

# Programme Specification

# Title of Course: BSc Advanced Pharmaceutics (top-up year)

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| Version number | 1.0 |
| Faculty | HSSCE |
| School | LSPC |
| Department | Pharmacy |
| Delivery Institution | Kingston University |

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 module can be found in the course VLE site and in individual Module Descriptors.

## SECTION 1: GENERAL INFORMATION

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| --- | --- |
| Award(s) and Title(s): | **BSc Advanced Pharmaceutics (top-up) Hons** |
| Intermediate Awards(s) and Title(s): | **none** |
| FHEQ Level for the Final Award: | **Level 6** |
| Awarding Institution: | Kingston University |
| Teaching Institution: | Kingston University |
| Location: | *Penrhyn Road Campus* |
| Language of Delivery: | *English* |
| Modes of Delivery: | *Full time,* |
| Available as: | *top up* |
| Minimum period of registration: | *FT 1 year* |
| Maximum period of registration: | *FT 2 years* |
| Entry Requirements: | Completion of FD Pharmaceutical and Chemical Sciences (Pre-Pharmacy) |
| Programme Accredited by: | *The module “Regulatory Affairs in Pharmaceutical Science” is accredited by TOPRA* |
| QAA Subject Benchmark Statements: | The programme outcomes are referenced to the QAA subject benchmarks and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2022), and relate to all students. <https://www.qaa.ac.uk/the-quality-code/subject-benchmark-statements/chemistry> |
| Approved Variants: |  |
| UCAS Code: |  |

For Higher or Degree Apprenticeship proposals only (delete if not applicable)

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| Recruitment, Selection and Admission process: | Pass in Foundation Degree in Pharmaceutical and Chemical Sciences, or pass 2nd year MPharm programme but not meeting the progression requirements onto level 6 MPharm |
| End Point Assessment Organisation(s): |  |

## SECTION 2: THE COURSE

### Aims of the Top-up year

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

* To provide comprehensive understanding of principles and practices of pharmaceutical formulation and drug delivery with a focus on the development and characterisation of advanced dosage forms including small biologics.
* To provide students with an in-depth knowledge and understanding of core national and international pharmaceutical regulatory affairs and their application in pharmaceutical manufacturing.
* To help students acquiring knowledge and skills necessary to develop and evaluate novel dosage forms for various therapeutic applications.
* 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 provide the students with the opportunities to develop their written and oral communications skills to be able to get across complex and detailed information to both specialist and non-specialist audiences.

### 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:

### 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 |
| A1 | Demonstrate a comprehensive knowledge of the core areas of pharmaceutical science including advanced formulations, and drug delivery. | B1 | Critically analyse and appraise both primary and secondary sources to test hypotheses, design experiments, and interpret results | C1 | Formulate and design various drug delivery systems. |
| A2 | Appraise pharmaceutical approaches for preventing and treating diseases, including complications related to them, from both a clinical and pharmaceutical viewpoint. | B2 | Apply critical thinking and problem-solving skills, to analyse and evaluate complex scientific data and make informed decisions. | C2 | Carry out COSHH safety assessments for any experiment and perform laboratory techniques safely, sustainably and effectively. |
| A3 | Competently and safely use a variety of modern scientific instruments techniques specific to areas of pharmaceuticals. | B3 | Plan and execute research projects efficiently and demonstrate the ability to be independent, autonomous learners who have effective time management and organisation skills. | C3 | Plan, conduct and report on complex experiments, research project and Marketing authorisation application (MAA). |
| A4 | Demonstrate a good knowledge of the regulations applicable to the development, testing and marketing of pharmaceutical products. Interpret and use relevant guidelines for example those from the ICH, EMA, and MHRA | B4 | Assemble data from a variety of sources and discern and establish connections and contradictions. | C4 | Navigate the drug development process and apply the regulatory requirements for drug development processes. |

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 listed in the following Graduate and Academic Success Framework:

