Programme Specification

BSc Chemistry with Foundation **UCAS Code: F101**

For students entering Foundation year in September 2017 **UFCHEMBWFY**

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
Accreditation	The Royal Society of Chemistry

Programme information and content	
The programme aims to provide you with a broad coverage of the core disciplines within Chemistry. You will study Analytical, Inorganic, Organic and Physical Chemistry as part of the four year BSc chemistry programme with Foundation. Throughout the course there will be opportunities to work individually or as part of a team, this may take the form of a practical experiment or an oral presentation or a group exercise. The Science Foundation Year forms Part 0 of this course, which provides you with the basic knowledge and essential foundations to succeed on our Chemistry program. Furthermore, the course is designed as a progression with years 1 and 2 being core knowledge that is fundamentally important to enable you to progress to more challenging topics in your final year. The course requires every student to retain and remember details and information provided in lecture courses across terms and years, in order that more advanced courses can be fully understood and that the student becomes adept at problem solving.	
Foundation year:	The Science Foundation Year provides you with the scientific background required to succeed on the subsequent years of the course. You will acquire a broad foundation in Chemistry, Biology and scientific Calculations. Additionally, our Key Skills module gives you all the skills necessary to excel at University. The goal of Year 0 is to provide each student with basic core knowledge suitable for your chosen pathway and the confidence of transitioning to Higher Education.
Part 1:	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 each student the tools necessary to help them become an independent learner, provide the necessary background to enable rationalisation and predictions for unseen processes and reactions.
Part 2:	Provides you with more in-depth study of Inorganic, Organic and Physical Chemistry. The second year see 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. The programme has an equivalent programme which features a lacement year or year abroad component. All students are included in all of the sessions that run to encourage and prepare students to seek placements and/or study abroad opportunities. These begin in part one and are run by the Department and the Careers and Placements services. If you decide that you wish to undertake a placement or study abroad opportunity, we encourage this option for all students, and are successful in finding a placement or study abroad opportunity, you should discuss programme transfer with your personal tutor. Programmes at BSc and MChem level are available for study abroad or placement students. Please note, some restrictions apply on transfer from BSc to MChem programmes (see the handbook for more information).
Part 3:	Gives you the opportunity to begin to see the application of Chemistry at the forefront its applications. The content is deliberately broad, covering all 4 streams of the discipline. The material is now beginning to become more specialised and you will experience this through study of a series of smaller selfcontained 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.

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
BI0BF1	Foundation Programme: Biology	40	0
BI0MF1	Mathematics Foundation	20	0
CH0CHE	Chemistry	40	0
FB0SSK	Key Skills for Science Research	20	0

Part 1 Modules:

Module	Name	Credits	Level
CH1CC2	Chemical Concepts and Skills 1	20	4
CH1IN1	Fundamentals of Atomic Structure and the Periodic Table	20	4
CH1OR1	Shape, Structure and Reactivity in Organic Chemistry	20	4
CH1PH1	Physical Processes and Molecular Organisation	20	4
CH1PRA	Laboratory Skills for Chemists	20	4

The following module is compulsory for students who do not have an A-level pass in Mathematics:

CH1M	Mathematics	20	4

The following module is compulsory for students who have an A-level pass at grade C-E in and
optional for those with a grade A-B:

CH1M2	Mathematics M2	10	4

Students who are required to take CH1M will not be able to select any other optional modules. Students who select module CH1M2 will have the option to select another module equalling 10 credits from
outside the department. Student who opt to take neither CH1M/CH1M2 will select other modules equalling 20 credits from outside the Department.

Part 2 Modules:

Module	Name	Credits	Level
CH2AN3	Analytical Chemistry	10	5
CH2CC2	Chemical Concepts and Skills 2	10	5
CH2IN1	Further Inorganic Chemistry	20	5
CH2OR1	Further Organic Chemistry	20	5
CH2PH1	Further Physical Chemistry	20	5
CH2PRAC	Extended Laboratory Skills for Chemists	30	5

Students must select a further 10 credits of optional credits at Part 2 from a list provided by the School
of Chemistry, Food & Pharmacy.

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

Students taking the 4 year version of the programme which includes the placement will take the following module between Parts 2 and 3:

CH3PIN	BSc Industrial Placement	120

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

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
CH3AN1	X-ray Techniques and Databases in Analytical Chemistry	10	6
CH3AN2	Advanced Analytical Techniques for Inorganic Structure Determination	10	6

CH3I1	d and f block chemistry	10	6
CH3I2	Clusters, Extended Arrays and Solid-State Chemistry	10	6
CH3O1	Advanced Organic Chemistry - Synthesis of Complex Targets	10	6
CH3O2	Advanced Organic Chemistry - Contemporary Synthetic Methodology	10	6
CH3P1	Advanced Topics in Physical Chemistry 1	10	6
CH3P2	Advanced Topics in Physical Chemistry 2	10	6

Students must select one of the following project modules at Part 3:

CH3PR	BSc Chemistry Project	40	6
Or			
ED3EDP	Chemistry Education Project	40	6

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. For textbooks and similar learning resources, we recommend that you budget between £50 to £150 a year. The core textbook(s), which most students normally purchase, cost(s) £65 new, and there may be other books/resources which you would find it convenient to buy. The core chemistry textbook is available in e-book format from the University library. Some books may be available second-hand, which will reduce costs. 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. Printing and photocopying facilities are available on campus at a cost of £0.05 per page. Costs will be, on average, £10 per year. As Chemistry is a practical subject, you will be provided with the relevant personal protective equipment at the outset of your course (laboratory coat and safety glasses). If you need to replace these
items, they can be purchased from the Chemistry laboratory technical staff: £10 for a laboratory coat and £2 for safety glasses. 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 2017.

Placement opportunities

You will 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, tutorials, workshops and laboratory classes. Assessment takes a variety of formats; tutorials are assessed by submission of written work prior to the date of the tutorial meeting, Laboratory classes are primarily assessed via a write-up of the laboratory work and results, lecture material for most modules is assessed via an end of year examination. You will also be assessed carrying out oral presentations, group work and team work exercises.

The contact hours for your Programme will be approximately 15 hours per week and will depend upon your module combination; however information about module contact hours can be located in the relevant module description.

Accreditation details

The Royal Society of Chemistry

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 0
(i) an average of at least 40% in modules totalling 120 credits; with
(ii) a maximum of 40 credits of these modules with a mark below 35% and a pass in the Academic Skills module
Passes are at three levels: Grade I with Distinction (70%), Grade I (60%) and Grade II (40%).
In order to progress from Part 0 to Part 1, a student must achieve a threshold performance; and
(iii) a Grade I pass(60%) in each of two 40 credit modules (CH0CHE Chemistry and BI0BF1 Biology);and
(iv) an average of at least 40% in the remaining two modules (BI0MF1 and FB0SSK) but with no module mark below 35%.
The achievement of a threshold performance at Part 0 qualifies a student for a Certificate in

Foundation Year Studies if he or she leaves the University before completing the subsequent Part.

Part 1
(i) obtain an overall average of 40% over 120 credits taken in Part 1; and
(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 a weighted average of 40% across all compulsory modules at Part 1; and
(iv) obtain marks below 40%, but at least 30%, in compulsory modules amounting to not more than 20
credits.
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; Part 3: two-thirds Placement/Study Abroad Year abroad not included in the classification

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 Chemistry with Foundation for students entering Foundation year in session 2017/18
22 July 2020