

Programme Specification

BSc Atmospheric Sciences (NUIST-UoR Academy) NUIST-based (full-time)

For students entering Part 1 in September 2020

AFATMOSJJ
UFATMOSJX

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

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| Awarding Institution | University of Reading |
| Teaching Institution | University of Reading |
| Length of Programme | 4 years |
| Length of Programme with placement/year abroad | BSc Atmospheric Sciences (NUIST-UoR Academy) UoR-based (full-time) - 4 years (internal transfer only) |
| Accreditation | N/A |

Programme information and content

The foundation year (Part 0) is designed for foundation year students at NUIST who intend to progress on to a three-year undergraduate programme within the NUIST-University of Reading Academy. Successful completion of the NUIST Foundation Programme gives the student admission to one of the University of Reading undergraduate programmes. It also contributes, through credit transfer, to the first year of an award of NUIST.

On completion of Part 0, students will have the general academic language and study skills required to begin their Year 1 degree studies.

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.

This programme is available to students studying at NUIST-Reading Academy, who may transfer to UoR for either part 3, or part 2 onwards, for part of their degree.

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| Foundation year: | <p>The aims of this of the programme are to develop students' language knowledge* and language skills to meet the needs of their future academic studies, by improving their ability to:</p> <ul style="list-style-type: none">• use academic sources effectively and appropriately (in accordance with academic conventions) to complete academic assignments• present information, ideas and opinions through writing, in a clear, organised, and effective way, using appropriate academic language• understand long spoken texts (e.g. mini-lectures, lecture extracts, spontaneous monologues) and take notes independently |
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| | <ul style="list-style-type: none"> • listen to and understand spontaneous speech in both group and one-to-one settings, and to contribute orally in both contexts in a relevant and constructive way • deliver extended formal presentations, and respond effectively to questions • study independently e.g. planning their work, managing their time, finding additional language learning resources and additional sources relevant to their academic assignments • work effectively in groups. <p>*Language knowledge: in all parts of the programme, there will be an emphasis on expanding the students' range and control of English vocabulary, grammar, language functions and academic style.</p> <p>Content will include:</p> <p>Reading skills and strategies, including survey reading, close reading, selecting information, summarising, monitoring comprehension, summarising, synthesising.</p> <p>Listening skills and strategies, including identifying main and supporting points, note-taking, decoding connected speech, monitoring comprehension; listening and responding appropriately in interactive situations.</p> <p>Speaking skills, including oral presentations, group discussions, oral fluency, communicative strategies, negotiating meaning by checking understanding and asking for clarification, pronunciation.</p> <p>Writing skills, including paragraphing, text organisation, introductions and conclusions,</p> <p>analysing essay questions, paraphrasing, avoiding plagiarism, referencing ; the process of writing i.e. planning, drafting, receiving feedback, redrafting.</p> <p>Language knowledge: (a) vocabulary – General Service List, Oxford 3000, Academic Word List (b) grammatical structures and functional language relevant to general academic English.</p> <p>Studied at NUIST</p> |
| Part 1: | <p>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.</p> |

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| | Studied at NUIST |
| Part 2: | <p>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.</p> <p>Studied at NUIST or UoR</p> |
| Part 3: | <p>Gives you the opportunity to develop further in different areas of atmospheric and ocean science. 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.</p> <p>Studied at NUIST or UoR</p> |

Module information

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

Foundation modules:

| Module | Name | Credits | Level |
|--------|---------------------------------------|---------|-------|
| IF0NU1 | English for Academic Purposes 1 | 60 | 0 |
| IF0NU2 | English for Academic Purposes 2 | 40 | 0 |
| IF0NUP | English for Academic Purposes Project | 20 | 0 |

Part 1 Modules:

| Module | Name | Credits | Level |
|---------|----------------------------------|---------|-------|
| IF1NUA | English for Atmospheric Science | 20 | 4 |
| MA1CANU | Calculus | 20 | 4 |
| MA1LANU | Linear Algebra | 20 | 4 |
| MT11CNU | Introduction to Meteorology | 20 | 4 |
| MT11DNU | Weather and Climate Fundamentals | 20 | 4 |
| MT12CNU | Skills for Environmental Science | 20 | 4 |

Part 2 Modules:

| Module | Name | Credits | Level |
|---------|------------------------|---------|-------|
| MA2DENU | Differential Equations | 20 | 5 |
| MA2VCNU | Vector Calculus | 10 | 5 |

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| MT24ANU | Atmosphere and Ocean Dynamics | 20 | 5 |
| MT24BNU | Atmospheric Physics | 20 | 5 |
| MT24CNU | Numerical Methods for Environmental Science | 10 | 5 |
| MT24ENU | Weather Forecasting | 10 | 5 |
| MT25GNU | Climate Change | 10 | 5 |
| MT26ENU | Surface Energy Exchange | 10 | 5 |
| MT2SWCNU | Statistics for Weather and Climate | 10 | 5 |

