

**Programme Specification**

**Title of Course:**

**Pharmaceutical and Chemical Sciences FdSc (Pre-Pharmacy)**

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| **Date first produced** | February 2008 |
| **Date last revised** | March 2021 |
| **Date of implementation of current version** | April 2021 |
| **Version number** | 10 |
| **Faculty** | Science |
| **School** | Pharmacy and Chemistry |
| **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 teaching, learning and assessment methods, learning outcomes and content of each module can be found in the Course Guide, on Canvas and in individual Module Descriptors.

**SECTION 1: GENERAL INFORMATION**

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| **Award(s) and Title(s):** | Pharmaceutical and Chemical Sciences FdSc |
| **Intermediate Awards:** | Cert HE |
| **FHEQ Level for the Final Award:** | Foundation Degree level 5 |
| **Awarding Institution:** | Kingston University |
| **Teaching Institution:** | Kingston University |
| **Location:** | Kingston University |
| **Language of Delivery:** | English |
| **Modes of Delivery:** | Full time taught |
| **Available as:** | Full field |
| **Minimum period of registration:** | FT 2 years |
| **Maximum period of registration:** | FT 4 years |
| **Entry Requirements:** | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Pharmaceutical & Chemical Sciences FdSc (Pre-Pharmacy)** | | | | | | **UCAS Code: F190** | | | | | | UCAS tariff points | 72 | | | | | GCE A-Levels | Subjects required | Minimum Grades | | Other comments | | A 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 Grades | Other comments | | BTEC Diploma appropriate subjects | | MMM | BTEC Award and Certificate are not accepted. | | Access to HE Course (QAA validated) | Specific Course(s) | | Minimum Grades | Other comments | | Access Course | | 45 credits at level 3 + 15 credits at level 2 | Access to Healthcare is not accepted. | | International Baccalaureate | Specific Course(s) | | Minimum Grades | Other comments | | 28 points overall with: 4 in Chemistry, Maths and Biology (All HL) + English (SL) | |  | European Baccalaureate is also accepted, please contact admission team. | | Certificate of HE | Specific Course(s) | | Minimum Grades | Other comments | | Biology and chemistry to be core subjects | | 50% overall + 50% in all chemistry modules |  | | GCSE subjects | Subjects required | | Minimum Grades | Other comments | | English language  Maths | | C/Grade 4  C/Grade 4 | Minimum of 5 subjects at minimum grade C/Grade 4 | | Scottish qualifications | Advanced Highers are equivalent to A levels and Highers are equivalent to AS levels - A level entry requirements must be met. | | | | | Irish Leaving Certificate | From 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.** |
| **Programme Accredited by:** | General Pharmaceutical Council (GPhC) |
| **QAA Subject Benchmark Statements:** | Foundation Degree Qualification Benchmark |
| **Approved Variants:** | All students are subject to Fitness to Practice regulations in addition to the University Students Disciplinary rules.  Modules must be passed at 40% and normal UMS compensation and retake opportunities apply to pass onto the next level of study or graduate.  **For Pharmacy transfer:**  To pass onto level 5 MPharm, All major elements of assessment (exam and coursework) in each module must be passed at the pass mark, which is 40% at level 4 and 5. Exception is module PY4110. For this module, it is not a requirement that any major element of assessment is passed separately in order to achieve an overall pass for the module.  In addition, students need to achieve an aggregate mark of 50% overall across all modules at each level.  In addition, to pass onto level 5 MPharm you must also pass the following:   * + Interview   + Calculations test   + OSCE   + Code of conduct   + Satisfactory DBS check and Health Check   These will be run in level 5 of the Foundation Degree. The pass mark will be standard set. This assessment will be synoptic and two attempts will be permitted with no opportunity for repeat. This assessment will be a part of a separate assessment component in one of the Foundation Degree (FD) modules at level 5, as a requirement for MPharm progression. As these assessments are 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.  Foundation Degree students who have had to repeat more than 60 credits during the FD programme are not permitted to transfer to the MPharm programme. Following transfer, any FD degree transferee who has to repeat more than 90 credits in total due to academic failure in the FD and MPharm programmes combined following either the June PAB or Reassessment board will be exited from the MPharm programme and transferred to another programme or awarded an exit degree as appropriate. Repeat for a non-accredited programme or degree is permitted. The exemption for the level 7 project module also applies to these students.  Compensation:  At Levels 4 and 5 inclusive, a maximum of 30 credits (one module) can be compensated for one single failed element of assessment if the failed element is 35% or above, the module has achieved a pass mark (i.e. 40% or greater) and all other modules (at the same level as the compensated module) have been passed at 50% or greater.  Attendance threshold:  A minimum standard of 80% (in light of COVID-19 this was adjusted to 70%) attendance is expected across each module for level 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 at **a minimum of 20 sessions** across a module, **including all components**. This attendance monitoring will be completed at random sessions throughout each module, either through electronic or paper registers. This will take place at Kingston University.  If you are unable to attend where you have **clear mitigation**, please inform the module leader, including evidence of the mitigation.  If, at the end of the year 80% (in light of COVID-19 this was adjusted to 70%) attendance has not been reached no resit/retake opportunity will be allowed as the learning outcomes will not have been achieved.  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 pre-registration on graduation for those students wishing to pursue Pharmacy after the Foundation Degree. |
| **UCAS Code:** | F190 |

