

# Medicinal Chemistry with Pharmacology

MChem

## COURSE DETAILS

- A level requirements: [ABB](#)
- UCAS code: FIBF
- Study mode: Full-time
- Length: 4 years

## KEY DATES

- Apply by: [29 January 2025](#)
- Starts: 22 September 2025

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## Course overview

Chemistry graduates are at the heart of science, underpinning some of the world's most dynamic and exciting industries. Combining the study of chemistry with pharmacology, this MChem qualification makes an ideal foundation for a wide range of career pathways or to study for a PhD.

## INTRODUCTION

This four-year programme will give you a broad and detailed understanding of every aspect of advanced medicinal chemistry and pharmacology. On completion you will be ready to embark on a PhD in either chemistry or pharmacology or on a career in the pharmaceutical industry.

All our programmes have a common chemistry core which provides a good measure of flexibility and choice for you during the first two years. This programme shares this common chemistry core but you devote around 25% of your time to studying pharmacology and biomedical sciences.

The first two years of this programme are identical to the first year of the BSc Medicinal Chemistry (FIB2) programme. There are no optional modules, instead students take designated modules in biomedical and biological sciences and medicinal chemistry. These first two years progress rapidly, with a mix of theory and practical modules to give you a solid grounding in the subject.

Since students enter the Department with a wide range of experience in mathematics (which is essential for studying chemistry to a high level) we provide a flexible tiered maths for chemistry course allowing you to develop your skills at your own pace.

In year three, you continue with the Inorganic and Organic sections of the MChem Chemistry (F102) programme but instead of physical chemistry, you take designated pharmacology modules. You will start to apply your knowledge of chemistry and pharmacology to pharmaceutical problems, with particular reference to drug design and development.

Your final year brings you to the frontiers of chemistry and pharmacology and the basic concepts of both subjects are fully integrated. You will take core organic chemistry modules as well as core pharmacology modules such as drug metabolism and drug response, and cancer pharmacology.

Chemical research is particularly important in year four and involves you conducting a significant project with a strong medicinal chemistry theme as a member of one of the research groups in the department.

This degree programme has a year abroad option. The year abroad is an incredible new opportunity to spend one academic year at one of our partner universities expanding your academic and cultural horizons. You'll spend this time abroad in between your second and third years of study and your degree will extend by one year.

The Department of Chemistry is committed to continuous improvement of our curriculum. We are undergoing a curriculum review to further prepare our graduates for the next stage of their career by developing our degree programmes to incorporate knowledge and skills for the future workforce and ensure a positive learning experience for all students. Module and programme structures may change as we further develop an inclusive curriculum with enhanced sustainable, digital, and analytical chemistry elements. These aspects will sit alongside all the expected core chemistry components including organic, inorganic, and physical chemistry and professional skills.

## **WHAT YOU'LL LEARN**

- Maths for Chemistry
- Drug design and development
- How drugs metabolise
- Cancer pharmacology
- Problem solving
- Computational modelling
- Molecular visualisation

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## **ACCREDITATION**

This programme has master accreditation from the Royal Society of Chemistry (RSC).

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# Course content

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

## YEAR ONE

### COMPULSORY MODULES

#### FOUNDATIONS OF MEDICINAL CHEMISTRY (CHEM141)

**Credits: 15 / Semester: semester 1**

This module will introduce the area of medicinal chemistry and the underpinning cellular biology where it is applied. The course will delve into the chemical aspects of molecular and cellular biology and the processes that allow life to exist, and subsequently discuss the key cellular targets of interest to a medicinal chemist in the drug design process. This material will form the foundations needed to progress onto higher years of medicinal chemistry where modern case studies and the principles of pharmacology will be looked at in greater depth.

#### INTRODUCTORY INORGANIC CHEMISTRY (CHEM111)

**Credits: 15 / Semester: semester 1**

This module gives an introduction to the chemistry of the main group elements, using the periodic table as the underpinning framework for understanding this chemistry, and develops students' analytical chemistry skills including volumetric and spectrophotometric techniques applied to materials that are familiar in everyday life.

