Template C4

Programme Specification

Title of Course: *FdSc Pharmaceutical and Chemical Sciences (Pre-Pharmacy)*

Date first produced	01/02/2008
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Version number	16
Faculty	Faculty of Health, Science, Social Care & Education
School	School of Life Sciences, Pharmacy and Chemistry
Department	Department of Chemical & Pharmaceutical Sciences
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 modules can be found in the course VLE site and in individual Module Descriptors.

SECTION 1: GENERAL INFORMATION

Award(s) and Title(s): ***Up to 10 pathways***	FdSc Pharmaceutical and Chemical Sciences (Pre-Pharmacy)
Intermediate Awards(s) and Title(s): ***There are 4 Intermediate awards for each pathway***	Cert HE
Course Code ***For each pathway and mode of delivery***	
UCAS code ***For each pathway***	Pharmaceutical & Chemical Sciences FdSc (Pre-Pharmacy)UCAS Code: F190UCAS tariff points72GCE A-LevelsSubjects requiredMinimum GradesOther commentsA minimum 72 points from 2 A levels. Chemistry and at least one other science (Maths, Physics or Biology) A2 Chemistry Grade D and A2 Biology (preferred), Maths or Physics. AS Biology is required Grade D if not taken at A level.General Studies, Key Skills and Critical Thinking not accepted.Tariff points for AS levels are not included in the total. Biology at AS required if it is not carried forward to A2. BTEC Nationals(Diploma/Extended Diploma)Specific Course(s)Minimum GradesOther commentsBTEC Diploma appropriate subjectsMMM BTEC Award and Certificate are not accepted. Access to HE Course (QAA validated)Specific Course(s)Minimum GradesOther commentsAccess Course 45 credits at level 3 + 15 credits at level 2Access to Healthcare is not accepted. International BaccalaureateSpecific Course(s)Minimum GradesOther comments28 points overall with: 4 in Chemistry, Maths and Biology (All HL) + English (SL)European Baccalaureate is also accepted, please contact admission team.Certificate of HESpecific Course(s)Minimum GradesOther commentsBiology and chemistry to be core subjects50% overall + 50% in all chemistry modulesGCSE subjectsSubjects requiredMinimum GradesOther commentsEnglish languageMathsC/Grade 4C/Grade 4Minimum of 5 subjects at minimum grade C/Grade 4Scottish qualificationsAdvanced Highers are equivalent to A levels and Highers are equivalent to AS levels - A level entry requirements must be met.Irish Leaving CertificateFrom Higher Levels: minimum grade C3 in Chemistry + Biology + another science subject (Maths or Physics). In addition, if no GCSEs in English Language, then IELTs 6.5 (with a minimum of 6 in each category) in required.

RQF Level for the Final Award:	

Awarding Institution:	Kingston University
Teaching Institution:	Kingston University
Location:	Kingston University
Language of Delivery:	English
Modes of Delivery:	Full-time
Available as:	Full field
Minimum period of registration:	Full-time - 2
Maximum period of registration:	Full-time - 4
Entry Requirements:	n/a
Programme Accredited by:	General Pharmaceutical Council (GPhC)
QAA Subject Benchmark Statements:	Pharmacists' initial education and training of pharmacists' standards: https://www.pharmacyregulation.org/initial-training and 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:	All students are subject to Fitness to Practice regulations in addition to the University Students Disciplinary rules. **For Pharmacy transfer:** To pass onto level 5 MPharm: Each element of assessment in each of the level 4 and 5 modules must be passed as a requirement. All modules and credits need to be passed to progress from one level to another. Students cannot progress from one level to another while trailing assessments of a 30 credit or zero credit module to the next level. In addition, to pass onto level 5 MPharm you must also pass or complete the following: • o Interview (this is conducted at point of transfer for those admitted pre-September 2024. Those admitted in September 2024 would be interviewed at point of admission onto the foundation degree) o Calculations test

	○ OSCE ○ Four days placement in total across level 4 and 5 and e-portfolio ○ Inter-professional education activity ○ Code of conduct ○ Satisfactory DBS check and Health Check ○ Meet Attendance threshold (see below) The OSCE and Calculation test will be run in level 5 of the Foundation Degree. The pass mark will be standard set. These assessments will be synoptic and only two attempts will be permitted with no opportunity for repeat. These assessments will be a part of a separate assessment component in one of the Foundation Degree (FD) modules at level 5 (PY5100 the Portfolio module), as a requirement for MPharm progression. As the OSCE assessment is where competence is being assessed within a specified time, no extra time for each station will be permitted, although other reasonable adjustments, e.g., large font papers, coloured filters, etc. will be provided. Failure to achieve the required level will mean FD students will progress on the FD as per Undergraduate Regulations but will not be permitted to transfer to the MPharm. Students who have repeated more than 60 credits during the foundation degree programme are not permitted to transfer to the MPharm programme. Furthermore, students who have retaken more than 120 credits during the foundation degree programme are not permitted to transfer to the MPharm Programme. Compensation: No compensation is permitted due to PSRB requirements. Attendance threshold: A minimum standard of 70% attendance is expected across each module for level 4 and 5 of the Foundation Degree. This is across all components of the modules, including lectures, workshops, practicals and seminars. This will be monitored by the module leader. Attendance will be monitored through electronic (SEATS) or paper registers. A student who does not meet the attendance standard for a module will be set a reassessment related to the module(s) material that they missed through non-attendance. The assessment will be marked as pass/fail. Where it is not possible to design a reassessment by retake which will allow students to demonstrate achievement of the module

