

# Chemistry MChem

## COURSE DETAILS

- A level requirements: [ABB](#)
- UCAS code: F102
- Study mode: Full-time
- Length: 4 years

## KEY DATES

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

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## Course overview

Do you want to pursue a high-level research career as a professional chemist? This course brings you to the frontiers of chemistry where you will join one of the research teams in the department.

## INTRODUCTION

Study Chemistry at Liverpool and learn in a culture of research excellence. Chemistry is a great choice for those with a keen interest in materials chemistry, medicinal chemistry and theoretical and computation chemistry. You'll thrive in our award-winning undergraduate laboratories. All our chemistry programmes have a common core in the first two years, this provides a good measure of flexibility and choice for you during the first two years. These first two years progress rapidly, with a mix of theory and practical modules to give you a solid grounding in the subject.

By year three you will be a proficient chemist, and will be able to extend your knowledge in the three traditional branches of chemistry. You will also be offered a choice of optional chemistry and non-chemistry modules, or modules in science education for those interested in pursuing a career in teaching. Practical modules in year three will continue to develop your skills and knowledge learnt in the first two years. This may involve conducting mini-projects, relevant in the modern world, developing your skill set to make you industry-ready.

In your final year, you will take a range of advanced core modules in inorganic, physical and organic chemistry and can tailor your studies to choose high-level modules in areas that interest you and that are related to our research areas. Chemical research is particularly important in year four and involves you conducting a significant project as a member of one of the research groups in the Department.

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.

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**

- Practical application of chemistry
  - Material chemistry
  - Energy and catalysis
  - Functional interfaces
  - Medicine and bio-nano chemistry
  - Theoretical and computational chemistry
  - Renewable and sustainable chemistry
  - Numeracy and problem solving
  - Working in a research environment
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## **ACCREDITATION**

Our MChem programmes have bachelor accreditation from the Royal Society of Chemistry (RSC) ensuring your degree with us will set you on the pathway to a successful career.

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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

In the first year, you will take modules that cover the fundamentals of Inorganic, Organic and Physical Chemistry, plus necessary key skills. Four Chemistry modules combine theoretical and practical aspects and one Chemistry module develops Quantitative and General Key Skills. You will spend three to six hours per week in the laboratory and so will receive a comprehensive training in practical aspects of the subject.

You will have a choice of 30 credits of subsidiary modules from other Departments including Environmental Sciences, Mathematics, Physics and Archaeology.

There are also optional courses within chemistry covering, for example the chemistry-biology interface, and in the second semester you can opt to take a research inspired course, innovative chemistry for energy and materials, delivered by staff in the Stephenson Institute for Renewable Energy.

You will have a choice of 30 credits of subsidiary modules from other Departments including Environmental Sciences, Life Sciences (Anatomy, Molecular biology, Biochemistry, Pharmacology or Physiology), Mathematics, Physics and Archaeology.

There are also optional courses within chemistry covering, for example the chemistry-biology interface, and in the second semester you can opt to take a research inspired course Innovative chemistry for energy and materials delivered by staff in the Stephenson Institute for Renewable Energy.

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## COMPULSORY MODULES

### 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.

## **OPTIONAL 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.

## **INNOVATIVE CHEMISTRY FOR ENERGY AND MATERIALS (CHEM184)**

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

The module covers a wide variety of topics in the area of innovative chemistry for energy and materials. This will act as an introduction to these areas to enable the student to pursue their interests to a deeper level independently, and to provide a foundation level knowledge in materials and electrochemistry, to be expanded in subsequent core and optional chemistry modules.

*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**

You will learn more advanced topics within all the main branches of chemistry and continue to develop your quantitative and key skills.

Practical skills will be developed through stand-alone practical modules and you will have the opportunity to spend between six and nine hours per week in the laboratory.

