NEW
Find out about our MChem (with Industrial Placement)

Chemistry
Undergraduate Degrees 2025
Welcome

Chemistry is a fascinating subject that we are all incredibly passionate about here at Lancaster. Often referred to as the “central science”, chemistry provides us with a unique perspective of the universe, emerging from the fundamental properties and interactions of atoms and molecules. This enables us to shape the world around us, and as such, we continue to push boundaries of understanding, and to carry out research that advances knowledge and improves lives.

The impact of chemistry on society is immense, from solving challenges in energy and climate change, food production, clean water, the development of pharmaceuticals and novel materials. Chemistry is enhancing the capture and storage of energy, underpinning society’s shift to net zero and the electric vehicle revolution. Greater understanding of the chemical processes in cells enables the development of new medical treatments, whilst new synthetic routes and catalysts are being developed to make the chemical industry greener and more sustainable.

Our established undergraduate chemistry degree programmes are Royal Society of Chemistry accredited and research-led, being taught by staff who are committed to advancing the frontiers of chemistry. The modern curriculum is designed to deliver chemistry in an integrated form, rather than in the traditional silos of inorganic, organic, physical and analytical chemistry. Our purpose-built teaching and research laboratories are housed in the recently fully refurbished Chemistry Building. Here you will receive hands-on training in the fundamental techniques of modern practical chemistry. Beyond chemistry, our degree programmes are designed to develop key transferable skills, which are so important for enhancing your career prospects in chemistry and beyond, including communication and presentation skills, and competency in mathematics and computing. Previous graduates have gone into postgraduate study, the chemical industry, teaching and a broad range of graduate-level jobs.

Three features that really set us apart are:
(i) an exceptional student experience (evidenced by our track record in the NSS);
(ii) excellent staff-student ratios and
(iii) the opportunities for all of our students to carry out genuinely novel research.

We believe the Department is a highly supportive environment committed to your success - a feature that our students often highlight is the accessibility of our academic staff. We have recently renewed our Athena SWAN award which recognises the Department’s values and focus on people, in being inclusive and in providing opportunity and support for all our students and staff.

We welcome you to our Department!

Dr Nick Evans, Head of Department

The impact of chemistry on society is immense, from solving challenges in energy and climate change, food production, clean water, the development of pharmaceuticals and novel materials. Chemistry is enhancing the capture and storage of energy, underpinning society’s shift to net zero and the electric vehicle revolution. Greater understanding of the chemical processes in cells enables the development of new medical treatments, whilst new synthetic routes and catalysts are being developed to make the chemical industry greener and more sustainable.

Our established undergraduate chemistry degree programmes are Royal Society of Chemistry accredited and research-led, being taught by staff who are committed to advancing the frontiers of chemistry. The modern curriculum is designed to deliver chemistry in an integrated form, rather than in the traditional silos of inorganic, organic, physical and analytical chemistry. Our purpose-built teaching and research laboratories are housed in the recently fully refurbished Chemistry Building. Here you will receive hands-on training in the fundamental techniques of modern practical chemistry. Beyond chemistry, our degree programmes are designed to develop key transferable skills, which are so important for enhancing your career prospects in chemistry and beyond, including communication and presentation skills, and competency in mathematics and computing. Previous graduates have gone into postgraduate study, the chemical industry, teaching and a broad range of graduate-level jobs.

Three features that really set us apart are:
(i) an exceptional student experience (evidenced by our track record in the NSS);
(ii) excellent staff-student ratios and
(iii) the opportunities for all of our students to carry out genuinely novel research.

We believe the Department is a highly supportive environment committed to your success - a feature that our students often highlight is the accessibility of our academic staff. We have recently renewed our Athena SWAN award which recognises the Department’s values and focus on people, in being inclusive and in providing opportunity and support for all our students and staff.

We welcome you to our Department!

Dr Nick Evans, Head of Department

Chemistry is a fascinating subject that we are all incredibly passionate about here at Lancaster. Often referred to as the “central science”, chemistry provides us with a unique perspective of the universe, emerging from the fundamental properties and interactions of atoms and molecules. This enables us to shape the world around us, and as such, we continue to push boundaries of understanding, and to carry out research that advances knowledge and improves lives.