	learning outcomes, a repeat will be agreed or removal from the MPharm route and transfer to BSc in advanced pharmaceutics top up route. All variants are to satisfy GPhC accreditation requirements and to ensure that students show sufficient knowledge and skills in the professional practice area to be fit to enter foundation year on graduation for those students wishing to pursue Pharmacy after the Foundation Degree.
Is this Higher or Degree Apprenticeship course?	

For Higher or Degree Apprenticeship proposals only	
Higher or Degree Apprenticeship standard:	n/a
Recruitment, Selection and Admission process:	n/a
End Point Assessment Organisation(s):	n/a

SECTION 2: THE COURSE

A. Aims of the Course

The Foundation Degree in Pharmaceutical and Chemical Sciences (Pre-Pharmacy) is offered as a two-year full-time foundation degree course, delivered over 4 modules per academic year.
This course is designed to support the attainment of a vocationally relevant foundation science degree, with available top up to BSc, or to facilitate further studies via Master of Pharmacy. The Foundation Degree has been accredited to allow students who graduate from the Foundation Degree to enter directly into the second year of the Pharmacy course. The course teaches students in areas that are relevant to pharmacy practice and associated professional standards. A sound background in chemistry, maths, academic and employability skills are developed at the start of the course in addition to basic body physiology, microbiology and basic pharmaceutics. Thereafter, the course focuses on the legal and ethical framework of pharmacy, the physiology of body systems and the foundation of diagnostic tests, the role of pharmacist within the community setting, including counter prescribing for minor ailments and health promotion, in addition to advanced pharmaceutics. The course also embeds experiential learning opportunities to build students competencies and skills.
In common with all foundation degrees, a third year “top up” to Honours programme is available to graduates of the course to gain a BSc (hons) Advanced Pharmaceutics.
The main aims of the foundation degree are:

- Provide the students with fundamental understanding of how bioavailability, pharmacokinetics, physical-chemical principles and techniques, including sustainable laboratory practices, are used in designing and formulating various types of pharmaceutical dosage forms with a focus on routes of administration.
- Give the students the basic knowledge and understanding of the core professional standards and processes relevant to their placement at community pharmacies.
- Provide student with a comprehensive knowledge of organic reaction mechanisms and their relevance in the synthesis of medicines and associated subject related practical skills.
- Introduce where relevant, priorities of patient welfare, safeguarding, confidentiality, inclusivity, consent, information governance in the health care profession related to pharmacy.
- Enable students to evaluate the cellular and physiological mechanisms of the human body and its regulation while developing the ability to apply theoretical principles in diagnosing patient health and disease pathophysiology.
- Impart a comprehensive introduction to the fundamentals of cell biology, with a specific focus on human physiology and the pathological microorganisms.
- Facilitate experiential learning that allows students to apply and demonstrate their future skills, while also maintaining a portfolio to document their newly acquired competencies.
- Cultivate the development of students' reflective skills enabling them to engage and plan their personal and professional growth.
- Nurture collaborative learning with effective team working and communication skills with patients and across health care professions.
- Equip the students with the knowledge to develop their written and oral communications skills.

- Prepare students for enhanced employment skills and handle challenges by developing an entrepreneurial mindset, empathy, critical thinking, and problem-solving skills.

B. Intended Learning Outcomes

The course outcomes are referenced to the relevant QAA subject benchmarks indicated and the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2022), and relate to the typical student. The course provides opportunities for students to develop and demonstrate knowledge and understanding specific to the subject, key skills and graduate attributes in the following areas:

