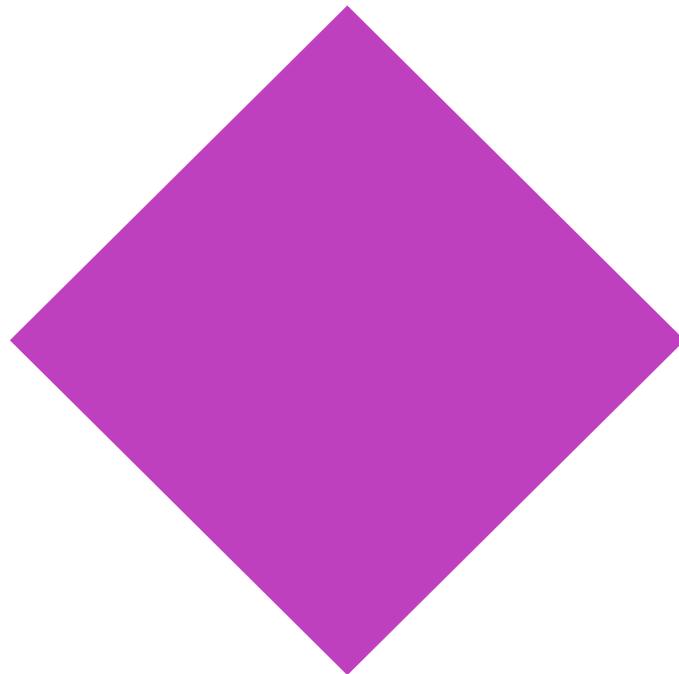**Architectural Association
School of Architecture**

AA PROGRAMME SPECIFICATION

POSTGRADUATE MASTER OF ARCHITECTURE (MArch)

2025–2026

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SECTION 1: THE SCHOOL
ARCHITECTURAL ASSOCIATION SCHOOL OF ARCHITECTURE

1.1 THIS GUIDE / WHERE WE ARE

The purpose of this Programme Guide is to provide information regarding the way in which the School and its programmes are organised. It also provides an introduction to terms and definitions, common principles of content and assessment, the way that the programmes are structured, how each Course is organised, credited, and regulated, and what you will be expected to do.

Other documents you will find essential in orienting yourself within the School include the following:

- The AA School Academic Regulations
- The AA School Quality Manual
- The Programme Handbook

Our principal buildings, where most of the academic programmes are based, are at 32-39 Bedford Square, 4 and 16 Morwell Street and 1 and 1A Montague Street in Bloomsbury, Central London. The Design and Make Programme is located in AA's Hooke Park, in Dorset.

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Contact Details

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1.2 ACADEMIC ORGANISATION AND MANAGEMENT

Overall Academic Organisation

The AA School of Architecture is an independent school governed by the Architectural Association (Inc.). It consists of c. 900 full-time students, who study in the Foundation, Intermediate, Diploma and Postgraduate programmes. The AA School is made-up of four distinct parts:

- A one-year Foundation Programme for students contemplating a career in architecture or related arts subjects. The Foundation Award in Architecture, Art and Design is separate to and does not form part of the 5-year full-time course in architecture.

- The Intermediate and Diploma Programmes offering the 5-year full-time course in architecture:
  - The AA Intermediate Programme leading to the Bachelor of Arts (Honours) and providing exemption from ARB/RIBA Part 1 after 3 years of full-time study (please note that students that complete the programme after June 2027 will receive RIBA Part 1 only);
  - The AA Diploma Programme leading to the Master of Architecture (MArch) and providing exemption from ARB/RIBA Part 2 after 2 years of full-time study.

- The postgraduate programmes comprising 11 distinct programmes of advanced full-time and part-time studies:
  - 10 taught Master level programmes (PGDip/MA/MSc/MArch/MFA/Taught MPhil)
  - A PhD degree. The AA is an Affiliated Research Centre (ARC) of the OU for the delivery and validation of the PhD degree.

- The AA Professional Practice and Practical Experience Examination leading to exemption from the ARB/RIBA Part 3 Examination, the entry requirement to professional registration as an architect. The course and examination are open to anyone who has successfully obtained their Part 1 and Part 2 qualifications (or equivalency from overseas schools of architecture) and also to qualified practitioners for the purpose of Continuing Professional Development.

Enhancing Quality of Learning: Reviews and Monitoring

All programmes in the AA School are subject to systematic internal and external review on a regular basis. This includes review by the School's Academic Committee and Board (see details below), annual monitoring and periodic review for each programme, annual feedback from External Examiners, student feedback as well as annual and periodic review from the School's professional bodies and validation partners the Open University, ARB and RIBA.

Academic Governance

The Academic Board (AB) is the sovereign academic body charged with responsibility for the academic governance of the AA School and its programmes of study. It is chaired by the Director of the AA School. The Academic Board delegates responsibilities to, and monitors the progress, effectiveness and recommendations of the AA School's Academic Committee (AC). The Academic Board demonstrates its accountability to the AA Council by submission of quarterly reports and an annual report.

SECTION 2: DEGREE SPECIFICATION

2.1 POSTGRADUATE MArch DEGREE SUMMARY INFORMATION

Awarding body	Architectural Association School of Architecture
Partner institution(s)	N/A
Location of Study/campus	36 Bedford Square, London WC1B 3ES Except for Design and Make located at: Hooke Park, Beaminster, Dorset DT8 3PH
Professional, Statutory and Regulatory Bodies	Office for Students / QAA

Award and titles	Award	Title
Final award	Postgraduate Master of Architecture (MArch)	PG MArch in Architecture and Urbanism (DRL) PG MArch in Design and Make PG MArch in Emergent Technologies and Design PG MArch in Housing and Urbanism PG MArch in Landscape Urbanism PG MArch in Sustainable Environmental Design
Credits	180	
Intermediate Award	N/A	
FHEQ Level	7	

	Duration of study (standard)	Maximum registration period
Full-time	16 months (4 terms)	28 months
Sandwich	N/A	N/A
Part Time	N/A	N/A
Distance	N/A	N/A
Start date for programme	September 2025	

Course codes/categories	
UCAS code	N/A
CATS points for course	N/A
QAA Subject Benchmark	Architecture 2020

Admissions agency	
UCAS	N/A
Direct to School	✓

Admissions criteria	
Requirements	Refer to AA School Academic Regulations
Language	Refer to AA School Academic Regulations

Contacts	
School Registrar	Belinda Flaherty
Programme Heads	Theodore Spyropoulos (Architecture and Urbanism (DRL)) Kate Davies and Emmanuel Vercruysse (Design and Make) Milad Showkatbakhsh (Emergent Technologies and Design) Jorge Fiori and Lawrence Barth (Housing and Urbanism) Jose Alfredo Ramirez and Eduardo Rico Carranza (Landscape Urbanism) Paula Cadima (Sustainable Environmental Design)

Examination and Assessment	
External Examiners 2024-2025	Winka Dubbeldam, Costas Grigoriadis (Architecture and Urbanism (DRL)) Sheryl Boyle, Kai Strehlke (Design and Make) Sean Hanna, TBC (Emergent Technologies and Design) Keith Bradley, Paul Vermeulen (Housing and Urbanism) Luis Callejas, Billy Fleming (Landscape Urbanism) Irene Gallou, Rosa Schiano-Phan (Sustainable Environmental Design)
Examination Board(s)	External Examiners, Programme Heads, School Director, Head of Teaching (Chair), Head of Learning, School Registrar (Administrator)

Approval/review dates	Approval date	Review date
Programme Specification Validation	May 2020, revalidated July 2024	July 2029

2.2 POSTGRADUATE MArch PROGRAMME STRUCTURE

PG MArch programmes are delivered in two phases. Phase 1 is delivered over two academic terms of taught courses and studio design work and Phase 2 over the third and fourth terms for the production of the design thesis project.

PG MArch Programmes consist of 180 credits at FHEQ Level 7, each credit equating to approximately 10 learning hours. The credits are split between different modules of varying credit values and submissions.

2.3 DEGREE CREDIT FRAMEWORK

GENERAL POSTGRADUATE MArch CREDIT FRAMEWORK 16 months – 180 Credits	
Core Studio / Thesis	100 credits
Core Module 1	20 credits
Core Module 2	20 credits
Core Module 3	20 credits
Core Module 4	20 credits
	180 credits
For programme specific credit frameworks please refer to the programme pages below	

2.4 TEACHING, LEARNING AND ASSESSMENT

Teaching and Learning

The first three academic terms of taught courses for PG MArch programmes consist of lectures, workshops, seminars and writing workshops, with submissions required for each module. The fourth term is devoted to the individual work needed to complete the studies.

Evaluating and Improving Quality/Quality Indicators

AA Academic Committee / Academic Board	Annual Monitoring Reports are submitted to the Academic Committee each September, reflecting on examiner reports, student and staff feedback, and student progression and achievement data. The Academic Committee then reports findings to the Academic Board. Refer to AA School Quality Manual for further detail.

Professional Accreditation and Validation	Revalidation for the PG MArch takes place every 5 years Next revalidation: July 2029 Refer to AA School Quality Manual for further detail

Assessment

All submissions are assessed and marked by two or more members of the programme's regular academic staff and confirmed by the Internal Assessment Board. Marks and feedback are provided to students within 15 working days/3 weeks of initial submission. This timeframe is not inclusive of closure weeks. In exceptional circumstances where this timeframe is not met, students will be informed of when marks and feedback will be released at the earliest opportunity. Student work is then reviewed by the PG MArch External Examiners, whose role is to ensure fair and objective marking and the maintenance of high academic standards across the School's PG MArch programmes. The PG MArch Examination Board has the responsibility for confirming the final marking of all submitted work and decisions on distinctions and resubmissions.

Marking of all course work is on a scale of 0–100% with a pass mark of 50% and grading as shown below:

80% or above	Distinction
70–79%	High Pass
50–69%	Pass (Low Pass = 50%)
49% or below	Fail

To qualify for the PG MArch, students must attain the 50% threshold mark on both the coursework average, and on the final project average mark. An overall final mark is then calculated as the weighted average of coursework and Dissertation/Design Thesis. Large differences (of more than 10 percentage points) in the marking of the assessors are moderated by the Programme Head or an appointed assessor from the Programme staff when necessary.

Grading Outcomes and Criteria

Distinction: Demonstrates an exceptional level of achievement overall, significantly exceeding the assessment criteria required to attain a Pass. The submission is complete under the requirements of the brief set. Coherence of thought is expressed throughout the work, with an exhaustive appreciation of topic and a rigorous application of critical reflection and insight. Developmental and final work is documented in a highly effective manner in a well-structured and skilfully presented submission.

High Pass: Demonstrates a high level of achievement overall, exceeding the assessment criteria required to attain a Pass. The submission is complete under the requirements of the brief set. Coherence of thought is articulated throughout the work, with a comprehensive appreciation of topic and a thorough application of critical reflection and insight. Developmental and final work is documented clearly in a coherently structured and well-presented submission.

Pass: Demonstrates a good level of achievement overall, meeting all aspects of the assessment criteria required to attain a Pass. The submission is complete under the requirements of the brief set. Coherence of thought is evidenced throughout the work, with an appreciation of topic and an appropriate level of critical reflection and insight. Developmental and final work is documented clearly in a suitably presented submission.

