

## Programme Specification

**BSc Meteorology and Climate**

**For students entering Part 1 in September 2023**

**UCAS Code: F790**

**UFMETCLI**

**UFMETCLIWY**

**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
Accreditation	The programme outlined here is approved by the Royal Meteorological Society as an appropriate academic training for meteorologists seeking the qualification <i>Chartered Meteorologist</i> .

### **Programme information and content**

The programme aims to provide you with a thorough degree level education in environmental physical science with an emphasis on the physics of the Earth's atmosphere and oceans. It also aims to provide graduates with sufficient maths and physics to pursue a career outside of the specialist areas of meteorology and oceanography.

Part 1:	Introduces you to the basic concepts and terminology of weather systems around the globe. Key concepts from physics will be applied specifically to the atmosphere and oceans to form the basis of a solid scientific study of the Earth's weather and climate. Important concepts in maths will be developed so that students are able to undertake a rigorous examination of the scientific principles that underpin the study of the weather and climate. Practical skills such as computer programming and laboratory/fieldwork experimental design, record keeping and data analysis will also be introduced.
Part 2:	Provides you with an opportunity to use the skills and concepts introduced in Part 1 in order to conduct a thorough scientific investigation of how the atmosphere and oceans evolve and develop on timescales from seconds to centuries. Further key mathematical concepts will be introduced and developed. The programming, laboratory and field work skills introduced in Part 1 will be put to use conducting experiments and analysing data both in the fluid dynamics laboratory and in our state-of-the-art atmospheric observatory.
Placement/Study abroad year:	The placement year provides experience of working in industry, government, research or other appropriate organisations. Training takes place in the workplace, usually including attendance at Continuing Professional Development courses as well as mentoring by a line

	manager. Actual contact hours will vary according to the placement and employer.
Part 3:	Gives you the opportunity to focus on areas of atmospheric and ocean science that are of the most interest to you. In particular you will conduct an extensive research project, working closely with members of the Department's academic and research staff, on a topic of your choice, culminating in a written dissertation and presentation to your peers and members of staff. Optional modules cover a broad range of different topics in weather and climate science.

### 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
MT11C	Introduction to Meteorology	20
MT11D	Weather and Climate Fundamentals	20
MT12C	Skills for Environmental Science	20

Your remaining credits will be made up of optional modules from the School of Mathematical, Physical and Computational Sciences and modules from elsewhere in the University.

Students without an A level in Physics, or with an A level in Physics at a grade lower than B, will be required to take a 20 credit introductory physics module.

#### Part 2 Modules:

Module	Name	Credits	Level
MA2DE	Differential Equations	20	5
MT24A	Atmosphere and Ocean Dynamics	20	5
MT24B	Atmospheric Physics	20	5
MT24C	Numerical Methods for Environmental Science	10	5
MT25G	Climate Change	10	5
MT26E	Surface Energy Exchange	10	5
MT2SWC	Statistics for Weather and Climate Science	10	5

Your remaining credits will be made up of optional modules from the School of Mathematical, Physical and Computational Sciences and modules from elsewhere in the University.

Students may also select 20 credits at level 4 in a foreign language offered by the Institutional Wide Language Programme (IWLP).

**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 year.

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

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

Students may be permitted to undertake a placement year between Part 2 and Part 3 of the programme. In such cases students will transfer to a 4-year programme. The placement 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
MT37L	Boundary Layer Meteorology	10	6

Your remaining credits will be made up of optional modules from the School of Mathematical, Physical and Computational Sciences and modules from elsewhere in the University.

**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.

### **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 2022.

### **Placement opportunities**

#### **Placements:**

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 seminars, lectures, tutorials and problems classes, laboratory and field work.

The contact hours for your Programme will be (on average) 360 hours for Part 1, 324 hours for Part 2 and 204 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.

### **Accreditation details**

The BSc Meteorology and Climate programme is accepted by the Royal Meteorological Society as fulfilling the requirements for core content under the Society's Chartered Meteorologist Accreditation Scheme.

### **Assessment**

The programme will be assessed through a combination of written examinations and coursework. However, some modules are assessed only by coursework, while others are assessed solely by examination. Details are given in the relevant module descriptions.

## **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 Meteorology modules averaged together at Part 1 (MT11C, MT11D, MT12C); and
- (iv) obtain no less than 30% in MT11C, MT11D and MT12C.

The achievement of a threshold performance at Part 1 qualifies a student for a Certificate of Higher Education if they leave 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 they leave 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/workplacement 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 Meteorology and Climate for students entering Part 1 in session 2023/24

16 June 2022

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