The programme learning outcomes are the high-level learning outcomes that will have been achieved by all students receiving this award. They must align to the levels set out in the '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
A5	Apply the underling principals of anatomy, cell biology, physiology and pharmacology to better understand diseases progression and treatment while being able to explain the physiological and practical principles that underpin the diagnostic tests used to monitor patient health	B4	Demonstrate the use of graduate attributes to explore problems within the context of pharmacy.	C5	Evaluate the aetiology and treatment of various diseases when dealing with case scenarios.
A4	Describe basic and fundamental concepts underlying drugs bioavailability and pharmacokinetic in determining drug action and side effect.	B2	Assemble data from a variety of sources and discern and establish connections.	C4	Apply chemical, biological, physical and mathematical concepts to inform basic drug formulation.
A3	Recognise the drug development process and basic knowledge of pre-formulation, formulation stages and large-scale production.	B1	Demonstrate multidisciplinary and inclusive working, effective leadership, professional judgement.	C3	Develop an academic and professional skills portfolio.
A2	Apply chemical and physical principles to the design and formulation of dosage forms, and to recognise the importance of key concepts in physiology and microbiology relevant to healthcare.	B3	Demonstrate the ability to be an independent autonomous learner.	C2	Develop subject related practical work, recognise and implement relevant safety and sustainable requirements.
A1	Possess and apply appropriate professional skills including knowledge of laws, sustainable approaches, ethics governing the supply of medicines and effectively interacting with patients as part of a	B5	Critically analyse and appraise both primary and secondary sources of information.	C1	Apply a communication framework to demonstrate patient centred interactions.

	multidisciplinary team to promote health.				
A6	Identify molecules of medicinal relevance and assess the structure activity relationship.				

In addition to the programme learning outcomes, the programme of study defined in this programme specification will allow students to develop the following range of 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

C. Outline Programme Structure

Full details of each module will be provided in module descriptors and student module guides as available on Canvas.
This course contains no optional modules. All modules need to be completed and passed to progress.

FdSc Pharmaceutical and Chemical Sciences (Pre-Pharmacy)

Level 4							
FdSc Pharmaceutical and Chemical Sciences (Pre-Pharmacy)							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Academic and Professional Skills Portfolio	PY4110	30	4	1&2			
Basic Pharmaceutics	PY4160	30	4	1 and 2		1	
Foundation Chemistry for Pharmacy and Pharmaceutical Sciences	PY4130	30	4	1&2			
Fundamentals of Human Physiology and Infection	PY4150	30	4	1 and 2		1	
Optional Modules							

Progression to Level 5

Progression to level 5 requires a pass in all 4 modules. To progress into level 5 MPharm route, all major elements of assessment (exam and (coursework/practical in aggregate)) in each module must be passed at the pass mark, which is 40%. The exception is module PY4100 (academic and professional skills portfolio) where the

e-portfolio need to be passed as a major element separately from the coursework/practical components. All modules and credits need to be passed to progress from one level to another. Students cannot progress from level 4 to level 5 while trailing assessments of a 30-credit module to the next level. Please see section 'Approved variants' in Section 1 under "For Pharmacy transfer" for more details. Students exiting the programme at this point who have successfully completed 120 credits are eligible for the award of Certificate of Higher Education.

Level 5							
FdSc Pharmaceutical and Chemical Sciences (Pre-Pharmacy)							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
ACADEMIC PORTFOLIO MODULE LEVEL 5	PY5100	0	5	1&2			
Academic skills portfolio	PY5101	0	5	Year long		2	
Approaches to Pharmaceutical Manufacturing	PY5141	30	5	1 and 2		1	
Cells, tissues and organ systems	PY5120	30	5	1&2			
Fundamentals of cell and human physiology	PY5131	30	5	1 and 2		1	
Introduction to Spectroscopy and Experimental Techniques	PY5140	30	5	1&2			
Medicines, Health and Wellbeing	PY5110	30	5	1&2			
Pharmacy Law, Ethics and Practice	PY5111	30	5	1 and 2		1	
Optional Modules							

Progression to Level 6

Level 5 (all core) BSc or MPharm Sci route					
Compulsory modules	**Module code**	**Credit Value**	**% Written exam**	**% practical exam**	**% course-work**
Medicines, Health and Wellbeing <					

D. Principles of Teaching, Learning and Assessment

All Foundation Degree students will be supported in their study, taking into account the Kingston University Curriculum Design Principles and the GPhC Standards of Initial Education and Training of pharmacists The foundation degree is accredited by the GPhC and it is one of the feeder courses for the MPharm.

The curriculum places a strong emphasis on professional communication, collaboration, and patient-centred care. These will be developed using simulated sessions and placements in community pharmacy.

The course utilises a wide range of teaching and learning methods that will enable all students to be actively engaged throughout the course. Diagnostic tests will help tailor teaching to specifically keep in mind the wide variety of students. 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, multiple-choice question (MCQs), examinations, laboratory reports, OSCEs, calculations test and e-portfolio. Canvas and CAL packages are used as tools both to develop independent learning and for formative assessment. The assessment regime will be tailored to suit the learning outcomes of the modules. Both formative and summative assessment will be used. Assessments are designed to demonstrate the required GPhC learning outcomes, and the types of assessment chosen are to reflect the learning outcomes at the expected levels of the Millers Triangle, as set by the GPhC (knows, knows how, shows how, does). Future skills will be embedded across the curriculum, The Navigate program is integrated in level 4. During the course, students will be provided with opportunities to engage in collaborative work and explore problem solving which will help their transition through the University. This will help the students to develop key “future skills” graduate attributes such as creative problem solving, critical thinking, empathy, team collaboration, resilience and communication skills. Modules will have assessments suited to that subject area, as appropriate. For those, not on the MPharm route, the Explore workshops will be delivered at level 5 within the Academic Skills Portfolio module.