Low Pass: Work attaining the standard of Pass, but which has previously been assessed as Fail and/or has been submitted after the advertised date/time. Low Pass is capped at 50%.

Fail: Unsatisfactory level of achievement overall, which fails to meet all aspects of the assessment criteria required to attain a Pass. The submission is incomplete under the requirements of the brief set. The work is assessed as being incoherent, demonstrating little appreciation of topic, development or effort. The submission is insufficient in quantity and demonstrates a lack of engagement. An appropriate level of critical reflection and insight is not evidenced. Developmental and final work is not documented to an appropriate level of clarity, or presented to a suitable standard. This assessment is also the automatic result of failure to

meet minimum attendance requirements. A submission receiving a Fail assessment can only achieve a Low Pass outcome upon successful resubmission. Students who have no further opportunity to undertake repeat studies are asked to leave the School.

2.5 AWARD CLASSIFICATION

The PG MArch degree is awarded as either:
- A pass.
- A 'Distinction' when the overall final mark is 80% or higher.

Other grading from coursework is registered in the School's database and is available on transcripts but do not appear on certificates.

2.6 AA MASTERS TO PhD PATHWAY

Upon successful completion of Master's study, graduates from the MA, MSc, PG MArch, MFA and Taught MPhil programmes are given the opportunity to develop their Master's thesis into a proposal to apply for the AA PhD programme. Applications to the PhD through this pathway can be considered for commencement in the academic year immediately after the student's graduation from their Master's programme.

2.7 LEARNING SUPPORT

Every student has continuous access to a design studio with storage space, along with access to all of the AA School's facilities at Bedford Square in London and in Hooke Park, Dorset. Introductory sessions are provided by the relevant academic resources departments at the beginning of the academic year to all students.

On-site resources at Bedford Square include a large wood and metal workshop, a model making workshop for materials such as clay and plastics, a digital prototyping lab, an audio-visual lab, a digital photography studio, an IT lab with both Mac and PCs, a drawing materials and print shop, the AA bookshop, AA library and AA archives. The AA also has its own bar and restaurant at Bedford Square.

Hooke Park in Dorset is the AA's satellite campus that hosts short residential workshops for visiting groups of students from throughout the school. Hooke Park is a 150-hectare working forest inside that provides the primary source of timber for student-led construction projects and also has large workshops, an IT lab, catering facilities and accommodation for students visiting from London.

The AA Writing Centre supports students in the development of their written communication skills and helps to strengthen reading, critical research and creative writing capabilities across all programmes and year groups.

AA Wellbeing offers students confidential, one-to-one wellbeing support and workshops. The team is available to explore students concerns, anxieties and emotional difficulties to support their wellbeing and academic progression. Difficulties may include the effects of bereavement, loss, lack of confidence, mood regulation, relationship difficulties or managing mental health.

The AA's London based Public Programme is an extensive series of public events dedicated to contemporary architectural culture: exhibitions, members' events, lectures, seminars and conferences, along with regular book launches hosted by the AA bookshop. Evening lectures are available online to view at Hooke Park. A weekly published school events lists is published through the communications studio.

School-wide facilities and resources are described in more details on the AA Website.

SECTION 3:

PG MArch IN ARCHITECTURE AND URBANISM (DRL)

3.1 PROGRAMME INTRODUCTION

The Design Research Laboratory (DRL) is a 16-month, post-professional design research programme at the Architectural Association – School of Architecture, leading to a Master of Architecture and Urbanism (MArch) degree.

Our world-renowned lab has been at the forefront of design experimentation since its founding in 1997, pioneering advanced methods in design, computation, and manufacturing. Championing an unapologetic belief that design and discourse permeate all aspects of life, we see architecture as a framework to explore, invent, and respond to the challenges of today. It is a pursuit of an adaptive and enabling architecture that can evolve with us. Our programme follows an evolving framework of three-year research cycles that investigate architecture and urbanism from the city scale to the nanoscale. Led by innovators in architecture, design, and engineering, DRL embraces an interdisciplinary approach that extends beyond architecture, fostering collaborations with leading research institutions and companies.

Participation is at the heart of this project. Self-organised teams of international researchers come to our lab to collaborate on complex problems that demand progressive, shared ideas to construct our collective future. In this expanded field, architecture is understood as a spatial framework that challenges norms and habitual tendencies that limit possibilities. The aim is to offer more and examine architecture as a mode of enquiry that enables both social and material agency. Our architecture is a continuous work in progress, evolving daily. The lab remains a hub of cooperation and curiosity, dedicated to cultivating the next generation of architects who will actively shape and influence the field. It emphasizes the teaching and learning of knowledge and skills associated with the making of comprehensive and innovative architectural design projects and their relationship to urbanism, with a focus on contemporary city settings.

3.2 AIMS

The programme aims to develop the learner's interest, knowledge, and skills in the advanced architectural design, including the relationship of contemporary architectural projects to urban settings. Emphasis is placed upon learning to develop forward-thinking design concepts, skills and knowledge related to the making of architectural design proposals, in a team–based studio setting using innovative design tools. Participants in the programme come from around the world with considerable prior academic and professional training from their home countries. Upon completion graduates re–enter professional architectural practices within notable practices across the world, with many opting to teach in leading architecture schools around the world.

3.3 LEARNING OUTCOMES

INTENDED LEARNING OUTCOMES: PG MArch in Architecture and Urbanism (DRL); FHEQ LEVEL 7	
Learning Outcomes 'LO'	Aligned to the Framework for Higher Education Qualifications (FHEQ) and QAA Subject Benchmark (Architecture), on successful completion of the MArch in Architecture and Urbanism (DRL) students will be able to:
A	**Knowledge and Understanding**
A1	The relationship of contemporary architectural design and urbanism.
A2	Current developments in contemporary design theories, practices, and their discourses.
A3	Current developments in design tools and technologies.
A4	The team–based development of comprehensive design proposals.
A5	Relating theoretical interests and design concepts to specific design methods, techniques and outcomes
A6	Principles for negotiating today's advanced, networked, design systems.
A7	Research into appropriate contextual, conceptual, critical and technological precedents, methodologies, practices and tools is synthesised into the design process, allowing for creative decision-making, inventive design strategies and experimentation.
B	**Intellectual Skills**
B1	Apply the skills needed for academic study and enquiry.
B2	Direct and evaluate the development of comprehensive design proposals.
B3	Synthesise information constraining specific design projects and goals.
B4	Utilise design problem–solving skills.
B5	Relate specific design tools and media to personal design goals and interests.
B6	Identify, analyse, and evaluate significant contemporary design projects and innovation.
B7	Demonstrate criticality and independent learning skills, the ability to work in group, in continuing professional and academic development.
C	**Professional Practical Skills**
C1	Undertake skilled, competent, comprehensive architectural design projects.
C2	Document and communicate innovative design ideas and techniques.
C3	Make judgments and evaluate contemporary design projects, problems, and results.
C4	Reflect upon design results and relate design outcomes to contemporary architectural practice.
C5	Communicate and negotiate personal design interests and goals to team–based design development.

C6	Utilise and operate advanced design media, systems, and tools.
C7	Communicate effectively in structured way through a range of considered methods and visual, verbal and written skills.
D	**Transferable Skills**
D1	Communicate effectively with a wide range of individuals, including team members and outside critics.
D2	Evaluate individual academic and professional performance in the design studio.
D3	Manage the progressive refinement and development of design projects.
D4	Relate final project outcomes to initial design thesis proposals, interests, and goals.
D5	Utilise design problem–solving skills in a variety of practical situations.
D6	Take personal responsibility for personal and professional learning and development.
D7	Manage time, priorities, and workloads.
D8	Design system management skills, including digital design media and IT skills.

3.4 ASSESSMENT

Please refer to the AA School Academic Regulations for a complete description of assessment procedures as set out with consistency in the postgraduate programmes. Listed below are issues pertaining directly to the AADRL MArch Architecture and Urbanism programme.

Assessment Procedures

Students are assessed by course tutors and given a course mark for all compulsory modules, which they complete in the programme. Students are assessed individually based upon the quality of their final course submissions, required of all compulsory modules. The weight of each course mark is summarised in the previous table.

Assessment criteria apply to the programme's different modules. All learning outcomes must be met in order to achieve a pass overall. Students are required to demonstrate knowledge, understanding, ability and skills in the following areas:
- Context and analysis
- Process and synthesis
- Resolution and communication

Overall, students are assessed on the following:
- Course Participation
- Design Tutorial Assessments
- Design Presentation Assessments
- Course Submission Assessments

Course Participation

The assessment procedure in the programme's Core Studios and Core Modules (Workshops) are course submissions made at the end of each module, which are read and marked by course tutors. Assessment procedures for the Seminar modules are also based on course submissions completed at the end of the course, which is reflected in the greater weight given the final course submission in the student's overall mark for the course.

Participation in Core Studio and Core Modules (Workshops) is constantly monitored in two principal forms: during design tutorials, and interim/final project presentations. The final course submissions required at the end of each course, are assessed, and form the basis for marks given to students for each required and designated study module. If students are not participating adequately within the course, they receive a written warning by programme directors if at any time their participation is deemed lacking by course tutors. This leads to meetings with the student and course tutors to review participation and learning progress. Failure to improve participation to suitable levels results in the student being asked to repeat study modules or, in extremely rare cases, repeat Phase I studies in the programme. In exceptionally rare cases students unable to satisfactorily pass compulsory study modules and showing insufficient progress are asked to leave the programme. Appeal procedures regarding these decisions are summarised in the AA School Academic Regulations.

Design Tutorial Assessments

Tutor–led design tutorials with individual students and design teams are an essential assessment procedure in the programme. They are regularly held throughout the entire duration of all projects completed in Core Studios and Core Modules (Workshops) and are the means by which tutors assess a student's learning, knowledge, and skills as reflected in design results. Design tutorials consist of studio–based meetings between course tutors, individual students and/or design teams. Recent design results and activities are verbally presented to course tutors, in the form of printed documents, animations, videos, programming exercises, physical and digital models. These results are assessed verbally during an exchange between students and course tutor, who evaluates progress, the relationship between results and expectations, the design team's own goals, and the written design objectives contained in the module syllabus and project brief. Importantly, the role of individual members within design teams is presented, discussed, and assessed.

During these sessions, tutors make notes regarding the project's progress, diagrams suggesting alternative routes, goals, or processes to explore, and typically conclude with suggestions for future development of the project. These results are then subsequently compared to results presented in later tutorials, giving tutors an intimate understanding of each student's learning progress and outcomes. During design tutorials assessments are made in comparison to each student's internal progress and development, relative to his or her own past performance and participation. This allows an absolute measure of progress made by individual students and teams. Criteria for this assessment are described below.

Design Presentation Assessments

At select intervals during the development of a project and at the end of all Core Studios and Core Modules (Workshops), design teams additionally present a coherent summary of their design projects, affording another key assessment procedure for course tutors to assess individual students' knowledge, skill and learning. At these presentations to course staff and invited outside critics, each member of design teams participates in a verbal presentation of documents and other design results relating to a design project. In Core Studios and Core Modules (Workshops), the assessment of individual student and team performance is made by the course tutors in direct comparison to the performance of other individuals and teams working on the same project brief and within the same study module, allowing assessment to be made in relative, comparative, ways. Presentations in Core Studios are less formal and typically relate to the essential or recommended readings of a given class session; these presentations are assessed relative to the final course submissions made at the end of the course.
The criteria for design assessments are described below.

