

Programme Specification

MSc Design and Management of Sustainable Built Environments (full-time)

PFTZDBUILTHM

MSc Design and Management of Sustainable Built Environments (flexible-modular)

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For students entering in 2024/25

This document sets out key information about your Programme and forms part of your Terms and Conditions with the University of Reading.

Awarding Institution	University of Reading
Teaching Institution	University of Reading
Length of Programme	MSc Design and Management of Sustainable Built Environments (full-time) - 12 months MSc Design and Management of Sustainable Built Environments (flexible-modular) - 24 months
Accreditation	Chartered Institution of Building Services Engineers (CIBSE) Energy Institute (EI)
Programme Start Dates	September for full-time and flexible-modular February starts available for flexible-modular only, with a minimum period of 33 months
QAA Subject Benchmarking Group	N/A

Programme information and content

MSc Design and Management of Sustainable Built Environments is concerned with interdisciplinary design and will develop the leadership skills in the discipline. The aim is to provide a coherent framework for the discipline and practice of design and management. Each module includes sessions delivered by leading practitioners. The programme is continually informed not only by the latest developments in industry, but also by on-going international research. It is ideal for professionals in the built environment including urban planners, architects, building services engineers, facilities managers and performance assessors. The challenges include fragmentation of disciplines in built environments. We aim to prepare professionals to address these challenges through the acquisition of key practical skills of analysis and simulation in technical issues in environmental design, engineering and management. The Masters programme provides an introduction to the fundamental subjects related to environmental design, operation and management, and an understanding of the latest theories and research. It will provide a knowledge of environmental engineering, building design, energy efficiency and management, along with the application of digital technology and indoor environmental quality and well-being.

Value of the programme to students

The programme will also develop the following transferable skills:

- Critical systems theory skills
- Systems dynamics and systems evolution analysis skills
- Environmental management and technology skills
- Environmental design skills
- Reflective practitioner skills
- Scientific, engineering and management skills
- Inter-professional team working skills
- Hands-on computer simulation skills

Programme Learning Outcomes

-MSc Design and Management of Sustainable Built Environments (full-time)

During the course of the Programme, you will have the opportunity to develop a range of skills, knowledge and attributes (known as learning outcomes) For this programme, these are:

Learning outcomes	
1	Deal with complex issues both systematically and creatively, make reasoned judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences.
2	Demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level.
3	Demonstrate competence in the design and management of environmental systems and their performance assessment in the context of sustainability.
4	Possess an understanding of conventional and renewable energy requirements in building environmental control, to allow evaluation and synthesis to be undertaken.
5	Possess evaluation skills in the areas of low carbon building and urban design.
6	Strategic planning, briefing and management at design and management phases.
7	Design and performance evaluation of environmental systems, including assessment of indoor environments.
8	Differentiate and evaluate various building energy management methods across a range of differing contexts.

You will be expected to engage in learning activities to achieve these Programme learning outcomes. Assessment of your modules will reflect these learning outcomes and test how far you have met the requirements for your degree.

To pass the Programme, you will be required to meet the progression or accreditation and award criteria set out below.

Module information

The programme comprises 180 credits, allocated across a range of compulsory and optional modules as shown below. Compulsory modules are listed.

Compulsory modules

Module	Name	Credits	Level
CEM107	Sustainable Design and Management Principles and Practice	40	M
CEM10A	Research skills	20	M
CEM10B	Research dissertation	40	M
CEM250	Building Information Management and Socio-technical Change	20	M
CEM360	Energy in Buildings and Building Simulation	20	M
CEM370	Urban Microclimates and ICT and Energy Management	20	M

Part-time students will take compulsory modules Sustainable Design and Management Principles and Practice A (CEM17A) and Sustainable Design and Management Principles and Practice B (CEM17B) in place of Sustainable Design and Management Principles and Practice (CEM107).

The remaining credits will be taken from the list of optional modules from the School of Built Environment for this programme.

Part-time or flexible modular arrangements

This programme may be taken on a flexible-modular basis, normally over 24 months for September starts or 33 months for February starts, up to a maximum of 63 months. February starts involve spreading the period of study over three academic years, with a view to graduating in December of the third year.

Placement opportunities

There are no formal arrangements for placements.

Study abroad opportunities

There are no formal arrangements for study abroad.

Optional modules

The optional modules available can vary from year to year. An indicative list of the range of optional modules for your programme can be found online in the Course Catalogue. Details of optional modules for each part, including any additional costs associated with the optional modules, will be made available to you prior to the beginning of the Part in which they are to be taken and you will be given an opportunity to express interest in the optional modules that you would like to take. Entry to optional modules will be at the discretion of the University and subject to availability and may be subject to pre-requisites, such as completion of another module. Although the University tries to ensure you are able to take the optional modules in which you have expressed interest this cannot be guaranteed.

Teaching and learning delivery

The programme is delivered through a combination of instructor-led and student-led learning approaches including lectures, seminars, tutorials, group work, site visits,

workshops and interactive sessions depending on the modules chosen. Industry guest speakers and case studies will offer students opportunities to engage with real life projects.