### Key Skills

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Self-Awareness Skills | Communication Skills | Digital and numerical skills | Interpersonal skills | Research Skills | Management and Leadership | Creativity and problem-solving skills |
| Take responsibility for own learning and plan for and record own personal development | Synthesise information to express ideas clearly in writing and the spoken word to diverse and multiple audiences | Handle and understand number as required for context | Work well with others in a group or team | Identify and use effective ways to search and validate information | Seek opportunities to initiate and determine the scope of a task/project | View problems from a diverse range of perspectives to find solutions |
| Recognise own academic strengths and weaknesses, reflect on performance and progress and respond to feedback | Present, challenge and defend ideas effectively | Summarise and visualise numerical data | Work flexibly and respond to change | Critically evaluate information and use it appropriately | Seek opportunities to identify and secure resources needed to undertake the task/project; efficiently schedule and manage the resources | Seek opportunities to address global and long-term challenges |
| Organise self effectively, agreeing and setting realistic targets, accessing support where appropriate and managing time to achieve targets | Actively listen to ideas of others in an unbiased way | Navigate, interact and contribute effectively, safely and legally with various digital platforms, including the web | Discuss and debate with others and make concessions to reach agreement | Apply the ethical requirements in both the access and use of information | Seek opportunities to set the direction, successfully complete and evaluate a task/project, revising the plan where necessary | Imagine, create and exploit solutions and more abstract ideas, including experimentation and risk-taking |
| Work effectively without supervision in unfamiliar contexts |  | Use personal and professional digital tools and environments | Give, accept and respond to constructive feedback | Comply with legal requirements in both the access and use of information | Seek opportunities to motivate and direct others to enable an effective contribution from all diverse participants | Work with complex ideas and problems, making evidence-based recommendations |
|  |  | Use technologies to effectively communicate and collaborate across dispersed/global teams. | Show sensitivity and respect for diverse values and beliefs | Accurately cite and reference information Sources |  | Enterprise skills (ability to anticipate, identify, and grasp opportunities) |
|  |  |  |  |  |  | Commercial acumen |

### Outline Programme Structure

This level is made up of four modules each worth 30 credit points. Full details of each module will be provided in module descriptors and student module guides on Canvas.

### Level 6

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Core modules | Module code | Credit  Value | Level | Teaching Block |
| Infection, Immunology, Haematology, and Cancer | PY6xxx | 30 | 6 | TB1 and TB2 |
| Regulatory affairs | CH6400 | 30 | 6 | TB1 and TB2 |
| Advanced formulations and drug delivery systems | PY6xxx | 30 | 6 | TB1 and TB2 |
| Research Project | PY6xxx | 30 | 6 | TB1 and TB2 |

## All modules need to be passed for the BSc award.

## Principles of Teaching, Learning and Assessment

The core programme and pathway comprising this top-up year have been designed to take account of the KU Curriculum Design Principles. The top-up year utilises a wide range of teaching and learning methods that will enable all students to be actively engaged throughout the year. The top-up year has traditionally had a diverse cohort of students, attracting students of different educational background, age, gender, race, religion, sexual orientation and disability. As a result, the curriculum has been designed to be as inclusive as possible. Teaching and learning methods are carefully crafted to suit the content and the learning outcomes of each specific module. Typically, this involves using lectures to ensure that students have the key theoretical knowledge relating to the module before using strategies that allow the students to apply this knowledge in a variety of ways. Through group and seminar work, practical and laboratory sessions students are then able to develop more individual interests and personal and key skills. A blended learning approach will be adopted to cater for the learning needs of each individual student wherever possible.

A range of assessment methods will be used that enable students to apply problem solving, and critical analysis skills. Methods include oral presentations, in-class tests, MCQs, examinations, laboratory reports and poster presentations, peer marking as well as informal Q and A in each learning setting. The assessment regime for each module has been designed to provide formative opportunities that allow students to practice and to receive feed forward on their performance in preparation for the summative assessment. Care will be taken to avoid assessment bunching.

In line with university policy, feedback is provided to students on all forms of assessment including formal examinations. The return dates of marked coursework are published in all module guides. Many modules in the top-up year have an assessment component comprised of a collection of small coursework elements, such as practical reports. Continual review of these assessment elements is performed to ensure that students get feedback on one piece before doing the next and that the summative assessment burden is not so great to prevent students being engaged with the formative assessment opportunities offered in modules.

Such coursework assessment will complement the testing of knowledge and skills in examination settings. The examinations themselves will also be presented in a variety of modes, ranging from calculations, problem solving and data analysis to MCQs and essay-type long answers. MCQs will be designed to test the same knowledge, concepts and problem-solving abilities that will be assessed by short answer questions (SAQs) and long answers in examinations.

Research informs the teaching delivered as many staff are active in pursuing their own research activities. Additionally, professionally registered staff have obligations to undertake continuing professional development requiring that they are up to date with the latest innovations in their field. Lecturers will bring these new developments into their classes. Additionally, all staff members at Kingston University run projects in their areas of expertise and give first hand instruction on research methods.