The impact of chemistry on society is immense, from solving challenges in energy and climate change, food production, clean water, the development of pharmaceuticals and novel materials. Chemistry is enhancing the capture and storage of energy, underpinning society’s shift to net zero and the electric vehicle revolution. Greater understanding of the chemical processes in cells enables the development of new medical treatments, whilst new synthetic routes and catalysts are being developed to make the chemical industry greener and more sustainable.

Our established undergraduate chemistry degree programmes are Royal Society of Chemistry accredited and research-led, being taught by staff who are committed to advancing the frontiers of chemistry. The modern curriculum is designed to deliver chemistry in an integrated form, rather than in the traditional silos of inorganic, organic, physical and analytical chemistry. Our purpose-built teaching and research laboratories are housed in the recently fully refurbished Chemistry Building. Here you will receive hands-on training in the fundamental techniques of modern practical chemistry. Beyond chemistry, our degree programmes are designed to develop key transferable skills, which are so important for enhancing your career prospects in chemistry and beyond, including communication and presentation skills, and competency in mathematics and computing. Previous graduates have gone into postgraduate study, the chemical industry, teaching and a broad range of graduate-level jobs.

Three features that really set us apart are:
(i) an exceptional student experience (evidenced by our track record in the NSS);
(ii) excellent staff-student ratios and
(iii) the opportunities for all of our students to carry out genuinely novel research.

We believe the Department is a highly supportive environment committed to your success - a feature that our students often highlight is the accessibility of our academic staff. We have recently renewed our Athena SWAN award which recognises the Department’s values and focus on people, in being inclusive and in providing opportunity and support for all our students and staff.

We welcome you to our Department!

Dr Nick Evans, Head of Department

The impact of chemistry on society is immense, from solving challenges in energy and climate change, food production, clean water, the development of pharmaceuticals and novel materials. Chemistry is enhancing the capture and storage of energy, underpinning society’s shift to net zero and the electric vehicle revolution. Greater understanding of the chemical processes in cells enables the development of new medical treatments, whilst new synthetic routes and catalysts are being developed to make the chemical industry greener and more sustainable.

Our established undergraduate chemistry degree programmes are Royal Society of Chemistry accredited and research-led, being taught by staff who are committed to advancing the frontiers of chemistry. The modern curriculum is designed to deliver chemistry in an integrated form, rather than in the traditional silos of inorganic, organic, physical and analytical chemistry. Our purpose-built teaching and research laboratories are housed in the recently fully refurbished Chemistry Building. Here you will receive hands-on training in the fundamental techniques of modern practical chemistry. Beyond chemistry, our degree programmes are designed to develop key transferable skills, which are so important for enhancing your career prospects in chemistry and beyond, including communication and presentation skills, and competency in mathematics and computing. Previous graduates have gone into postgraduate study, the chemical industry, teaching and a broad range of graduate-level jobs.

Three features that really set us apart are:
(i) an exceptional student experience (evidenced by our track record in the NSS);
(ii) excellent staff-student ratios and
(iii) the opportunities for all of our students to carry out genuinely novel research.

We believe the Department is a highly supportive environment committed to your success - a feature that our students often highlight is the accessibility of our academic staff. We have recently renewed our Athena SWAN award which recognises the Department’s values and focus on people, in being inclusive and in providing opportunity and support for all our students and staff.

We welcome you to our Department!

Dr Nick Evans, Head of Department

Chemistry is a fascinating subject that we are all incredibly passionate about here at Lancaster. Often referred to as the “central science”, chemistry provides us with a unique perspective of the universe, emerging from the fundamental properties and interactions of atoms and molecules. This enables us to shape the world around us, and as such, we continue to push boundaries of understanding, and to carry out research that advances knowledge and improves lives.

The impact of chemistry on society is immense, from solving challenges in energy and climate change, food production, clean water, the development of pharmaceuticals and novel materials. Chemistry is enhancing the capture and storage of energy, underpinning society’s shift to net zero and the electric vehicle revolution. Greater understanding of the chemical processes in cells enables the development of new medical treatments, whilst new synthetic routes and catalysts are being developed to make the chemical industry greener and more sustainable.