Elements of your programme will be delivered in conjunction with the use of University's online learning and teaching platforms (i.e. Blackboard). A small number of guest speakers will deliver lectures online. Some supervision may also be held online.

Elements of your programme will be delivered via digital technology.

The scheduled teaching and learning activity hours and amount of technology enhanced learning activity for your programme will depend upon your module combination. In addition, you will undertake some self-scheduled teaching and learning activities, designed by and/or involving staff, which give some flexibility for you to choose when to complete them. You will also be expected to undertake guided independent study. Information about module study hours including contact hours and the amount of independent study which a student is normally expected to undertake for a module is indicated in the relevant module description.

Accreditation details

The MSc programme in Design and Management of Sustainable Built Environments is accredited by the Chartered Institution of Building Services Engineers (CIBSE) and the Energy Institute (EI).

To be awarded the accredited MSc, students must satisfy the conditions mentioned below.

Assessment

The general assessment pattern for each module is by coursework with one formal examination in the CEM360 module. Detailed assessment regimes are specified in the relevant module descriptions.

Each 20 credit module will have a maximum of two assignments. Methods of summative assessment are listed below and match the PLOs directly.

Students are challenged in class to make clear arguments, form views and defend them. Written assignments, discussions and group work provide vehicles for developing intellectual skills. Dissertation research under supervision provides opportunities for critical thinking and developing the ability to construct arguments from different disciplinary perspectives.

Intellectual skills are assessed by means of assignments and exercises:

1. Individual and teamwork problem-solving exercises and assignments
2. Case-based assignments including reports and presentations.
3. Case-based teamwork assignments.
4. Dissertation work

Progression

N/A

Classification

The University's taught postgraduate marks classification is as follows:

Mark Interpretation

70 - 100% Distinction

60 - 69% Merit

50 - 59% Good standard (Pass)

Failing categories:

40 - 49% Work below threshold standard

0 - 39% Unsatisfactory Work

For Masters Degree

The following conditions must be satisfied for the award of a Master's degree:

Award of a Master's degree

- (i) an overall weighted average of 50% or more over 180 credits
- (ii) a mark of 50% or more in at least 120 credits
- (iii) not more than 20 credits with a mark below 40%
- (iv) a mark of 50% or more for the Dissertation

Students with any module marks below 50% will be awarded an MSc in Sustainable Built Environments which is not accredited by the Energy Institute (EI) or the Chartered Institute of Building Services Engineers (CIBSE). Such students must not have any module marks below 40.

In addition to the threshold conditions for the award of a Master's degree, the following **further** conditions must be satisfied for a classification of Distinction or Merit:

Distinction

An overall weighted average of 70% or more over 180 credits

OR

an overall weighted average of 68% or more over 180 credits and marks of 70% in at least 90 credits

AND

A mark of at least 60% in the dissertation

AND

No marks below 40%.

Merit

An overall weighted average of 60% or more over 180 credits

OR

an overall average of 58% or more over 180 credits and marks of 60% in at least 90 credits

AND

No marks below 40.

For Postgraduate Diploma

The following conditions must be satisfied for the award of a Postgraduate Diploma:

Award of a Postgraduate Diploma

(i) an overall weighted average of 50% or more over 120 credits

(ii) a mark of 50% or more in at least 80 credits

(iii) not more than 20 credits with a mark below 40%

The qualification of PG Diploma excludes CEM10A and CEM10B. Where the conditions for a higher class have been met, the higher class should be awarded.

In addition to the threshold conditions for the award of a Postgraduate Diploma, the following further conditions must be satisfied for a classification of Distinction or Merit:

Distinction

An overall weighted average of 70% or more over 120 credits

OR

an overall weighted average of 68% or more over 120 credits and marks of 70% in at least 60 credits

AND

No marks below 40.

Merit

An overall weighted average of 60% or more over 120 credits

OR

an overall average of 58% or more over 120 credits and marks of 60% in at least 60 credits

AND

No marks below 40.

For Postgraduate Certificate

The following conditions must be satisfied for the award of a Postgraduate Certificate:

Award of a Postgraduate Certificate

(i) an overall weighted average of 50% or more over 60 credits

The qualification of PG Certificate excludes CEM10A, CEM10B and CEM107 and CEM17A and CEM17B.

Additional costs of the programme

Where applicable, core textbooks recommended for student purchase may cost around £15 to £25 per module; there may be other books/resources which you would find it convenient to buy. Some books may be available second-hand, which will reduce costs. A wide range of resources to support your curriculum, including textbooks, more specialist studies, and electronic resources, are available through the library.

Printing and photocopying facilities are available on campus at a cost per A4 page of £0.05 (black and white) and £0.30 (colour). Essential costs in this area will be low as most coursework is submitted electronically.

Costs are indicative and may vary according to optional modules chosen and are subject to inflation and other price fluctuations. The estimates were calculated in 2023.

For further information about your Programme please refer to the Programme Handbook and the relevant module descriptions, which are available at <http://www.reading.ac.uk/module/>. The Programme Handbook and the relevant module descriptions do not form part of your Terms and Conditions with the University of Reading.

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11 December 2023

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