#### INTRODUCTORY ORGANIC CHEMISTRY (CHEM130)

**Credits: 30 / Semester: whole session**

An Introduction to Organic Chemistry consisting of lectures, workshops and laboratory classes assessed continuously by an online quiz, two class tests and a final exam

#### INTRODUCTORY PHYSICAL CHEMISTRY (CHEM152)

**Credits: 15 / Semester: semester 2**

This module builds on the thermodynamics and kinetics that students have studied prior to University. Learning is supported by both problem-solving workshops and undertaking experiments in the laboratory

## **INTRODUCTORY SPECTROSCOPY (CHEM170)**

**Credits: 15 / Semester: whole session**

This module will provide an introduction to a variety of spectroscopic techniques. Students will explore the theory underpinning various spectroscopic methods, how they are put into practice when acquiring spectra, and the interpretation of spectra to identify unknown substances.

## **KEY SKILLS FOR CHEMISTS 1 (CHEM180)**

**Credits: 15 / Semester: whole session**

The aim of this module is: (i) to equip students with the basic quantitative transferable skills required for the first year of a Chemistry degree programme. (ii) to broaden a student's perspective of chemistry whilst developing their general transferable skills focusing on communication and employability. The overarching learning outcome is for students to have the key skills that will equip them to perform well in the rest of their chemistry degree programme.

Quantitative Key Skills will be taught using a lecture/workshop format involving problem solving classes, using computers where necessary. General Key Skills will involve a series of lecture-based presentations given by staff from the Department of Chemistry and the Careers Service together with a database workshop and small group tutorials. Extensive use of online platforms will be made.

## **INTRODUCTORY PHYSIOLOGY AND PHARMACOLOGY FOR CHEMISTS (CHEM142)**

**Credits: 15 / Semester: semester 2**

This module will introduce the areas of Physiology and Pharmacology. The course will delve into the physiology of the human body looking at specific organ systems, their control and function. Physiology is then linked to Pharmacology and drug action to provide an underpinning knowledge of both areas. This material will form the foundations needed to progress onto higher years of medicinal chemistry where modern case studies, organ specific drug action and the principles of pharmacology will be looked at in greater depth.

*Any optional modules listed above are illustrative only and may vary from year to year. Modules may be subject to minimum student numbers being achieved and staff availability. This means that the availability of specific optional modules cannot be guaranteed.*

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## **YEAR TWO**

### **COMPULSORY MODULES**

#### **AN INTRODUCTION TO MEDICINAL CHEMISTRY (CHEM248)**

**Credits: 7.5 / Semester: semester 2**

This module introduces students to the fundamental principles that underpin modern medicinal chemistry.

## **COORDINATION AND ORGANOMETALLIC CHEMISTRY OF THE D-BLOCK METALS (CHEM214)**

**Credits: 15 / Semester: semester 2**

The module introduces the descriptive coordination and organometallic chemistry and the concepts underpinning our understanding of this chemistry.

## **KEY SKILLS FOR CHEMISTS 2 (CHEM280)**

**Credits: 15 / Semester: whole session**

This module aims to (i) further develop the quantitative skills of a student, (ii) introduce students to the Chemistry Key Skill of Molecular Modelling, and (iii) maintain student development of general transferable and employability skills. The overarching learning outcome is that students will gain the necessary key skills to perform well in their chemistry degree programmes. By the end of the module students will have improved their ability to perform and apply mathematical techniques to problems in kinetics, thermodynamics, quantum mechanics and molecular symmetry. They will have developed abilities to employ force-field and Quantum Chemistry techniques in Molecular Modelling using the Spartan package. They will also have further developed their range of transferable and employability skills, including written and oral communication and team working.

## **MEASUREMENTS IN CHEMISTRY (CHEM246)**

**Credits: 15 / Semester: semester 2**

This is a practical module in which students learn the practice of taking physical measurements, the critical analysis and evaluation of experimental data, the application of measurements to the study of chemical phenomena and the dissemination of results.