Our established undergraduate chemistry degree programmes are Royal Society of Chemistry accredited and research-led, being taught by staff who are committed to advancing the frontiers of chemistry. The modern curriculum is designed to deliver chemistry in an integrated form, rather than in the traditional silos of inorganic, organic, physical and analytical chemistry. Our purpose-built teaching and research laboratories are housed in the recently fully refurbished Chemistry Building. Here you will receive hands-on training in the fundamental techniques of modern practical chemistry. Beyond chemistry, our degree programmes are designed to develop key transferable skills, which are so important for enhancing your career prospects in chemistry and beyond, including communication and presentation skills, and competency in mathematics and computing. Previous graduates have gone into postgraduate study, the chemical industry, teaching and a broad range of graduate-level jobs.

Three features that really set us apart are:
(i) an exceptional student experience (evidenced by our track record in the NSS);
(ii) excellent staff-student ratios and
(iii) the opportunities for all of our students to carry out genuinely novel research.

We believe the Department is a highly supportive environment committed to your success - a feature that our students often highlight is the accessibility of our academic staff. We have recently renewed our Athena SWAN award which recognises the Department’s values and focus on people, in being inclusive and in providing opportunity and support for all our students and staff.

We welcome you to our Department!

Dr Nick Evans, Head of Department

Chemistry is a fascinating subject that we are all incredibly passionate about here at Lancaster. Often referred to as the “central science”, chemistry provides us with a unique perspective of the universe, emerging from the fundamental properties and interactions of atoms and molecules. This enables us to shape the world around us, and as such, we continue to push boundaries of understanding, and to carry out research that advances knowledge and improves lives.

The impact of chemistry on society is immense, from solving challenges in energy and climate change, food production, clean water, the development of pharmaceuticals and novel materials. Chemistry is enhancing the capture and storage of energy, underpinning society’s shift to net zero and the electric vehicle revolution. Greater understanding of the chemical processes in cells enables the development of new medical treatments, whilst new synthetic routes and catalysts are being developed to make the chemical industry greener and more sustainable.

Our established undergraduate chemistry degree programmes are Royal Society of Chemistry accredited and research-led, being taught by staff who are committed to advancing the frontiers of chemistry. The modern curriculum is designed to deliver chemistry in an integrated form, rather than in the traditional silos of inorganic, organic, physical and analytical chemistry. Our purpose-built teaching and research laboratories are housed in the recently fully refurbished Chemistry Building. Here you will receive hands-on training in the fundamental techniques of modern practical chemistry. Beyond chemistry, our degree programmes are designed to develop key transferable skills, which are so important for enhancing your career prospects in chemistry and beyond, including communication and presentation skills, and competency in mathematics and computing. Previous graduates have gone into postgraduate study, the chemical industry, teaching and a broad range of graduate-level jobs.

Three features that really set us apart are:
(i) an exceptional student experience (evidenced by our track record in the NSS);
(ii) excellent staff-student ratios and
(iii) the opportunities for all of our students to carry out genuinely novel research.

We believe the Department is a highly supportive environment committed to your success - a feature that our students often highlight is the accessibility of our academic staff. We have recently renewed our Athena SWAN award which recognises the Department’s values and focus on people, in being inclusive and in providing opportunity and support for all our students and staff.

We welcome you to our Department!

Dr Nick Evans, Head of Department
Flexible degree programmes

Chemistry is often referred to as the ‘central science’, as it interfaces with the physical, environmental, and biological sciences. We have developed our degree programmes to reflect the diversity of the discipline.

