Programme Specification

MSc Renewable Energy: Technology and Sustainability (full-time)	PFTZRENETSHM
MSc Renewable Energy: Technology and Sustainability (flexible-modular)	PPTZRENETSFM

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 Renewable Energy: Technology and Sustainability (full-time) - 12 months MSc Renewable Energy: Technology and Sustainability (flexible-modular) - 24 months
Accreditation	Energy Institute and Chartered Institute of Building Services Engineers (CIBSE)
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
The aim is to study renewable energy and sustainable technologies, as well as carbon management and energy use in the built environment. The programme covers rapidly evolving fields that are vitally relevant to how society develops in the 21st Century. The MSc Renewable Energy: Technology and Sustainability course will develop a broad understanding of the applications of renewable energy and sustainable technologies, as well as an awareness of the impacts of using non-sustainable technologies. Accredited by the Energy Institute, and the Chartered Institution of Building Services Engineers, the course is designed to enable you to develop your knowledge further in a range of areas including carbon management and energy use in the built environment.

Programme Learning Outcomes -MSc Renewable Energy: Technology and Sustainability (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	Understanding of, and the ability to engage in informed debate concerning the role of energy in the modern world, the resulting environmental and societal impacts and alternative means of energy provision that seek to minimise any negative impacts.
2	Analytical and practical skills for the assessment, selection and deployment of renewable energy technologies in the field with an emphasis on wind, hydro, solar, wave/tidal and biomass.
3	Ability to make rational decisions about energy supply options based on quantitative arguments.
4	Understanding of the issues which need to be considered when incorporating renewable energy in power systems.
5	Analytic skills appropriate for the outline assessment of conventional energy technologies.
6	Mental agility and flexibility with multi-disciplinary problems.
7	Confidence in interacting with the key players in the new and traditional energy supply technologies globally.
8	Improve your ability to make decisions and communicate these effectively by analysing different energy supply options using quantitative arguments.

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
CEM10A	Research skills	20	M
CEM10B	Research dissertation	40	M
CEM160	Renewable Energy Systems	40	M
CEM340	Carbon Management and Life Cycle Assessment	20	M
CEM350	Urban Energy Systems and Energy and the Environment	20	M

Part-time students will take the compulsory modules Renewable Energy Systems A (CEM16A) and Renewable Energy Systems B (CEM16B) in place of Renewable Energy Systems (CEM160).

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
Programme accredited by the Energy Institute and Chartered Institute of Building Services Engineers (CIBSE).

Assessment
The general assessment pattern for each module is by coursework. There are no formal examinations for the compulsory modules in this programme. Detailed assessment regimes are specified in the relevant module descriptions. Each 20-credit module will typically have two major assignments. Assessment is through written term papers and reports, group work, smaller digital deliverables and the research dissertation. In their work, students are challenged to make clear arguments, question assumptions, form views and support them with evidence from. Written assignments, discussions and group work provide powerful platforms for developing intellectual and critical thinking skills. Dissertation research under supervision provides opportunities for critical thinking and developing the ability to construct arguments from different disciplinary perspectives.

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

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 CEM160 and CEM16A and CEM16B.

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**.**

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