## **ORGANIC CHEMISTRY II (CHEM231)**

**Credits: 15 / Semester: semester 1**

This module is the core Organic Chemistry module for Year 2 Chemistry students. It introduces important carbon-carbon bond forming reactions within a mechanistic and synthetic framework, together with exposure to a selection of stereochemical issues.

## **PHYSICAL CHEMISTRY II (CHEM260)**

**Credits: 15 / Semester: whole session**

This module expands on the fundamentals of Physical Chemistry that were introduced in Year 1. The principles and applications of thermodynamics, kinetics and spectroscopy are covered in detail with more emphasis on derivation of key results than in Year 1. Quantum mechanics is developed from the basic principles and mathematical description of quantum phenomena. It is applied to describe bonding in small molecules and in solids, and is linked to spectroscopy via detailed description of molecular energy levels and the possible transitions between these permitted by quantum mechanics.

## **PRACTICAL PHARMACOLOGY (LIFE234)**

**Credits: 7.5 / Semester: semester 2**

This module aims to provide practical experience in many of the techniques specifically used in the study of Pharmacology. It will also provide you with the specialist skills and knowledge of techniques necessary to undertake practical work and project work in Year Three. Each practical will be introduced through a 15-20 minute presentation and will run for 3 hours. The module will be assessed through a report describing the experimental techniques and main findings of one of the key practicals, and through a final online assessment aimed at evaluating student understanding of the experimental approaches, underpinning pharmacological principles and data processing/interpretation.

## **PREPARATIVE CHEMISTRY: SYNTHESIS AND CHARACTERISATION (CHEM245)**

**Credits: 15 / Semester: semester 1**

The module presents a unified approach to the synthesis and characterisation of organic and inorganic compounds, introducing a range of synthetic techniques, experiments and analytical methods.

## **PRINCIPLES OF PHARMACOLOGY (LIFE207)**

**Credits: 15 / Semester: semester 1**

This module will provide an understanding of the quantitative aspects of drug action on cellular receptors and will address the relationship between drug efficacy and chemical structure.

The module will introduce the basic principles of pharmacokinetics, outline the relationship between drug concentration and response, and include an introduction to the principles of toxicity of drugs and their metabolites.

The module will provide knowledge of the molecular biology of receptors.

The lectures will be supplemented with online resources. Students will be given guided reading, and regular formative assessment exercises will enable students to evaluate their understanding of the module.

The module will be assessed by both an online test and a final examination.

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## **YEAR THREE**

In year three, you further develop your skills in organic and inorganic chemistry as well as taking 30 credits of pharmacology modules.

## **COMPULSORY MODULES**

### **ANTIMICROBIAL CHEMOTHERAPY FOR CHEMISTS (LIFE348)**

**Credits: 15 / Semester: semester 2**

This module is aimed specifically at FIB2 and FIBF students. The aim of this module is to reinforce the relevance and importance of the principles of chemotherapy learned in level 5 (antibacterial chemotherapy) and extend the application of these principles to diseases caused by viruses (e.g. HIV/AIDS) and parasites (e.g. malaria). The module will be assessed by coursework which will consist of TWO separate assessments.

Module material will be delivered primarily through a mixture of recorded and live online lectures as well as face-2-face on-campus sessions (subject to Covid-19 restrictions), supported by materials on Canvas and other web-based resources for students' independent learning. Students will be directed to key articles in the literature (textbooks, original papers and review articles) and be expected to use this material to inform their independent learning. A revision tutorial will prepare students for the second assessment (Week 13/14).

### **DRUG ACTION (LIFE206)**

**Credits: 15 / Semester: semester 2**

This module aims to enable students to develop their understanding of the cardiovascular, endocrine and central nervous systems and the mechanisms by which drugs interact with physiological processes operating within each of these systems. They will also gain an appreciation of the drug development process, including clinical trials and drug regulation. The lectures will be supplemented with on-line resources. Students will be given guided reading, and regular formative assessment exercises in class will enable students to evaluate their understanding of the module. The module will be assessed by an online test and a final examination.