### **COMPULSORY MODULES**

#### **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.

#### **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.

#### **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.

## **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.

## **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.

## **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.

## **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

## **OPTIONAL 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.

## **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.

## **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.

## **FUNCTIONAL ORGANIC MATERIALS (CHEM241)**

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

Organic functional materials are of increasing global importance with applications in energy, medicine and electronics. This module will highlight how functional organic materials such as high-performance polymers, crosslinked polymers and composites, and porous materials can be designed for specific applications. The module will also explain how advanced characterisation methods (including scattering techniques, gas sorption, size exclusion chromatography, thermogravimetric analysis, tensile measurement, and electron microscopy) are used in the development of modern materials. Additionally, this module will provide an introduction to polymers, outlining aspects of polymer synthesis, properties and characterisation. Some of the history, importance, and current issues of polymeric materials – such as sustainability – will be discussed to provide an understanding of the wider context. CHEM241 will be useful to chemists who wish to develop a deeper understanding of how organic compounds can be designed to provide functional materials

## **STEM EDUCATION AND COMMUNICATION (CHEM390)**

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

This module is designed to give students experience of communicating in a variety of media and in a variety of contexts. It will also introduce students to contemporary issues in education, and educational practice. This will be achieved by seminars, interactions with educational professionals, and the design and delivery of enrichment materials, utilising the existing and highly successful outreach activity within the school.

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## **YEAR THREE**

The third year will concentrate entirely on chemistry, extending your knowledge in the three traditional branches of the subject and the interdisciplinary subject of catalysis.

Importantly, year three will provide you with the opportunity to learn about the application of chemistry to the modern world, in modules that examine the chemistry and chemical processes that are fundamental to the production of pharmaceuticals, polymers / plastics, pigments and novel materials.

The practical modules in this year will be more challenging than those encountered in previous years, involve up to 15 hours laboratory work per week and in some cases will be organised as mini-projects.

### **COMPULSORY MODULES**

#### **CATALYSIS (CHEM368)**

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

This module will give students a broad, interdisciplinary, background in catalysis across the traditional divides within chemistry.

#### **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.

#### **FURTHER PHYSICAL CHEMISTRY (CHEM354)**

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

The aim of this module is to extend a student's knowledge of physical chemistry, in particular to demonstrate the understanding of electrochemical cells, surfactants and colloids, and the quantum mechanical description of chemical bonding.

#### **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.



## **PRACTICAL CHEMISTRY YR 3 (CHEM375)**

**Credits: 22.5 / Semester: semester 1**

In this module, students will carry out a bespoke collection of advanced experiments in three of the areas of Organic, Inorganic, Physical or Computational Chemistry

## **PRACTICAL CHEMISTRY PROJECT YEAR 3 – AN INTRODUCTION TO RESEARCH METHODS (CHEM366)**

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

This module is taken by year 3 MChem students in the 2nd semester. Students will be assigned mini research projects based on their project preference and potential projects offered by academic staff. Students carry out these projects in research labs for 9 weeks.

## **FINAL YEAR RESEARCH PROJECTS (CHEM370)**

**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 be assigned an extended experiment on a synthetic (organic or inorganic), physical (catalysis, electrochemistry, surface science, modelling, nanoparticles) or other types of project, according to their own interests. However, the project does not necessarily have to be research or laboratory based, although these would be expected to cover the majority of cases. School outreach projects and some development projects may be available.

## **OPTIONAL MODULES**

### **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.

## **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.

## **CHEMISTRY RESEARCH INTERNSHIP (CHEM309)**

**Credits: 22.5 / Semester: semester 1**

The research internship is designed to give students the experience of working in a research environment or setting that is quite different from any project work that they undertake in the laboratories in the Department of Chemistry. It should provide an insight into how students may apply skills and experiences later in their career; whether working abroad, in industry or in any other scientific setting.