BSc Hons Chemistry
UCAS Code: F100
Duration: 3 years (full-time)

MChem Hons Chemistry
UCAS Code: F101
Duration: 4 years (full-time)

MChem Hons Chemistry (Study Abroad)
UCAS Code: F1T7
Duration: 4 years (full-time) including one year studying abroad

MChem Hons Chemistry (with Industrial Placement)
UCAS Code: F102
Duration: 4 years (full-time) including one year on placement

You can view details of all our courses at lancaster.ac.uk/chemistry/study/undergraduate

More than £30 million invested in chemistry since 2012
Small class sizes and approachable academic and support staff
Flexible degree programmes
Study abroad option
Industrial placement option

Our FREE Learning Resource Pack provides the key materials to support your studies: lab coat, eye protection, all glassware and lab equipment, lab books and online core course text books
Chemical technologies enrich our quality of life by providing breakthroughs in energy, genetics, biochemistry, healthcare and medicine, materials science, forensics, nanotechnology, drug discovery and pharmaceuticals, the environment and next-generation computer hardware. Chemistry also underpins many of our everyday activities including our consumption of food, water, electricity and gas, cosmetics, cleaning products, paints and dyes.

The UK chemical and pharmaceutical industry continues to be a vital part of the UK economy, with the UK being one of the world’s top global producers of chemicals and pharmaceuticals. These industries employ vast numbers of chemists in a range of roles, including in research and development, marketing, sales and management.

Chemistry graduates also find employment in a broad range of careers, including pharmaceuticals, commercial research and development, academic research, product development, healthcare, medicine, finance, teaching, environmental protection, biotechnology, energy and food. A chemistry degree prepares you for a wide range of careers.

Every hydrogen atom in your body was created at the big bang, that means part of you is 13.5 billion years old. Study chemistry at Lancaster and discover the inner workings of the world around us.

World changing chemistry
Chemical technologies enrich our quality of life by providing breakthroughs in energy, genetics, biochemistry, healthcare and medicine, materials science, forensics, nanotechnology, drug discovery and pharmaceuticals, the environment and next-generation computer hardware. Chemistry also underpins many of our everyday activities including our consumption of food, water, electricity and gas, cosmetics, cleaning products, paints and dyes.

Vital to the UK economy
The UK chemical and pharmaceutical industry continues to be a vital part of the UK economy, with the UK being one of the world’s top global producers of chemicals and pharmaceuticals. These industries employ vast numbers of chemists in a range of roles, including in research and development, marketing, sales and management.

Chemistry graduates also find employment in a broad range of careers, including pharmaceuticals, commercial research and development, academic research, product development, healthcare, medicine, finance, teaching, environmental protection, biotechnology, energy and food. A chemistry degree prepares you for a wide range of careers.

Be part of something amazing
Every hydrogen atom in your body was created at the big bang, that means part of you is 13.5 billion years old. Study chemistry at Lancaster and discover the inner workings of the world around us.

Aidan Leigh
MChem Hons Chemistry
Studying Chemistry at Lancaster University means being a part of an inclusive and friendly student and staff collective. The ease of access to wellbeing support and study assistance makes Lancaster feel much like home. Throughout my time at Lancaster, I have thoroughly enjoyed the high number of workshop and tutorial sessions we have each week. This helps to consolidate any learning from lectures, and also allows you to build a closer relationship with Department academics. Compared to other top universities around the country, Chemistry at Lancaster has a relatively small intake, which further helps in making sure each student’s needs are well catered to.

My favourite thing about my degree is the number of laboratory hours we have each week, covering areas such as synthetic, physical and computational chemistry. This provides students with a huge breadth of knowledge and hands-on experience, perfect for pursuing a lab-based career in the future. During these sessions, a large array of ‘soft skills’ are also cultivated, such as problem solving, communication, numerical skills and timekeeping. These are all highly valued by employers, regardless of the field of work.

My favourite thing about the University is the college system, which provides another way to make lasting connections with people on different courses. There are numerous inter-college sports, which are an amazing way to make friends and enjoy your extracurricular activities at the University.

We work closely with the Royal Society of Chemistry to ensure our degrees meet their accreditation standard

For more information please visit lancaster.ac.uk/chemistry
We provide the very best in modern, custom designed laboratories for both teaching and research, together with instrument suites, computer rooms, offices, and social spaces, including: specialist synthetic, physical & analytical and computational teaching labs, NMR, X-Ray diffraction, electron and atomic force microscopes, UV-Vis, IR and Raman spectrometers, a Mass spectrometry suite and a Nanoscribe microscale 3D printer.