### **FURTHER ORGANIC CHEMISTRY (CHEM333)**

**Credits: 15 / Semester: semester 1**

An extension of second year organic chemistry, covering pericyclic reactions, rearrangements and fragmentations, radical reactions, some important palladium-catalysed coupling reactions and the uses of phosphorous, sulphur and selenium in synthetic chemistry.

Some core physical-organic concepts are introduced along with revision of basic mechanisms.

## **INORGANIC MATERIALS CHEMISTRY (CHEM313)**

**Credits: 15 / Semester: semester 1**

This module builds on the fundamental inorganic chemistry that students have studied previously to give an appreciation of the science underpinning the development of modern materials. It will discuss the fundamentals of crystalline and disordered solids, and magnetism; methods for synthesising materials; characterisation techniques; applications of inorganic materials; and the link between the chemistry, structure and function of materials.

## **HETEROCYCLIC CHEMISTRY AND DRUG SYNTHESIS (CHEM338)**

**Credits: 7.5 / Semester: semester 2**

The module presents the synthesis and reactivity of the most important classes of heterocyclic compounds and shows case studies drawn from major drug classes.

## **MEDICINAL CHEMISTRY OF ANTI-INFECTIVES (CHEM335)**

**Credits: 7.5 / Semester: semester 1**

This module will introduce students to the fundamental principles that underpin modern medicinal chemistry of anti-infective drugs, building on the principles taught in the introductory medicinal chemistry module CHEM248.

## **PRACTICAL CHEMISTRY YR3 FOR MCHEM STUDENTS - SHORTER VERSION (CHEM355)**

**Credits: 15 / Semester: semester 1**

In this module, students will carry out a bespoke collection of advanced experiments in the areas of Organic and Physical Chemistry.

## **YEAR 3 RESEARCH PROJECTS (CHEM380)**

**Credits: 22.5 / Semester: whole session**

During the first semester students will participate in a group research-based mini-project directed by a real-world industrial problem from a range of industrial sectors. This will be facilitated by the module staff and other colleagues from the institution and wider industry. Students will supplement this activity through an employability portfolio and reflective activities looking at job application exercises, interview preparation techniques and project preparation. Students will engage in a literature review looking forward to their second semester, where students will undertake an individual mini research project based on their project preference and potential projects offered by academic staff. Some developmental projects may be available.



## **OPTIONAL MODULES**

### **INORGANIC APPLICATIONS OF GROUP THEORY (CHEM216)**

**Credits: 7.5 / Semester: semester 2**

This module shows how an understanding of the symmetry properties of molecules can be applied to the understanding of spectroscopic selection rules and bonding

### **CHEMISTRY FOR SUSTAINABLE TECHNOLOGIES (CHEM284)**

**Credits: 7.5 / Semester: semester 2**

This module introduces the basic concepts of sustainability and sustainable development, particularly in relation to their technological underpinnings. The module will address the role of chemistry in relation to broad societal, environmental and developmental questions. The module also gives a fundamental understanding of the principles and technologies in Green Chemistry and the generation of Renewable Energy and Chemicals.

### **APPLIED ANALYTICAL CHEMISTRY (CHEM286)**

**Credits: 7.5 / Semester: semester 2**

This is an introductory module that aims to illustrate the fundamental theoretical principles of selected instrumental analytical techniques (NMR spectroscopy, mass-spectrometry, atomic spectroscopy, separation and hyphenated techniques) in the context of their roles in industrial and academic research, to include chemical and pharmaceutical analysis.