**SECTION 2: THE PROGRAMME**

1. **Programme Introduction: 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. Students will benefit from scientific expertise at Kingston University.

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 or BSc or Master of Pharmaceutical Science courses. 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, as well as other degree courses at Kingston University. The course teaches students in areas that are relevant in both biological and chemical fields. A sound background in chemistry, maths and academic skills are developed at the start of the course. Thereafter, more complex chemistry is introduced as well as new areas in biology, microbiology and drug development. The students are also given a solid background in pharmacy processes.

Students are able to undertake options in the second year which are generally consistent with their intended pathway. 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) Pharmaceutical and Chemical Sciences.

The main aims of the foundation degree are:

* to provide students with an understanding of underlying scientific principles relevant to pharmaceutical and chemical sciences
* to provide all students who take the Pharmaceutical and Chemical Sciences field with an in-depth knowledge and understanding of the core elements of the sciences relevant to their placement employment.
* to introduce where relevant, priorities of patient welfare and of work in the health care profession related to their chosen field of study
* to provide students with the background training to enable them to identify, locate and critically evaluate secondary and primary sources as a basis for independent study
* to further develop subject related practical skills
* to provide the students with the opportunities to develop their written and oral communications skills
* to prepare students for enhanced employment responsibilities, further study and lifelong learning by developing their intellectual, problem solving, practical and key (transferable) skills
* to prepare students for continuous professional development by providing a knowledge and understanding of the process, through the preparation and implementation of their own personal development plans.

1. **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 (2014), 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 provides opportunities for students to develop and demonstrate knowledge, understanding and skills and other attributes in the following areas.

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| **Programme Learning Outcomes** | | | | | |
|  | **Knowledge and Understanding**  **On completion of the course students will have knowledge and understanding of:** |  | **Intellectual skills – able to:**  **On completion of the course students will be able to:** |  | **Subject Practical skills**  **On completion of the course students will be able to:** |
| A1 | Pharmacy law, ethics and practice and understanding patient behaviour | B1 | 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 | Biological, medicinal and pharmaceutical chemistry | B2 | Solve complex problems | C2 | Gain an understanding of pharmacy practice and be able to communicate effectively with patients |
| A3 | Formulation, stability and efficacy of medicines | B3 | Assemble data from a variety of sources and discern and establish connections | C3 | Formulate and prepare medicines for individual patient use |
| A4 | Importance of biology and microbiology in infection and formulation of medicines | B4 | Demonstrate the ability to be an independent autonomous learner | C4 | Development of an academic and professional skills portfolio |
| A5 | Physiological processes to the action of medicines |  |  | C5 | Understand and implement modern laboratory techniques |

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. **Outline Programme Structure**

This programme is offered in full-time mode and leads to the award of Foundation Degree in Pharmaceutical and Chemical Sciences. Entry is normally at level 4 with A-level or equivalent qualifications. Intake is normally in September.

