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**Programme Specification**

**Title of Course: BSc Pharmaceutical and Chemical Sciences (top-up year)**

**Date Specification Produced: May 2008**

**Date Specification Last Revised:** **August 2022**

This Programme Specification is designed for prospective students, current students, academic staff and potential 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 he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content of each module can be found in Student Handbooks and Module Descriptors.

**SECTION 1: GENERAL INFORMATION**

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| **Title:** |  |
| **Awarding Institution:** | Kingston University |
| **Teaching Institution:** | Kingston University |
| **Location:** | Penrhyn Road, Kingston University |
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**SECTION 2: THE PROGRAMME**

1. **Programme Introduction**

The BSc (Honours) Degree in Pharmaceutical and Chemical Sciences is offered as a one year full-time top-up to the Foundation Degree in Pharmaceutical and Chemical Sciences course, delivered over two semesters in an academic year. The BSc (Honours) top-up course is delivered at Kingston University. The foundation degree course was designed to support the attainment of a vocationally relevant foundation science degree, with available top up to BSc, or to facilitate further studies via MPharm, MPharmSci or MChem courses dependent upon which pathway students take through the second year of study. The foundation degree course taught students in areas that are relevant in both biological and chemical fields. A sound background in chemistry, maths and academic skills were developed at the start of the course. Thereafter, more complex chemistry was introduced as well as new areas in biology, microbiology and drug development. The students were also given a solid background in pharmacy processes. Students also undertook work-based components in their place of employment for one or two days per week. Work-based learning is to provide students with skills that can be used when finding work following on from studies. Students incorporated what was learnt during studies at the university and college in the work-based learning position and vice-versa. This component provides a third year “top up” to Honours programme, which is available to foundation degree graduates of the course

1. **Aims of the Programme**

The main aims of the BSc (Honours) degree (in addition to those of the Foundation Degree) are:

* to provide students with an in-depth understanding of topics relevant to pharmaceutical and chemical sciences
* to provide all students with the opportunities to develop their skills in searching for literature sources relating to specific areas of academic research.
* to develop critical thinking and problem solving through project work.
* to develop advanced practical skills related to specific subject areas
* to provide the students with the opportunities to develop their written and oral communications skills in order to be able to get across complex and detailed information to both specialist and non-specialist audiences.

1. **Intended Learning Outcomes**

The programme provides opportunities for students to develop and demonstrate knowledge, understanding and skills and other attributes in the following areas. On completion of the BSc(Honours) degree students will, in addition to the learning outcomes gained through the foundation degree programme, have gained an in depth knowledge and understanding of:

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| **Programme Learning Outcomes** | | | | | |
|  | **Knowledge and Understanding**  **On completion of the course students will (depending on optional modules taken) have specific subject knowledge and understanding from which will include:** |  | **Intellectual skills – able to:**  **On completion of the course students will be able to:** |  | **Subject Practical skills**  **Depending on the option modules chosen, on completion of the BSc(Honours) degree students will be able to perform practical tasks from the following list:** |
| A1 | Research methodology required for a project or dissertation and: | B1 | Locate, critically analyse and appraise both primary and secondary sources of information | C1 | Carry out subject related practical work and understand and implement relevant safety requirements |
| A2 | Drug development | B2 | solve complex problems | C2 | characterize active and inactive components of medicines |
| A3 | Topics in pharmaceutical sciences | B3 | plan, conduct and report on an independent project | C3 | understand the meaning of, and work effectively, to Good Laboratory and Manufacturing Practice |
| A4 | Advanced analytical science | B4 | assemble data from a variety of sources, discern and establish connections and report in an appropriate manner | C4 | understand relevant development and manufacturing processes |
|  |  |  | demonstrate the ability to be an independent autonomous learner | C5 | undertake a laboratory based research project or dissertation |
|  |  |  |  | C6 | Design and carry out experiments to measure and subsequently interpret data |
|  |  |  |  | C7 | Drug synthesis and spectroscopic characterization |