Compulsory modules for students studying Part 2 at UoR

| Module | Name | Credits | Level |
|--------|---|---------|-------|
| MA2DE | Differential Equations | 20 | 5 |
| MA2VC | Vector Calculus | 10 | 5 |
| MT24A | Atmosphere and Ocean Dynamics | 20 | 5 |
| MT24B | Atmospheric Physics | 20 | 5 |
| MT24C | Numerical Methods for Environmental Science | 10 | 5 |
| MT24E | Weather Forecasting | 10 | 5 |
| MT25G | Climate Change | 10 | 5 |
| MT26E | Surface Energy Exchange | 10 | 5 |
| MT2SWC | Statistics for Weather and Climate | 10 | 5 |

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 |
|---------|---|---------|-------|
| MT37ANU | Part 3 Project (Nanjing) | 30 | 6 |
| MT37BNU | General Studies (Nanjing) | 10 | 6 |
| MT37DNU | Remote sensing methods and applications | 10 | 6 |
| MT37ENU | Dynamics of Weather Systems | 10 | 6 |
| MT37FNU | Oceanography | 10 | 6 |
| MT37LNU | Boundary Layer Meteorology | 10 | 6 |
| MT37PNU | Micrometeorology | 10 | 6 |
| MT38ANU | Global Circulation | 10 | 6 |
| MT38CNU | Numerical Weather Prediction | 10 | 6 |
| MT3SWNU | Space Weather | 10 | 6 |

Compulsory modules for students studying Part 3 at UoR

| Module Code | Name | Credits | Level |
|-------------|-----------------|---------|-------|
| MT37A | Part 3 project | 30 | 6 |
| MT37B | General Studies | 10 | 6 |

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| MT37L | Boundary Layer Meteorology | 10 | 6 |
| MT37E | Dynamics of Weather Systems | 10 | 6 |
| MT37D | Remote sensing methods and applications | 10 | 6 |
| MT37F | Oceanography | 10 | 6 |
| MT38A | Global circulation | 10 | 6 |
| MT38C | Numerical Weather Prediction | 10 | 6 |

Students based at UoR must select a further 20 credits from a list of optional modules provided by the School of Mathematical, Physical and computational Sciences.

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.

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

At NUIST: There will be some additional costs if you require printing facilities at NUIST, there may also be additional costs if your programme involves a field trip whilst at NUIST. Details of costs can be found at the NUIST help desk.

At UoR: 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 will be 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 2019.

Placement opportunities

N/A

Teaching and learning delivery:

In Part 0 you will be taught through classes, using a communicative approach to language learning, with an emphasis on meaning, task completion, interaction and feedback. You will also have a number of tutorials, and carry out supervised project work. Total study hours for Part 0 will be a minimum of 1200 hours.

Modules in Part 0 are taught by Academy staff in Nanjing.

For Part 1, 2 and 3 you will be taught through lectures, tutorials, computer labs and supervised project work.

Modules in Nanjing are taught by a combination of Academy staff and visiting staff from the University of Reading.

Total study hours for each Part of your programme will be a minimum of 1200 hours. The contact hours for your programme will depend upon your module combination; an average for Part 3 of - 204 hours (for student studying at UoR).

For students studying at NUIST contact hours will vary, in general a 10 credit module will have 3 contact hours per week over 16 weeks.

In addition to your scheduled contact hours, you will be expected to undertake guided independent study. Information about module 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

N/A

Assessment

The programme will be assessed through a combination of written exams and coursework. Some modules may be assessed by 100% coursework whereas others contain a mixture of both coursework and exam at varying ratios.

Progression

Part 0 Foundation year

In order to complete Part 0 successfully, students are required to:

(i) obtain a mark of at least 40% in IF0NU1 and IF0NUP.

(ii) obtain a mark of at least 5.5 in IF0NU2 with no element (Speaking, Listening, Reading and Writing) below 5.0. The summative assessment for this module will be through the TEEP.

Students who obtain 6.0 in IF0NU2, with no element (Speaking, Listening, Reading and Writing) below 5.5 will be deemed to have met the English language progression requirement to Part 2 and will be exempted from the mandatory Year 1 non-credit EAP module

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

Part 1

To gain a threshold performance at Part 1, a student shall normally be required to:

(i) obtain an overall 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.

(iii) obtain 6.0 in TEEP on IF1NU3A (where taken), with no element (Speaking, Listening, Reading and Writing) below 5.5.

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
(iv) Obtain not less than 30% in any of the Meteorology modules

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

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.

The University's Honours classification is as follows:

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:

Part 2: one-third

Part 3: two-thirds

Dual Awards

Successful completion of the Programme will lead to the award of degrees by both the University of Reading and Nanjing University of Information Science and Technology. Modules completed at Part 2 and Part 3 regardless of place of study, will contribute to the classification of degrees.

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 April 2022

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