documents the architectural potential and design applicability of their chosen topic in its geographic and climatic context. The MArch extends over a 16-month period that culminates in a detailed design application for a specific design brief and site.

Structure

Term 1: Project 1, research paper & technical studies = 45 credits (*)

Term 2: Project 2, research paper & technical studies = 45 credits

Term 3/4: Dissertation project = 90 credits

(*) 1 credit = 10 hours

The SED research agenda Refurbishing the City continues this year with London-based projects in Terms 1 and 2 in collaboration with local architectural and engineering practices. Dissertation project briefs will encompass many other cities and climates over Terms 3 and 4. For instance, MSc and MArch projects were presented at the International PLEA Conference, Architecture in (R)evolution, in September 2015. A book on sustainable housing design is currently being produced, drawing upon the programme's London case studies with a Research Award from the Royal Institute of British Architects.

The contact person is *Simos Yannas*: simos@aschool.ac.uk

He is a great intellectual. Simos has led environmental design research and teaching at the AA since the late 1970s. He has collaborated on many international projects, and his writings have been published in a dozen languages. His most recent publications are on adaptive architecture, on learning from vernacular architecture and on refurbishing the city. In 2001 he was a recipient of the International PLEA Achievement Award.

Simos is also chair of the AA PhD Committee. Doctoral studies at the AA combine advanced research with a broader educational agenda, preparing graduates for practice in global academic and professional environments. Current PhD topics encompass

architectural theory and history, architectural urbanism, advanced architectural design, the city, emergent technologies and sustainable environmental design in architecture. Doctoral candidates may follow the traditional route of a scholarly, text-based written dissertation. Alternatively, a studio-based option of a PhD in architectural design is offered to graduates who wish to engage with design as a research tool of the doctoral thesis.

Refer to:

<http://www.aaschool.ac.uk/STUDY/GRADUATE/?name=phd>

<http://www.aaschool.ac.uk/downloads/studentDocuments/2015->

[16PROGRAMMEGUIDES/Handbooks2015-2016/PhD/AAPHDPROGRAMMEGUIDE2015-16.pdf](http://www.aaschool.ac.uk/downloads/studentDocuments/2015-16PROGRAMMEGUIDES/Handbooks2015-2016/PhD/AAPHDPROGRAMMEGUIDE2015-16.pdf)