## **FURTHER ANALYTICAL CHEMISTRY (CHEM386)**

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

Further Analytical Chemistry provides the students with a knowledge of the principles of structural elucidation and application of various spectroscopic and spectrometric analytical techniques for identification and structural characterization of small molecules. This module will include the fundamental principles of selected instrumental analytical techniques (solution NMR spectroscopy, mass-spectrometry, separation and hyphenated techniques) in the context of their application for structural analysis in synthetic organic chemistry and catalysis.

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## **YEAR FOUR**

The final year of your programme will be dominated by the Chemical research project which accounts for 75 of the 120 credits. You will choose which branch of chemistry you wish to pursue research in (and usually also which research group you wish to be in), and work throughout the year on original research at the frontiers of chemistry. You select three of the available optional modules each semester that best reflect your interests.

## **COMPULSORY MODULES**

### **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.

## **OPTIONAL MODULES**

### **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

### **CHEMISTRY OF SOLIDS AND THEIR SURFACES (CHEM441)**

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

The chemical properties of crystalline inorganic materials underlie much of current technology, from the constituent materials of lithium ion batteries to those of LED lighting and photovoltaic devices. The functional properties of these materials depend on the chemistry of the bulk and surfaces of these crystalline solids. In this module we will investigate the structural and electronic properties of both the bulk and surfaces of inorganic crystalline solids, revealing the importance of materials chemistry in modern life.

### **INTERFACIAL ELECTROCHEMISTRY AND SPECTROSCOPY (CHEM455)**

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

Interfaces are ubiquitous in science and daily life, ranging from batteries to antimicrobial coatings. This is an advanced module that introduces the student to modern electrochemical and spectroscopic techniques and their applications in interface characterisation. Emphasis is given to those techniques, which are currently most important to chemical research both in industry and academia. At the end of the module, students should be able to understand the basic physical principles of these techniques and be able to decide which combination of techniques is best employed to tackle a particular problem of interface characterisation.

## **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.

## **ELECTROCHEMICAL SYSTEMS FOR ENERGY APPLICATIONS (CHEM456)**

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

In part 1 the course will revise key concepts and models of electrode interfaces before covering in detail examples of electrochemical interfaces for energy conversion including electrocatalysis for hydrogen production, carbon dioxide conversion; and also the principles light driven energy conversion. In part 2 the electrochemical principles of energy storage systems and the principles of design and operation of the current state-of-the-art and the potential future battery technologies. The course revises and builds on the contents of core inorganic and physical chemistry modules from years 1 and 2.

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## **HOW YOU'LL LEARN**

Laboratory classes in years one and two prepare you for independent laboratory work in years three. In year three you will carry out mini research projects, applying learning in computational modelling and molecular visualisation that are introduced in year one.

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

Our graduates develop a wide range of skills including numeracy, problem solving and IT in addition to scientific skills. 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.

Typical careers of our graduates include

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

Recent employers:

- GlaxoSmithKline
- Unilever
- IOTA Nanosolutions Ltd
- Perstorp Caprolactones
- Shell
- Towers Watson
- 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 fee covers almost everything, but you may have additional study costs to consider, such as books, specialist equipment or field trips.

## 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 in industry fee	£1,850
Year abroad fee	£1,385

<b>International fees</b>	
Full-time place, per year	£29,100
Year in industry fee	£1,850
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, as well as the year in industry fee will change, so the fees shown are 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

Lab coats and safety goggles are provided free of charge.

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](#)

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### **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.](#)

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### **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.](#)

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### **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.](#)

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### **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.](#)

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### **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.](#)



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## **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.](#)

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## **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.](#)

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## **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.](#)

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## **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.](#)

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## **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.](#)

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## **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.](#)

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## **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.](#)

- **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 for ABB two science A levels including Chemistry or AAB one science A level including A in Chemistry.</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>Two science A levels including Chemistry and a second science. Acceptable second sciences are: Mathematics, Further Mathematics, Physics, Biology, Geography, Geology, Computing, Computer Science and Economics.</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>

<b>Your qualification</b>	<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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**THE ORIGINAL**

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