Course Submission Assessments

Course submissions form the third key assessment procedure in the programme. Course Submissions consist of written or other forms of documents submitted at the end of a course or study module. The content of these required submissions, which form the criteria for assessing the submission, vary according to the two principal kinds of study modules in the programme: studio– based Core Studio and Core Modules (Workshops) courses, which result in the submission of booklets, books or multi–media documenting the design project; and Seminars, which result in the submission of written essays or equivalent documents relating to the course topic. Submission requirements for each course type are summarised below.

3.5 CREDIT FRAMEWORK

Term	Course Title	Credits
1	Core Module I – Design Workshop I	10
1	Core Module II – Design Workshop II	10
1	Research Methods Seminar – Design as Research	10
2	Core Seminar A – Behaviour: Examining the Proto-Systemic	10
2	Core Seminar B – Constructed Histories: Techno-centric History of Design and Relation to the Mathematics, Tools and Materials of the Age	10
2	Core Studio I	30
3	Core Studio II	30
4	Core Module III – Prototyping Workshop III	10
4	Thesis	60
1 + 2	Seminar: Synthesis – Project Submission, Writing and Research Documentation	0 (Supporting programme content)
1 + 2	Software Seminars	0 (Supporting programme content)
3	Thesis Preparation Document	0 (Supporting programme content)

3.6 TEACHING AND LEARNING METHODS

There are three main kinds of study modules in the programme, which serve as the basis for attaining expected learning outcomes. These are Core Studios, Core Modules (Design Workshops), and Seminars. Core studios include Phase I Core Studios taken in terms 2 and 3, and the Thesis Design Studio taken in term 4. The module structure and content is generally the same, and focuses on the preparation of architectural design projects undertaken in small, self–organised, design teams. Core Modules/Design Workshops consist of shorter– term design projects undertaken in the first and final term of the programme. The seminars offered by the programme consist of core theoretical and case study surveys that create the foundational knowledge to support the design research studios.

SECTION 4:

PG MArch IN
DESIGN AND MAKE

4.1 PROGRAMME INTRODUCTION

Design + Make (MArch/MSc) is based at the AA's satellite campus at Hooke Park, a rich context which serves as an immersive laboratory for architectural research. Students study within a working forest, inhabiting a unique environment in which landscape, studio and workshop are interwoven. Since its establishment in 2010 the programme has become a leading example of experimentation through education, celebrated for its creative innovation in timber fabrication, its integration of thinking across natural resource extraction and architecture, and its pedagogical model of design through physical production.

In the face of urgent, global environmental concerns, Design and Make offers a methodology for architectural production that is deeply rooted in a consideration for material resources, earth systems and their limits. Pursuing a direct physical engagement with the making of architecture.

The Hooke Park Campus is surrounded by a 330-acre working woodland, owned and managed by the AA, set within a rich regional landscape context that encompasses the Jurassic Coast. Students investigate the innovative use of locally sourced materials – with a particular expertise in timber - to build live projects and drive new forms of research. It is a problem-solving approach that integrates forestry, ecology, craft and material knowledge with progressive design, computational and fabrication technologies.

Design through making is the focus here in our woodland studio. The research we conduct demonstrates a vision for architectural education in which making (and remaking) is central to the act of design itself. The workshop facilities on site provide a unique testing ground where we devote time to speculative research through the fabrication of highly crafted, experimental prototypes.

We materialise built work through curiosity, craft and creativity. Speculative design attitudes drive the development of built projects. Our twin catalysts for the imagination are our direct physical engagement with the site and the alchemy of the act of making – we thrive on the unexpected revelations each of these bring.

We use a hands-on approach, and students are expected to spend the majority of their time in the workshop, developing an in-depth material understanding. Technology – such as 3D scanning, advanced modelling and CNC production – is deployed to augment traditional craft and material knowledge with the aim of striking an agile balance between the computational and the physical. This is a delicate blend which creates fertile conditions for innovative projects to thrive.

This forest laboratory is a space of intense investigation, a wild-wood of creativity and a home for architectural adventurers.

The Design and Make Programme is a bifurcated programme comprising MSc (12 months) and MArch (16 Months). MSc and MArch Students work closely together. MSc students have a more explicit technical focus, specifically on innovative applications for timber in architecture which becomes the focus for their dissertation. The MArch students use making as a vehicle for broader architectural design research, and each student reflects critically on aspects of the work in their thesis.

4.2 AIMS

MArch Design and Make develops students' understanding of, and skill in, contemporary making-led architectural design. Students are expected to develop research and design with the act of making at the centre of their process. Students work at full scale on group fabrication project sand then develop their design research through detailed prototypes, test fragments and speculative models,, making the most of the opportunities presented by the Hooke Park setting. In this way, Design + Make offers a holistic embodied

approach to architecture in which the designer interacts directly with the site itself and forms architecture solutions in response to its specific ecologies and conditions.

In the first term students are introduced to Hooke Park's unique context and equipped with the necessary abilities to engage confidently with the diverse set of physical and digital fabrication tools and methodologies on offer.

The Design Through Making Studios run through term 1 & 2, supported by taught skills sessions in Fabrication Methods and Digital Skills. The work is structured around group build projects, within tightly defined design parameters, where students begin hands-on and develop the fabrication skills and tools to support their design/make projects whilst having the opportunity to work as a team.

Students are also introduced to strategies for the documenting and presentation of process-based research. This informs the development of the Fabrication Log; a working record of individual design process which becomes a companion to made work throughout the year, and includes working notes and sketches, photography, and film.

Two Seminar courses in Term 1 – Making as Design and Timber Technologies – and one in Term 2 – Force, Form, Material complement the Studio by situating the Design + Make programme and the students' research within a broader cultural and technical context. Together they provide the theoretical foundation of the programme and introduce the various fields of knowledge relevant to the design of experimental timber prototypes. MArch students undertake the Making as Design essay in Term 1, which functions as an early exploration of Thesis content and intellectual position.

In this way the first two terms introduce the theoretical and technical context, key design methodologies and fabrication practices central to the programme. Students learn the fundamentals of timber technology, a core fabrication skill set and undertake an intensive exploration of design through making.

Terms 3 & 4 build on this with the development of a focused design research project and related Thesis, resulting in well-documented built prototypes and models, with term 4 seeing the development of the individual portfolio submission and written Thesis.

These components are supplemented by extra-curricular provision, including workshops, talks, visits and practical introductions as wells as by Public Programme lectures streamed live to Hooke from London.

4.3 LEARNING OUTCOMES

INTENDED LEARNING OUTCOMES: PG MArch in Design and Make; FHEQ LEVEL 7	
Learning Outcomes 'LO'	Aligned to the Framework for Higher Education Qualifications (FHEQ) and QAA Subject Benchmark (Architecture), on successful completion of the MArch in Design and Make students will be able to:
A	**Knowledge and Understanding**
A1	Demonstrate knowledge of the application of innovative fabrication technologies and methodologies in the production of architectural constructs.
A2	Demonstrate critical awareness of advanced digital design techniques, the realms of their application, and their relative merits when integrating design and production.
A3	Demonstrate knowledge of timber properties and production with respect to its use as a construction material.
A4	Understand innovative application of timber in architecture, including through advanced design and fabrication techniques.
A5	Demonstrate systematic knowledge of the historical and theoretical bases of design-make approaches and the relationship between ideas and technique in architecture.
A6	Understand the current thinking within contemporary critical discourse surrounding landscape in relation to natural resource extraction and the sustainable application of biogenic materials in architecture.
A7	Demonstrate knowledge of the application of structural design tools and methodologies in the production of architectural constructs.
A8	Demonstrate knowledge of testing and data recording methodologies to determine structural properties of materials or assemblies.
B	**Subject Specific Skills and Attributes**
B1	Conceive, produce, represent and articulate a comprehensive design research proposition.
B2	Research contemporary and traditional construction technologies and be able to identify and characterise relevant architectural typologies and built precedents.
B3	Synthesise technologies to develop and communicate advanced approaches to design and construction.
B4	Produce detailed design information for fabrication and construction.
B5	Demonstrate practical skill competency in the processes of fabrication and the ability to make informed pragmatic judgments concerning methods of construction.
B6	Conduct research that positions the physical production of architectural components as the focal point of its evidence.
C	**Transferable Skills and Attributes**
C1	Carry out critical and technical analyses of design and construction proposals.
C2	Communicate effectively with a wide range of individuals visually, orally and in writing, including within interdisciplinary professional teams.
C3	Formulate clear and appropriate hypotheses and arguments and apply these within a research agenda.
C4	Continue expanding knowledge using the skills acquired.

4.4 ASSESSMENT

Assessment Mechanisms

Students are assessed on the submitted documents and an assessment of the final built construct or prototype. Submissions are made on the stated submission date consisting of:

- A PDF submission (max size 10MB) uploaded to the AA submissions Portal
- A Physical document for the final Portfolio and Thesis submission, submitted to the Design + Make Programme Heads in the Hooke Park office.

Late submissions are penalised in line with AA School policy, work submitted up to seven days after the deadline will be marked and 10 marks (on a scale of 100) will be deducted for that element, for each calendar day of lateness incurred. Any piece of work submitted 7 or more days after the deadline will not be assessed and assigned a mark of 0, unless the student submits personal circumstances and these are accepted. Mitigating circumstances for late submissions are considered as detailed in the AA Academic Regulations.

All submissions are assessed and marked by two or more members of the programme's regular academic staff and confirmed by the Internal Assessment Committee. Student work is then reviewed by the MArch external examiners, whose role is to ensure fair and objective marking and the maintenance of high academic standards across the School's MArch programmes. The MArch Examination Board has the responsibility for confirming the final marking of all submitted work.

Assessment Criteria

All learning outcomes must be met in order to achieve a pass overall. The assessment of submitted work is based on the following overall assessment, in addition to specific ones given for each module. Students are required to demonstrate knowledge, understanding, ability and skills in the following areas:

Context and analysis
The work demonstrates a systematic understanding and critical awareness of relevant contextual factors such as site conditions, social, political, historical, economic, environmental and ethical issues. Analysis is undertaken in relation to the needs of the intended user groups and the complexities of the location. Appropriate conceptual, critical and/or technological precedents, methodologies, practices and/or tools inform the parameters of the brief, satisfying specific contextual and analytical requirements.

Process and synthesis
Research into appropriate contextual, conceptual, critical and/or technological precedents, methodologies, practices and/or tools is synthesised into the design process, allowing for creative decision-making, inventive design strategies, experimentation and originality, explored from both user and designer perspectives. Feedback is integrated into a self-directed design process that demonstrates criticality and independent learning skills, and the ability to work in a group where necessary, required for continuing professional and academic development.

Resolution and communication
Design proposals are resolved to a satisfactory standard based on the functional and aesthetic criteria and/or project themes set by the brief, with appropriate methodologies deployed in the production of appropriately ambitious propositional design work. Project work is organised, structured and communicated effectively through a range of considered representational methods and visual, verbal and written skills.

