

Programme Specification: Architecture and Environmental Design MSc

Course record information

Name and level of final award	<ul style="list-style-type: none"> • Master of Science - Architecture and Environmental Design • Postgraduate Certificate - Architecture and Environmental Design • Postgraduate Certificate - Energy and Environmental Design <p>The award is Bologna FQ-EHEA second cycle degree or diploma compatible</p>
Name and level of intermediate awards	<ul style="list-style-type: none"> • Postgraduate Diploma (Pg Dip) - Architecture and Environmental Design • Postgraduate Certificate (Pg Cert) - Architecture and Environmental Design
Awarding body/institution	University of Westminster
Teaching institution	University of Westminster
Status of awarding body/institution	Recognised Body
Location of delivery	Primary: Central London
Language of delivery and assessment	English
QAA subject benchmarking group(s)	N/A
Professional statutory or regulatory body	Energy Institute Chartered Institute of Building Services Engineers
Westminster course title, mode of attendance and standard length	<ul style="list-style-type: none"> • MSc Architecture and Environmental Design FT, Full-time, September start - 1 year standard length • MSc Architecture and Environmental Design PT, Part-time day/evening, September start - 2 years standard length • PG Cert Architecture and Environmental Design PT, Part-time day, September or January start - 2 years, 1 months standard length • PG Cert Energy and Environmental Design PT, Part-time day, September or January start - 2 years standard length
Valid for cohorts	From 2023/4

Admissions requirements

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

<https://www.westminster.ac.uk/courses/postgraduate/how-to-apply>.

Aims of the course

The main objectives of the **MSc Architecture and Environmental Design** award are:

- To empower the current and future generations of architects, engineers and building professionals with the knowledge and the tools required to apply an environmentally responsive approach to current architectural practice and to make informed design decisions which are evidence based.
- To prepare students with a robust methodology in environmental design which relates to the various stages of architectural design, emphasizing the generative potential of a combined bioclimatic and occupant focused approach.
- To foster a critical learning approach and develop a range of presentation/communication skills which are complementary to the graphical ones.
- To promote an interdisciplinary and international breadth to the course.
- To form students which ultimately have a thorough understanding of the principles and methods of environmental design to a degree that will modify their approach to and perception of architecture.
- To offer the values and pragmatic tools for our graduates to actively participate in the current discourse on environmental architecture and to make a contribution to society by delivering better performing and more sustainable built environments.

The main objectives of the **PGCert Architecture and Environmental Design** award are:

- To prepare students with a robust methodology in environmental design which relates to the various stages of architectural design, emphasizing the generative potential of a combined bioclimatic and occupant focused approach.
- To foster a critical learning approach and develop a range of presentation/communication skills which are complementary to the graphical ones.
- To provide students with a thorough understanding of the principles and methods of environmental design.
- To offer training in latest performance analysis tools for the design of new buildings.

The main objectives of the **PGCert Energy and Environmental Design** award are:

- To prepare students with a robust methodology in post-occupancy evaluation and performance analysis of existing built environments, emphasizing the effect of climate, microclimate and occupants' behaviours on the energy and carbon footprint of buildings.
- To foster a critical learning approach and develop a range of presentation/communication skills which are complementary to the graphical ones.
- To provide students with a thorough understanding of the principles and methods of environmental design, energy and carbon counting.
- To offer training in latest performance analysis tools for the evaluation and retrofit of existing buildings.

Employment and further study opportunities

Today's organisations need graduates with both good degrees and skills relevant to the workplace, i.e. employability skills. The University of Westminster is committed to developing employable graduates by ensuring that:

- Career development skills are embedded in all courses
- Opportunities for part-time work, placements and work-related learning activities are widely available to students
- Staff continue to widen and strengthen the University's links with employers in all sectors, involving them in curriculum design and encouraging their participation in other aspects of the University's career education and guidance provision
- Staff are provided with up-to-date data on labour market trends and employers' requirements, which will inform the service delivered to students.

What will you be expected to achieve?

