

Programme Specification

BSc Applied Chemistry (NUIST-UoR Academy) NUIST-based (full-time)

For students entering Part 0 in September 2024

AFAPCHEMJJ

UFAPCHEMJX

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	4 years
Length of Programme with placement/year abroad	BSc Applied Chemistry (NUIST-UoR Academy) UoR-based (full-time) - 4 years (internal transfer only)
Accreditation	N/A
QAA Subject Benchmarking Group	Chemistry

Programme information and content

The programme is designed to provide a broad and rigorous study of modern chemistry through an internationally coordinated teaching approach. The programme will focus on some advanced topics across the branches of organic, inorganic, physical and analytical chemistry. In addition, you will refine your laboratory techniques in preparation for an open-ended investigative project in one of the above areas of chemistry. The programme will also give you the opportunity to develop transferable skills for employment and to enhance your English language skills through chemical applications. The programme provides an excellent foundation to further research studies in chemistry or to employment in the chemical industry.

The programme includes a foundation year (Part 0), the completion of which will enable you to progress onto the undergraduate programme in Applied Chemistry within the NUIST-University of Reading Academy. On completion of Part 0, you will have the general academic language and study skills required to begin your degree studies through Part 1, Part 2 and Part 3.

This programme is available to students studying at Reading-NUIST Academy, or for those who are eligible to transfer to UoR for Part 2 or Part 3 for part of their degree.

Foundation year:	<p>Part 0 helps you develop the academic language and study skills you will need for your university degree programme. This year provides opportunities to:</p> <ol style="list-style-type: none">1. Understand and engage with the expectations of UK academic culture;2. Attain the academic reading, writing, listening, and speaking skills needed to undertake university study in English;3. Understand and apply basic academic study skills, including the selection, evaluation, and use of information sources;
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	<p>4. Develop as an independent learner; 5. To study and understand foundation level chemistry in preparation for Part 1.</p> <p>This Part is studied at NUIST.</p>
Part 1:	<p>Introduces you to the basic underpinnings of Inorganic, Organic and Physical Chemistry. Through material that will begin as a revision of A-level topics, it will progress rapidly and will present this familiar material in a new light. The goal of year 1 is to give you the tools necessary to help you become an independent learner, and provide the necessary background to enable rationalisation and predictions for unseen processes and reactions.</p> <p>This Part is studied at NUIST.</p>
Part 2:	<p>Provides you with more in-depth study of Inorganic, Organic and Physical Chemistry. The second year sees the introduction of a dedicated stream of Analytical chemistry that is also reflected in the content of the practical class. The material covered in the second year is challenging, it builds on the content of year 1 and extends the complexity and depth of study to allow study and analysis of real world problems. Much of the material introduced in year 2 is still regarded as fundamental, and a thorough understanding of the content is required for study in year 3.</p> <p>This Part may be studied at NUIST or UoR.</p>
Part 3:	<p>Gives you the opportunity to begin to see the application of Chemistry at the forefront of its applications. The content is deliberately broad, covering all four streams of the discipline, with some optional modules available. The material becomes more specialised and you will experience this through study of a series of smaller self-contained units within your core modules. The final year relies heavily on accumulated knowledge built up in years 1 and 2. The main component of the final year will comprise the research project. Whether in a team or as an individual researcher, you will have a chance to undertake a piece of research work that is your own. You will work with an assigned academic supervisor who will advise and encourage you to develop the work to its fullest extent that the time limits permit. You will be given a choice of the area in which you undertake your project work; more details of this can be found in the project handbook.</p> <p>This Part may be studied at NUIST or UoR.</p>

Programme Learning Outcomes - BSc Applied Chemistry (NUIST-UoR Academy)

NUIST-based (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	Formulate and explain a broad and balanced range of fundamental chemical concepts in the core areas of the discipline (Organic Chemistry, Inorganic Chemistry, Analytical Chemistry and Physical Chemistry and applied topics).
2	Work safely and competently in the laboratory by assessing and mitigating potential risks they may encounter, and applying health & safety and laboratory safe practice.
3	Apply appropriate methodologies and practical skills to solve a range of problems in chemistry.
4	Develop planning and investigative skills that draw on the existing literature to form new insights and propose avenues for further exploration.
5	Organize and interpret scientific information from the literature or the laboratory to produce written work such as lab reports, essays and dissertations for varied purposes and audiences.
6	Employ their knowledge and skills base (such as effective teamworking, ability to work autonomously and to demonstrate high-level practical skills) from which they can proceed to graduate employment or to further research studies in chemistry or multidisciplinary areas involving chemistry.
7	Effectively communicate information and chemical concepts at a level and in a format appropriate to the needs of a variety of purposes and target audiences.
8	Demonstrate numerical, and data analysis and presentation skills, using appropriate statistical techniques and making effective use of information technology.
9	Prepare samples for, and interpret spectra from a wide range of commonly used spectroscopic and spectrometric techniques.
10	Plan, design, conduct and report on an individual research project.

