PROGRAMME SPECIFICATION

Course record information

Name and level of final award:	BSc (Hons) Architecture and Environmental Design The BSc (Hons) Architecture and Environmental Design is a BSc Honours degree that is Bologna FQ-EHEA first cycle degree or diploma compatible.
Name and level of intermediate awards:	Diploma of Higher Education in Architecture and Environmental Design (2nd year) Certificate of Higher Education in Architecture and Environmental Design (1st year)
Awarding body/institution:	University of Westminster
Teaching Institution:	University of Westminster
Status of awarding body/institution:	Recognised Body
Location of delivery:	Marylebone Campus, University of Westminster
Language of delivery and assessment:	English
Mode, length of study and normal starting month:	Three years full time, four years part time day September start.
QAA subject benchmarking group(s):	Architecture (2010)
Professional statutory or regulatory body:	Royal Institute British Architects Architectural Registration Board
Date of course validation/review:	17th February 2015
Date of programme specification approval:	
Valid for cohorts:	2016/17 level 4, 2017/18 levels 4 and 5, 2018/19 levels 4, 5 and 6
Course Leader:	To be confirmed (Dr Rosa Schiano-Phan is coordinating documents for validation)
UCAS code and URL:	http://www.westminster.ac.uk/courses/undergraduate

What are the minimum entry requirements for the course?

There are standard minimum entry requirements for all undergraduate courses. Students are advised to check the standard requirements for the most up-to-date information.

westminster.ac.uk/courses/undergraduate/how-to-apply
For most courses a decision will be made on the basis of your application form alone. However, for some courses the selection process may include an interview to demonstrate your strengths in addition to any formal entry requirements.

More information can be found here: westminster.ac.uk/courses/undergraduate/howto-apply

Aims of the course

The course encompasses the 'artistic' and the 'scientific' to create a new generation of architects and designers who are not only environmentally aware, but able to quantify the environmental and energy impact of their designs. Students will develop their creative environmental design, technical and analytical skills, as well as critical thinking and awareness of the wider architectural context. This course will provide skills which can be used both in architectural practice and in environmental design consultancy for employment in a global marketplace.
Half of the time in the course will be spent on studio-based design activities and half on climatic, historical, cultural, socio-economic and professional studies. All modules have a strong interdisciplinary approach that highlights the added value environmental architects bring to the building industry and to society.

The specific objectives of the course are:

- Form the new generation of environmental architects who are not only environmentally aware but able to quantify the environmental impact of their design
- Demonstrate the design and analytical processes related to an evidence based approach to environmental architecture
- Highlight the 'added value' of environmental architects to the building industry and to other environmental engineering sectors, due to intrinsic interdisciplinary breadth and eclectic span of the architectural curriculum
- Apply an interdisciplinary approach both to taught modules and design studios via interdisciplinary input, flexible modules and collaborative design studios
- Foster Environmental Design proficiency, technical and analytical skills through a variety of qualitative and quantitative methods
- Enhance critical thinking and contextual awareness at multiple and interconnected levels: Climatic, Historical, Cultural, Socio-economic
- Develop communication and representation skills of complex, hybrid data sets which encompass the 'artistic' and the 'scientific'

What will you be expected to achieve?
Learning outcomes are statements on what successful students have achieved as

the result of learning. These are threshold statements of achievement the learning outcomes broadly fall into four categories:

- The overall **knowledge and understanding** you will gain from your course (KU).

- **Graduate attributes** are characteristics that you will have developed during the duration of your course (GA).

- **Professional and personal practice learning outcomes** are specific skills that you will be expected to have gained on successful completion of the course(PPP)

- **Key transferable skills** that you will be expected to have gained on successful completion of the course. (KTS)

Level 4 learning outcomes
Upon completion of level 4 you will be able to:

L4.1 Understand a broad range of theoretical and empirical approaches to studying architecture and environmental design and the historical and social context within which they have been formed (KU)

L4.2 Understand the basic principles of environmental design and building physics integrated to the key theories and concepts of building design, construction and operation (KU)

L4.3 Work effectively both independently and with others recognising, with appropriate support, responsibility for own learning and contribution in the context of planned activities within a group or in individual assignments, meeting specific goals and deadlines (KTS)

L4.4 Identify key learning resources from existing sources and datasets as well as collect numerical data from observations, measurements, surveys and equipment to create new and accurate datasets using established principles and standard classification and benchmarks (KTS)

