



1. General Information

Award	Programme Title	Duration	Mode of Study
MA (RCA)	Environmental Architecture	15 months	Full-time

Awarding Institution	Royal College of Art
Teaching Institution	Royal College of Art
Professional Accreditation	N/A
Qualifications Framework Level	7
Date of most recent validation	May 2017
Programme Specification Date	2018/19

2. Philosophy of the Programme

The intensity of our carbon economy has left the planet with a design problem. No matter where we live or work, the environments we move through are constructed. There is nothing on the planet that human beings haven't touched. If the planet has a design problem, what do the terms 'design' or 'architecture' mean when they are applied to phenomena as varied as oceans or atmospheres, or to farmland and deserts? The intensity of environmental change calls for new forms of knowledge production based in propositional thinking, especially design-based methods. Design is a crucial tool in the imagination and the negotiation of alternative futures.

The Environmental Architecture MA programme proposes to explore the future of landscapes, environments and ecosystems. It will focus on the co-dependence of life forms and earth systems as well as the co-existence of alternative concepts of landscapes, environments and ecosystems as they are expressed by different societies. Students will have the opportunity to engage with live projects in sites of rapid and complex environmental change.



MA Environmental Architecture emphasises comparative, interdisciplinary approaches to design research. MA Environmental Architecture is a field-focused, design-led, and project-based course. It proposes a unique, multi-scalar approach to environmental architecture education that unites anthropological and ethnographic research methods with new systems for measuring, classifying, and capturing data including computational sensing and imaging.

The programme understands the above as essential components in re-imagining the design and management of cities, resources, landscapes and environments in the future. MA Environmental Architecture proposed a pedagogical model centered around the idea of case studies and the power of design practice to intervene within multiple scales and disputes. The distinctive studio based model offers students a rigorous and experimental platform to:

- learn to negotiate between a complex range of actors and their constituencies;
- develop and test spatial transformation within a broad range of international and local contexts;
- to cultivate approaches to the practice of environmental architecture grounded in existing and alternative scientific and design models.

MA Environmental Architecture aims to expand the scope and content of design-led research in the field of architecture, environmental science and territorial management. Possible areas of inquiry can include: biodiversity, carbon trading, desertification and its effect on migration and settlement patterns, impacts of resource extraction on ecosystems, the role of automation in agriculture, the potential of renewable energy sources, new forms of tourism and their relation to local economies, indigenous struggles and land rights, the role of financial instruments and concepts of natural capital, or many others.

Students of the MA Environmental Architecture will have the opportunity to pursue a degree within a world leading art and design institution, and to access the rich culture of radical and experimental interdisciplinary work at the Royal College of Art. Moreover, the programme will help students to establish a network of colleagues and mentors by offering them the opportunity of connecting to leading figures in City Design both in London and internationally through an innovative partnership scheme.

3. Educational Aims of the Programme

The MA Environmental Architecture programme aims to:

- redefine environmental architecture practice and become a leading programme of environmental design, contributing to the radical re-invention of contemporary knowledge, research and practice of environmental science and architecture;
- provide a unique social and working environment that encourages students to demonstrate and develop their research, technical and design skills, while



- advancing their professional practice and academic abilities;
- maintain a working and research ethos where students develop their individual skills while learning to work with others in a multi-disciplinary collaborative environment;
 - create an outstanding academic platform that provides students with systematic and in-depth knowledge and understanding of environmental science and environmental design practices, architectural research and practice informed by contemporary debates, scholarship and technological innovations;
 - provide students with research skills that allows them to pursue independent research and to apply advanced, practice-based knowledge to the field of environmental architecture and design;
 - provide students with critical skills that allows them to position their own design practice within the field and to evaluate and critically frame current environmental design knowledge, scholarship, theoretical and practice-based research;
 - initiate design-led experimentation that incorporates science, technology and visualisation in the re-definition of city making, landscape and environmental models;
 - propose a pedagogical model based on the synthesis of written and design research in the formulation of new research hypotheses, design briefs and city making, landscape and environmental models;
 - to provide students with the social, academic and technical skills to operate in a competitive, multi-disciplinary, professional environment.