4.5 CREDIT FRAMEWORK

Term	Course Title	Credits
1	Core Module 1 – Design through Making: Induction Studio	30
1	Core Module 2 – Making As Design Seminar	10
1	Timber Technologies Seminar	0 (Supporting programme content)
1 + 2	Fabrication Methods	0 (Supporting programme content)
1 + 2	Design Information Digital Skills	0 (Supporting programme content)
2	Core Module 3 – Design through Making: Research Studio	40
2	Force, Material, Form Seminar	0 (Supporting programme content)
3 + 4	**Core Studio/Thesis – Design Make Studio**	**100 (as below)**
3 + 4	Portfolio & Built Prototype	80
3 + 4	Written Thesis	20

4.6 TEACHING AND LEARNING METHODS

Seminar Courses
The Seminar Courses consist of bi-weekly taught sessions supported by external lectures. Active participation by students in all seminars and lectures is a requirement of the programme. Students are given a reading list at the beginning of each course and are required to read set preparatory or follow-up material, and to make group or individual presentations at seminars.

For the Making as Design Seminar essay the seminar tutor will give tutorials to aid students in choosing their essay topics and focusing and developing their writing. An abstract of the proposed essay will be required from each student before the end of the seminar series, to ensure that an essay argument has been identified. The content, learning outcomes and assessment requirements of the seminar course is defined below. Assessment of the Making as Design Seminar course is of a written, illustrated essay submitted at the end of Term 1.

Studios
The Studios run throughout the length of the course and consist of the Design through Making - Induction and Research Studios, and The Core Studio. Whilst each Studio has different mechanisms and objectives, the general teaching strategies are common. Each Studio is set out by a brief and support is provided by the course directors, studio tutors, consultants and other invited lecturers, critics and jurors. These regular staff and invited lecturers give formal design/make tuition through lectures, workshops, tutorial contact and group sessions. Typically, this formal teaching occurs during weekly sessions at Hooke Park.

Student studio work takes place in the Design + Make studio and workshop spaces at Hooke Park, with physical workshop making, full-scale prototyping and site-based construction to be carried out as per the Project brief. Each project introduces a range of concepts and techniques, and students document their own work and make regular presentations. Design reviews and juries, at which students present work-in-progress for critique, are held at defined points through each Project. Generally, each project will end with a Final Jury presentation. The specific submission requirements are given in the Course Syllabi.

Group Working Methodologies
Collaborative design and group build activities form a central aspect of the programme. Students are required to respond to specific briefs as a collective design team (or teams). Prototypes and experimental architectural constructs are fabricated by student teams with guidance from tutors and technical staff.

However, whilst design and fabrication is approached collaboratively, all submissions are individual, and should demonstrate each individual student's role within the team and their specific area of research focus within the group project. All work in the submissions is clearly credited and attributed to individuals or groups as appropriate.

Research: MArch Thesis
The individual MArch Thesis is supported by individual tutorials biweekly in Term 3 and 4 to assist students in the development and production of the Thesis. Thesis is closely aligned with studio project work and provides a theoretical and research framework that supports the design development.

MArch students produce their 4000-word Thesis during Term 4. The thesis is a platform for proposing an argument, testing, resolving and critically reflecting upon strategies deployed in the made work but also for developing, testing and refining aspects of each student's practice beyond Hooke Park.

Non-Assessed Activities
In additional to the required seminars and studios, various talks, lectures and visits are organised periodically to complement the programme.

SECTION 5:

PG MArch IN EMERGENT TECHNOLOGIES AND DESIGN

5.1 PROGRAMME INTRODUCTION

Emergent Technologies and Design Post-Graduate Programme (inaugurated in 2001) offers two degrees of Master of Science (12 months) and Master of Architecture (16 months) and is open to graduates in architecture and engineering who wish to develop skills and pursue knowledge in architectural design science that is located in new production paradigms. The programme continues to investigate new synergies of architecture and ecology through the critical intersection of computational design and advanced fabrication. Its focus is on exploring the experiential, social, and cultural potentials of new material and spatial configurations for architectural, urban, and ecological design solutions situated in the dynamic contexts of emerging biomes. The programme is designed to stimulate critical thinking through experience of research-driven design projects that are developed in an intellectually rigorous and creative studio environment. EmTech projects are pursued by multiple iterations through hypothesis, material and computational experimentation, advanced fabrication including robotics, and evaluation, reflected upon in verbal presentations and group discussions and documented in analytical and scientifically structured papers.

Emergent Technologies and Design (EmTech) program showcases an interdisciplinary approach, weaving together diverse disciplines to redefine the role of architectural education and the architect, in particular. The curriculum integrates advanced principles from engineering, computer science, biomimetics, and material sciences with critical insights from sustainability, urbanism, ecology, and complexity theory.

Key to EmTech's approach is its workshops and seminars that emphasize computational design and physical fabrication, allowing students to engage directly with both digital and hands-on production techniques. This integration enables the exploration of sustainable design solutions inspired by biological systems through biomimetics, enhancing the ecological responsiveness of architectural projects. Moreover, the program challenges traditional boundaries by incorporating complex system theories and advanced digital fabrication, including robotics, into the core of its academic exploration. This fosters a learning environment where theoretical knowledge meets practical implementation, equipping students with the necessary skills to innovate within the rapidly evolving field of architecture.

EmTech's dissertations reflect this interdisciplinary ethos, with projects that not only address theoretical and material innovation but also tackle pressing global issues such as urban sustainability and ecological resilience. Through this comprehensive educational approach, EmTech prepares its graduates to lead and innovate in addressing the multifaceted challenges of contemporary architecture and urban design.

EmTech offers both MSc and MArch degrees. The MSc focuses more on developing skills and pursuing knowledge in architectural design science within new production paradigms, emphasizing computational design and fabrication methodologies to address real-world design problems and contexts. The MArch, while sharing a common emphasis on innovation and technology integration, allows for a deeper engagement in architectural design processes, considering the practical application and execution of design projects across a range of scales, including material experimentation, architectural configurations, as well as urban and ecological solutions. Both degrees involve rigorous experimentation and research but engage with different scales of implementation in their application strategies.

Our PG MArch programme has two distinct phases – the Studio and the Dissertation. Both Studio and the Dissertation are aligned with and supported by the research of the programme team and the advanced expertise our alumni and research colleagues in practice and industry.

5.2 AIMS

The programme is designed to build skills, knowledge and to stimulate critical thinking through the experience of research driven design projects that are developed in an intellectually rigorous and creative studio environment. Our projects are pursued by multiple iterations through hypothesis, material and computational experimentation, robotic fabrication, and evaluation; reflected upon in verbal presentations and group discussions and documented in analytical and scientifically structured papers.

Design Research is central to the agendas of Emergent Technologies and Design, and the programme proceeds from the fundamental premise of a shared understanding between staff, students, researchers, and collaborators across the world that nature and artifice are strongly coupled, that the cultural production of artefacts and systems exist as part of the environment of other active systems, and that they are subject to change. They also share an understanding that causality of change is complex and multi-scalar, that the dynamics of change are perturbed and accelerated by human activities, and they share a concern for the consequences of those changes to society and the natural world. Design processes in this domain are developed through iterative computational processes of serial experimentation and analysis, generative propositions, and simulations. The programme is structured to provide skills and knowledge of a coherent set of linked and convergent discourses, methodologies, and concerns that cross multiple disciplines in the Studio, and the opportunity to further develop those skills and deepen knowledge in the Dissertation.

While climate change continues to intensify, as designers, architects, and engineers we have a crucial role in designing structures and settlements that can withstand extreme weather conditions and adapt to variable biomes. We will need to incorporate resilience into our designs and consider their environmental impact, ensuring that our design solutions can endure extreme climatic events such as hurricanes, floods, and extreme heat or cold. Furthermore, we need to consider the local ecosystems we are proposing solutions for and aim to create designs that integrate with and support the surrounding environment, rather than disrupt it. As extreme ecological events and climate change become the new norm, we will need to create designs to help mitigate their effects, while also preparing for their impacts. In EmTech, we aspire to equip ourselves for what lies ahead.

The Studio (Core Modules 1/2A/2B/3A/3B/4 and Elective) comprises workshops, seminars, electives, and design projects that are led by EmTech staff and our associated researchers and offers a creative and intellectually rigorous sequence of study that builds knowledge and skill. It provides an intensive engagement in Design Science and introduces our students to the wider community of design researchers in global practices. It concludes with guiding students through the formation of a detailed proposal for an original architectural inquiry that is to be pursued in the Dissertation.

The Dissertation Research Studio (Core Studio / Thesis) extends the acquisition of research competencies through extensive collaborative dialogue with EmTech's research community of active Post Doc researchers and PhD candidates. The principal domains of our design research are positioned at the confluence of two major research trajectories:
- Dynamic Material Systems with Advanced Fabrication – focused on advanced fabrications and assembly technologies applied at the scale of medium/large buildings and/or landscapes.
- Ecological Urban Design in Emergent Biomes - focused on algorithmic design for metabolic models of new cities and settlements and their integrated technologies at the scale of an ecologically defined landscape such as a shoreline, river valley, delta or hillside.

Students integrate explorations of the theoretical discourses, relevant sciences and case studies of 'state of the art' projects in the domain of their chosen topic and set out the methods and protocols for the development of their Design Proposal. The development and conclusion of the final proposal is pursued through the iterative design cycles in which students have acquired knowledge and skills during the early phases of the programme.

Design and Build is our 'extracurricular' collaborative student project and is an essential part of the pedagogy and culture of EmTech. It runs right through the year, alongside both Studio and the Dissertation, and provides opportunities to design and deliver a built project with real material, structural, fabrication and assembly constraints. The experience gained enhances the design, computational and analytical skills students have acquired in Studio, and it develops crucial transferrable skills that are applicable to professional practice. Our Design and Build projects have been published internationally in the architectural press since 2001 and have received industry awards.

5.3 LEARNING OUTCOMES

INTENDED LEARNING OUTCOMES: PG MArch in Emergent Technologies and Design; FHEQ LEVEL 7	
Learning Outcomes 'LO'	Aligned to the Framework for Higher Education Qualifications (FHEQ) and QAA Subject Benchmark (Architecture), on successful completion of the PG MArch in Emergent Technologies and Design students will be able to:
A	**Knowledge and Understanding**
A1	Assimilation of the programme material and familiarity with concepts, techniques, and strategies in the field of Emergence.
A2	Assimilation and familiarity with material processes and advanced manufacturing techniques.
A3	Assimilation and familiarity with advanced digital and mathematical design techniques.
A4	Assimilation and familiarity with advanced digital structural and environmental analysis.
B	**Subject Specific Skills and Attributes**
B1	Demonstration of clear and appropriate formulation of hypotheses and arguments, and the ability to deploy these for the planning and pursuit of a research agenda.
B2	The ability to conduct comparative analysis and produce meaningful generalization.
B3	Demonstration of clear structure, precise writing and presentation of work; referencing of sources, information using agreed conventions.
B4	The development of critical faculties and advanced design skills.
B5	Demonstration of judgment and appropriate application of research material and technical knowledge to design and material experiments.
B6	Demonstration of capacity to apply acquired knowledge and techniques in a creative and innovative way to a comprehensive architectural design and to its material construction.
B7	Demonstration of capacity to apply the acquired knowledge and techniques in a creative and innovative way to a general architectural construction type and material system, or to a developed and tested generative strategy of architectural design.
C	**Transferable Skills and Attributes**
C1	A thorough knowledge of the specific concepts, techniques and practices in the field of Emergent Technologies and their effect on the production of built architectures and artefacts.
C2	Capacity for critical and technical analysis.
C3	The ability to construct Case Studies by applying critical and technical analysis to historical modes of construction.

