

We are exceptional

BSc Pharmaceutical Sciences

3 years: UCAS code B210

- The course provides students with an exciting opportunity to study for a degree which will provide the foundation for a career in the pharmaceutical, healthcare and allied industries.
- A key feature of the course is the opportunity to gain experience of working in industry through placements.
- The course is supported by the local pharmaceutical/healthcare industries.

Quote from a student:

My time at the School of Pharmacy was a truly enjoyable experience. The delivery of the course content was excellent and I always felt that I could approach any member of staff for help and advice when I needed it. The undergraduate programme fully prepared me for the world of work.

Caoimhe McIlmurray
(School of Pharmacy graduate 2011)

Introduction to the subject

Pharmaceutical Sciences is concerned with the design, evaluation, production and testing of medicines. As such, it is based on the chemical, biological and medical sciences as the foundation for employment within the Pharmaceutical and Healthcare (e.g. Medical Device) Industries. All of these facets are addressed and integrated in this new and exciting undergraduate degree programme.

The course will be delivered by the School of Pharmacy at Queen's, which achieved excellent scores for student satisfaction in the 2012 National Student Survey and is ranked as the Number One School of Pharmacy in the UK by the Sunday Times University Guide 2013.

Course content

Level 1

Pharmaceutics

Physiology for the Pharmaceutical Sciences 1

Mathematics and Statistical Skills

Physiology for the Pharmaceutical Sciences 2

Physical Pharmaceutics

Structure, Reactivity and Mechanism in Organic and Bioorganic Chemistry

Six modules are studied: one module (Pharmaceutics) provides an introduction to pharmaceutical microbiology

including aspects of disinfection and sterilisation. Physical Pharmaceutics introduces the principles of physical and analytical chemistry of importance to the pharmaceutical sciences. A third module addresses the mathematical and statistical skills that are needed by pharmaceutical scientists to work effectively in the industrial and related sectors (Mathematics and Statistical Skills). A chemistry-based module covers important aspects of organic and bio-organic chemistry including structure determination, chemical reactivity and mechanistic aspects (Structure, Reactivity and Mechanism in Organic and Bioorganic Chemistry). Finally, two physiology modules (Physiology for the Pharmaceutical Sciences 1 and 2) cover the principles of general physiology and histology as well as an introduction to systematic pathophysiology.

Level 2

Medicinal Substances: Characterisation and Quantification

Principles of Drug Action 1

Formulation Science

Medicinal Substances: Structure and Function

Principles of Drug Action 2

Industrial Pharmaceutics

Level 2 provides further development of the understanding of basic sciences related to the pharmaceutical sciences. Six modules are studied: two cover basic principles of drug action (Principles of Drug Action 1 and 2) and two are



concerned with medicinal substances. The first of these (Medicinal Substances: Characterisation and Quantification) deals with analytical methods used to identify and quantify therapeutic agents in biological and non-biological media whereas the second module (Medicinal Substances: Structure and Function) examines the relationships between the structure and function of drug molecules. The remaining two modules deal with formulation/ of drug products, drug stability and the industrial manufacturing of pharmaceutical dosage forms (Formulation Science, Industrial Pharmaceutics).

Level 3

Biological Pharmaceutics

Drug Delivery

Applied Pharmaceutical Analysis and Drug Design

Pharmaceutical Engineering

Pharmaceutical Biotechnology

Pharmaceutical Sciences Research Project

The final year of the degree builds on the disciplines that are covered in the first two years of the degree and provides specialisms in key areas that are needed to work successfully within the industrial sector. Six modules will be studies covering the following areas: Biological Pharmaceutics, Drug Delivery, Applied Pharmaceutical Analysis and Drug Delivery, Pharmaceutical Biotechnology and Pharmaceutical Engineering. In Level 3, students also have the opportunity to carry out an extensive research project.

Special Features

Placement: Pharmaceutical Sciences students will have the option to complete a placement in a Pharmaceutical (or related) Industry between the second and third years of their degree. This placement includes project work.

Industrial Focus: This course has been developed in association with the Pharmaceutical Industry and is designed to produce graduates who will be highly employable within the Pharmaceutical and related Industries.

Entry Requirements

A-level

BBB-ABB including Biology and Chemistry + GCSE Mathematics.

Irish Leaving Certificate

B2B2B2B2CC-B2B2B2B2B2B2B2 including Higher Level grade B2 in Biology and Chemistry + If not offered at Higher Level then Ordinary Level grade C in Mathematics.

For students whose first language is not English

An IELTS score of 6.5 with a minimum of 6.0 in each test component or an equivalent qualification acceptable to the University. For further information on other acceptable English Language qualifications please see: <http://www.qub.ac.uk/home/StudyatQueens/InternationalStudents/EnglishLanguageRequirements/>

If you are an international student and you do not meet the entrance requirements, you should consider a preparation course at INTO Queen's University Belfast, which will prepare you for successful study on these degree courses. INTO Queen's University Belfast is based on the University campus and offers a range of courses including: International Foundation in Engineering and Science.

Opportunities for Careers and Postgraduate Study

- The course is designed to produce graduates who will be ideally suited to work in high-level careers in the pharmaceutical and related industries world-wide.
- The BSc in Pharmaceutical Sciences is a new course and is strongly supported and welcomed by the local pharmaceutical industry.
- Graduates from the BSc course will be eligible to apply for Masters and PhD courses both within the school of Pharmacy and beyond.

Quote from Industry:

Students who choose to study this degree programme will graduate from a world-class University having been taught by key subject leaders within the Pharmaceutical Sciences.

Warner Chilcott.