Template C4

Kingston University London

Programme Specification

Title of Course: *BSc (Hons) Chemistry*

Date first produced	31/08/2012
Date last revised	11/03/2025
Date of implementation of current version	01/09/2025
Version number	13
Faculty	Faculty of Health, Science, Social Care & Education
Cross-disciplinary	
School	School of Life Sciences, Pharmacy and Chemistry
Department	Department of Chemical & Pharmaceutical Sciences
Delivery Institution	Kingston University, London

This Programme Specification is designed for prospective students, current students, academic staff and employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes and content of each modules can be found in the course VLE site and in individual Module Descriptors.

SECTION 1: GENERAL INFORMATION

Award(s) and Title(s):	BSc (Hons) Chemistry
Exit Award(s) and Title(s):	Cert HE Chemistry Ordinary degree Chemistry Dip HE Chemistry
Course Code *For each pathway and mode of delivery*	UFCHE1CHE03
UCAS code *For each pathway*	F100

Award(s) and Title(s):	BSc (Hons) Chemistry (with Professional Placement)
Exit Award(s) and Title(s):	Cert HE Chemistry (with Professional Placement) Ordinary degree Chemistry (with Professional Placement) Dip HE Chemistry (with Professional Placement)
Course Code *For each pathway and mode of delivery*	USCHE1CHE45
UCAS code *For each pathway*	

Award(s) and Title(s):	BSc (Hons) Chemistry (with Foundation Year)
Exit Award(s) and Title(s):	Cert HE Chemistry (with Foundation Year) Ordinary degree Chemistry (with Foundation Year) Dip HE Chemistry (with Foundation Year)
Course Code *For each pathway and mode of delivery*	UFCHE1CHE55
UCAS code *For each pathway*	

Awarding Institution:	Kingston University
Teaching Institution:	Kingston University, London
Location:	Penrhyn Road
Language of Delivery:	English
Delivery mode:	Primarily campus based (up to 20% of scheduled L&T hours delivered online)

Learning mode(s):	With Professional Placement Full-time
Minimum period of registration:	With Professional Placement - 4 Full-time - 3
Maximum period of registration:	With Professional Placement - 8 Full-time - 6
Entry requirements	Kingston University typically uses a range of entry requirements to assess an applicant's suitability for our courses. Most course requirements are based on UCAS Tariff points, usually stipulated as a range, and are sometimes coupled with minimum grades in specific relevant subjects. We may also use interview, portfolio and performance pieces to assess an applicant's suitability for the course. We recognise that every person's journey to Higher Education is different and unique and in some cases we may take into account work experience and other non-standard pathways onto University level study. Additionally, all non-UK applicants must meet our English language requirements. Please see our course pages on the Kingston University website for the most up to date entry requirements
Regulated by	The University and its courses are regulated by the Office for Students
Programme Accredited by:	Royal Society of Chemistry (RSC)
Approved Variants:	There are no variants to the UR.
Is this Higher or Degree Apprenticeship course?	No

SECTION 2: THE COURSE

A. Aims of the Course

The main aims of the field taken by BSc students are:

- to provide students who take the Chemistry field with a broad knowledge of the main branches of the subject (organic, inorganic, physical and analytical chemistry)
- to provide exposure to other areas of the subject, such as environmental, medicinal and industrial or analytical chemistry, and to permit some degree of specialisation within these areas
- to develop subject related practical skills
- to enable students to develop their skills in independent study using both primary and secondary literature sources
- to provide students with the opportunity to develop their written and oral communication skills
- to prepare students for graduate employment (subject related or otherwise) or further study (either taught or by research) by developing their intellectual, problem solving, analytical and key (transferable) skills.

Additionally, for those students following the sandwich programme:

- to enable students to complete a period of work experience within the chemical industry, building upon their previous academic knowledge and experience
- to provide students with an insight into the role of the professional chemist by firsthand experience and to increase their awareness of career opportunities within the chemical industry

B. Programme Learning Outcomes

The programme learning outcomes are the high-level learning outcomes that will have been achieved by all students receiving this award. They have been aligned to the levels set out in ‘Sector Recognised Standards in England’ (OFS 2022).

