

## Programme Specification

### BSc Environmental Physics

For students entering Part 1 in September 2016

UCAS Code: F330

UFENVPHYS

UFENVPHYSIY

UFENVPHYSSY

**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	3 years
Length of Programme with placement/year abroad	BSc Environmental Physics (with placement year) - 4 years (internal transfer only) BSc Environmental Physics with Study Year Abroad - 4 years (internal transfer only)

#### Programme information and content

The programme aims to provide you with a thorough degree-level education in the fundamental physics central to environmental physical science and its application to a number of atmospheric, oceanographic, Earth-system and solar-terrestrial situations. It provides graduates with degree level knowledge of applied physics, along with the requisite scientific, mathematical and transferable skills, to enable them to pursue a career in a wide range of scientific, technical and numerate fields, including air pollution, environmental consultancy, adaptation to climate change, energy supply and insurance, as well as varied careers in terrestrial and space-weather forecasting and general environmental research. Optional modules allow the student to pursue specialisations within the field of Environmental Physics, such as Climate Change, Dynamical Meteorology, Oceanography, Earth System Modelling, Atmospheric Spectroscopy and Solar-Terrestrial Physics.

Part 1:	Introduces you to the core methods and approaches of Environmental Physics, with modules covering the required fundamental physical principles, mathematical tools and laboratory techniques. The modules are designed to ensure you have a strong foundation across the relevant parts of physics, chemistry, meteorology, climate and mathematics. You will also develop transferable skills in communication, interpersonal skills, learning skills, numeracy, self-management, use of IT and problem-solving.
Part 2:	Provides you with the opportunity to further advance these core academic and transferable skills, as well as choose from a range of optional modules which focus on specific areas of Environmental Physics in greater detail.

	A year spent on placement gives students the opportunity to gain experience of the practical application of their studies and accordingly make a more informed choice of career.
Part 3:	Gives you the opportunity to specialise in one or more Environmental Physics disciplines. Part 3 also features an extended project which develops skills in research and analysis, as well as scientific communication. General studies involves attendance and participation in weekly Weather and Climate Discussions.

### Module information

Each part comprises 120 credits, allocated across a range of compulsory and optional modules as shown below. Compulsory modules are listed.

#### Part 1 Modules:

Module	Name	Credits
MA1CA	Calculus	20
MA1LA	Linear Algebra	20
MT11D	Weather and Climate Fundamentals	20
MT12C	Skills for Environmental Science	20
PH101	Physics of the Natural World	20
PH102	Atomic and Nuclear Physics	10
PH103	Global Environmental Chemistry	10

All modules at Part 1 of the programme are compulsory.

#### Part 2 Modules:

Module	Name	Credits	Level
MA2MPH	Mathematical Physics	10	5
MA2VC	Vector Calculus	10	5
MT24B	Atmospheric Physics	20	5
MT24C	Numerical Methods for Environmental Science	10	5
MT26E	Surface Energy Exchange	10	5
MT2ACT	Atmospheric Chemistry and Transport	10	5
MT2IEM	Instrumentation for Environmental Measurements	10	5
MT2SWC	Statistics for Weather and Climate Science	10	5

Students must select a further 30 credits from a list provided by the Department of Meteorology.

It may be possible to for students to select 20 credits at level 4 in a foreign language offered

by the Institutional Wide Language Programme (IWLP) with permission from the Programme Director.

**Modules during a placement year or study year (if applicable):**

Students on the 4 year version of the programme will take one 120 credit module during their placement or study abroad year.

Students may be permitted to undertake a placement year or a study abroad year between Part 2 and Part 3 of the programme. In such cases students will transfer to a 4-year programme. The placement or study abroad year should not normally be shorter than nine months full-time.

If you take a year-long placement or study abroad, Part 3 as described below may be subject to variation.

**Part 3 Modules:**

Module	Name	Credits	Level
MT37A	Part 3 Project	30	6
MT37B	General Studies	10	6

Students must select a further 80 credits from a list provided by the Department of Meteorology.

**Additional costs of the programme**

During your programme of study you will incur some additional costs.

The main additional cost for this programme is for an optional field trip prior to the start of Part 3. There are no compulsory textbook purchases for this programme. A range of resources to support your curriculum, including textbooks and electronic resources, are available through the library. Reading lists and module specific costs are listed on the individual module descriptions.

You will need an approved scientific calculator (approximate cost £12).

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 2016.

**Optional modules:**

The optional modules available can vary from year to year. An indicative list of the range of optional modules for your Programme is set out in the Further Programme Information. 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.

**Placement opportunities**

You may be provided with the opportunity to undertake a credit-bearing placement as part of your Programme. This will form all or part of an optional module. You will be required to find and secure a placement opportunity, with the support of the University.

**Teaching and learning delivery:** you will be taught through lectures, seminars, tutorials and practical classes.

The contact hours for your Programme will be (on average) 360 hours for Part 1, 312 hours for Part 2 and 180 hours for Part 3, and will depend upon your module combination; however information about module contact hours can be located in the relevant module description.

**Assessment**

The programme will be assessed through a combination of written examinations, coursework, oral examinations, practical examinations.

**Progression**

The University-wide rules relating to 'threshold performance' as follows

*Part 1*

- (i) obtain an overall weighted average of 40% in 120 credits
- (ii) obtain a mark of at least 30% in individual modules amounting to at least 100 credits taken in Part 1.

In order to progress from Part 1 to Part 2, a student must achieve a threshold performance and

(iii) obtain at least 40% in the Environmental modules MT11D, MT12C averaged together;  
and

(iv) obtain at least 40% in the compulsory Physics modules, averaged together, at Part 1; and

(v) not less than 30% in the individual modules MT11D, MT12C and PH101

The achievement of a threshold performance at Part 1 qualifies a student for a Certificate of Higher Education if he or she leaves the University before completing the subsequent Part.

### *Part 2*

To gain a threshold performance at Part 2, a student shall normally be required to:

(i) obtain a weighted average of 40% over 120 credits taken at Part 2; and

(ii) obtain marks of at least 40% in individual modules amounting to at least 80 credits; and

(iii) obtain marks of at least 30% in individual modules amounting to at least 120 credits, except that a mark below 30% may be condoned in no more than 20 credits of modules owned by the Department of Mathematics and Statistics.

In order to progress from Part 2 to Part 3 in the **3 year programme**, a student must achieve a threshold performance

In order to progress from Part 2 to Part 3 in the **4 year programme**, a student must achieve a threshold performance and obtain a pass in the professional/work placement or study abroad year. Students who fail the professional/placement year transfer to the non-placement year version of the programme.

The achievement of a threshold performance at Part 2 qualifies a student for a Diploma of Higher Education if he or she leaves the University before completing the subsequent Part.

## **Classification**

### Bachelors' degrees

The University's honours classification scheme is based on the following:

Mark	Interpretation
70% - 100%	First class
60% - 69%	Upper Second class
50% - 59%	Lower Second class
40% - 49%	Third class
35% - 39%	Below Honours Standard
0% - 34%	Fail

The weighting of the Parts/Years in the calculation of the degree classification is:

*Three year programmes:*

Part 2: one-third

Part 3: two-thirds

*Four year programmes, including professional/work placement or study abroad:*

Part 2: one-third

Placement/Study Abroad Year abroad not included in the classification

Part 3: two-thirds

**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.**

BSc Environmental Physics for students entering Part 1 in session 2016/17

15 September 2016

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