### **BIOLOGICAL ENERGY CONVERSION PROCESSES (CHEM382)**

**Credits: 7.5 / Semester: semester 2**

This module will focus on energy conversion processes found in nature. Energy as a commodity is described as "reducing power" or as "high energy electrons" and the concept of nutrient or fuel is introduced. Biological energy conversion processes are discussed from an evolutionary perspective, and it is described how they have contributed to the current composition of the planet's atmosphere and crust. Sustainability issues will become apparent when comparing the time scales of biogenic fuel accumulation and human consumption of fuel.

### **BIORENEWABLE CHEMICALS FROM BIOMASS (CHEM384)**

**Credits: 7.5 / Semester: semester 2**

This module provides the scientific and technical foundation to understand the utilisation of biomass and other renewable feedstocks in the emerging renewable chemicals industry. Most of the reactions and processes studied are currently used in biorefineries and other industries and in this module we will further explore newest development and future outlook in the production of renewable chemicals and materials within the circular economy.

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## **YEAR FOUR**

### **COMPULSORY MODULES**

#### **CARDIOVASCULAR PHARMACOLOGY (LIFE401)**

**Credits: 7.5 / Semester: semester 1**

The objective is to extend to Masters level the students' previous knowledge and understanding of cardiovascular pharmacology. The key topics covered in this module will include prevention and treatment of cardiovascular diseases including atherosclerosis, heart failure, hypertension, ischemic heart disease, arrhythmia, and drug-induced cardiovascular toxicity. Several classes of drugs currently used in cardiovascular medicine that were introduced in previous modules will be discussed in more detail, including lipid lowering therapy, anticoagulants, antiplatelet medications, antihypertensives, and anti arrhythmic drugs. Interindividual variability in response to cardiovascular medications will be covered as well as personalisation of drug therapy that has been established in the field of cardiovascular medicine. Several examples of how genetic makeup of an individual can affect response to medications will be discussed. A number of drugs from different clinical areas that have adverse effects on the heart and vascular system will be also covered. The module is taught through lectures. The assessment will take the form of a summative exercise covering aspects of the taught material.

#### **CHEM480 – CHEMICAL RESEARCH PROJECT (CHEM480)**

**Credits: 60 / Semester: whole session**

The aim of this module is to develop the skills necessary to undertake independent chemical research. Students carry out a research project of their choice in an area that is presently active in the department and that is aligned with our research clusters in Chemical Models, Chemistry of World Health, Energy and Interfaces, Materials Chemistry, and, Organic Chemistry and Catalysis. This is delivered by becoming a member of a research group led by academic staff of the Department of Chemistry and by carrying out experimental or theoretical/computational work as a member of that research group.

#### **NEUROPHARMACOLOGY (LIFE369)**

**Credits: 7.5 / Semester: semester 1**

The aim of this module is to provide a review of drug treatment for common disorders of the brain, focusing on pathophysiology, receptors and ion channels as drug targets, and the mechanisms of action of key classes of neuropharmacological agents. The module will be assessed by both continuous assessment and by a final examination.

## **ADVANCED SYNTHESIS METHODS (CHEM435)**

**Credits: 15 / Semester: semester 1**

This module will develop and extend the knowledge of modern organic synthesis to prepare students for a career as a specialist chemist or for a PhD programme

## **KEY SKILLS AND RESEARCH PROJECT PREPARATION (CHEM479)**

**Credits: 15 / Semester: semester 1**

The aim of this module is to enhance students research skills (academic integrity, scientific writing, research ethics, literature review) complementing their research projects (research project is in a module for either MChem or MSc cohort).

## **OPTIONAL MODULES**

### **CANCER PHARMACOLOGY FOR MEDICINAL CHEMISTS (LIFE402)**

**Credits: 7.5 / Semester: semester 2**

The aim of this module is to provide an understanding of cancer development and progression and how this is exploited in the rational design of drugs to target cancer. A further aim is to explain the molecular mechanism of anti-cancer drugs and the potential for side-effects, drug toxicity and drug resistance. The module will be assessed by a summative exercise and by a final examination.