C4	The ability to connect analysis to design philosophies and material strategies and relate them to industrial processes and production.
C5	Skills in developing and pursuing architectural and technical research in the field of Emergent Technologies, and in presenting research findings individually and as part of a group.
C6	The ability to contribute to interdisciplinary professional teams.

5.4 ASSESSMENT CRITERIA

All learning outcomes must be met in order to achieve a pass overall. The assessment of submitted work is based on the following overall assessment, in addition to specific ones given for each module. Students are required to demonstrate knowledge, understanding, ability and skills in the following areas:

Design

Context and analysis
The work demonstrates a systematic understanding and critical awareness of relevant contextual factors such as site conditions, social, political, historical, economic, environmental, and ethical issues. Analysis is undertaken in relation to the needs of the intended user groups and the complexities of the location. Appropriate conceptual, critical and/or technological precedents, methodologies, practices and/or tools inform the parameters of the brief, satisfying specific contextual and analytical requirements.

Process and synthesis
Research into appropriate contextual, conceptual, critical and/or technological precedents, methodologies, practices and/or tools is synthesised into the design process, allowing for creative decision-making, inventive design strategies, experimentation, and originality, explored from both user and designer perspectives. Feedback is integrated into a self-directed design process that demonstrates criticality and independent learning skills, and the ability to work in a group where necessary, required for continuing professional and academic development.

Resolution and communication
Design proposals are resolved to a satisfactory standard based on the functional and contextual criteria and/or project themes set by the brief, with appropriate methodologies deployed in the production of appropriately ambitious propositional design work. Project work is organised, structured, and communicated effectively through a range of considered representational methods and visual, verbal, and written skills.

Technology

Context and analysis
The work demonstrates a systematic understanding and critical awareness of relevant contextual factors such as site conditions, social, political, historical, economic, environmental, and ethical issues that influence the technical strategy developed in the project and its overall impact on the climate where necessary. A range of critical precedents, methodologies, practices and/or tools at the forefront of the discipline are investigated to inform the environmental and technical parameters of the brief.

Approach and synthesis
An integrated technical, environmental, and contextual method is demonstrated through the application of research into precedents, contemporary technologies, materials, and processes. Environmental and technical knowledge acquired and/or findings are synthesised into a self-directed and critical decision-making process, demonstrating originality in tackling problems, an informed approach toward a regenerative approach to design, independent learning, and the ability to work in a group if necessary, and the skills required for continuing professional and academic development.

Resolution and communication
The work demonstrates the ability to analyse and refine technical concepts, communicating sound judgements and a critical understanding of the implications of technical design decisions at a range of scales over the lifecycle of the project. Through resolution, the project addresses the contextual, programmatic and

functional requirements of the brief. The work is structured and organised effectively and communicated through advanced visual, verbal, and written communication techniques. The PG MArch dissertation is required to demonstrate the capacity to apply the acquired knowledge and techniques in a creative and innovative way to a material prototype, to the system in which it is embedded, to its fabrications and assembly, and that is developed and evaluated within the context of a climatic or ecological set of parameters.

History & Theory

Research and knowledge acquirement
Research into the chosen area of study is independently undertaken, demonstrating a comprehensive understanding and critical awareness of the relevant social, political, historical, theoretical, economic, environmental and/or ethical contexts, concepts, ideas and/or precedents at the forefront of the discipline, being addressed through systematic enquiry.

Approach and development
The work submitted demonstrates an inventive and original approach to the consolidation and development of research, with a consistent process of synthesising acquired knowledge is evidenced in the work. The structures, methods and/or tools utilised in the production of the work demonstrate initiative, self-directed learning, the ability to work in a group where necessary, and the skills to make complex decisions.

Argument and communication
The work demonstrates the ability to devise and sustain complex arguments, contextualised effectively in a wider field of relevant ideas with a critical position determined. Conclusions and/or reflections are well executed, with good judgement shown in the absence of complete data. Written and visual communication skills are evidenced to a high standard throughout, and the work demonstrates the abilities developed to undertake further research.

Professional Practice

Knowledge acquirement
The work analyses and reflects upon developments and insights at the forefront of the profession of architecture. Relevant contextual information and/or precedents are critically evaluated in order to inform the parameters of an appropriately clear and complete representation of the subject matter.

Integration and synthesis
The work demonstrates the ability to work independently and, in a group, where necessary, integrating and synthesising contextual information and acquired knowledge through a systematic method, evidencing self-direction, originality and the ability to respond critically to the subject matter.

Clarity of communication
The work elucidates concepts, facts and opinions in an analytical manner, evidencing the ability to construct and maintain a critical position. The work is structured and organised effectively, demonstrating good use of written and visual communication skills and the independent learning ability required for continuing professional development.

5.5 CREDIT FRAMEWORK

Term	Course Title	Credits
1	Core Module 1 – Design and Technology	10
1	Core Module 2a – Natural Systems and Biomimetics	10
1	Core Module 2b – Design I: Digital and Material Fabrication	15
2	Core Module 3a – Emergence and Evolutionary Computation	10
2	Core Module 3b – Design II: Ecological Urban Design	15

1 + 2	Climate and Ecological Systems in Design Science	10
1, 2, 3	Core Module 4 – Critical Discourses	10
3 + 4	Core Studio/Thesis – The Dissertation	100
2, 3, 4	Design and Build	0 (supporting programme content)

5.6 TEACHING AND LEARNING METHODS

A distinguishing characteristic of the programme is the emphasis on the team, and the skills and knowledge developed in collaborative learning, research, and design. Students work in small teams in studios, workshops, and seminar courses, and for their Dissertation choose their own team and topic. This is a reflection of the way in which architects work in the professional world, and in academic research in the Design Sciences. Both in the Studio and Dissertation phase, emphasis is placed on the balance between individual and group work, and the importance of critical reflection. Individual intellectual and critical development is reflected in the personal essays that each student undertakes and submits during The Studio, and in the individual Critical Reflection that each student develops and submits with their Dissertation.

Design processes in this domain are distributed and collaborative, and are explored, developed, and refined through iterative computational processes of serial experimentation and analysis, generative simulations, and material fabrication. The programme is structured to provide skills and knowledge of a coherent set of linked and convergent discourses, methodologies and concerns that cross many different disciplines in The Studio stage, and those skills are further developed, and knowledge deepened in The Dissertation stage.

Teaching strategies reflect this modality of research and design. Each member of the teaching team has their own speciality and active personal research, but also contributes to coordination of the agendas and delivery of each module and workshop, and to the programme as a whole. One or two members of the teaching team lead modules and workshops, but all teaching staff collectively attend key interim and other internal presentations to offer critical commentary and advice to clarify and develop the student work.
Student life in the programme provides additional opportunities for learning as all tutorials and instructions take place in open studio, and students attend and participate in all presentations by their colleagues in the programme. The programme facilitates the self-organisation of study groups and workshops for additional software skills in the evenings and weekends. For these reasons attendance in studio is mandatory Monday to Friday and is monitored.

Course Participation
Participation in seminars, workshops, and modules, and in studio generally is constantly monitored in studio discussions, design tutorials, and at presentations. If teaching staff have observed a lack of adequate participation, the student will receive a formal written warning from the Programme Director and is required to attend a mandatory meeting with teaching staff tutors to review participation and learning progress. Failure to improve participation to suitable levels results in the student being asked to repeat Phase I studies in the programme in the following year, or in extreme cases, leave the programme permanently. Students of this programme and others in the AA School receive an intense, highly supervised and closely monitored learning experience. It is the responsibility of all students to ensure that the arrangements of their personal circumstances (including payment of tuition fees) enable them to participate in all aspects of their course/programme of study. Details of the processes and requirements outlined above are set out in Section 17, Attendance and Attendance Management Procedures of the Academic Regulations. Appeal procedures regarding these decisions are also summarised in the AA School Academic Regulations.

The Studio (Core Modules)
The Studio workshops, seminars and design projects are led by EmTech staff and our associated researchers and offer a creative and intellectually rigorous sequence that builds knowledge and skill. It provides an intensive engagement in Design Science and introduces our students to the wider community of design researchers in London practices. It concludes with guiding students through the formation of a detailed proposal for an original architectural inquiry that is to be pursued in the Dissertation.

The teaching team and invited guests give tuition in studio, and students develop their skills and knowledge through research and design experiments. The Studio introduces a range of concepts and methodologies, and students document their work and make regular presentations. These are brought together and presented at the end of each course in a final presentation for critical advice, and in the compiled final documents submitted for assessment. The documents describe the work undertaken by the student team, the rationale for the decisions made, analyses and critically reflects upon the output, and situates the work in its theoretical, research and professional domains. Tutorials aid students in focusing and developing their submissions.

The Seminar courses embedded in The Studio have a common structure and method, with appropriate variation in delivery. Students are asked to read preparatory or follow up material, and make short group or individual presentations of work set at the end of each session. Each course has a written submission by the student team that documents the work undertaken, and an individual essay that critically reflects upon the work undertaken by their team, and situates in its theoretical, research and professional domains. Tutorials aid students in focusing and developing their submissions.

The Seminar courses are supported by a series of workshops that run throughout the Studio. More information on the seminar courses and workshops can be found in the Programme Handbook.
In Term 1, the programme offers 1 open module as part of the school-wide Electives programme: Climate and Ecological Systems in Design Science. For EmTech students, this elective is mandatory, and they may audit another suitable module offered by other programmes at the AA.

Thesis Formation takes place in studio in an intensive and highly structured week in the beginning of Term 3. Morning sessions are focused on topic discussions, exchanges and negotiations, and the afternoon sessions in writing proposals that are in turn presented and discussed the following morning. Dissertation Proposals are submitted at the end of the week, with sharply defined Abstracts, Ambitions, Methods and Domain statements. The proposals are reviewed by the teaching team, discussed with the students, reworked if necessary, and formally accepted.

At the conclusion of The Studio, all assessments of work submitted for the modules of the Studio are reviewed together with the Dissertation Proposal and students are then notified of progression to The Dissertation stage.

The Dissertation (Core Studio/Thesis)
PG MArch students produce their 15,000 – 20,000-word Dissertation for submission at the end of the 16-month programme.

The third and fourth term are entirely dedicated to the production of the Dissertation, with continuous review and supervision in Studio by the teaching team. Tutorials are scheduled each week in advance. Students review and synthesize the analyses, research, and case studies of the practices of design and production particular to the research topic. In the Research and Design Studio - Term 3 - students develop two chapters of their Dissertation from the Dissertation proposal, The Domain and the Methods, and pursue design experimentation appropriate to the central arguments and technical propositions. Supporting documentation of analysis, research conclusions, and strategic design decisions and argumentation in support of the Dissertation is written and refined. In addition to the scheduled weekly tutorials, regular presentations are made, and critical advice offered by the entire teaching team and invited guests.

Term 4 is focused on the design development and testing, and the final design proposal is produced, analysed, critiqued and refined. Tutorial arrangements, regular presentations and critical advice are similar to those in Term 3. The final presentations are to a panel of invited guests from practice and academia, and their critical advice is focused on the necessary steps to complete the Dissertation, and the finished document of the Dissertation is compiled and submitted.