For more information please visit lancaster.ac.uk/chemistry

Over £1.5 million has been spent on mass spectrometry in the Department

The Chemistry Building also features social spaces for students to relax and study

Synthetic Undergraduate Teaching Laboratory

Physical & Analytical Teaching Laboratory. Practicals in this laboratory tend to focus on the characterisation and analysis of substances

Chemistry Building

Computational Undergraduate Teaching Laboratory

For more information please visit lancaster.ac.uk/chemistry
Taught by the very best

To ensure that you have the best possible experience, our courses are taught by experienced, highly qualified experts, with international reputations.

Modern chemistry skills

Science in general, and chemistry in particular, is becoming increasingly multidisciplinary. We will therefore equip you with the knowledge and understanding of a broad range of sciences, as well as advanced subject-specific skills, to meet this need.

Our teaching is research-led, and our curriculum is explicitly developed to provide you with the skills that a modern chemistry graduate needs. As part of our commitment to teaching excellence, we have developed our degrees in conjunction with the Royal Society of Chemistry, and operate a continual course development process in response to student feedback.

An integrated approach

You will be taught chemistry as an integrated subject, emphasising the practical and theoretical skills that are important for a modern chemistry graduate and which are highly valued by employers. Our courses develop practical synthetic, characterisation, measurement and analytical skills. They also involve data analysis, mathematical and computational techniques, written and oral presentations, report-writing, literature searching and fundamental research.

As an international student I didn’t have the chance to visit the campus before starting my course. However, I was amazed by everyone’s friendliness and support in the Chemistry Department and the modern feel of the Chemistry Building. Right from the beginning, I was assigned a personal academic advisor, who provides me with academic, career and pastoral help whenever I need it. Also, there is an open door policy at the Department, which means that whenever I have a question about material from a given module or I want to discuss anything else with an academic, I can simply go to their office without arranging a meeting with them beforehand.

What I especially enjoy as part of my degree is the practicals, where I can apply the knowledge I get from the lectures and workshops. In second year, I had 8-12 hours of practicals per week where I either worked in the synthetic or analytical lab or did computer simulations in one of the computer labs. With every session, I became more confident in using various instruments or programmes.

I have also had the opportunity to explore my career options during two careers modules. Talking to some of the staff about my future prospects convinced me that I would like to pursue a career in research. As a result of this I applied for and undertook an 8-week long summer internship with the Department working on the development of new aqueous batteries. I cannot wait for further opportunities to broaden my knowledge of chemistry and enhance my employability with the help of the Department.
Industrial Placement

MChem Hons Chemistry (with Industrial Placement) - 4 Years

Our MChem Industrial Placement option offers a fantastic opportunity for you to increase your attractiveness to employers and to add a distinctive practical chemistry element to your CV.

Working with an industrial partner, you will deepen your understanding of the workplace and learn how to apply your skills and knowledge to real world experiences. This will greatly increase your confidence and broaden your horizons.

Throughout your second and third year we will support you to find a placement and help you through the competitive application process.

As you are distance learning while on your placement, you only pay 20% of your year’s tuition fee.

Whilst on placement you will be undertaking a major research project as well as completing a module reflection assessment. You will also take a selection of modules delivered online.

You will be supported throughout your placement year by the Department and a company employee.

The Chemistry Department is very excited to have launched this new degree course in which students can complete their 4th year research projects during their industrial placement.

We provide students with lots of support to find and prepare for their placements, and potential industrial partners have already given us great feedback about the structure of the programme.

We are looking forward to sending our first cohort of students on placements in the autumn of 2025.

Dr Maria Paz Munoz-Herranz, Industrial Placement Coordinator
As part of our MChem course, it is possible to spend a year studying at a prestigious overseas university.

I’d never really thought about Study Abroad until I came to the Open Day and it was mentioned at the end of the speech. I looked into it a bit more and there was loads of support, so you’re not just getting thrown into this different country and having to look after yourself.