### **ADVANCED & FUTURE HEALTHCARE TECHNOLOGIES (CHEM428)**

**Credits: 15 / Semester: semester 2**

Advanced materials and technologies in medicine are increasingly important multidisciplinary, global science. This is an introductory module aims to provide students with the essential knowledge required to understand the rapidly advancing field of advanced materials for medicine, in particular Nanomedicine and therapeutics, and healthcare technologies for medical diagnostics. Following some introductory lectures, students will undertake self-directed learning alongside lectures to examine leading published research related to the design of advanced nanomedicines and clinical trials. This module will be useful chemists who wish to develop a deeper understanding of colloid materials, gain a detailed insight into the advanced synthetic approaches used to produce nanomedicines, explore technological approaches for therapeutics and diagnostics, and broaden their knowledge of pharmacology concepts.

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## **HOW YOU'LL LEARN**

Laboratory classes in years one and two prepare you for independent laboratory work in years three and four.

In year three you will carry out mini research projects, while in year four you will carry out research alongside PhD and postdoctoral researchers on cutting edge projects, often leading to a first scientific publication.

Computational modelling and molecular visualisation are introduced as interactive animated models from year one, reinforced as a key skill in later years and by year four you will be able to perform your own calculations to underpin final year research projects.

## **HOW YOU'RE ASSESSED**

You are assessed by examination at the end of each semester (January and May/June) and by continuous assessment of laboratory practicals, class tests, workshops, tutorials and assignments.

You have to pass each year of study before you are allowed to progress to the following year. Re-sit opportunities are available in September at the end of years one and two.

If you take an industrial placement, a minimum standard of academic performance is required before you are allowed to embark on your placements. All years of study (with the exception of year one) contribute to the final degree classification.

## **LIVERPOOL HALLMARKS**

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

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# Careers and employability

Visits to the department by leading companies such as GlaxoSmithKline and Unilever ensure that you make contact with prospective employers at key stages in your final year. Graduates find employment in many areas, from the pharmaceutical industry to business management.

Typical careers of our graduates include:

- assistant analyst
- development chemist
- research assistant
- site chemist.

Recent employers of our graduates are:

- AstraZeneca
- GlaxoSmithKline
- IOTA Nansolutions Ltd
- Johnson Matthey
- Perstorp Caprolactones
- Shell
- Towers Watson
- Unilever
- United Utilities

**4 IN 5** CHEMISTRY STUDENTS FIND THEIR MAIN ACTIVITY AFTER GRADUATION MEANINGFUL.

*Graduate Outcomes, 2018-19.*

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# Fees and funding

Your tuition fees, funding your studies, and other costs to consider.

## TUITION FEES

<b>UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)</b>	
Full-time place, per year	£9,535
Year abroad fee	£1,385

<b>International fees</b>	
Full-time place, per year	£29,100
Year abroad fee	£14,550

*The UK full-time tuition fee, international course fee and fee for the year abroad for international students shown are correct for 2025/26 entry. We are currently awaiting confirmation of whether the year abroad fee for UK students will change, so the fee shown is for 2024/25. Please note that the year abroad fee also applies to the year in China.*

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support. [Learn more about fees and funding](#).

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## ADDITIONAL COSTS

Your tuition fee covers almost everything but you may have [additional study costs](#) to consider, such as books.

Find out more about the [additional study costs](#) that may apply to this course.

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## SCHOLARSHIPS AND BURSARIES

We offer a range of scholarships and bursaries that could help pay your tuition and living expenses.