Programme Learning Outcomes					
	Knowledge and Understanding On completion of the course students will be able to:		**Intellectual Skills** On completion of the course students will be able to		**Subject Practical Skills** On completion of the course students will be able to
A4	Demonstrate numerical and computational competence necessary for working in science, including the use of Artificial Intelligence (AI), for instance, as a tool to expedite information recovery or information synthesis.	B4	Work and study in an independent manner, be adaptable and selecting appropriate tools to achieve their goal in an efficient and timely manner.	C3	Plan a programme of laboratory work considering the cost and safety of the chemicals by carrying out a safety and risk assessment for it.
A3	Recognise how the core chemistry branches can be used in materials research, drug design and synthesis and process development, especially those that are related to the chemical industry	B3	Carry out and report the results of an individual project (or review) and critically evaluate and synthesise the work of others in a subject.	C2	Report on and draw conclusions from the results of laboratory work, being digitally literate: use of IT to calculate, format, reference and illustrate the work according to best practice in the area.
A2	Use synthetic & analytical experimental techniques competently and safely, informed by UN SDG to work as responsible chemists in various areas such as academia, industry or other commercial capacity.	B1	Critically analyse and appraise primary and secondary sources of information, where necessary, using multiple sources of information.	C1	Carry out preparative and analytical (both qualitative and quantitative) laboratory work in the main branches of chemistry
A1	Demonstrate knowledge and understanding of the three core	B2	Creatively solve problems in aspects of chemistry and the supporting numerical areas,	C4	Use a range of instrumentation and understand the technical basis for it, its applicability as

	branches of chemistry: inorganic, organic & physical.		bearing in mind concepts such as green chemistry, sustainability, and inclusion and diversity.		well as the limitations of a given technique to solve the problem at hand.
A5	Show the interpersonal and time management skills required to collaborate with colleagues to achieve organisational goals (Professional Placement route)	B5	Demonstrate awareness of the structure and function of the employing company/organization in relation to the scientific professional environment (Professional Placement route)	C5	Communicate effectively both orally and in writing by discussing and reflecting on their experience of working in a professional environment (Professional Placement route)