L4.5 Undertake laboratory and site surveys of climatic and environmental parameters to produce data for the characterization of building performance and the solution of simple building science problems (GA)

L4.6 Produce and interpret accurate architectural drawings using a wide range of representation skills: from sketching to detailed drawing in 2 and 3d using specialist software, and understand and be able to formulate a programmatic response to a given brief (PPP)

Level 5 learning outcomes
Upon completion of level 5 you will be able to:

L5.1 Demonstrate a detailed knowledge of the theories, concepts and principles of architecture and environmental design with specific reference to the design process, climatic context and historical development (KU)

L5.2 Demonstrate a detailed knowledge of energy systems and fluxes in the built environment and the relationship between conventional building services, low-energy practices and climatic applicability of passive design strategies for the provision of comfort in buildings (KU)

L5.3 Develop simple research strategies, manage information and ideas with increasing confidence in the way data and creative outputs are communicated in a variety of formats (KTS)

L5.4 Interact effectively within a group identifying, with some guidance, resources to help meet needs and responsibility for own learning and contribution in the context of planned activities within a group or in individual assignments, meeting deadlines and obligations (KTS)

L5.5 Develop more sophisticated techniques for the conceptualization and embedding of bioclimatic, cultural and social theories and practices in the architectural design and refinement of the design process and representation (GA)

L5.6 Develop design strategies for detailed briefs, formulate and communicate effectively solutions to problems involving higher degrees of complexity (PPP)

Level 6 learning outcomes
Upon completion of level 6 you will be able to:

L6.1 Demonstrate fluent and systematic knowledge of the theories, concepts and principles of architecture and environmental design with specific reference to the application and integration of such principles to the architectural design process (KU)

L6.2 Demonstrate systematic and proficient knowledge of the architectural integration of environmental strategies and low-energy systems towards energy demand reduction and of methods for the quantification of building performance (KU)

L6.3 Identify complex research questions, formulate hypotheses and device a research plan with the ability to synthesise ideas and existing information, elaborating own concepts and creative design inputs (KTS)

L6.4 Contribute positively and constructively to group work being able to adopt a leadership role as well as being an effective team player. Develop the ability to work independently, to identify learning resources with minimal guidance, taking full responsibility for own work with a critical perspective (KTS)

L6.5 Formulate and articulate briefs and design proposals which embed principles of environmental and bioclimatic design conceptualising a variety of physical and socio- cultural contexts and being able to communicate and exemplify design through a number of representation and making skills (GA)

L6.6 Develop a deeper understanding of the applicability of technical knowledge to design practice and appreciate barriers and potential future solutions. Foster interdisciplinary approach and be able to communicate with other stakeholders of the building industry (PPP)

How will you learn?

The learning and the teaching of the course will be include a combination of studio-based design modules which represent 50% of the programme, taught modules divided between cultural context and environmental and technical studies subjects. Some of the modules will involve laboratory experimentation, monitoring and surveying exercises and prototype fabrication and testing.

The pattern of teaching and learning in the Programme will specifically include:

- Lectures, demonstrations and other forms of visual and verbal presentation. A typical lecture course consists of twelve sessions of three hours contact teaching (also involving seminars, presentation sessions, visits, etc.).
- Studio-based design work under the guidance of Studio Supervisors.
- Studio discussions, seminars, workshops and other events.
- Tutorials, either individually or in small groups.
- Specialised instruction in the use of computers, drafting and representational techniques, workshop equipment etc.
- Critical reviews ('crits') with feedback being recorded by academic staff and peers at an interim stage and towards the conclusion of a project.
- Field Trips to a city of international significance at Level 5.
- Visits to sites, exhibitions, galleries and projects.
- Portfolio Review at the end of each design module.

Creative thinking is always encouraged, supported by the exploration of appropriate architectural, cultural and technological typologies and precedents. In doing so, students develop a passion for, and curiosity about, the subject as well as honing attendant research skills and knowledge. Iteration is sometimes necessary, however, students learning to do the basics well and, thereby, gaining valuable experience within, and without, the complex and challenging realm of architecture.