Course learning outcomes

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)

Upon successful completion of the the programme, students will have acquired the requisite knowledge and understanding to:

- KNU1 Conceptual and theoretical framework of the subject area. (KU)
- KNU2 Past and current context of development of the discipline. (KU)
- KNU3 Principles of passive design and performance analysis tools applied to design practice. (KU)
- KNU4 Fundamentals of building physics and energy flows between the built environment and its inhabitants. (KU)
- KNU5 Appropriate application of quantitative and qualitative analytical tools to evaluate performance of existing buildings and of new design proposals. (KU)
- KNU6 Critical appreciation of environmental requirements and performance of various building typologies and built precedents. (KU)
- KNU7 Correlations between climatic & microclimatic factors, buildings and their mutual interactions. (KU)
- KTS1 Frame problems in complex situations. (KTS)
- KTS2 Design based problem solving involving creativity, innovation and critical evaluation based on reasoned application of theory and precedent. (KTS)
- KTS3 Participate in Inter-disciplinary team working, negotiation, and collaborative working. (KTS)
- KTS4 Undertake independent learning and enquiry. (KTS)
- KTS5 Formulate, research, structure, and advance an evidence based reasoned argument. (KTS)
- KTS6 Self-manage, set targets, manage time and resources, work to deadlines and balance conflicting demands. (KTS)
- KTS7 Deploy effective communication of ideas and information combining verbal, written, numeric and graphic media in a structured manner. (KTS)
- SS1 Critical, reflective and synthetic skills leading to a problem definition approach to the wider as well as specific technical aspects concerned with environmental performance of buildings and the built environment. (SS)
- SS2 Critical review of existing literature and information already available in the field. (SS)
- SS3 Ability to plan, carry-out, process and interpret fieldwork and monitoring data from in and around buildings using specialist equipment and data collection protocols. (SS)
- SS4 Well-developed presentation skills through variety of media ranging from oral, written, graphical, three-dimensional, virtual, etc. (SS)
- SS5 Use specialist computational tools and analytical methods to assess and predict building performance. (SS)
- SS6 Assess the technical feasibility, environmental performance and social benefit of design propositions. (SS)
- SS7 Formulate research questions and hypotheses relevant to the context of interest and undertake architectural research leading to guidelines of applicability of studied solutions and research outcomes. (SS)

Additionally, the students of the Postgraduate Certificate in Architecture and Environmental Design pathway will be able to:

- KNU1 Principles of passive design and performance analysis tools applied to design practice. (KU)
- KNU2 Fundamentals of building physics and energy flows between the built environment and its inhabitants. (KU)
- KNU3 Appropriate application of quantitative and qualitative analytical tools to evaluate performance of new design

proposals. (KU)

- KNU4 Critical appreciation of environmental requirements and performance of various building typologies and built precedents. (KU)
- KNU5 Correlations between climatic & microclimatic factors, buildings and their mutual interactions. (KU)
- KTS1 Design based problem solving involving creativity, innovation and critical evaluation based on reasoned application of theory and precedent. (KTS)
- KTS2 Participate in Inter-disciplinary team working, negotiation, and collaborative working. (KTS)
- KTS3 Undertake independent learning and enquiry. (KTS)
- KTS4 Self-manage, set targets, manage time and resources, work to deadlines and balance conflicting demands. (KTS)
- KTS5 Deploy effective communication of ideas and information combining verbal, written, numeric and graphic media in a structured manner. (KTS)
- SS1 Critical, reflective and synthetic skills leading to a problem definition approach to the wider as well as specific technical aspects concerned with environmental performance of buildings and the built environment. (SS)
- SS2 Ability to plan, carry-out, process and interpret fieldwork and monitoring data from in and around buildings using specialist equipment and data collection protocols. (SS)
- SS3 Well-developed graphical and written skills for the presentation of environmental strategies and designs. (SS)
- SS4 Use specialist computational tools and analytical methods to assess and predict building performance. (SS)
- SS5 Assess the technical feasibility, environmental performance and social benefit of design propositions. (SS)