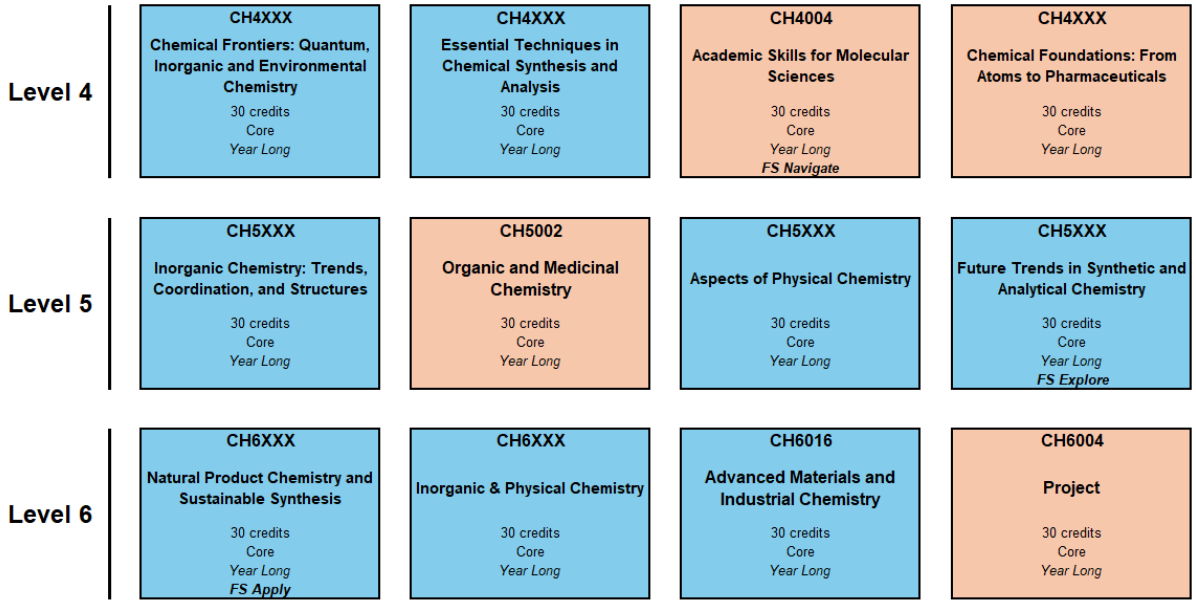
C. Future Skills Graduate Attributes

In addition to the programme learning outcomes, the programme of study defined in this programme specification will engage students in developing their Future Skills Graduate Attributes:

1. Creative Problem Solving
2. Digital Competency
3. Enterprise
4. Questioning Mindset
5. Adaptability
6. Empathy
7. Collaboration
8. Resilience
9. Self-Awareness

D. Outline Programme Structure

Course Structure Diagram



Key to colour coding: Blue Shading = Chemistry Only Module; Orange Shading = Shared Module (with Pharmaceutical Science)

Full details of each module will be provided in module descriptors and in the module canvas pages.
Future Skills (FS) will be delivered in an integrated approach to help students develop the graduate attributes listed previously. *Navigate* will be delivered in CH4004 Academic Skills for Molecular Sciences, *Explore* in CH5013 Future Trends in Synthetic and Analytical Chemistry and *Apply* will be delivered in CH6015 Natural Product Chemistry and Sustainable Synthesis.

For level 3 modules, see Programme Specification for Foundation Year in Science.

BSc (Hons) Chemistry

Level 4							
BSc (Hons) Chemistry							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Academic Skills for Molecular Sciences	CH4004	30	4	Year long		1	
Chemical Foundations: From Atoms to Pharmaceuticals	CH4010	30	4	Year long		1	
Chemical Frontiers: Quantum, Inorganic and Environmental Chemistry	CH4011	30	4	Year long		1	
Essential Techniques in Chemical Synthesis and Analysis	CH4012	30	4	Year long		1	

Exit Awards at Level 4

This course permits progression from level 4 to level 5 with 90 credits at level 4 or above. The outstanding 30 credits from level 4 can be trailed into level 5 and must be passed before progression to level 6.

Exit Awards at Level 4

Students exiting the course at this point who have successfully completed 120 credits at level 4 or above are eligible for the award of Certificate of Higher Education.

Level 5							
BSc (Hons) Chemistry							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**

Aspects of Physical Chemistry	CH5012	30	5	Year long		2	
Future Trends in Synthetic and Analytical Chemistry*	CH5004	30	5	Year long		2	
Inorganic Chemistry: Trends, Coordination, and Structures	CH5013	30	5	Year long		2	
ORGANIC AND MEDICINAL CHEMISTRY	CH5002	30	5	Year long		2	
Optional Modules							
Sandwich Year Placement	LS5000	120	5	Year long		3	

Exit Awards at Level 5

This course permits progression from level 5 to level 6 with 90 credits at level 5 or above. The outstanding 30 credits from level 5 can be trailed into level 6 and must be passed before consideration for an award.
Students who are registered on the professional placement route must successfully complete Levels 4 and 5, before undertaking a period of at least 36 weeks of supervised work experience.

Exit Awards at Level 5

Students exiting the programme at this point who have successfully completed 120 credits at level 5 or above are eligible for the award of Diploma of Higher Education

Level 6							
BSc (Hons) Chemistry							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Advanced Materials and Industrial Chemistry	CH6016	30	6	Year long		3	
Inorganic and Physical Chemistry	CH6013	30	6	Year long		3	
Natural Product Chemistry and Sustainable Synthesis	CH6015	30	6	Year long		3	

Project	CH6004	30	6	Year long		3	

Exit Awards at Level 6

Level 6 requires the completion of the core modules to achieve 120 credits at Level 6.
Students exiting the programme without completing the full 120 credits at level 6 but having successfully completed 60 credits at level 6 or above are eligible for the award of an Ordinary Degree.
Students exiting the programme with 120 credits at each level are eligible for the award of BSc (Hons) Chemistry.