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| **Transferable/key skills** | | | | | |
|  | **Self Awareness Skills** |  | **Communication Skills** |  | **Interpersonal Skills** |
| AK1 | Take responsibility for own learning and plan for and record own personal development | BK1 | Express ideas clearly and unambiguously in writing and the spoken word (including CV writing) | CK1 | Work well with others in a group or team |
| AK2 | Recognise own academic strengths and weaknesses, reflect on performance and progress and respond to feedback | BK2 | Present, challenge and defend ideas effectively | CK2 | Work flexibly and respond to change |
| AK3 | Organise self effectively, agreeing and setting realistic targets, accessing support where appropriate and managing time to achieve targets | BK3 | Actively listen to ideas of others in an unbiased way | CK3 | Accept and respond to constructive feedback |
| AK4 | Work effectively without supervision in unfamiliar contexts |  |  |  |  |
|  | **Research and Information Literacy Skills** |  | **Numeracy** |  | **Management and Leadership Skills** |
| DK1 | Search for and select relevant sources of information and use it appropriately | EK1 | Handle and understand numbers as required for context | FK1 | Determine the scope of a task (or project) |
| DK2 | Apply the ethical and legal requirements in both the access and use of information | EK2 | Interpret and apply data to inform judgements | FK2 | Identify resources needed to undertake the task (or project) and to schedule and manage the resources. |
| DK3 | Accurately cite and reference information sources |  |  | FK3 | Evidence ability to successfully complete and evaluate a task (or project), revising the plan where necessary |
| DK4 | Use software and IT technology as appropriate |  |  | FK4 | Motivate and direct others to enable an effective contribution from all participants |
|  | **Creativity and Problem Solving Skills** |  |  |  |  |
| GK1 | View problems from a range of perspectives to find solutions to problems |  |  |  |  |
| GK2 | Work with complex ideas and justify judgements made through effective use |  |  |  |  |

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| **Teaching/learning methods and strategies** |
| A range of learning and teaching strategies be used and includes the following:   * Formal lectures * Practical classes * Demonstrations of equipment and techniques * Seminars and workshops * Case studies * Group work exercises * Tutorials * Blended learning * Work-based placements |
| **Assessment** |
| The assessment strategies employed in the Fields include the following:   * Written Examinations/Tests * Multiple Choice Tests * Essays * Posters * Oral Presentations * Reports * Case Studies |

In addition to the programme learning outcomes identified overleaf, the programme of study defined in this programme specification will allow

students to develop a range of Key Skills as follows:

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| **Key Skills** | | | | | | |
| **Self Awareness Skills** | **Communication Skills** | **Interpersonal Skills** | **Research and information Literacy Skills** | **Numeracy Skills** | **Management & Leadership Skills** | **Creativity and Problem Solving Skills** |
| Take responsibility for own learning and plan for and record own personal development | Express ideas clearly and unambiguously in writing and the spoken work | Work well with others in a group or team | Search for and select relevant sources of information | Collect data from primary and secondary sources and use appropriate methods to manipulate and analyse this data | Determine the scope of a task (or project) | Apply scientific and other knowledge to analyse and evaluate information and data and to find solutions to problems |
| Recognise own academic strengths and weaknesses, reflect on performance and progress and respond to feedback | Present, challenge and defend ideas and results effectively orally and in writing | Work flexibly and respond to change | Critically evaluate information and use it appropriately | Present and record data in appropriate formats | Identify resources needed to undertake the task (or project) and to schedule and manage the resources | Work with complex ideas and justify judgements made through effective use of evidence |
| Organise self effectively, agreeing and setting realistic targets, accessing support where appropriate and managing time to achieve targets | Actively listen and respond appropriately to ideas of others | Discuss and debate with others and make concession to reach agreement | Apply the ethical and legal requirements in both the access and use of information | Interpret and evaluate data to inform and justify arguments | Evidence ability to successfully complete and evaluate a task (or project), revising the plan where necessary |  |
| Work effectively with limited supervision in unfamiliar contexts |  | Give, accept and respond to constructive feedback | Accurately cite and reference information sources | Be aware of issues of selection, accuracy and uncertainty in the collection and analysis of data | Motivate and direct others to enable an effective contribution from all participants |  |
|  |  | Show sensitivity and respect for diverse values and beliefs | Use software and IT technology as appropriate |  |  |  |

1. **Entry Requirements**

The minimum entry qualifications for the programme are:

Pass in Foundation Degree in Pharmaceutical and Chemical Sciences

1. **Programme Structure**

This programme is offered in full-time mode, and leads to the award of BSc (honours) in Pharmaceutical and Chemical Sciences. Entry is normally at level 6 with a pass in Foundation Degree in Pharmaceutical and Chemical Sciences.