Additionally, the students of the Postgraduate Certificate in Energy and Environmental Design pathway will be able to:

- KNU1 Principles of passive design, energy and carbon counting and performance analysis tools applied to evaluation of built environments. (KU)
- KNU2 Fundamentals of building physics and energy flows between the built environment and its inhabitants, (KU)
- KNU3 Appropriate application of quantitative and qualitative analytical tools to evaluate performance of existing built environments. (KU)
- KNU4 Critical appreciation of environmental requirements and performance of various building typologies and built precedents. (KU)
- KNU5 Correlations between climatic & microclimatic factors, buildings and their mutual interactions. (KU)
- KTS1 Design based problem solving involving creativity, innovation and critical evaluation based on reasoned application of theory and precedent. (KTS)
- KTS2 Participate in Inter-disciplinary team working, negotiation, and collaborative working. (KTS)
- KTS3 Undertake independent learning and enquiry. (KTS)
- KTS4 Formulate, research, structure, and advance an evidence based reasoned argument. (KTS)
- KTS5 Self-manage, set targets, manage time and resources, work to deadlines and balance conflicting demands. (KTS)
- KTS6 Deploy effective communication of ideas and information combining verbal, written, numeric and graphic media in a structured manner. (KTS)
- SS1 Critical, reflective and synthetic skills leading to a problem definition approach to the wider as well as specific technical aspects concerned with environmental performance of buildings and the built environment. (SS)
- SS2 Ability to plan, carry-out, process and interpret fieldwork and monitoring data from in and around buildings using specialist equipment and data collection protocols. (SS)
- SS3 Well-developed graphical and written skills for the presentation of environmental strategies and designs. (SS)
- SS4 Use specialist computational tools and analytical methods to assess building performance. (SS)
- SS5 Assess the technical feasibility, environmental performance and social benefit of existing buildings. (SS)

How will you learn?

Learning methods

Apart from lectures and other similar presentations, a studio-based, student-centred learning environment will be created with the intention of encouraging inter-disciplinary discussion and cross-pollination of ideas. This will emulate the integrated working practises of the building industry and the associated challenges of architectural and environmental design. Such a model will provide diversity of academic debate and a catalyst for the exchange of views, as well as formative criticism from practising professionals, consultants and academic staff. However, an increasing degree of autonomy will be required as a student progresses through the Course.

Thesis development work, synthesising both analytical and design investigative elements, will be undertaken both in studio groups and individual assignments. Members of the core teaching staff will tutor and supervise the students at each stage of the thesis' development. Development of project-based learning methods, interpersonal student learning and group information exchanges will also be encouraged.

Students will also be required to set their own agendas within specific pedagogical parameters agreed in conjunction with the Course teaching staff. In essence, learning is to be 'goal-centred' and related to individual student programmes. Thesis work will reflect contemporary issues or, where appropriate, draw upon historical, social and cultural aspects in architecture and environmental design.

Learning resources

The ability to effectively utilise the full range of learning opportunities and resources including:

Self-evaluation: A student must clearly display an ability to reflect and evaluate their own work at every stage of a module.

Information management: Through careful research, a student must be capable of identifying relevant source material, or other references, and competently manage and use this information with the minimum of guidance.

Autonomy: A student must be capable of independent thought and self-critical analysis and, where appropriate, be able to share their learning in aiding others in seminars, tutorials and workshops.

Communication: A student must be able to engage confidently in academic and professional communication with others, reporting on action clearly, autonomously and competently.

Problem-solving: Throughout the Course, a student should demonstrate the capability of independent learning commensurate with continuing professional study.

Teaching methods

The teaching practises evident within the Course are wide-ranging and incorporate some of the following pedagogical methods:

Lectures: Supporting lectures on specialist topics delivered by invited speakers.

Seminars: Conducted in small groups to disseminate material from lectures, workshops, student research and the like.

Case studies: Invited lecturers present feedback on recently completed or current projects which represent exemplars relevant to the Course.