Full details of each module will be provided in module descriptors and student module guides.

**C1. Professional and Statutory Regulatory Bodies**

General Pharmaceutical Council

**C2. Work-based learning, including sandwich programmes**

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.

**C3. 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 4** (all core) | | | | | |
| **Compulsory modules** | **Module code** | **Credit**  **Value** | **%**  **Written exam** | **% practical exam** | **%**  **course-work** |
| Academic and Professional Skills Portfolio | PY4110 | 30 |  |  | 100 |
| Introduction to Pharmacy Practice | PY4120 | 30 | 40 |  | 60 |
| Foundation Chemistry for Pharmacy and Pharmaceutical Sciences | PY4130 | 30 | 50 | 25 | 25 |
| Life Science and Medicines | PY4140 | 30 | 50 | 25 | 25 |
| 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) in each module must be passed at the pass mark, which is 40%. In addition, students need to achieve an aggregate mark of 50% overall across all modules at each 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. | | | | | |

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| **Level 5** (all core) MPharm Route | | | | | |
| **Compulsory modules** | **Module code** | **Credit**  **Value** | **%**  **Written exam** | **% practical exam** | **%**  **course-work** |
| Medicines, Health and Wellbeing | PY5110 | 30 | 50 | 25 | 25 |
| Cells, Tissues and Organ Systems | PY5120 | 30 | 60 |  | 40 |
| The Science of Medicines | PY5130 | 30 | 50 |  | 50 |
| Introduction to Spectroscopy and experimental techniques | PY5140 | 30 |  |  | 100 |
| Portfolio | PY5100 | 0 |  |  | 100 |
| Progression to level 5 MPharm after Level 5 FD route requires a pass in all major elements of assessment (exam and coursework) in each module must be passed at the pass mark, which is 40%. In addition, students need to achieve an aggregate mark of 50% overall across all modules at each level. Please see section ‘Approved variants’ in Section 1 under “For Pharmacy transfer” for more details. Please note, to pass onto level 5 you must also pass the following:  o Interview  o Calculations test  o OSCE  o Code of conduct  o Satisfactory DBS check and Health Check  Progression to level 6 (top-up) requires a pass in all 4 modules  Students exiting the programme at this point who have successfully completed 120 credits are eligible for the award of Foundation Degree | | | | | |

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| **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 | PY5110 | 30 | 50 | 25 | 25 |
| Cells, Tissues and Organ Systems | PY5120 | 30 | 60 |  | 40 |
| The Science of Medicines | PY5130 | 30 | 50 |  | 50 |
| Introduction to Spectroscopy and experimental techniques | PY5140 | 30 |  |  | 100 |
| Progression to level 5 Pharm Sci requires a pass in the module in all 4 modules  Progression to level 6 (top-up) requires a pass in all modules taken  Students exiting the programme at this point who have successfully completed 120 credits are eligible for the award of Foundation Degree | | | | | |

**The portfolio module** is a must pass at level 5. It consists of assessments and engagement and professional activities. These include, adequate meetings of personal tutor, a calculation test and an objective structured clinical examination (OSCE). An attendance standard of 80% (in light of COVID-19 this was adjusted to 70%) in all timetabled sessions in each module at Kingston University based on SEAtS data is required at each level for the student to be considered for a retake if the module is failed. If a student does not achieve the 80% attendance (70% in light of covid-19) and fails that module, the student will be required to repeat the module, without being allowed to retake the exam. This will be part of the academic and professional skills portfolio. Failure due to not meeting the attendance standard will require attendance in the missed sessions in the following academic year to meet the 80% standard (in light of COVID-19 this was adjusted to 70%). Only one repeat opportunity will be provided.