**E1. Outline Programme Structure**

Each level is made up of four modules each worth 30 credit points. Typically a student must complete 120 credits at each level. All students will be provided with the University regulations and specific additions that are sometimes required for accreditation by outside bodies (e.g. professional or statutory bodies that confer professional accreditation). Full details of each module will be provided in module descriptors and student module guides.

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| **Level 6** | | | | | |
| **Compulsory modules** | **Module code** | **Credit**  **Value** | **%**  **Written exam** | **% practical exam** | **%**  **course-work** |
| Project | CH6004 | 30 |  |  | 100 |
| Advanced Analytical Science | CH6007 | 30 | 60 |  | 40 |
| Drug Development | CH6008 | 30 | 60 |  | 40 |
| Topics in Pharmaceutical Science | CH6009 | 30 | 60 |  | 40 |
|  | | | | | |

**Principles of Teaching Learning and Assessment**

1. **Support for Students and their Learning**

All BSc students will be supported in their study, taking into account the KU Curriculum Design Principles. The course utilises a wide range of teaching and learning methods that will enable all students be actively engaged throughout the course. A variety of teaching will be used to engage students in their learning, from lectures to workshops. Group work will be actively promoted, to help in peer learning. Practical sessions will help to implement theory taught in lectures. The workshops will allow for more one-on-one teaching between staff and students. Blended learning will again engage students and help identify areas for further study. A range of assessment methods will be used that enable students to demonstrate the acquisition of knowledge and skills. Methods include course work, oral presentations, in-class tests, MCQs, examinations, laboratory reports and poster presentations. The assessment regime will again be tailored to suit the learning outcomes of the modules. Both formative and summative assessment will be used.

The following highlights specific areas aimed to aid students in their learning:

* A Module Leader for each module
* A Course Leader to help students understand the programme structure
* Personal Tutors to provide academic and personal support
* Technical support to advise students on IT and the use of software
* A designated programme administrator
* An induction week at the beginning of each new academic session
* Canvas – a versatile on-line interactive intranet an learning environment
* A substantial Study Skills Centre that provides academic skills support
* Student support facilities that provide advice on issues such as finance, regulations, legal matters, accommodation, international student support etc.
* Disabled student support
* Union of Kingston Students
* Careers and Employability Service and Student Life Centre

1. **Ensuring and Enhancing the Quality of the Course**

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

* Student Voice Committee
* External examiners
* Boards of study with student representation
* Annual review and development
* Periodic review undertaken at the subject level
* Student evaluation
* Moderation policies

1. **Employability Statement**

The BSc in Pharmaceutical and Chemical Sciences is specifically designed with employability in mind. Students have had time set aside to engage in work-based placements during their first two years of study. There is no emphasis on the nature of the work itself, but rather on all aspects associated with work, such as time-keeping and professionalism. Students were aided in finding work both in and out of the course by a Level 4 module, Academic and Professional Skills Portfolio. Here, all students were aided in their development of and the continuous amendment of their CV, writing cover letters and identifying areas for employment. Students are continuously aided by the Careers and Employability department.

1. **Approved Variants from the Undergraduate Regulations.**

None

1. **Other sources of information that you may wish to consult**

General Pharmaceutical Council

[www.pharmacyregulation.org](http://www.pharmacyregulation.org)

Royal Pharmaceutical Society

[www.rpharms.com/](http://www.rpharms.com/)