4. Intended Learning Outcomes of the Programme

Able to:	A. Intellectual Engagement
A1.	demonstrate an advanced understanding of the principles and methods required to formulate innovative research and design in the field of environmental architecture.
A2.	formulate original research and design questions that contribute to knowledge in environmental architecture and to address practice-based problems.
A3.	demonstrate an advanced and comprehensive understanding of the historical and theoretical framework of environmental design practice and scholarship.
A4,	conduct independent research and produce applied knowledge that combines to the theory and practice of environmental design and architecture.
A5.	develop innovative and transformative environmental design models that respond to site-specific conditions and problems, capable of reaching different audiences and stakeholders.



Able to:	B. Technical Skills
B1.	develop individual and group based design and discursive skills in the production and presentation of design reports, policy documents, design briefs and academic papers.
B2.	acquire expertise in analogue and digital media used for representation, visualisation, data processing and modelling relevant to environmental design and architectural practice.
B3.	acquire oral presentation skills that enable the successful presentation and dissemination of work to different audiences such as academia, professional groups, government and the general public.
B4.	master different forms of collaborative knowledge production and lead or participate in interdisciplinary projects, while acknowledging and respecting expertise in complementary to environmental architecture disciplines.

Able to:	C. Professional Development
C1.	initiate and lead independent research and practice-based projects.
C2.	participate in collaborative, interdisciplinary projects with confidence and with a clear understanding of expertise in professional fields that are complementary to city design.
C3.	develop frameworks for assessing the success of design practice both including and beyond the conditions defined by the private sector and public institutions
C4.	have the ability to continue learning and researching independently or in collaboration within other academic institutions.

5. Programme Structure and Curriculum

Programme Overview
<p>Live Project-based studio work forms the core of activity for the first three terms of the MA Environmental Architecture programme, with complementary technical, historical, theoretical and case study seminars occurring in parallel.</p> <p>Group work is encouraged and considered an important introduction to the inherently collaborative process of architecture and environmental design.</p> <p>In the fourth and final term, students will complete an Independent Research Project as an individual submission, which will offer the opportunity to work on a detailed design</p>



proposal or thesis with support and feedback from urban and city design practitioners.

Workshops focus on new spatial epistemologies, especially systems of representation, visualisation and calculation. History theory subjects examine alternative models for the city throughout history, focusing on the way social and political ambitions have become spatialised. Shared modules at programme, School and College level encourage different scales of collaboration with related disciplines and across the College.

Programme Units and Credit Ratings

- Studio (T1, T2, T3), 60 credits
- Seminar (T1, T2, T3), 60 credits
- Critical and Historical Studies (CHS), 40 credits
- Technical Workshop (T1, T2), 20 credits
- Independent Research Project (IRP) (T4), 60 credits

Programme Curriculum Map

TERM 1	TERM 2	TERM 3
BRIEF (20 CP)	STRATEGY (20 CP)	CONCEPT (20 CP)
CASE STUDIES (20 CP)	HISTORY THEORY (20 CP)	SCITECH (20 CP)
TECHNICAL WORKSHOPS (SCHOOLWIDE) (20 CP)		
CHS (40 CP)		
TERM 4		
IRP (60 CP)		

6. Learning and Teaching Methods

Design Studio

The weekly, 4-hour design studio is the core of the new MA programme. Work in the studio is organised in small student groups (2-4 students) and teaching is conducted during weekly group tutorials and pin-up presentations. Work produced in the studio is assessed in mid-term, end-of-term presentations and end-of-term submissions. The submissions follow distinct stages of environmental architecture defined in practice: ‘Brief’ (T1), ‘Strategy’ (T2), ‘Concept Design’ (T3). The three design studios introduce the pedagogy of the programme, provide students with design skills and research methodologies to analyse case studies, while assisting students with the formulation of research and design proposals. The teaching model combines written and design components since both are



considered essential practices in the generation of disciplinary questions, in the clarification of site-specific design problems and in the proposition of new environmental and architectural models.