SECTION 6:

PG MArch IN HOUSING AND URBANISM

6.1 PROGRAMME INTRODUCTION

Housing and Urbanism focuses on the key issues driving urban transformation and the role of architecture in promoting and supporting critical change. We emphasize the lived city and the central role of residential life in the intensity and dynamism of the urban process. We treat housing as the cornerstone of an emerging urban vitality and its design as central to the modification of wider, complex urban systems. Design learning and investigation form the core of our programme, but a complementary aim is to deepen students' grasp of the politics of the city. In all our work, we integrate the study of form and process.

We work across scales, from detailed plans of contemporary housing to the mobility infrastructure of the regional metropolis. While many courses in urbanism grasp the broad overview of cities and regions, Housing and Urbanism investigates the way specific design reasoning enables actors and decision-makers to take essential next steps in generating change. The capacity for critical synthesis drives all our work and enables students to understand their project as the coalescence of a range of urban forces and trends. Offered as a 16-month taught-degree programme, the MArch in Housing and Urbanism curriculum centres on design-led research leading to an individual thesis based on a comprehensive design project. A collaborative Design Workshop forms the central element of the coursework and the student experience during the first three terms, with lectures and seminars informing students' design work and broadening their scholarly understanding of urban trends and histories. The final term is devoted entirely to students' individual design thesis development and completion.

Each year, we focus on a set of specific research themes which organise our workshops and international collaborations, while always maintaining our commitment to the interrelationship between urban projects and civic action. We investigate the foundations of urban resilience and complexity, and research how design supports multi-sectoral decision making involving both government and private actors. In this era of global uncertainty generated by conflict and climate change, we emphasize the potential of innovation in our lived environments to support and strengthen democratic practice. We examine the hopes for leadership, responsibility, and innovation that may emerge from the current situation, and the role that architects and urbanists may play in encouraging a high level of ambition among our political actors and civic leaders.

Housing and Urbanism holds to a comparative and international tradition. While London as an outstanding global city forms our primary research laboratory, we undertake an annual European study trip to investigate leading-edge projects elsewhere, such as Berlin, Paris, Copenhagen, or Vienna. In addition, Housing and Urbanism collaborates each year with a host city and university in an intensive workshop addressing a specific live challenge under conditions of complexity and rapid change. Our partner cities have included Warsaw, Bogotá, Recife, Taipei, Hanoi, Shanghai, Rio de Janeiro, and Mexico City. This past year, we worked with the city of Brno, Czechia, and will continue this collaboration, while also initiating new partnerships in South America. Housing and Urbanism students become part of this vibrant network of international urban learning.

6.2 AIMS

The Housing and Urbanism Programme seeks innovative urban strategies through the integration of architecture, politics, and research into the contemporary urban process. Students are taught to think and design across scales, from the dwelling to the metropolitan region, and to value associational practice and civic action in their approach to urban projects. We demonstrate how architectural tools and concepts offer lines of investigation and development to students interested in effective urban transformation. Our approach derives from an experimental pragmatism, well grounded in a solid understanding of contemporary trends

and urban realities. Students' thesis projects should demonstrate a balanced concern for critical reflection, innovation, and viability, and present a synthetic understanding of urban issues through the application of architectural and urban reasoning.

6.3 LEARNING OUTCOMES

INTENDED LEARNING OUTCOMES: PG MArch in Housing and Urbanism; FHEQ LEVEL 7	
Learning Outcomes 'LO'	Aligned to the Framework for Higher Education Qualifications (FHEQ) and QAA Subject Benchmark (Architecture), on successful completion of the PG MArch in Housing and Urbanism students will be able to:
A	**Knowledge and Understanding**
A1	Demonstrate a good grasp of the theories and concepts which help understanding the interplay of social/political and spatial processes in the city.
A2	Demonstrate critical and analytical capacity in the use of those conceptual tools.
A3	Demonstrate good knowledge of historical precedents.
A4	Demonstrate good knowledge of the history of ideas in the fields of urbanism and housing.
A5	Demonstrate good knowledge of tools and methods of spatial analysis and intervention.
A6	Apply their analytical capacity to a real context and situation.
B	**Subject Specific Skills and Attributes**
B1	Represent graphically their understanding of a given situation.
B2	Connect their analysis to concrete design strategies and proposals.
B3	Identify and use tools of spatial design and intervention appropriate to a given situation.
B4	Contribute to professional teams working on urban and housing projects.
B5	Develop and test by and through design a central thesis.
C	**Transferable Skills and Attributes**
C1	Use their analytical capacity in other areas of urban development studies.
C2	Engage in urban research as a member of an interdisciplinary team.
C3	Contribute, as part of an interdisciplinary team, to the formulation of urban development strategy.

6.4 ASSESSMENT CRITERIA

All learning outcomes must be met in order to achieve a pass overall. The assessment of submitted work is based on the following overall assessment, in addition to specific ones given for each module. Students are required to demonstrate knowledge, understanding, ability and skills in the following areas:

Context and analysis
- An awareness of the historical and theoretical context of the issue(s) addressed.
- A sound critical and analytical grasp of the main concepts employed or discussed.
- An ability to understand urban spatial conditions and processes and/or analyse and employ exemplary urban projects in the development of an argument.

- Referencing of sources of information using agreed conventions.
- Ability for comparative analysis and meaningful generalisation.

Approach and development
- A capacity to develop a clear point of view and consistent line of argument both through written work and design.
- A capacity to apply knowledge gained in the Course to the development of the written and design work.
- Effective and appropriate use of visual material to develop the thesis argument.
- Use of critical faculties which will allow graduates to continue expanding their knowledge in the field.
- Good judgement and a responsible attitude toward the application of this knowledge.
- Capability to apply the newly acquired knowledge in architectural and design practices and research.

Resolution and communication
- Innovative thinking and creativity.
- Clear structure, writing and presentation of course work.
- An ability to develop a comprehensive design response to a particular urban challenge.

6.5 CREDIT FRAMEWORK

Term	Course Title	Credits
1, 2, 3	**Core Module 1 – Design Workshop Group** Including: Critical Urbanism Sustainable Urbanism	20
1, 2, 3	**Core Module 2 – Design Workshop Individual** Including: Critical Urbanism Sustainable Urbanism	20
1	**Core Module 3 – Elective: Submit 2 of 3 Electives** Housing Form Transnational Cities I Urbanity and Democracy	20 (10 credits per elective)
2	**Core Module 4 – Elective: Submit 2 of 3 Electives** Domesticity Transnational Cities II Urban Form	20 (10 credits per elective)
3, 4	**Thesis**	90
3	**Thesis Brief**	10

6.6 TEACHING AND LEARNING METHODS

The MArch Course is structured around three primary types of teaching and learning activities: design workshops; lectures and seminars; and the Design Thesis. The design workshops offer an opportunity to explore and apply architecture to questions of urban change, to develop arguments and debate approaches through project design, and to develop graphic and presentational skills. Here, students learn the interrelationships among proposition, investigation, debate, and synthesis that bring architecture and design onto the terrain of research in urbanism. The lectures and seminars allow students to broaden and deepen their understanding of architectural thought, the politics of urban change, and to develop a critical capacity to integrate these types of knowledge. In each of these activities the programme takes a prospective and internationally comparative view, helping students develop an informed but experimental attitude toward the pursuit of specific projects which may initiate or nurture positive urban transformation. This attitude is carried over into the dissertation work, during which the student develops a critically synthetic project demonstrating effective next steps within the contemporary urban process.

Group work within the course – especially in the Design Workshop – is modelled upon architectural practice, where collaboration, shared purpose, review, debate and common decision-making are given priority.

Students work in small subsets of two or three students within a larger team to develop complex design responses to specific urban briefs. This exposes students to the challenge of collaboration and the opportunity to hone skills in listening, presentation, communication, and persuasion. One output of the Design Workshop takes the form of a group document and is assessed as a common piece of work. A second output is an individual piece of work deepening and developing each student's distinctive perspective. Both pieces of work build students' capacity to critically synthesise materials from the lecture series in Critical Urbanism and Sustainable Urbanism and apply these to their design work. The Design Workshop Individual Assignment, essays for the elective lecture courses, and the thesis all emphasize individual work, along with the depth of research and personal ownership over the topic that this implies.

While the Design Workshop emphasises the architectural foundations of urban strategy, the elective lecture and seminar courses are organized around three additional core themes: the political foundations of the urban process; the investigation of critical difference in urban form, and especially, the role of housing innovation in democratic city-building. These themes are approached from different vantage points in each of the elective courses, and students are required to submit essays for two of the three electives in each of the first two terms. This enables students to develop the breadth and depth of their studies.

In each of the three teaching and learning activities, there is a structured balance between individual and group activities. The primary emphasis of the programme is on the development of each individual student's interests and capacities, and the preponderance of assessed work is individually pursued. However, the programme also aims to cultivate students' capacity for teamwork, shared investigation, and informed debate through team-based design review sessions and seminars.

London provides an outstanding laboratory of urban transformation, and the exploration of the city and its processes are fully integrated into Housing and Urbanism teaching in the main Design Workshop, through lectures and group seminar work, and through guided investigation tailored to individual student research interests. However, London is not just a place, but a network of active professionals and decision-makers, and Housing and Urbanism students are brought into contact with the field of London's change-makers to better understand the practical and political framework of urban transformation. Equally, however, lectures are structured to highlight an international and comparative perspective and to promote knowledge sharing and innovation transnationally. Our study trips and workshop abroad extend and deepen this learning strategy.

Learning Support

Housing and Urbanism is strongly oriented toward a culture of active engagement between students and staff in all areas of teaching and learning. Scheduled activities, such as lectures, seminars, and the Design Workshop, make up a substantial portion of each week during term-time, which means there is a high level of contact hours with faculty as a baseline. In addition, there are opportunities for individual tutorial every week with both design tutors and lecturers. Students are encouraged to seek tutorials with faculty both for their design work and for essay writing, and we also have a dedicated staff member to support the development of students' writing skills. During Phase II, the Design Thesis period of the course, each student will have at least two dedicated faculty for regular design review and tutorials.

Housing and Urbanism faculty are engaged in real-world urban projects and/or urban policy development, and a core area of our culture as a programme is to bring a feel for the pragmatics of contemporary urban and architectural practice to the lecture hall and studio. At the same time, Housing and Urbanism is also a home for conceptual experimentation and development, debate, and innovation, and the fundamental reason for our high degree of contact time with students is to bring out the richness of this encounter. We maintain a studio with this culture of engagement in mind, to support both individual design work and writing, on the one hand, and group activities, such as teamwork and discussion sessions, on the other.

Our annual European study trip and Intensive Workshop Abroad are both accompanied by a full complement of Housing and Urbanism faculty, such that these extended activities become opportunities for a sustained learning experience. In addition, during these trips we integrate local practitioners, academics, and decision-makers into our discussions, so that students gain an understanding of different international perspectives on urban development and strategy, along with the projects which support and manifest them.

In addition to the core areas of teaching and learning inside the programme, Housing and Urbanism students have access to Media Studies courses from the wider AA School, and a broad range of lunchtime and evening lectures, symposia and conferences. There is also a full complement of further support facilities, such as workshops, 3-D printing facilities, and a library with extensive holdings.