1. **Principles of Teaching, Learning and Assessment**

All Foundation Degree 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. Diagnostics test 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, 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. Gradually, critical thinking and applied science will be established, and this will be supported by the different methods of teaching and assessment. Development of key skills in communication, team working and independent learning will be monitored and each module will have assessments suited to that particular subject area.

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.

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.

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. Over the two years of the programme there are tasks are set that are associated with and/or assessed by the student’s Personal Tutor, which is designed to encourage communication between students and one member of staff throughout their time at Kingston University.

**1st year:** Becoming a reflective learner

Students meet with their tutors for an introductory session which will enable tutors to find out about student and allow students to ask questions about their studies. Students write summaries of their preferred methods of learning in their e-PDP which are then discussed with tutors. In semester two students meet with tutors to discuss academic progress.

**2nd year:** Communication skills

Update their e-PDP with reflections on progress and possible methods to improve study skills. Tutors give feedback and advice for future improvements for scientific writing.

In semester two students will discuss with their tutors: interview skills and employability e.g. CV and references, with discussions on top-up or transfer e.g. to Pharmacy.

1. **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 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
* The Students’ Union
* Careers and Employability Service and Student Life Centre
* Mock interviews

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:

* External examiners
* Boards of study with student representation
* Annual Monitoring and Enhancement
* Periodic review undertaken at subject level
* Student evaluation including module evaluation questionnaires (MEQs), level surveys and the National Student Survey (NSS)
* Moderation policies
* Feedback from employers
* GPhC reaccreditation is required every six years with three year interim practice visits
* Stakeholder meetings to encourage development of the course

1. **Employability Statement 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 standards for the initial education and training of students who wish to transfer onto the Pharmacy degree programme. The Foundation Degree also allows students to pursue other interests, such as Chemistry or Pharmaceutical Science and is an alternative route of entry to different degree programmes under ‘widening participation’. As employability skills are essential for all students graduating from the Foundation Degree, students have time set aside to engage in work-based placements. There is no emphasis on the nature of the workplace itself, but rather on all aspects associated with work, such a time-keeping and professionalism. Students are aided in finding work both in and out of the course by a first year module, Academic and Professional Skills Portfolio. Here, 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 emphasized 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. Students also complete a work-based placement logbook, which explores both the students’ ability to work in the workplace, which will be completed by the employer, but also introduces reflective thinking on the student’s part. The Foundation Degree can enhance the student’s confidence and ability in finding employment after completing the course.

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/>

1. **Development of Field/Course Learning Outcomes in Modules**

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

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|  |  |  | **Level 4** | | | | **Level 5** | | | |
|  | **Module Code** |  | PY4110 | PY4120 | PY4130 | PY4140 | PY5110 | PY5120 | PY5130 | PY5140 |
| **Programme Learning Outcomes** | **Knowledge & Understanding** | A1 |  | S |  |  | S |  |  |  |
| A2 |  |  | S | S |  |  |  | S |
| A3 |  |  |  |  |  |  | S |  |
| A4 |  |  |  | S |  |  | S |  |
| A5 |  |  |  | S |  | S |  |  |
| **Intellectual Skills** | B1 | S |  |  |  |  |  |  |  |
| B2 |  |  |  |  | S | S | S |  |
| B3 | S |  |  |  | S |  |  |  |
| B4 |  |  |  |  | S |  | S |  |
| **Practical Skills** | C1 |  | S | S | S | S | S | S | S |
| C2 |  | S |  |  | S |  |  |  |
| C3 |  |  |  |  | S |  | S |  |
| C4 | S |  |  |  |  |  |  |  |
| C5 |  |  | S |  |  |  |  | S |

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