The design studio is led by the Senior Tutor and the Programme Tutor who are responsible for material preparation, weekly feedback, assessments and pastoral care. Additional VL time has been allocated for invited guests. These could include experts, technical assistants and invited lecturers. Visiting professors will also act as advisers to design studio, conducting workshops and providing feedback to students as agreed.

Seminars

There are three seminars organised across the first three terms. The seminars require constant engagement and involvement by students in course material selection and preparation, collective discussions and oral presentations. Typically, weekly 2-hour seminar presentations by tutors will be followed by a 2-hour roundtable forum organised and prepared by students with regular participation by relevant professionals. In the first term, seminar 1: 'Case Studies', is aligned to Studio 1 and introduces students to contemporary case studies. These represent distinct cases of environmental design problems and disputes that become the basis for students to identify their own site and to develop their research approach and design briefs. During the second term, seminar 2: 'History and Theory', will introduce students to important precedents and theories of architecture, environmental design and landscape architecture and urbanism, while in term 3, seminar 3: 'Science and Technology' explores ways in which technical and scientific aspects of design could be theorized and applied in student design work. Submissions in the three seminars vary: oral presentation (T1), 3000-word essay (T2), and a technical portfolio (T3).

Seminars are run by the programme's Senior Tutor and Tutor. Additional VL time is allocated in Term 3 for invited specialists.

Technical Workshop

Technical Workshops run in T1 and T2 and consist of 2-hour long, lab-based, tutor-run courses. They are skill-based and knowledge based workshops offered by the School of Architecture and are open to students from other programmes. The units are taking place 6/15 in White City's specialised labs and make use of advanced software and equipment offered by the College in the new campus. If required and provisioned, teaching could take place in Kensington Campus in order to use laboratories and workshops were they not available in White City.

Technical Workshop 1, 'Core', asks students to explore new visualisation techniques - analogue or digital - while Technical Workshop 2, 'Advanced', exposes students to current digital models and processes of data gathering, quantification and



calculation.

Technical workshops are run by programme faculty and invited specialists. Submission for both terms consists of individual technical portfolios that include all exercises, workshops and end-of-term submissions. Potentially, these units could be offered as executive education modules.

Independent Research Project (IRP)

The Independent Research Project consists of a detailed design proposal completed individually by each student and based on the earlier group work. Students will be asked to develop a unique design proposition that responds to the preliminary brief, and reacts to the parameters set by strategic and concept design developed in the first three terms. The proposals might vary in scale; the individual contributions should address different site-specific problems and disputes that have been identified by the team. The definition of the scope of the IRP and its relation to the group work will occur in collaboration with the IRP supervisor (Senior Tutor). The report should include all exercises and projects completed in historical, theoretical and technical workshop units. A written component (10.000 words) is included in the final submission.

An essential part of the IRP and the teaching during term 4 is the proposed professional mentor scheme. Apart from regular, weekly tutorials with the programme's Senior Tutor, students will be connected to and get feedback from leading figures in the field of city design in London. Responsibilities and levels of commitment of mentors are clarified by draft memo prepared by the School's Administration and RCA Human Resources attached as an appendix to this validation.

Desk Crits and Tutorials

The Programme's main teaching method is the weekly individual and group tutorials. For both Studio and Seminar units, a combination of one-to-one and small group tutorials will be conducted regularly between students and the two permanent Senior Tutor and Tutor. Specialists, invited experts and the programme's visiting professors will also contribute depending on research interests and sites. There are specific requirements for minimum number of tutorials per term - one per week in Studio and one every two weeks for Seminar and Technical Workshops - and contact hours are defined in the unit descriptors.

Roundtable Forums

This is an essential teaching method for the seminar course that aims to reconfigure history and theory learning processes. This seminar works according to a model where students will have to lead at least one seminar as members of groups or individually, select and prepare course material, organise and moderate collective discussions, presentations and debates between themselves and invited specialists from academia or practice.

This structure emphasises rapid comprehension of complex site conditions and



stakeholder disputes while providing students with the tools to engage with debates around selected case studies in a live and performative manner.