Live projects: Liaison with multi-professional design teams and monitoring of live projects which may necessitate Study Trips and, or, Field Trips.

Individual and group tutorials: Where students and tutors discuss detailed progress of a particular project, its challenges and possibilities.

Task-based project workshops: Project working provides both a focus and a structure against which the pedagogical demands of the Course can be articulated.

Panel criticism for Design projects: This is group-based and requires students to present their work to, and receive advice from, a group of Course staff, peers and invited critics. This form of presentation affords students the opportunity to advocate their ideas and proposals as if to a client body, competition jury or panel of professional assessors.

Student-centred learning: The need to develop students' skills in path-finding and decision making has resulted in the introduction of student-centred learning. This is regarded as a vital extension of formalised teaching and learning methods. Students will be guided by the subject tutors in their development of learning methods other than the structured methods described above. Improved time management techniques and the detailed appreciation of the use of information sources towards a clearly determined objective are seen as important outcomes.

Self-directed private study: Students are expected to underpin their learning by personal study. To assist students in

this context the University provides a variety of support including libraries, workshops and computing facilities (please refer to appropriate sections of the Course Handbook).

Assessment methods

The specific assessment requirements are described within the module descriptors and the criteria for assessment are related to the anticipated overall standard of achievement.

The nature of the creative, intellectual and professional areas of expertise with which the Course is concerned demands a variety of assessment types, thereby enabling students to express their competence in a number of ways. The relative weightings of each assessment type may vary from module to module depending on the underlying strategy and constituent learning outcomes.

Learning and communication skills are vital within architecture and environmental design and, in consequence, assessment formats and presentation sessions are designed to add value to the learning experience in terms of the development of effective visual, aural, verbal and written communication techniques.

All assessment of modules on the Course will be continuous (ie. there are no formal written examinations).

Note: At both interim reviews and final assessments other Departmental staff not directly involved with the Course may be invited to attend, in addition to other external consultants and experts. Part-time and visiting staff, together with other Departmental tutors, will supplement the Course Team as appropriate for tutorial instruction, criticism, assessment and feedback.

Course Structure

This section shows the core and option modules available as part of the course and their credit value. Full-time Postgraduate students study 180 credits per year. Additional free text information on the choices may also be included, for example where students must choose one of two modules.. Course structures can be subject to change each academic year following feedback from a variety of sources.

MSc Architecture and Environmental Design

Level 7

Full Time

Semester 1: 7AEVD004W, 7AEVD003W, 7AEVD002W

Semester 2 and 3: 7AEVD001W, 7AEVD008W, 7AEVD006W

Part Time Year 1

Semester 1: 7AEVD004W, 7AEVD003W

Semester 2: 7AEVD001W

Part Time Year 2

Semester 1: 7AEVD002W

Semester 2 & 3: 7AEVD006W, 7AEVD008W

Module Code	Module Title	Status	PT Year (where applicable)	UK credit	ECTS
7AEVD001W	Evidence-Based Environmental Architecture	Core	1	40	20
7AEVD003W	Fundamentals of Environmental Design	Core	1	20	10
7AEVD004W	Post Carbon Culture	Core	1	20	10
7AEVD002W	Climate Positive Environments	Core	2	40	20
7AEVD006W	Energy and Carbon	Core	2	20	10
7AEVD008W	Thesis Project	Core	2	40	20

Postgraduate Certificate in Architecture and Environmental Design

Level 7

Semester 1: 7AEVD003W

Semester 2 and 3: 7AEVD001W

Module Code	Module Title	Status	PT Year (where applicable)	UK credit	ECTS
7AEVD001W	Evidence-Based Environmental Architecture	Core	1	40	20
7AEVD003W	Fundamentals of Environmental Design	Core	1	20	10

Postgraduate Certificate in Energy and Environmental Design

Level 7

Semester 1: 7AEVD002W

Semester 2 and 3: 7AEVD006W

Module Code	Module Title	Status	PT Year (where applicable)	UK credit	ECTS
7AEVD002W	Climate Positive Environments	Core	1	40	20
7AEVD006W	Energy and Carbon	Core	1	20	10

Please note: Not all option modules will necessarily be offered in any one year. In addition, timetabling and limited spaces may mean you cannot register for your first choice of option modules.