We had the opportunity to go to Australia, Canada and a couple of places in America and New Zealand. I went to Kentucky as the course there matched what I was doing here. It was a really cool place and feel I actually got to experience the real America. I got to do a project over there and work in an American research group. I also made connections as well; I still email my supervisor who supervised my project in Kentucky. Studying abroad has meant having more skills to add to my CV – I can now say that I’m good at communicating because I’ve communicated with all these different people and I’m flexible as I’ve had to adapt to a whole different country. I also feel like you’re building your confidence as well because you have to make new friends really quickly, and make these connections. It also made me appreciate Lancaster more, as I feel you are a bit spoiled because it’s such a good department.

In Kentucky, I did a computer-based project, where I was simulating molecules that would prevent the overcharging in batteries. It’s been this project that’s made me realise that energy storage is what I want to do.

I visited Vancouver in my year away and I could see myself living there, so I applied for a PhD at Vancouver University where I am now studying.

Kate Fraser
MChem Hons Chemistry (Study Abroad)

For more information please visit lancaster.ac.uk/chemistry
Supporting you every step of the way

Our small group tutorials and seminars will support you throughout your studies. We have dedicated careers advisors who are approachable and always on hand, and you will receive individual supervision for your project work.

Core themes
- Atoms and molecules
- Organic structure
- Organic reactivity and mechanism
- Chemistry of the elements
- Coordination chemistry
- Skills for chemists
- Spectroscopy and analytical chemistry
- Thermodynamics of chemical processes
- Chemical reaction kinetics
- Physical foundations of chemistry

Degree specifics

First year

Each of our single honours Chemistry degrees shares a common first and second year. Here, the key concepts underpinning chemistry are introduced, along with the supporting practical skills. The topics link and interface with other disciplines and will be built upon in later years.

Core themes
- Atoms and molecules
- Organic structure
- Organic reactivity and mechanism
- Chemistry of the elements
- Coordination chemistry
- Skills for chemists
- Spectroscopy and analytical chemistry
- Thermodynamics of chemical processes
- Chemical reaction kinetics
- Physical foundations of chemistry

Free Learning Resource Pack provides the key materials to support your studies:
- Lab coat
- Eye protection
- All glassware and lab equipment
- Lab books
- Online core course text books

Degree specifications

First year

Each of our single honours Chemistry degrees shares a common first and second year. Here, the key concepts underpinning chemistry are introduced, along with the supporting practical skills. The topics link and interface with other disciplines and will be built upon in later years.

Core themes
- Atoms and molecules
- Organic structure
- Organic reactivity and mechanism
- Chemistry of the elements
- Coordination chemistry
- Skills for chemists
- Spectroscopy and analytical chemistry
- Thermodynamics of chemical processes
- Chemical reaction kinetics
- Physical foundations of chemistry

Free Learning Resource Pack provides the key materials to support your studies:
- Lab coat
- Eye protection
- All glassware and lab equipment
- Lab books
- Online core course text books

Degree specifications

First year

Each of our single honours Chemistry degrees shares a common first and second year. Here, the key concepts underpinning chemistry are introduced, along with the supporting practical skills. The topics link and interface with other disciplines and will be built upon in later years.

Core themes
- Atoms and molecules
- Organic structure
- Organic reactivity and mechanism
- Chemistry of the elements
- Coordination chemistry
- Skills for chemists
- Spectroscopy and analytical chemistry
- Thermodynamics of chemical processes
- Chemical reaction kinetics
- Physical foundations of chemistry

Free Learning Resource Pack provides the key materials to support your studies:
- Lab coat
- Eye protection
- All glassware and lab equipment
- Lab books
- Online core course text books

Degree specifications

First year

Each of our single honours Chemistry degrees shares a common first and second year. Here, the key concepts underpinning chemistry are introduced, along with the supporting practical skills. The topics link and interface with other disciplines and will be built upon in later years.

Core themes
- Atoms and molecules
- Organic structure
- Organic reactivity and mechanism
- Chemistry of the elements
- Coordination chemistry
- Skills for chemists
- Spectroscopy and analytical chemistry
- Thermodynamics of chemical processes
- Chemical reaction kinetics
- Physical foundations of chemistry

Free Learning Resource Pack provides the key materials to support your studies:
- Lab coat
- Eye protection
- All glassware and lab equipment
- Lab books
- Online core course text books
Second year

The second year of our chemistry degrees builds upon the strong foundations of the first year, where we introduce a range of new topics, and go into greater depth with more familiar topics.