Lecture/Presentations

This includes lectures and presentations prepared by programme staff, School of Architecture staff, invited academics and practitioners. Apart from events organised by MA Environmental Architecture, students will be encouraged to follow SoA’s international lecture series, across school symposia and interdisciplinary forums organised by the SoA in collaboration with other academic institutions.

Work-in-Progress presentations and reviews

In Studio units, students will have to present their work to programme staff and invited critics multiple times each term.

Panels will include School of Architecture staff, experts and specialists involved in the selected case studies or student project sites, UK-based and international academic and practitioners with a distinguished track record in environmental architecture and related fields, as well as the programme’s visiting professors and professional mentors.

For Term 1 and 2, there is one interim and one end- of-term presentation, while in Term 3, two interim reviews and one final before the summer break. In each review students, in group or individually if required, will have to present the evolution of their work according to the unit’s brief and submission requirements.

Regular reviews and more informal crits will provide valuable opportunities for students to get feedback and to develop and improve their skills in verbal presentation.

Field Trips

International field trips are an essential component of the programme’s pedagogical model. The MA Environmental Architecture focuses on case studies and organises individual and group student research and projects around site-specific environmental questions and spatial problems. The field trips will allow the students to study and learn from local experts about specific cities in the UK, Europe and other contexts, such as South East Asia, the Middle East and South America. There will be at least two field trips planned in the academic calendar. The first in UK or Europe at the end of Term 1 and a second beginning of Term 2.

7. Assessment

General

Regulations for assessment and progression can be found in the College Regulations, sections 2.7 – 2.10.



Interim Examination

Students in the MA Environmental Architecture programme are expected to have at least one tutorial per week from their Studio, and one personal tutorial every two weeks from their Seminar and Technical Workshop tutors. They are also expected to be present for all programme events and activities, and to use the studio as their work base throughout the duration of the programme. Students will be required to present work at specified feedback points each term in crit panels that will include Programme and School staff as well as invited specialists and where possible programme's visiting professors and mentors. These regular crits are essential to the programme's pedagogical model. Students should learn to organise, edit, and present their work both discursively and visually as an indispensable part of their academic and professional development. During these presentations, students should refer to each unit's assessment criteria and their performance will be evaluated according to relevant learning outcomes.

Individual assessment is continuous and consists of an on-going process of tutorials, submissions and presentation of design and written work that culminates in the programme's final examination. The final examination synthesises learning outcomes from all previous units in the form of a design proposal, written submission and oral presentation.

There are three distinct categories of continuous assessment of student work, either individually or in groups: (1) internal crits and student presentations, (2) mid-term and end-of term reviews, and (3) end-of-term submissions.

Internal Crits and student presentations

In studio units, students will be asked to present their work every two weeks in front of their peers and tutors. Students should print material and prepare a 5 to 10-minute oral presentations of their in-progress work and they will get oral feedback from unit tutors. At the conclusion of internal crits, there will be a collective discussion where students will be asked to comment upon and discuss the work of their peers alongside their own.

In seminar units, students will be required to participate in the weekly lectures and roundtable forums. Their active participation and contribution will be taken into consideration on their assessment. They will be asked to present at least once each term either individually or in groups. The theme of their presentation might vary depending on the content of the unit each term.

In both cases, unit tutors will give oral feedback to the students, and if required, written notes.

Mid-Term and End-of-Term Reviews



Studio units will schedule end-of-term reviews (T1, T2 and T3) and at least one mid-term review per term. Students will be asked to prepare a 10 to 15-minute presentation of their group or individual work that will be assessed by a review panel. Apart from the unit tutors, this will usually include the Head of Programme, School of Architecture staff and invited specialists from academia and practice. Required work and assessment criteria are clearly outlined in unit descriptors.

Students will receive written feedback from unit tutors that will indicate the present position, future objectives, overall progress, level of fulfilment of the unit brief, and any concerns with progress.