BSc (Hons) Chemistry (with Professional Placement)

BSc (Hons) Chemistry (with Foundation Year)

E. Teaching, Learning and Assessment

This course uses a range of teaching and assessment methods which have been designed to support students' learning and achievement of the learning outcomes. The course has been developed with reference to the Kingston University Academic Framework which sets-out core principles relating to Course and Credit Structure (including Module delivery Structure and Pattern and Learning Hours and Learning Formats); Curriculum Design (inclusion Learning Design Principles and Inclusive Curriculum); and Future Skills.

Teaching and Learning on the course consist of Scheduled Learning and Teaching and Guided Independent Study (self-managed time). Scheduled Learning and Teaching includes the following, and the format for each module is set out in the module specification:

- Laboratory Sessions
- Lectures
- Seminars
- Tutorials
- Workshops
- Placements

Guidance for students on the use of independent study time is communicated through the 'Succeed in your module' section on the Canvas Virtual Learning Environment and through other communications during the course.

In addition to the core Scheduled Learning and Teaching activities for the course, the University may offer students additional optional opportunities for learning. Examples of these include Study abroad and Work-based learning.

The course will provide students with the opportunity to develop their knowledge and skills relating to at least two United Nations Sustainable Development Goals (UN SDGs). We are committed to empowering students with the knowledge, skills and opportunities to understand and address the UN SDGs: each course is thus also required to prepare students for at least two of the SDGs (not including Quality Education, which all courses must deliver).

F. Support for Students and their Learning

Students are supported through a range of services that provide academic and wider support. These include:

- A Module Leader for each module
- A Course Leader to help students understand the course structure
- Personal Tutors to provide academic and personal support
- Technical support to advise students on IT and the use of software
- Student Voice Committee – to ensure the views of students are heard
- Canvas – Kingston University's Virtual Learning Environment
- Student support facilities that can provide advice on issues such as finance, regulations, legal matters, accommodation, international student support
- Disabled student support
- The Kingston Students' Union
- Student Development and Graduate Success

G. Ensuring and Enhancing the Quality of the Course

The University has policies and procedures for evaluating and improving the quality and standards of its provision. These include:

- Continuous Monitoring of courses through the Kingston Course Enhancement Programme (KCEP)
- Student evaluation including Module Evaluation Questionnaires (MEQs), the National Student Survey (NSS)
- Internal and external moderation of graded assignments
- Periodic review undertaken at the subject level
- Re-accreditation by the Royal Society of Chemistry (every 6 years)

H. External Reference Points

- The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies: https://www.qaa.ac.uk/docs/qaa/quality-code/the-frameworks-for-higher-education-qualifications-of-uk-degree-awarding-bodies-2024.pdf
- QAA Subject Benchmark in Chemistry: https://www.qaa.ac.uk/docs/qaa/sbs/sbs-chemistry-22.pdf

- Royal Society of Chemistry: https://www.rsc.org
- Advance HE: https://www.advance-he.ac.uk

I. Development of Course Learning Outcomes in Modules

This table maps where programme learning outcomes are **summatively** assessed across the **core** modules for this course. It provides an aid to academic staff in understanding how individual modules contribute to the course aims, a means to help students monitor their own learning, personal and professional development as the course progresses and a checklist for quality assurance purposes.

Module Code		Level 4				Level 5					Level 6			
		CH4004	CH4012	CH4011	CH4010	LS5000	CH5013	CH5004	CH5012	CH5002	CH6015	CH6013	CH6004	CH6016
Knowledge & Understanding	A4	S		S					S	S	S			S/F
	A3	S	S				S	S				S		S/F
	A2	S		S					S	S		S	S	S
	A1								S		S			S/F
	A5	S		S			S				S	S		
Intellectual Skills	B4			S							S		S	
	B3		S									S		
	B1							S		S		S		S
	B2	S		S				S	S					S/F
	B5		S							S		S	S	
Practical Skills	C3	S		S			S			S	S	S		
	C2		S					S	S			S		S

	C1	S								S		S		S/F
	C4	S							S	S		S	S	S
	C5		S							S		S		

Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.

Additional Information