### Core themes
- Strategies for chemical synthesis
- Molecular structure determination
- Organometallics, catalysis and mechanism
- Inorganic chemistry
- The physical principles of spectroscopy
- Thermodynamics and statistical mechanics
- Electrochemistry
- Quantum chemistry, symmetry and group theory
- Aromatic and aliphatic chemistry
- Using your degree for career skills

All of our teaching has been designed to encourage the development of problem solving, communication, practical, research and technical skills. We also offer transferrable skills and employability guidance which seeks to provide you with explicit practice in many of these skills in a broader context.

As in the first year, associated with each topic are lectures, practical classes (synthetic, physical, or computational), and a combination of seminars, tutorials and workshops.

Teaching in second year build upon the foundations of first year; more advanced synthetic chemistry is introduced, including topics dealing with rationalising the reactivity and mechanism of organic and inorganic molecules.

Familiar characterisation techniques such as NMR, IR, and mass spectrometry are built upon, and new techniques such as X-ray diffractometry and UV/Vis spectroscopy are introduced, both from a practical point-of-view, and from the theoretical side.

Phases of matter and influences on bulk behaviour are discussed, and characterised using thermodynamic techniques, spectroscopy and electrochemistry.

The underlying origin of all of these effects is introduced by means of quantum chemistry, which allows us to understand the fundamental properties and interactions of atoms and molecules at a molecular level.

---

Third and fourth years

The final years of our BSc and standard MChem programmes allow an element of specialisation, and provide the opportunity for you to undertake independent research projects in conjunction with one of our world-leading research groups.

### Third year

**Core themes**
- Advanced kinetics, reaction dynamics and surfaces
- Advanced spectroscopy: theory and applications
- Advanced synthetic chemistry
- f-block chemistry and metals in biology
- Further inorganic chemistry: f-block and metals in biology
- Biological chemistry and chemical biology
- Computational chemistry

**Core research project**
- Chemistry Research Project

**Optional themes**
- Advanced Techniques for Analytical Separations
- The Chemistry of Biomedical Imaging
- Investigating Mechanism in Sustainable Polymer Synthesis
- Computational Electronic Structure Theory

---

### Fourth year

**Core research project**
- MChem Chemistry Research Project

**Optional themes**
- Solar Energy Conversion and Storage
- Advanced Quantum Chemistry
- Self-organising Soft Nanomaterials
- Supramolecular Chemistry
- Transition Metal Structure and Application to Catalysis
- Advanced NMR: Proteins, Solids and Imaging
- Stereoselective Synthesis and Catalysis
- Advanced Materials Chemistry
- Determining Mechanisms in Organic Chemistry

In the third year of our BSc degree, you will take a research project, together with a series of taught topics that further develop chemistry knowledge and skills in more advanced areas.

For our standard MChem students, you will spend that time beginning to specialise in an area of advanced chemistry, whilst honing the skills you need for undertaking a more in-depth research project in your final year.

The final year of the standard MChem degree involves a research project, together with a choice between a number of optional advanced taught Master’s-level topics.

Practical work still forms a significant part of these years. However, rather than individual practical sessions that advance the skills and techniques of previous years, the practical work takes a more combined and integrated approach, where many of the skills connect and integrate in longer-term practicals and projects.

For MChem (Study Abroad) and MChem (with Industrial Placement) third and fourth year requirements, please see the relevant course page at lancaster.ac.uk/chemistry.
**Exciting research projects**

In the final year of your degree, you will have the opportunity to undertake a piece of original research. We offer a broad range of projects across all our research areas.

The research projects form a major part of your studies. They provide the opportunity to work more independently, but under the guidance and supervision of our expert academic staff, who have extensive experience in chemistry research.

We are continuously developing research programmes that cross the standard discipline boundaries, and indeed the interfaces with the other natural sciences, and that engage with government and industry.