End-of-term submissions

Each term, students will have to submit work in all Studio, Seminar and Technical Workshop units in order to successfully pass the unit. Submission requirements and assessment criteria are described in unit descriptors and vary according to the content, learning outcomes and teaching method of each unit. Students will receive written feedback from unit tutors that will indicate the present position, future objectives, overall progress, level of fulfilment of the unit brief, and any concerns with progress.

If submission is marked as incomplete, students will have to discuss with their tutors and re-submit work in an agreed time, no more than two weeks after initial submission.

Final Examination

The Final Examination is the culmination of the studies in the MA Environmental Architecture programme. The Final Examination is in two parts:

- viva-voce, which take place in the end of Term 4;
- a Final Examination Board, chaired by the Dean of School, or Head of Programme, will be held to recommend results to the Academic Board for Concessions & Discipline for ratification.

The Final Examination Board usually includes the External Examiner, MA Environmental Architecture Senior Tutor, the student's Personal Tutor and other programme staff, and an Internal Moderator.

Internal Moderators are members of academic staff from a School other than that in which the programme is located. Their role in the Examination Board is to ensure that there are appropriate mechanisms in place for the objective and impartial assessment of students' work and to ensure comparability of examination practices between programmes within the College.

The Final Examination takes approximately 30 minutes. Students will have to attend in



person and the schedule of their examination date, time and location will be circulated at least a month in advance. They will be allowed a minimum of 15 minutes to present their work. The Board will then ask questions about the work for a further 15 minutes. Students should present the structure, synopsis, findings and final design proposal of their Independent Research Project (IRP), which they will have to submit in printed form a week prior the Final Examination.

The report should include the IRP synthesising the previous units: 'Brief', 'Strategy' and 'Concept Design', seminars and technical workshops. Students should clearly indicate their individual contribution to both text and visual material where it is group work. The final report should also include all exercises and projects completed in historical, theoretical and technical workshop units.

Students should discuss the content and structure of their final report and presentation during the tutorials in Term 4 by the Senior Tutor and with their practice mentor. Apart from presenting their individual design proposal, students should curate and edit the group work in order to frame their own project with respect to the group work aspect. Students should also submit a draft of their presentation to their Personal Tutor a week prior to examination and schedule at least one rehearsal ahead of the exam. The work will be assessed according to the programme's aims, objectives and assessment criteria as outlined in the Student Handbook.

Referral

If at Final Examination student work is considered to be unsatisfactory but retrievable within the equivalent of one term - for example marked as 'poor' or a borderline fail - students will be asked to re-submit work. This could happen within the academic term or through a referral examination within 12 months of the initial examination. If the resubmitted work is still not satisfactory, students will be deemed to have failed the programme. After each examination, students have the right to appeal against the decision of the Examination Board. More information about examination procedures, referrals and appeals can be found in College Regulations.

If students have been ill, or their work has been or will be affected by some other adverse circumstance, they should notify the Head of Programme or Senior Tutor as well as notify their Personal Tutor in advance of the exam. Students should provide some form of evidence of their difficulty, for example a doctor's certificate. The panel can elect to judge the work on its current form with respect to the student's circumstances, or ask students to resubmit.



8. Admissions

Cross-College Requirements

- Entry is based on a high standard of final-year undergraduate work (as reflected in portfolio or degree classification), or on advanced work of an equivalent level. Your work must also demonstrate a maturity and readiness to undertake postgraduate studies.
- You must normally have obtained a good relevant undergraduate degree or an equivalent qualification. The College recognises as an equivalent qualification any degree, diploma, certificate or other evidence of formal qualification awarded by a university or other higher education establishment where the award is made following the successful completion of a course of at least three years' study, the programme of study being open, as a general rule, only to persons holding a certificate awarded on the successful completion of a full course of upper secondary education. Other qualifications may be approved, providing that the Academic Board for Concessions and Discipline (ABCD) is satisfied that the applicant has the ability to pursue the programme of study successfully.
- The ABCD is empowered to make judgements about the extent to which qualifications or experience gained elsewhere may be accepted in partial fulfilment of its requirements.
- Upon entry to any of the College's programmes you should be able to demonstrate:
 1. The potential to benefit from and contribute to the programme of study or research for which you are applying.
 2. Prior knowledge and experience indicating the potential to achieve the independence necessary for postgraduate study in a specialist discipline.
 3. Enthusiasm and aptitude to confront the issues to be addressed in preparation for a future professional career.
- Applicants should normally be aged over 21 years by 1 September of the proposed year of admission.