Kingston University School of Pharmacy and Chemistry

<http://sec.kingston.ac.uk/about-SEC/schools/pharmacy-and-chemistry/>

**Development of Programme Learning Outcomes in Modules**

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

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|  |  |  | **Level 6** | | | |
|  | **Module Code** |  | CH6004 | CH6007 | CH6008 | CH6009 |
| **Programme Learning Outcomes** | **Knowledge & Understanding** | A1 | S/F |  |  |  |
|  | A2 |  | S/F |  |  |
|  | A3 |  |  | S/F |  |
|  | A4 |  |  |  | S/F |
|  |  |  |  |  |  |
| **Intellectual Skills** | B1 | S/F | S/F | S/F | S/F |
| B2 | S/F | S/F | S/F | S/F |
| B3 | S |  |  |  |
| B4 | S/F |  |  | S/F |
| **Practical Skills** | C1 | S/F | S/F | S/F | S/F |
| C2 |  | S | S | S |
| C3 | F | F |  | S |
| C4 |  | S/F | S/F |  |
| C5 | S |  | S/F | S/F |
| C6 | S |  |  |  |
| C7 |  |  | S |  |
| **Transferable Skills** | AK1 | S |  |  |  |
| AK2 | S/F | F | F | F |
| AK3 | F |  |  |  |
| BK1 | S | S | S | S |
| BK2 | S |  |  |  |
| BK3 | F | F | F | F |
| CK1 |  | F |  |  |
| CK2 | F |  |  |  |
| CK3 | F |  | F |  |
| DK1 | S/F |  |  |  |
| DK2 | S/F |  |  |  |
| DK3 | S | S | S | S |
| DK4 | S | S | S | S |
| EK1 | S/F | S/F | S/F | S/F |
| EK2 | S | S | S | S |
| FK1 | S/F |  |  |  |
| FK2 | F | F | F | F |
| FK3 | S/F |  |  |  |
| FK4 |  | F |  |  |
| GK1 | S/F | S/F | S/F | S/F |
| GK2 | S/F | S/F | S/F | S/F |

**S**  indicates where a summative assessment occurs.

**F** where formative assessment/feedback occurs.

**Indicative Module Assessment Map**

This map identifies the elements of assessment for each module. Course teams are reminded that:

* There should be no more than three elements of assessment per module
* There should be no more than one formal examination per module.
* Synoptic assessments that test the learning outcomes of more than one module are permitted

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| **Module** | | | | | **Coursework** | | | |  | **Examination** | |  |
| **Level** | **Module Name** | **Module code** | **Credit value** | **Core/**  **option** | **Type of coursework** | **Word Length** | **Weighting %** | **Summative/**  **Formative** | **Written/**  **practical** | **Duration** | **Weighting%** | **Summative/**  **Formative** |
| 6 | Project | CH6004 | 30 | Core | Project proposal  Library workbook  Oral presentation  Poster presentation  Final report  Log book | All variable | 15  5  10  10  40  20 | S  S  S  S  S  S |  |  |  |  |
| 6 | Advanced Analytical Science | CH6007 | 30 | Core | Assignments  Various assessments and workshops | Variable | 40  n/a | S  F | Written | 3 h | 60 | S |
| 6 | Drug development | CH6008 | 30 | Core | Written assignment  Practical reports  Online MCQ test/open-learning resources | Variable  Variable  n/a | 20  20  n/a | S  S  F | Written | 3 h | 60 | S |
| 6 | Topics in Pharmaceutical Science | CH6009 | 30 | Core | Assignments (including practical reports/assessments/workshops  Workshops/MCQ tests | Variable  n/a | 40  n/a | S  F | Written | 3 h | 60 | S |

**Technical Annex**

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| **Final Award(s):** | BSc (honours) in Pharmaceutical and Chemical Sciences |
| **Intermediate Award(s):** | None |
| **Minimum period of registration:** | 3 years |
| **Maximum period of registration:** | 6 years |
| **FHEQ Level for the Final Award:** | 6 |
| **QAA Subject Benchmark:** | Foundation Degree Qualification Benchmark |
| **Modes of Delivery:** | Full time taught |
| **Language of Delivery:** | English |
| **Faculty:** | Health, Science, Social Care and Education |
| **School:** | Life Sciences, Pharmacy and Chemistry |
| **JACS code:** | F190 |
| **UCAS Code:** | F190 |
| **Course Code:** | UFPCT1PCT01 |
| **Route Code:** | UFPCT1PCT01 |
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