Students learn and progress by:

- undertaking self-directed research under tutor support and guidance
- attending lectures, seminars and tutorials in Cultural Context and Environmental and Technical Studies modules, and progressing coursework set by tutors.
- developing designs through creative endeavours and extensive iterative design processes using a wide range of media. The direction of these will be negotiated and agreed with tutors during tutorials and presentations.
- resourcing and integrating ideas and knowledge gained through co-requisite modules and through peer and tutor led studio investigations and discussions.
- presenting and communicating coursework (design/project work and research proposals) to peers and tutors, and in critically appraising the work of peers.
- responding to critical appraisal of coursework, formative and summative assessment.
- reflecting constructively on PDP submissions and Personal Tutorial discussions.
- In design projects, students learn to conceptualise, make proposals and to evaluate them in the context of module assessment criteria.

Students are expected to plan their time and study with increasing independence as the Programme unfolds.

How will you be assessed?

The course offers a variety of assessment to students which aim to provide students with formative and summative feedback in the various stages of their academic and professional development. Assessment methods vary from module to module, specific requirements being contained in the Handbook.

Assessment of design studio based modules is undertaken using a wide range of established methods including critical reviews or 'crits' (formative assessment) and Portfolio Reviews (summative assessment). For all the other taught and laboratory based modules there is additional coursework in the form of written and/or illustrated texts such as technical reports (including laboratory reports), essays, journals, technical diaries, sketchbooks, logbooks and letters. Some coursework will take the form of fabricated artefacts, scaled models and prototypes. There are no formal class tests or written examinations; all assessment is through coursework submission. Parity of grading is ensured by double marking of written submissions. Every member of the design staff is in attendance at the Portfolio Review when the work of individual students is scrutinised and grades awarded. Grades are ratified by a panel of External Examiners at the end of the academic year. In design projects, students learn to conceptualise, make proposals and evaluate them against module assessment criteria. Studio tutors give guidance on how these are understood in the context of a Studio design project. By the end of Third Year (Level 6), students are required to integrate knowledge and skills learned in the lecture-based courses into concurrent design projects.

Students are also expected to carefully plan their time and study with increasing independence as the Programme unfolds. Personal Development Plans (PDPs) are developed each student in the Programme. Such documentation allows students to monitor and reflect upon their respective progress in all aspects of the Course, identify strengths and possible weaknesses, record achievements and enhance confidence and self-awareness. PDPs also provide a detailed record, which may be discussed with Personal Tutors and the Course Leader with respect to the improvement of existing knowledge bases and skills and may eventually be used in the compilation and preparation of CVs. Studio Supervisors are familiar with the work of all Studios across the Programme, variations in content and complexity between sites and briefs being carefully monitored and evaluated. All Studio Supervisors are required to attend Portfolio Reviews and subsequent grading sessions.

Employment and further study opportunities

There is currently a buoyant employment market for professional architects with a specialization in Environmental Design, Sustainability and Low Carbon Design in the UK and internationally. There is a particular demand from consulting engineering employers for architects/environmental design consultant who have a good understanding of environmental engineering, passive strategies and systems, their integration in architectural design. Moreover, quantification skills and ability to evaluate energy and environmental performance in the light of more stringent building regulations and energy certification are very sought after by employers both in the engineering and architectural professions. Both sides value the contribution of a qualified professional who can bridge the gap and speak the 'other's' language.

On successful completion of the course students will have realised the learning outcomes of the Royal Institute of British Architects' requirements for Part I. In order to become members of the RIBA they will need to complete

- a Master of Architecture with Part II accreditation,
- two years in practice, and
- pass the RIBA Part III Examination.

The Department of Architecture, University of Westminster currently offers a MArch Part II and a Part III course, which has RIBA professional accreditation.

The BSc Architecture and Environmental Design is a course designed to promote the development of the University of Westminster's five graduate attributes: creative and critical thinkers, literate and effective communicators, entrepreneurial, global in outlook and engaged in communities, and socially and environmentally aware.

University of Westminster courses capitalise on the benefits that London as a global city and as a major creative, intellectual and technology hub has to offer for the learning environment and experience of our students.

The BSc Architecture and Environmental Design aims to create graduates with the following specific attributes:

- **Critical and creative thinkers**

Creativity and critical thinking are key to the practice of architecture. Developing critical thinking extends and often challenges previous academic experience and cultural expectations. During the course students will discuss and critique theory and practice. Case studies and projects reflecting real world situations will be used to develop strategic thinking, problem solving skills, and design skills.