We've set the country or region your qualifications are from as United Kingdom. [Change it here](#)

- **UNDERGRADUATE GLOBAL ADVANCEMENT SCHOLARSHIP**

- [International students](#)

[If you're a high-achieving international student starting an undergraduate degree with us from September 2024, you could be eligible to receive a fee discount of up to £5,000. You'll need to achieve grades equivalent to AAA in A levels. Most of our undergraduate degrees are eligible, with the exception of clinical programmes in Medicine and Dental Surgery.](#)

- **THE LIVERPOOL BURSARY**

- [Home students](#)

[If you're a UK student joining an undergraduate degree and have a household income below £35,000, you could be eligible for a Liverpool Bursary worth up to £2,000 for each year of undergraduate study.](#)

- **ASYLUM SEEKERS SCHOLARSHIP**

- [Home students](#)

[Apply for an Asylum Seekers Scholarship and you could have your tuition fees paid in full and receive help with study costs. You'll need to have applied for asylum in the UK, or be the dependant of an asylum seeker, and be joining an eligible undergraduate degree.](#)

- **CARE LEAVERS' OPPORTUNITY BURSARY**

- [Home students](#)

[If you've spent 13 or more weeks in Local Authority care since age 14, you could be eligible for a bursary of £3,000 per year of study. You'll need to be a UK student joining an eligible undergraduate degree and be aged 28 or above on 1 September in the year you start.](#)

- **COWRIE FOUNDATION SCHOLARSHIP**

- [Home students](#)

[Are you a UK student with a Black African or Caribbean heritage and a household income of £25,000 or less? You could be eligible to apply for a Cowrie Foundation Scholarship worth up to £8,000 for each year of undergraduate study.](#)

- **ESTRANGED STUDENTS BURSARY**

- [Home students](#)

[If you're a UK student identified as estranged by Student Finance England \(or the equivalent UK funding body\), you could be eligible for a bursary of £1,000 for each year of undergraduate study.](#)

- **GENESYS LIFE SCIENCES SCHOLARSHIP**

- Home students

Joining a School of Biosciences degree and have a household income of less than £25,000? If you're a UK student, you could apply to receive £4,500 per year for three years of your undergraduate course.

- **GRADUATE ASSOCIATION HONG KONG & TUNG UNDERGRADUATE SCHOLARSHIPS**

- International students

- Hong Kong

If you're an undergraduate student from Hong Kong who can demonstrate academic excellence, you may be eligible to apply for a scholarship worth £10,000 in partnership with the Tung Foundation.

- **KAPLAN DIGITAL PATHWAYS EXCELLENCE SCHOLARSHIP**

- International students

Completed a Kaplan Digital Pathways Foundation Certificate? We're offering a £5,000 fee discount off the first year of undergraduate study for a maximum of two high achieving students joining one of our non-clinical degrees from an online Kaplan Foundation Certificate.

- **NOLAN SCHOLARSHIPS**

- Home students

Do you live in the Liverpool City Region with a household income of £25,000 or less? Did neither of your parents attend University? You could be eligible to apply for a Nolan Scholarship worth £5,000 per year for three years of undergraduate study.

- **RIGBY ENTERPRISE AWARD**

- Home students

Are you a UK student with a household income of £25,000 or less? If you've participated in an eligible outreach programme, you could be eligible to apply for a Rigby Enterprise Award worth £5,000 per year for three years of your undergraduate degree.

- **ROLABOTIC SCHOLARSHIP**

- Home students

Are you a UK student with a household income of £25,000 or less? Did neither of your parents attend University? You could be eligible to apply for a ROLABOTIC Scholarship worth £4,500 for each year of your undergraduate degree.



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## **SPORT LIVERPOOL PERFORMANCE PROGRAMME**

- [Home and international students](#)

[Apply to receive tailored training support to enhance your sporting performance. Our athlete support package includes a range of benefits, from bespoke strength and conditioning training to physiotherapy sessions and one-to-one nutritional advice.](#)

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## **TECHNETIX BROADHURST ENGINEERING SCHOLARSHIP**

- [Home students](#)

[Joining a degree in the School of Electrical Engineering, Electronics and Computer Science? If you're a UK student with household income below £25,000, you could be eligible to apply for £5,000 a year for three years of study. Two awards will be available per academic year.](#)

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## **UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE EXCELLENCE SCHOLARSHIP**

- [International students](#)