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

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
CH0NUI	Fundamental Chemistry	20	0
IF0NU1	English for Academic Purposes 1	60	0
IF0NU2	English for Academic Purposes 2	40	0

Part 1 Modules:

Module	Name	Credits	Level
CH1CC1NU	Chemical Concepts and Skills 1 (NUIST)	20	4
CH1IN1NU	Fundamentals of Atomic Structure and the Periodic Table (NUIST)	20	4
CH1O2CNU	Shape, Structure and Reactivity in Organic Chemistry (NUIST)	20	4
CH1PP2NU	Physical Processes and Molecular Organisation (NUIST)	20	4
CH1PR1NU	Chemistry Practicals 1 (NUIST)	20	4
IL1ACNU	English for Chemists	20	4

Part 2 Modules:

Module	Name	Credits	Level
CH2IN1NU	Further Inorganic Chemistry	20	5
CH2MC1NU	Medical Chemistry (NUIST)	20	5
CH2OR1NU	Further Organic Chemistry	20	5
CH2PH2NU	Further Physical Chemistry (NUIST)	20	5
CH2PR1NU	Chemistry Practicals 2 (NUIST)	40	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
CH3CC1NU	Chemistry Core 1 (Inorganic and Organic) (NUIST)	20	6
CH3CC2NU	Chemistry Core 2 (Physical and Analytical) (NUIST)	20	6
CH3PRANU	Advanced Laboratory Skills	20	6
CH3PRJNU	Research Project	40	6

The remaining credits will be made up by one of the UoR optional third year modules TBD.

Part 3 Modules (at UoR):

Module	Name	Credits	Level
CH3PRO	BSc Chemistry Project	40	6
CH3CC1	Chemistry Core 1 (Inorganic and Organic)	20	6
CH3CC2	Chemistry Core 2 (Physical and Analytical)	20	6

The remaining credits will be made up of optional modules available in the Department of Chemistry.

Placement opportunities

N/A

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:

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

Students will be taught primarily through a mixture of lectures, lab practicals, digitally-enabled learning activities, tutorials and seminars, depending on the modules students choose. Some modules may include group work. Elements of your programme will be delivered via digital technology.

For Part 1, 2 and 3 you will be taught primarily through a mixture of lectures, tutorials and seminars, depending on the modules you choose. Some modules may include group work. Modules in NUIST are taught by a combination of Academy staff and visiting staff from the University of Reading.

All modules will require significant guided independent learning.

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

N/A

Assessment

The programme will be assessed through a combination of written examinations, coursework (including class tests) and oral examinations. Further information is contained in the individual module descriptions.

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 CH0NU1.
- (ii) obtain a Pass mark in IF0NU2 as specified in the module description.

Students who obtain 6.0, with no element (Speaking, Listening, Reading and Writing) below 5.5 in the IF0NU2 final TEEP test will be deemed to have met the English language progression requirements to Part 2 and will be exempted from the mandatory Part 1 non-credit English for Academic Purposes module IF1NU3A.

Successful completion of these modules will lead to progression to Year 1 of the student's chosen degree programme.

The achievement of a threshold performance at Foundation Year qualifies a student for a Certificate of Completion if they leave the University before completing the subsequent Part.

Part 1

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

- (i) an overall average of 40% over 120 credits taken in Part 1;
- (ii) a mark of at least 30% in individual modules amounting to not less than 100 credits; and
- (iii) Obtain marks of at least 30% in modules amounting to 120 credits.

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

- (iv) obtain a mark of at least 40% in CH1PR1NU; and
- (v) obtain 6.0 in TEEP on IF1NU3A (where taken), with no element (Speaking, Listening, Reading and Writing) below 5.5.

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.

Transferring from a Joint Honours to a Single Honours programme

Students are able to transfer from a Joint Honours to a Single Honours programme in one of their joint subject areas at the end of Part 1, subject to fulfilling the Part 1 University Threshold Standard, achieving marks of at least 40% in at least 40 credits of modules in the subject to which they wish to transfer, and fulfilling any programme-specific progression rules for the Part 1 Single Honours Programme to which they wish to transfer.

Students who transfer from a Joint Honours to a Single Honours programme may not have taken all of the Part 1 modules listed in the Single Honours Programme Specification. The modules which they have taken will be shown on their Diploma Supplement.

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, and;

- (iv) obtain a mark of at least 40% in CH2PR1NU.

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:

Four year programmes:

Part 2: one-third

Part 3: two-thirds

The classification method is given in detail in [Section 17](#) of the Assessment Handbook.

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.

Additional costs of the programme

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

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. 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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16 August 2023

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