- **Literate and effective communicators**

Our graduates will need good written, oral and graphic communication skills in their professional lives. Students will learn to develop coherent evidence based arguments, and to use a range of media to present technical data and design proposals. Graduates will need to be digitally literate and proficient in the use of a range of software including CAD and energy and environmental modelling and simulation. They will need to be able to communicate to members of diverse multidisciplinary professional communities. As the course progresses students will learn how to develop strategies to communicate to varied audiences and acquire a multidisciplinary vocabulary.

- **Entrepreneurial**

Our graduates will need to be able to operate effectively in a competitive business environment. Our students will learn to evaluate the operation of property markets and to assess the role of different stakeholders in the development process. They will develop skills in the environmental and energy evaluation of development proposals and the appraisal of their sustainability. As their studies progress, students will become more outward looking and engaged with practice. They will experience and evaluate work environments, and use these experiences to develop and manage their careers.

- **Global in outlook and community engaged**

Our graduates will need to be aware of the impacts of globalisation and climate change on built environments in different contexts and of the finite nature of global resources. They will also need to understand the importance of effective community engagement to sustainable development and of the use of local resources and

bioclimatic potentials. The development of this attribute will be embedded in our teaching activities and become intrinsic to our students' learning. The course will explore literature and case studies that investigate the design and application of sound environmental and passive strategies to a range of different climatic and socio-cultural contexts. Projects will enable students to investigate the needs of individuals and communities and develop practical proposals to meet their needs. The course will include a project linked to an international field trip.

- **Socially, environmentally and ethically aware**

An understanding of sustainability and environmental principles is at the core of the programme and will be developed throughout the course. Students will debate different adaptation and mitigation strategies to address the challenges of climate change and to realise sustainable built environments, achieving users comfort and social responsibility for the use of energy and environmental shared resources. Students will also discuss the ethical standards that are required of professional architects.

Course structure

This section shows the core and option modules available as part of the course and their credit value. Full-time Undergraduate students study 120 credits per year. Course structures can be subject to change each academic year following feedback from a variety of sources.

The course is structured around year themes, which guide the student experience throughout the degree. The first year theme, 'Sensing the Environment', is understanding the physicality of the built environment and placing it in a broader historical and professional skills' context. The second is about 'Transformation and Application' as experimentation of a wider urban dimension, exploring social, economic, and energy issues. The third celebrates the students' achievements and maturity in 'Stepping out and Making' including a proactive engagement in physical testing of environmental design ideas. The opportunity to learn through making, fabrication and environmental testing of physical prototypes is a distinguishing feature of the degree.

Year 1: Sensing the Environment (Credit Level 4)				
Module code	**Module title**	**Status**	**UK credit**	**ECTS**
4ARCH010W	DES1A: Introduction to Design Skills	Core	40	20
4ARCH011W	DES1B: Design, Materials and Fabrication	Core	40	20
4ARCH008W	CC1: A History of Architecture	Core	20	10
4AEVD001W	Environmental Design and Principles of Building Physics	Core	20	10
Award of Certificate of Higher Education available				
Year 2: Transformation and Application (Credit Level 5)				
Module code	**Module title**	**Status**	**UK credit**	**ECTS**
5AEVD001W	Design in Cities	Core	20	10

5AEVD002W	Environmental Design and Technology	Core	20	10
5AEVD003W	Designing in Extreme Climatic Conditions	Core	20	10
5AEVD004W	Zero-Plus Energy Buildings	Core	20	10
5ARCH006W	Architectural History & Urbanism	Core	20	10
5AEVD006W	Climate, Energy and Architecture	Core	20	10
Award of Diploma of Higher Education or Foundation Degree available				
Year 3: Stepping out and Making (Credit Level 6)				
Module code	**Module title**	**Status**	**UK credit**	**ECTS**
6AEVD001W	CC3: Personal Interest and Research Brief	Core	20	10
6AEVD002W	Final Thesis Project	Core	40	20
6AEVD003W	Prototype Fabrication and Testing	Core	20	10
6AEVD005W	Professional Practice	Core	20	10
6AEVD004W	Environmental and Energy Performance	Core	20	10
Award of BSc available **Award of BSc Honours available.**				

Professional Body Accreditation or other external references

The BA Hons Architecture has been put forward for validation by RIBA (Part I) and prescription by ARB on a yet to be confirmed annual cycle with annual monitoring.

This means that the students will obtain, on successful completion of the course and successful validation by the professional bodies, a RIBA Part I professional accreditation.