Candidates for all MA Courses are assessed on their existing qualities as demonstrated in their work and in their interview, as well as on their potential to benefit from the programme and to achieve MA standards overall.

The assessment will consider:

- creativity, imagination and innovation evident in the work;
- ability to articulate the intentions of the work;
- intellectual engagement in relevant areas;
- appropriate technical skills;
- overall interview performance, including oral use of English.



Programme-Specific Requirements

Prospective candidates will likely be students of architecture with a 3+2-year Bachelor and Master's degree, or master-equivalent 5-year diploma preferably in Architecture, Landscape Architecture, Landscape Urbanism, Urban Design or other related design discipline looking to acquire expertise in large scale, environmental and ecological design projects.

Portfolio

Other backgrounds, such as social sciences, geography, urban studies, planning or economics, will also be considered if prior work is of exceptional merit and students are able to demonstrate their ability to work alongside and contribute to multidisciplinary teams. Evidence of intellectual and professional curiosity and a readiness to engage in a rigorous and demanding period of study is essential.

A Design Portfolio is a necessary requirement to enter into the programme if the candidate's first degree is in Architecture or related design discipline. Candidates entering from non-design disciplines will have to demonstrate exceptional levels of attainment in prior studies and a strong interest in the field. Candidates should submit a digital portfolio via the School's online applications portal of between four to ten completed projects that best reflect their abilities, skills, experience and interests. The portfolio must follow College guidelines for uploading work, such as the following:

- each project should include a title image and up to 6 supporting gallery images;
- candidates should provide a description of maximum of 100 words for each title image and a caption of up to 50 words for each supporting gallery image;
- when submitting collaborative work, students should specify this and clearly indicate their role and responsibility;
- no actual objects, sketchbooks, physical portfolios or other media should be submitted at the point of application. Submission of any material not listed above will not be accepted;
- links to personal websites or dropbox/google drive folders are also not acceptable.

Interview

Candidates will be interviewed by up to three members of the academic staff of the School of Architecture and a student representative. Candidates should bring their online portfolio submission in its physical form as well as any other relevant or recent work, or work in progress. Apart from previous student work, it is useful to include any independent, self-initiated projects or research and professional work.

Candidates who do not speak English as their first language are required to produce evidence that within the previous two years they have achieved at least 93 in the TOEFL



internet test with an additional writing test score of TWE 24 or an IELTS exam score of 6.5 with 6 in writing.

9. Quality Indicators

Refer to Academic Development Handbook for more details of the College's quality and standards procedures.

- All academic programmes at the Royal College of Art are revalidated on a six-yearly cycle. Revalidations involve external subject experts and internal panel members appointed by the College's Academic Standards Committee (ASC).
- Programmes are required to submit an annual Review, the primary purpose of which is to evaluate the experience of students enrolled on both its MA and MPhil / PhD courses.
- External Examiners are appointed for a maximum of three years to ensure that:
 - the academic standard for each award is set and maintained at an appropriate level and that student performance is properly judged against this;
 - the standards of awards are comparable with those of other UK higher education institutions;
 - the process of assessment and examination is fair and has been fairly conducted.
- An Internal Moderator is appointed by the Senate on the recommendation of ASC to ensure that there are appropriate mechanisms in place for the objective assessment of student work and to ensure comparability of examination practices between programmes within the College.
- Students have the opportunity to provide feedback through regular programme-level meetings (at least one each year considers the delivery of the MA programme and the External Examiner report); and through an annual College-wide MA student survey. A Student Representative Council brings forward issues from Course Forums and programme-level meetings to the President and Vice-President of the Students' Union who then, where appropriate, present these issues at College committees or to the Senior Management of the College.