Modules have been developed to allow integration of teaching on different subject areas. This allows students to better establish the links between these subjects when describing the use and development of medicines as a whole.

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.

One of the key goals of the personal tutor initiative at Kingston University is to enrich a student's learning experience while also promoting their self-awareness and employability skills. Throughout the two-year program, tasks are assigned to the students that encourage ongoing communication between them and their personal tutor, fostering a supportive and constructive relationship during their time at the university..

The course incorporates an Interprofessional Education (IPE) opportunity to allow students to participate in collaborative work with other disciplines. To encourage student engagement, develop reflective learning and professionalism and record competencies achieved during placements, students will be required to complete a professional and academic portfolio (e-portfolio). T The e-portfolio will list competencies that students need to demonstrate at each level and will integrate discipline outcomes with professional and graduate attributes. Students will receive formative feedback and will be able to discuss the e-portfolio with a designated tutor. Placements will take place throughout the year including holiday periods. The e-portfolio must be satisfactorily completed for the student to progress to the MPharm route.
A must pass calculation test plus an objective structured clinical examination (OSCE) at level 5 are included within the academic and portfolio skills portfolio module at level 5 for those on the MPharm route.

E. 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
- A placement tutor to give general advice on placements
- 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
- NAVIGATE and EXPLORE workshops to support students in their learning.
- New simulation units and placements encapsulating experiential learning
- E-learning packages such as SCRIPT and MyDispense to increase accessibility
- Students are encouraged to use LinkedIn Learning for personal development.

F. 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
- Boards of study 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
- GPhC reaccreditation on a regular basis including interim practice visits
- Stakeholders meetings to inform the design and ongoing developments of the programme (Advisory Board).
- Quality assurance of placement providers

G. Employability and work-based learning

The Foundation Degree in Pharmaceutical and Chemical Sciences is specifically designed with employability in mind. As the course is accredited by the GPhC, the course has been designed to fulfil the new standards for the initial education and training of students who wish to transfer onto the Pharmacy degree programme. The Foundation Degree also allows an alternative route of entry to degree programmes under ‘widening participation’ such as BSc in advanced pharmaceutics. As employability skills are essential for all students graduating from the Foundation Degree, students have time set aside to engage in work-based placements. The curriculum has been designed to provide students with four days placement in community pharmacies. During the first year of study (Level 4) students will participate in two days of community pharmacy based placement. In the second year (Level 5), students pursuing an MPharm route will continue with an additional two days of placement, while those not on the MPharm route will have the opportunity to self-organise two days of placement experiences.

The student's clinical skills and learning gained from the placements will be documented using an electronic portfolio (e-portfolio). This e-portfolio serves as a comprehensive record of the student's competency achieved through experiential learning and placements experiences. It also provides an opportunity for students to reflect on their personal growth, establish objectives, and take proactive steps towards

their future aspirations in the pharmacy field. Through this process, students will attain graduate attributes that will help them navigate complex challenges within healthcare environments.

Within the Academic and Professional Skills Portfolio module at level 4, all students are aided in their development of and the continuous amendment of their CV, writing cover letters and identifying areas for employment. The vocational aspect of the course is emphasised throughout the 2 years of the Foundation Degree and the taught material supports this area. Employability skills are aided by both the work-based placements undertaken by the students, as well as material covered in modules taught on the Foundation Degree. Thus, the Foundation Degree is designed in a way to enhance the student's confidence and ability in finding employment after completing the course.

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.

H. Other sources of information that you may wish to consult

General Pharmaceutical Council
www.pharmacyregulation.org

Royal Pharmaceutical Society
www.rpharms.com/

Kingston University School of Pharmacy and Chemistry
http://sec.kingston.ac.uk/about-SEC/schools/pharmacy-and-chemistry/

I. 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.

Module Code	Level 4	Level 5

		PY4110	PY4130	PY4160	PY4150	PY5141	PY5101	PY5131	PY5111	PY5100	PY5110	PY5140	PY5120
Knowledge & Understanding	A5												
	A4												
	A3												
	A2		S									S	
	A1												
	A6												
Intellectual Skills	B4												
	B2												
	B1	S											
	B3	S											
	B5												
Practical Skills	C5		S									S	
	C4	S											
	C3												
	C2												
	C1		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.