SECTION 7:

PG MArch IN LANDSCAPE URBANISM

7.1 PROGRAMME INTRODUCTION

Landscape Urbanism is a postgraduate design programme at the Architectural Association leading to a Master of Architecture (PG MArch, 16 months) in Landscape Urbanism.

The programme explores the role that designs and designers – from architects and landscape architects to urban designers and planners – can play when confronted with the processes, landscapes and territories of planetary urbanisation (metropolitan areas, rural environments, infrastructural and productive landscapes, etc) and the environmental, racial, socio-economic and health-related crises they have triggered. Planetary urbanisation is structured by an economic model based on policies that have been shaped by 'human relations of power, production, and environment-making in the web of life'. In this context, LU explores the design, beyond normative aesthetic and performative proposals, as a mechanism to shape progressive policies with which to orchestrate, choreograph and negotiate political and economic frameworks to avert the contemporary ecological crisis. To this end, LU is inherently transdisciplinary, integrating critical thinking at its core and knowledge coming from practices including policymaking, political ecology, cartography, environmental history, ecological economics, scripted simulations and participatory tools. Alongside this, various forms of media representation are explored to ensure the design of policies is widely available and accessible to the general public. Beyond the design of single buildings or pieces of urban design, AA Landscape Urbanism is interested in designing policies that directly impact landscapes to develop, organizational models, innovative regulatory plans and visual decision-making tools with the capacity to integrate design within world-ecology frameworks. The aim of the programme is to contribute to the enhancement of the discipline by making it more relevant to wider conversations, dialogues and debates with different disciplines (geography, economy, law, ecology, political science, agroecology etc.), highlighting the unique capabilities of design to offer alternatives to the contemporary crises we are experiencing.

The programme uses as a backbone the design of policies and sees it as a potential field of design praxis. Through this lens, it operates within contemporary conditions whereby urban environments are understood as intrinsically interconnected and related webs of landscapes necessary for them to operate and with implications at local, regional, and planetary scales. This interconnectedness explains the current planetary environmental breakdown, energy crisis, water/food/land consumption and depletion, widespread pollution, and social injustices, all disguised by ecological and sustainable design-driven agendas for the urbanised world.

7.2 AIMS

Landscape Urbanism works as a design research course that explores relevant landscape and urban histories and theories methods and uses relevant landscape, cartographic and design techniques to produce critical Landscape Urbanism projects. At the end of the programme, students are expected to work as design professionals capable of handling large-scale, trans-disciplinary projects with particular expertise on the spatial impacts policies have in the landscape design and dynamics applicable to a variety of professional disciplines such as architecture, landscape architecture, urban design and planning as well as develop skills to collaborate with organisations and think tanks working on the design of progressive policies in the UK.

The Landscape Urbanism Master in Architecture (March) degree produces site-specific projects that work as an operative test bed of landscape design policies. The March projects rely on the application and on-site implementation of techniques and theories into concrete designed scenarios. The MArch degree fosters a way of thinking in which the overarching questions developed in the landscape design policies and the specificity of site conditions will be mutually feedback and negotiated. Students are expected to develop in-depth research on the given site, in close collaboration with local universities, organisations, communities and institutions. The final dissertation work will contribute to critical reflection on the theoretical aspects of the course and discuss the relevancy of the discipline in the given specific context.

 The programme has as main educational objectives the following:
- To form design professionals, able to participate in largescale, multi-disciplinary projects with the capacity to read and analyse landscape and territorial dynamics using latest urban theories and methodologies aid by new technologies.
- Approach the design of urban, landscape and territorial environments based on critical thinking and landscape/ecological models to understand, interrogate contemporary urban conditions, and project potential alternatives.
- Develop methods for long-term research on novel forms of cartographical representation, socio-economic analysis, and landscape dynamics simulation.
- Develop design methodologies that are inclusive of projects, theories, and techniques from relevant disciplines (Geomorphology, Economy, Geography) that engages with the wider disciplinary problem of 'territory' as a praxis and design field.

The specific educational aims which are emphasized in the March degree course are linked to the development of practices aligned to the specificity and synthetic approach of policy design implementation in a given site. These can be described as follows:
- Develop professionals who can generate detailed design strategies from the research on urban landscape processes which has been conducted in the studio.
- Work across scales, generating rich spatial design proposals derived from the study of landscape formations derived from socioeconomic, political and ecological forces.

Develop spatial design strategies which address both specific conditions (detailed social and environmental conditions) but can also respond to methods of policy design and implementation at a specific level.

7.3 LEARNING OUTCOMES

INTENDED LEARNING OUTCOMES: PG MArch in Landscape Urbanism; FHEQ LEVEL 7	
Learning Outcomes 'LO'	Aligned to the Framework for Higher Education Qualifications (FHEQ) and QAA Subject Benchmark (Architecture), on successful completion of the PG MArch in Landscape Urbanism students will be able to:
A	**Knowledge and Understanding**
A1	Develop a project brief which is critically situated within a wider architectural–landscape–urbanism policy discourse.
A2	Demonstrate a critical understanding of current theories and practice within the field of urbanism, landscape and ecology. Analyse complex territorial contexts as well as design concepts by means of a synthesis of personal and workplace reflection and data drawn from scholarship, research and personal enquiry.
A3	Evaluate complex and even contradictory theories and present their findings in a well-argued presentation.
A4	Undertake independent research with minimum guidance and synthesize that information in a well-constructed argument leading to a conclusion.
A5	Develop an understanding of socio-environmental issues.
A6	Develop an understanding of policy design and input into the design field.
B	**Intellectual Skills**
B1	Generate graphic material capable of outlining information clearly and concisely.
B2	Generate new design concepts for their project and support the achievement of desired outcomes at a professional or equivalent level.
B3	Demonstrate the ability to communicate ideas orally and demonstrate the capability to structure and show complex ideas through graphic and visual means.
B4	Write and design well-structured essays and visual essays that show evidence of independent research, make an argument clearly and effectively, present original ideas and conclusions, and use a standard style for referencing.
B5	Make use of diagrammatic drawings, 3D software, mapping and physical models to enable decision-making in complex and unpredictable situations.
C	**Research Skills**
C1	Evaluate critically current research, advanced scholarship or professional practice in the discipline or field of study.
C2	Evaluate methodologies and develop critiques of them and, where appropriate, propose new hypotheses.
C3	Plan, develop and apply research methods, retrieving and interpreting information from a wide range of sources.
C4	Synthesise design and theoretical research and report clearly, accurately and eloquently on findings.
C5	Represent and visualise clearly in design and writing.
C6	Continue to advance their knowledge and understanding, and to develop new skills at a high level.

D	Transferable Skills
D1	Exercise initiative and personal responsibility and accept accountability for decision-making including the use of supervision.
D2	Be able to make decisions in complex and unpredictable situations.
D3	Have achieved the independent learning ability required for continuing professional development.
D4	Be able to organise decision-making processes.
D5	Work and adapt to different team experiences, sharing, negotiating and presenting information and contributing to the formulation of a design proposal in relation to policy making.
D6	Manage others' work and adapt the course design methodology to gain insight into complex urban and territorial problems.

7.4 ASSESSMENT CRITERIA

All learning outcomes must be met in order to achieve a pass overall. The assessment of submitted work is based on the following overall assessment. The assessment of submitted work is detailed in each of the below sections of this Programme Guide. Students are required to demonstrate knowledge, understanding, ability and skills in the following areas:

Design Criteria
- Context and analysis
- Process and synthesis
- Resolution and communication

Technology Criteria
- Context and analysis
- Approach and synthesis
- Resolution and communication

History and Theory Criteria
- Research and knowledge acquirement
- Approach and development
- Argument and communication

Professional Practice Criteria
- Knowledge acquirement
- Integration and synthesis
- Clarity of communication

7.5 CREDIT FRAMEWORK

Term	Course Title	Credits
1	Core Module 1 – Territorial Formations (Design Studio)	20
2	Core Module 2 – Carto-Genesis (Design and Research Studio)	20
1	Core Module 3a – Models Methods and Concepts (History and Theory Seminar)	15
2	Core Module 3b – The Rhetoric of Mapping (History and Theory Seminar)	15
2	Core Module 4 – World-Ecology and Policy Design (Seminar)	15
3 + 4	Core Studio/Thesis – Design Thesis	95

7.6 TEACHING AND LEARNING METHODS

The programme's design studios, technical and computational workshops, seminars and lectures are thematically and pedagogically related, providing students with the necessary information, knowledge, skills, and guidance to undertake the required project work and complete the programme.

The programme is organized around a Design Studio which is theoretically supported by a series of Seminars and Lectures and a Field Trip to collect and verify data. The Design Studio is based on a series of weekly tutorials and intensive workshops. Both Design Studio and Seminars and Lectures provide individual and group tutorials and teaching available throughout the academic year, and on a more limited basis from July to September.

The principal process of learning in the programme is the development of the students' personal and team agendas throughout the year, which starts with a series of short-term group workshops in Term 1, tailored to acquire a wide range of tools and geared toward long-term group proposals. It then moves to the development of group agendas in Terms 2 and 3 for group projects to focus during Term 4 on the development of design documents leading to a design thesis during summer.

The learning processes of the programme can be summarised as follows:
- Undertaking design research, which must be completed and presented at given stages of the programme.
- Attending prescribed lectures and participating in seminars which include readings and group discussions.
- Researching, designing and writing individual essays related to core seminars and lectures.
- Taking part in field trips and workshops.
- Attending open lectures and other special events organised by the AA
- Preparing digital and physical portfolios.
- Preparing a printed and bound document of the individual design development by Terms 1 and 2 and group design thesis by the end of the programme.
- Distinguishing between studio group work and deliverables from individual work and deliverables. An important aspect of the programme is the opportunity for students to experience both individual research and collaborative research which is clearly outlined in the assessing methods of each individual course.

SECTION 8:

PG MArch IN SUSTAINABLE ENVIRONMENTAL DESIGN

8.1 PROGRAMME INTRODUCTION

The MArch Sustainable Environmental Design (SED) is a 16-month (4 terms) postgraduate programme focusing on cutting edge design areas of architecture, urban design and engineering following environmental design principles and sustainability considerations. The Programme focuses on innovation by integrating advanced technologies, low carbon solutions, and inhabitant experience to stimulate creativity for solving world's pressing challenges related to climate change and stay ahead of lifestyle trends.

This year the Programme has established new collaborations with leading architectural and engineering practices, offering students practical experience in a research learning environment while allowing practices to gain fresh perspectives to address real-world complex issues. Aiming at emphasising its focus on current design trends and needs, the SED programme launches a new module "Low Carbon Studio" which explores design strategies and analytical methods to radically reduce carbon emissions in the built environment.

The SED pedagogy is research-led, evidence-based and practice-oriented, addressing real-life projects across climates, urban morphologies and building typologies. The taught programme is shared by the MArch and MSc cohorts and students are free to work in mixed groups on Term 1 and 2 projects.

The programme is delivered in two consecutive phases. Phase 1 (Terms 1 and 2) is organised around group projects that engage students in experimental fieldwork and computational studies using knowledge and tools introduced in weekly lectures and workshops. Building studies and design projects in Phase 1 are usually in London and involve collaborations with professional architectural and engineering practices. Refurbishing the City, a continuing SED research agenda, provides briefs for case studies of buildings and outdoor spaces in London and other major cities. On-site fieldwork is followed by computational modelling and simulation exploring alternative scenarios for adapting to climate change and post-pandemic work patterns. In Term 2, the results of these studies become the starting points for design research on mixed-use building programmes. Design research develops in parallel to presentations by invited designers and researchers setting out the state-of-the-art in environmental design research and practice.