Professional body accreditation or other external references

The course has been designed with reference to:

QAA Subject benchmarks for Environmental Design

SEEC Credit Level Descriptors for Further and Higher Education

QAA Guidelines for preparing Programme Specifications

The Chartered Institute of Building Services Engineers (CIBSE) and the Energy Institute accreditation, which the course has obtained conditional approval for, ensure independent validation that the course meets high standards set by the profession. It also benchmarks the course against other institutions nationally and internationally and contributes to the ongoing improvement and development of the course. For students on a course with professional accreditation, it provides a pathway to professional registration such as Chartered Engineer (CEng) and Member of the Energy Institute (MEI).

The MSc Architecture and Environmental Design course is intended to fulfil the educational requirements and accreditation conditions of CIBSE CEng and of EI, including the Engineering Council Accreditation of Higher Education Programmes fourth edition (AHEP4). Due to the conditional accreditation timeline the course will be considered for full accreditation in 2024. The accreditation will be backdated to include intake years between 2022-2024 and, following that, accreditation will be renewed on a 5-year cycle. On successful completion of this process the course will become fully accredited from 2024.

Course management

The management structure supporting the course is as follows:

Course Leader, responsible for day to day running and overall management of the course and development of the curriculum and its delivery.

Head of School, holds overall responsibility for the course, and for the other courses run by the School of Architecture and Cities within the College of Design, Creative and Digital Industries.

Academic regulations

The current Handbook of Academic Regulations is available at [westminster.ac.uk/academic-regulations](https://www.westminster.ac.uk/academic-regulations).

Course specific regulations apply to some courses.

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 Campus Registry. You will be provided with the Course Handbook, which provides 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. Further information on Blackboard can be found at <https://www.westminster.ac.uk/current-students/studies/your-student-journey/when-you-arrive/blackboard>

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. Further information on the Academic Learning Development Centre can be found at [westminster.ac.uk/academic-learning-development](https://www.westminster.ac.uk/academic-learning-development).

Learning support includes four libraries, each holding a collection of resources related to the subjects taught at that site. Students 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 in their College. Students can also securely connect their own laptops and mobile devices to the University wireless network.

Support Services

The University of Westminster Student and Academic Services 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. Further information on the advice available to students can be found at <https://www.westminster.ac.uk/student-advice>

The University of Westminster Students' Union also provides a range of facilities to support students during their time at the University. Further information on UWSU can be found at <https://www.westminster.ac.uk/students-union>

How do we ensure the quality of our courses and continuous improvement?

The course was initially approved by a University Validation Panel. University Panels normally include internal peers from the University, academic(s) from another university, a representative from industry and a Student Advisor.

The course is also monitored each year by the College 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 evidence of student surveys, student progression and achievement and reports from external examiners, in order to evaluate the effectiveness of the course and make changes where necessary.

A Course revalidation 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 revalidation panels to provide feedback on their experiences. Student feedback from previous years 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 student engagement activities at Course/Module level, students have the opportunity to express their voice in the running of their course. Course representatives are elected to expressly represent the views of their peers. The University and the Students' Union work together to provide a full induction to the role of the course representatives.
- There are also School Representatives appointed jointly by the University and the Students' Union who meet with senior School staff to discuss wider issues affecting student experience across the School. Student representatives are also represented on key College 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.
- Final year Undergraduate students will be asked to complete the National Student Survey which helps to inform the national university league tables.

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 they take full advantage of the learning opportunities that are provided. This specification is supplemented by the Course Handbook, Module proforma and Module Handbooks provided to students. Copyright in this document belongs to the University of Westminster. All rights are reserved. This document is for personal use only and may not be reproduced or used for any other purpose, either in whole or in part, without the prior written consent of the University of Westminster. All copies of this document must incorporate this Copyright Notice – 2022©