[Completed a Foundation Certificate at University of Liverpool International College \(UoLIC\)? We're offering a £5,000 fee discount off the first year of undergraduate study to some of the highest achieving students joining one of our non-clinical degrees from UoLIC.](#)

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## **UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE FIRST CLASS SCHOLARSHIP**

- [International students](#)

[We're offering a £1,000 fee discount for years 2 and 3 of undergraduate study to eligible students progressing from University of Liverpool International College. You'll need to be studying a non-clinical subject and get an average of 70% or above in year 1 of your degree.](#)

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## **UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE IMPACT PROGRESSION SCHOLARSHIPS**

- [International students](#)

[If you're a University of Liverpool International College student awarded a Kaplan Impact Scholarship, we'll also consider you for an Impact Progression Scholarship. If selected, you'll receive a £3,000 fee discount off the first year of your undergraduate degree.](#)

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## **YOUNG ADULT CARER'S (YAC) BURSARY**

- [Home students](#)

[If you're a young adult and a registered carer in the UK, you might be eligible for a £1,000 bursary for each year of study. You'll need to be aged 18-25 on 1 September in the year you start your undergraduate degree.](#)

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# Entry requirements

The qualifications and exam results you'll need to apply for this course.

Your qualification	Requirements <a href="#">About our typical entry requirements</a>
A levels	<p>ABB including two science A levels, Chemistry and a second science. Acceptable second sciences are: Mathematics, Further Mathematics, Physics, Biology, Geography, Geology, Computing, Computer Science and Economics.</p> <p>Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is <b>BBB</b> with <b>A</b> in the EPQ.</p> <p>You may automatically qualify for reduced entry requirements through our <a href="#">contextual offers scheme</a>.</p>
GCSE	4/C in English and 4/C in Mathematics
Subject requirements	<p>Where Chemistry is the only science A level offered, an offer may be made at AAB including an A in Chemistry.</p> <p>For applicants from England: Where a science has been taken at A level (Chemistry, Biology, Geology or Physics), a pass in the Science practical of each subject will be required.</p>
BTEC Level 3 National Extended Diploma	<p>D*DD in relevant diploma. Students will be invited to attend interview and take an assessment.</p> <p>Applicants must be completing the BTEC National Extended Diploma in Applied Science and be studying the following optional modules:</p> <ul style="list-style-type: none"><li>• Applications of Inorganic Chemistry</li><li>• Applications of Organic Chemistry</li><li>• Practical Chemical Analysis.</li></ul> <p>For previous BTEC (QCF) qualification:</p> <p>The Applied Science pathway is acceptable and the following optional modules must be studied:</p>

Your qualification	<b>Requirements</b> <a href="#">About our typical entry requirements</a>
	<ul style="list-style-type: none"> <li>• Chemical Periodicity and its Applications</li> <li>• Industrial Applications of Organic Chemistry and/or Industrial Chemical Reactions</li> <li>• Mathematical Calculations for Science and/or Using Statistics in Science</li> <li>• Chemical Laboratory Techniques and/or Chemistry for Biology Technicians.</li> </ul>
International Baccalaureate	33 points including 6 points from Chemistry at higher level and 5 points from one other science at higher level.
Irish Leaving Certificate	H1, H2, H2, H2, H3, H3 (including Chemistry and one other Science)
Scottish Higher/Advanced Higher	Not accepted without Advanced Highers.
Welsh Baccalaureate Advanced	Accepted at grade B, including 2 science A levels at grades AB including Chemistry.
Access	45 Level 3 credits in graded units in a relevant Diploma, including 30 at Distinction and a further 15 with at least Merit. 15 Distinctions are required in each of Chemistry and a second science. Students will be invited to attend interview and take an assessment.
International qualifications	Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the <a href="#">University of Liverpool International College</a> , means you're guaranteed a place on your chosen course.

## ALTERNATIVE ENTRY REQUIREMENTS

- If your qualification isn't listed here, or you're taking a combination of qualifications, [contact us](#) for advice
  - [Applications from mature students](#) are welcome.
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