In Phase 2 (Terms 3 and 4), research for both MSc and MArch thesis projects are conducted individually focusing on applications that benefit local communities and engage with global issues. MArch dissertation research is expected to culminate in a specific design application for a given site and brief. MArch projects differ from MSc projects, which in contrast explore the architectural potential and applicability of their research findings across climate zones and building types within selected geographic regions. Research for both thesis projects follow the methodology outlined by the taught programme as first applied to group projects in Terms 1 and 2. Research outcomes are assessed from the viewpoint of occupants, envisaging variations in occupancy, and measured against current practice and evolving performance standards.

Since its first cycle in 2005-06 the SED programme's MArch and MSc options have delivered some 500 completed dissertation projects set in locations across 60 countries and 150 cities, both north and south of the equator. These projects now form part of a growing SED archive that has already provided material for over 100 publications in books, journals and conference proceedings. AA SED student projects have been published in scientific and architectural journals, as well as in a number of books. The programme's graduates are in high demand from both architectural and engineering practices. Over the years many AA SED alumni have achieved senior positions in practice and academia and have themselves influenced the adoption of sustainable design in many countries and climatic regions.

8.2 AIMS

Aims of the MArch Sustainable Environmental Design are to provide objective criteria, knowledge and tools for conceiving, defining, developing and assessing environmental functions, attributes and performance of buildings and outdoor spaces in different climates and urban contexts. The taught programme and project work equip students with cognitive, experiential, analytical and generative skills for engaging in interdisciplinary design research and practice. The MArch dissertation project offers a unique opportunity for combining rigorous technical research and original design applications.

8.3 LEARNING OUTCOMES

INTENDED LEARNING OUTCOMES: PG MArch in Sustainable Environmental Design; FHEQ LEVEL 7	
Learning Outcomes 'LO'	Aligned to the Framework for Higher Education Qualifications (FHEQ) and QAA Subject Benchmark (Architecture), on successful completion of the PG MArch in Sustainable Environmental Design students will be able to:
A	**Knowledge and Understanding**
A1	Demonstrate knowledge and understanding of key concepts of sustainable environmental design.
A2	Demonstrate familiarity with energy modelling and the use of environmental simulation of buildings and outdoor spaces to inform design decisions.
A3	Identify and assess key parameters characterising building types and significant architectural precedents.
A4	Demonstrate knowledge and understanding of the environmental attributes of traditional and contemporary buildings.
A5	Formulate an informed position on wider issues and objectives of sustainability.
A6	Adopt a critical position in relation to parallel contemporary tendencies in architecture and urbanism.
B	**Subject Specific Skills and Attributes**
B1	Appraise and assess key technical and theoretical aspects of environmental sustainability in architecture and urban design.
B2	Plan, implement, process and interpret fieldwork involving observations, surveys and measurements using specialist instruments and data acquisition techniques.
B3	Apply appropriate specialised computational tools and performance assessment techniques to inform design decisions and assess the environmental impact and performance of buildings and urban spaces.
B4	Identify, compare and assess environmental attributes of buildings using on-site observations and measurements, as well as comparative performance data and calculated results.
B5	Assess the potential offered by new materials and technologies.
B6	Develop and test original design applications taking account of climate, site, and occupant comfort, health and wellbeing.
C	**Transferable Skills and Attributes**
C1	Applying appropriate analytical tools and evidence-based techniques to formulate and test research hypotheses.
C2	Collaborate in environmental research as a member of interdisciplinary international teams.
C3	Develop and test effective means of communication with clients and colleagues.
C4	Continue expanding their knowledge using the skills acquired on the course.

8.4 ASSESSMENT CRITERIA

All learning outcomes must be met in order to achieve a pass overall. The assessment of submitted work is based on the following overall assessment, The assessment of submitted work is detailed in each of the below sections of this Programme Guide. Students are required to demonstrate knowledge, understanding, ability and skills in the following areas:

Design:

Context and analysis
Demonstrating systematic understanding and critical awareness of relevant contextual factors. Application of methodology and analytical tools introduced by the taught programme to investigate specificities and variabilities of climate, urban morphology, vernacular and contemporary built precedents, and national and international regulations and standards, as these impinge upon the comfort and wellbeing of the intended user groups.

Process and synthesis
Undertaking research into specific contextual practices and issues demonstrating criticality, original thinking, independent learning skills and ability to work in a group. Generative and iterative application of computational tools to model and simulate site conditions, building form, construction and building occupancy, testing alternative design options, informing the design process with the results of the analysis.

Resolution and communication
Design proposals resolved to a satisfactory standard based on functional and aesthetic criteria and project targets set by the brief, assessed on comparative predictions of carbon emissions and occupant satisfaction. Evidence of well organised project work and effective collaborative procedures with research results and design proposals communicated effectively through a range of representational methods and visual, verbal and written skills.

Technology:

Context and analysis
Demonstrating a systematic understanding and critical awareness of relevant contextual factors. Engaging in data collection and processing aimed at characterising environmental conditions in and around buildings. Application of fieldwork methods and analytical tools introduced by the taught programme to investigate the environmental performance of buildings and outdoor urban spaces.

Approach and synthesis
Environmental knowledge acquired from the taught programme, published literature, field studies and analytical work synthesised into effective and original proposals demonstrating an informed approach toward regenerative design, independent learning and ability to work in a group, and the skills required for continuing professional and academic development.

Resolution and communication
The work demonstrates ability to analyse and refine technical concepts, communicating a critical understanding of the implications of design decisions at a range of scales over the lifecycle of the project. The project addresses the functional, programmatic and aesthetic requirements of the brief. The work is structured and organised effectively and communicated through advanced visual, verbal, and written communication techniques.

Professional Practice:

Knowledge acquirement
The work analyses and reflects upon developments and insights at the forefront of the profession of architecture. Relevant contextual information and/or precedents are critically evaluated in order to inform the parameters of an appropriately clear and complete representation of the subject matter.

Integration and synthesis
Demonstrates ability to work independently and in a group, integrating and synthesising contextual information and acquired knowledge through a systematic method, evidencing self-direction, originality and the ability to respond critically to the subject matter.

Clarity of communication
The work elucidates concepts, facts and opinions in an analytical manner, evidencing the ability to construct and maintain a critical position. The work is structured and organised effectively, demonstrating good use of written and visual communication skills and the independent learning ability required for continuing professional development.

8.5 CREDIT FRAMEWORK

Term	Course Title	Credits
1	Core Module 1 – Group Project 1: Building Studies	30
2	Core Module 2 – Group Project 2: Refurbishing the City Design Project	30
1	Core Module 3 – Research Paper 1	10
2	Core Module 4 – Research Paper 2 + Dissertation Outline	20
3, 4	Core Studio/Thesis – MArch Dissertation	90
1	Adaptive Architecturing	0 (Supporting programme content)
1	Design for Comfort, Health and Wellbeing	0 (Supporting programme content)
1, 2	Environmental Design Research Tools	0 (Supporting programme content)
1, 2	Low Carbon Studio	0 (Supporting programme content)
1, 2, 3	Research Seminar	0 (Supporting programme content)
2	Sustainable City	0 (Supporting programme content)
2, 3	Lessons from Practice (open to audit students)	0 (Supporting programme content)

8.6 TEACHING AND LEARNING METHODS

Weekly lectures, research seminars, software workshops, individual and group tutorials and daily study in the programme's studio provide the theoretical and empirical knowledge, methodology, analytical tools and guidance needed for undertaking real-life projects involving fieldwork as well as advanced computational studies and design research. SED projects are cross-course learning vehicles focused on the design, making, operation, performative assessment and potential improvement of new and existing built environments and microclimates, indoors and outdoors. In Term 1 the approach followed week by week is that of learning by doing. Three complementary lecture series are set in motion at the beginning of the term to provide the knowledge and tools needed each week for undertaking Team Project 1. In Terms 1 and 2, project work is in groups of 3-4 students that combine MSc and MArch students. Dissertation research is undertaken individually allowing students to contextualise their projects for the local climate and other specificities of their chosen geographic region and urban contexts.

Lecture Courses
In Term 1 the weekly taught programme provides the shared knowledge, skills and tools needed for project work and professional practice. Lectures address current issues and professional concerns thus providing a critical overview of the research directions pursued by the programme relative to the profession as a whole. Term 1 lectures are delivered by the programme's regular staff to ensure continuity and complementarity

providing direct support to student project work. In Terms 2 and 3 invited researchers and designers provide diversity of opinion, variety of input, and links with research and practice outside the programme. Lecture topics feed directly into each term's project agendas. Lectures are stored in electronic format and are available to students for further study.

Seminars and Workshops

The Research Seminar is a regular forum on research methods, information sources, essay writing and project documentation. It runs throughout the year. The Tools Workshop provides training in the use of a wide range of software tools. It is particularly intensive during Term 1 aiming to develop the empirical and analytical skills required for undertaking project work.

Projects

Term 1 and 2 projects are undertaken in teams of 3-4 students supported by weekly group tutorials and regular progress reviews. Projects are the vehicles for applying and integrating all the inputs of the taught programme. Each team project accounts for 30 credit units (some 300 study hours including attendance of related courses) awarded to each student. Technical studies undertaken as part of project work may involve fieldwork and/or analytical work that is shared between team members. Project support is in the form of weekly team tutorials and regular presentation of research results. Successful completion accounts for 10 credit units.

Research Papers

Research papers are expected to apply the knowledge and understanding gained from attending the taught programme to undertake critical review of published literature in selected topics of interest. They are undertaken individually supported by regular tutorials. Each research paper of 3,000 words accounts for 10 credit units. Research Paper 2, submitted at the beginning of Term 3, extends into preliminary studies to define the context, main topics and research questions of the dissertation for which it is assigned a further 10 credits.

Dissertation

The dissertation project is a significant piece of research that reflects the SED programme's areas of specialisation and students' backgrounds, personal interests, special skills and plans for the future. The Dissertation accounts for 90 credit units. Preliminary work in the form of a definition study is undertaken during Term 2 and an outline is included as an appendix to Research Paper 2. Dissertation topics are confirmed by the submission of written outlines aimed at providing evidence that the proposed topic is within the student's grasp and capabilities. Students researching related topics may choose to work together in pairs at early stages of the research. The MArch dissertation is concerned with an original design application that documents the potential of sustainable environmental design on a specific brief for a chosen context and site. Supervision of dissertation work is by weekly individual tutorials with assigned tutors; mid-term and end-term reviews with the programme's teaching staff and external reviewers. A list of completed MArch and MSc Dissertation Projects is included in the SED Programme Handbook. Printed and electronic copies are kept in the programme's archives.

Study Trips and Special Events

These include scheduled visits to buildings of interest, meetings with designers and researchers, participation in international conferences and joint workshops with students and staff from other institutions. Visit schedules vary from year to year; details are confirmed early in the year. Study trips take place during Term 2 or 3. Participation in trips involving travel abroad is optional; alternative arrangements are provided for students who are unable to travel abroad.