Academic regulations

The current Handbook of Academic Regulations is available at westminster.ac.uk/academic-regulations

How will you be supported in your studies?

Course Management

The BSc Undergraduate Programme is managed by the Course Leader (to be appointed in March 2016) within the Department of Architecture, one of three Departments in the Faculty of Architecture and Built Environment on the Marylebone Campus. At the time of writing, the Department has around twelve full-time staff and in excess of thirty part-time visiting lecturers. These arrangements provide a particularly varied and dynamic way of delivering the various facets of the Programme. Departmental staff are subject to annual appraisals of their teaching by colleagues with further staff development being achieved through attendance at courses and conferences and also by research activity. Teaching staff also attend events organised by the Human Resources Department and Westminster Exchange**.**

Academic Support

Upon arrival, an induction programme will introduce you to the staff responsible for the course, the campus on which you will be studying, the Library and IT facilities, additional support available and to your Faculty Registry Office. You will be provided with the Course Handbook, which includes detailed information about the course. Each

course has a course leader or Director of Studies. All students enrolled on a full-time course and part time students registered for more than 60 credits a year have a personal tutor, who provides advice and guidance on academic matters. The University uses a Virtual Learning Environment called Blackboard where students access their course materials, and can communicate and collaborate with staff and other students.

Learning Support

The Academic Learning Development Centre supports students in developing the skills required for higher education. As well as online resources in Blackboard, students have the opportunity to attend Study Skills workshops and one to one appointments.

Learning support includes four libraries, each holding a collection of resources related to the subjects taught at that site. Students[1] can search the entire library collection online through the Library Search service to find and reserve printed books, and access electronic resources (databases, e-journals, e-books). Students can choose to study in the libraries, which have areas for silent and group study, desktop computers, laptops for loan, photocopying and printing services. They can also choose from several computer rooms at each campus where desktop computers are available with the general and specialist software that supports the courses taught at their Faculty. Students can also securely connect their own laptops and mobile devices to the University wireless network.

Support Services

The University of Westminster Student Affairs department provide advice and guidance on accommodation, financial and legal matters, personal counselling, health and disability issues, careers, specialist advice for international students and the chaplaincy providing multi-faith guidance. The University of Westminster Students' Union also provides a range of facilities to support students during their time at the University.

How do we ensure the quality of our courses and continuous improvement? The course was initially approved by a University Validation Panel in ***2016***. The panel included internal peers from the University, an academic from another university and a representative from industry. This helps to ensure the comparability of the course to those offered in other universities and the relevance to employers.

The course is also monitored each year by the Faculty to ensure it is running effectively and that issues which might affect the student experience have been appropriately addressed. Staff will consider evidence about the course, including the outcomes from Course Committees, evidence of student progression and achievement and the reports from external examiners, to evaluate the effectiveness of the course. Each Faculty puts in to place an action plan. This may for example include making changes on the way the module is taught, assessed or even how the course is structured in order to improve the course, in such cases an approval process is in place.

A Course review takes place periodically to ensure that the curriculum is up-to-date and that the skills gained on the course continue to be relevant to employers. Students meet with review panels to provide feedback on their experiences. Student feedback from previous years e.g. from Course Committees is also part of the evidence used to assess how the course has been running.

How do we act on student feedback?

Student feedback is important to the University and student views are taken seriously. Student feedback is gathered in a variety of ways.

- Through Course Committees students have the opportunity to express their voice in the running of their course. Student representatives are elected to Committee to expressly represent the views of their peer. The University and the Students' Union work together to provide a full induction to the role of the student representatives.
- Each Faculty also has its own Faculty Student Forum with student representatives; this enables wider discussions across the Faculty. Student representatives are also represented on key Faculty and university committees.
- All students are invited to complete a questionnaire before the end of each module. The feedback from this will inform the module leader on the effectiveness of the module and highlight areas that could be enhanced.
- The University also has an annual Student Experience Survey which seeks the opinions of students about their course and University experience. Final year Undergraduate students will be asked to complete the National Student Survey which helps to inform the national university league tables.

[1] Students enrolled at Collaborative partners may have differing access due to licence agreements.

Please note: This programme specification provides a concise summary of the main features of the course and the learning outcomes that a student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. This specification should be read in conjunction with the Course Handbook provided to students and Module Handbooks, which provide more detailed information on the specific learning outcomes, content, teaching, learning and assessment methods for each module.

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