All student are required undertake a project that enables them to apply and exhibit the knowledge and skills acquired during their course of study. The allocation of supervisors for Projects and Dissertations is done by the Module Leader, balancing students’ preference, the supervisor's expertise and the supervisor's workload. By undertaking this project, students can develop and improve their research skills, obtain practical experience that is pertinent to a variety of employment opportunities, and establish a foundation for further study if they choose to pursue it. As the project requires extensive laboratory-based research, students will gain several skills necessary for succeeding in scientifically oriented professions.

E-technology plays an important role in enhancing learning and teaching throughout the top-up year. Canvas, for example, is a virtual learning environment that allows students to access lecture notes, assessments, screencasts, practical videos. The use of Turnitin allows students to recognise the dangers of plagiarism.

Throughout this course, students will advance their proficiency in the Future skills taught in the Pharmaceutical and Chemical Sciences Foundation Degree through Apply workshops and associated activities. They will also revisit the graduate attributes and examine their broader context beyond the university. Moreover, students will have a chance to apply the knowledge and skills they acquired in the Foundation degree pertaining to future skills and graduate attributes.

The personal tutor scheme was developed to enhance both a student’s learning  
experience at Kingston University, but also to enhance employability skills and self-  
awareness. students will be expected to work with their personal tutors to prepare a good quality CV ready for sending out to potential employers. The personal tutor scheme is also designed to encourage communication between students and one member of staff throughout their time at Kingston University.

## Support for Students and their Learning

Students are supported by:

* 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 and learning environment.
* Student Voice Committee.
* Academic Success 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.
* Mock interviews.
* Apply workshops to support students in their learning.

## 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:

* External examiners
* School Education Committee with student representation
* Annual Monitoring and Enhancement
* Continuous Monitoring of courses through the Kingston Course Enhancement Programme (KCEP+)
* Student evaluation including Module Evaluation Questionnaires (MEQs), level surveys and the National Student Survey (NSS)
* Moderation policies
* Feedback from employers

## Employability and work-based learning

The core programmes comprising the advanced pharmaceutics year are specifically tailored to equip students to work in one of the many roles that exist in the pharmaceutical industry and related areas of the public sector.

Work-based learning can take many forms, including internships and industry-sponsored research projects. These opportunities allow students to apply the knowledge and skills they have learned in the classroom to real-world situations and gain hands-on experience. This type of learning is beneficial as it helps students to develop the skills that are essential for success in the pharmaceutical industry such as teamwork, communication, problem-solving, and critical thinking.

The research project module builds skills to make students reflect on and develop the attributes that employers seek in graduates. These include independent learning, time management skills, verbal and written communication skills. A number of these skills are also developed through group work and presentations in other modules. This top up year has been designed to cater to the current competencies needed by the pharmaceutical sector, with a focus on advanced formulations, delivery systems for small biologics, Quality by Design (QbD), and regulatory compliance as key areas of emphasis in this crucial field. Entrepreneurship and business development is one of Kingston’s University values, through this top year, students can learn about developing new products and services in the field. An essential role of the personal tutor system is to encourage students to develop such skills.

**Work-based learning, including sandwich courses and higher or degree apprenticeships**

Work placements are actively encouraged – although it is the responsibility of individual students to source and secure such placements. This allows students to reflect upon their own personal experience of working in an applied setting, to focus on aspects of this experience that they can clearly relate to theoretical concepts and to evaluate the relationship between theory and practice.

## Other sources of information that you may wish to consult

The Academy of Pharmaceutical Sciences

https://www.apsgb.co.uk/

Royal Pharmaceutical Society

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

Kingston University School of Pharmacy and Chemistry

[School of Life Sciences, Chemistry and Pharmacy - Kingston University London](https://www.kingston.ac.uk/faculties/faculty-of-health-social-care-education/schools/school-of-life-sciences-chemistry-pharmacy/)

## Development of Course Learning Outcomes in Modules

This table maps where course learning outcomes are **summatively** assessed across the 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.

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| --- | --- | --- | --- | --- | --- |
|  |  | **Level 6** | | | |
|  | **Module code** | PY6xxx  Infection, Immunology, Haematology, and  Cancer | PY6xxx  Pharmaceutical regulatory affairs | PY6xxx  Advanced formulations and drug delivery systems | PY6xxx  Research project |
| **Knowledge & Understanding** | A1 |  | S | S | S |
|  | A2 | S |  |  |  |
|  | A3 |  |  | S | S |
|  | A4 | S | S | S | S |
| **Intellectual Skills** | B1 | S | S | S | S |
|  | B2 | S |  | S | S |
|  | B3 | S | S | S | S |
|  | B4 | S | S | S | S |
| **Practical Skills** | C1 |  |  | S | S |
|  | C2 |  |  |  | S |
|  | C3 | S |  | S | S |
|  | C4 |  | 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.**