Significant investment from the University into custom-designed facilities and equipment enables us to tackle major research challenges. This will provide you with the opportunity to use an extensive array of modern analytical and characterisation techniques.

**Our research is structured around some core themes**

+ Analytical and Spectroscopy
+ Theoretical and Computational Chemistry
+ Electrochemical and Surfaces
+ Inorganic Chemistry
+ Organic Chemistry

**The research itself seeks to address many major challenges, relating to:**

+ Healthcare
+ Energy
+ Materials
+ The environment

For more information please visit lancaster.ac.uk/chemistry

---

**World-leading departmental research**

**Professor John Griffin**
Professor in Materials Chemistry

John Griffin researches the study of structure and mechanisms in materials - in particular those with energy storage or conversion applications. John uses solid-state nuclear magnetic resonance (NMR) spectroscopy, a powerful analytical technique that can provide detailed information about atomic-scale structure, disorder and dynamics. This has involved developing and applying NMR experiments to study materials and combining this with insight from computational calculations. In this way it is often possible to get access to information that is very difficult to obtain from other experimental approaches.

---

**Dr Rachel Platel**
Lecturer in Chemistry

Rachel Platel is interested in controlling monomer sequence in copolymerizations to prepare copolymers with defined microstructures. In particular, biocompatible and biodegradable polyesters such as polylactide and polycaprolactone are currently of great interest, largely due to their biomedical applications. Rachel’s research involves both the design of new group 3 and lanthanide complexes and their use as initiators in ring-opening polymerization reactions with combinations of a variety of cyclic ester monomers, with the aim of preparing copolymers with variable structures. She is also interested in the relationship between catalyst design and polymer structure.
I enjoyed my final year project the most as this gave me the chance to research something completely new to me and learn about how a particular piece of chemistry is being used for research or can be applied in the real world. My project involved lots of lab work which was one of my favourite things about chemistry. I also enjoyed getting the frequent opportunity to work with peers in workshops, presentations and pieces of coursework.

I got an internship role as a Laboratory Assistant at Thermo Fisher Scientific in Heysham, which I got through the Chemistry Department at Lancaster. The role primarily involved working in the research & development labs on 0-20L scale chemical reactions. I was given a brilliant insight into a real-world chemistry environment and was introduced to other aspects of the company so that they could share with me more about what the company does as a whole.

The connections between Thermo Fisher Scientific and the Chemistry Department allowed for the internship I undertook to be advertised for solely Lancaster students. I got into my current role as a result of my internship. My internship was great so I looked for vacancies at Thermo Fisher Scientific around the time I was graduating and saw the role of a Compliance Specialist being advertised with a chemistry degree being one of the requirements. Knowing I’d enjoyed my internship and having some familiarity with the company already, I applied for this position and with the help of the references I’d earned from doing the internship, I was successful and got the job.
Hello Future

Chemistry graduates are in high demand due to the many transferable skills that are developed in a chemistry degree.

Some examples of graduate careers are:

- All areas of chemical industry, ranging from multinational oil, chemical and pharmaceutical companies, to a host of smaller enterprises producing new and specialised products
- Energy providers
- Public health and environmental protection
- Research in universities, government institutions, industry and private agencies
- Teaching
- Patent agencies
- Scientific journalism
- Forensic science
- Postgraduate medicine

Graduates can also seek employment in a wide range of non-chemistry related industries, in business, commerce, finance, banking or the Civil Service.

We offer careers advice and guidance throughout your time here and beyond, as all Lancaster graduates have lifetime access to our careers service.

We have a dedicated careers group on LinkedIn. Follow the QR code below to see where some of our graduates have ended up.

Flora Antoniou
BSc Hons Chemistry

Lancaster University was one of the best choices I ever made. The consistent high rankings and University’s reputation as well as the small community were things that caught my attention when comparing Lancaster with other universities. When I came to Lancaster, I was really impressed with how friendly everyone was. It is really easy to meet new people and make friends. I was able to make new friends from my course, my college and from any societies I joined.

During my degree I was taught modules that covered different chemistry areas such as physical, analytical, computational, synthetic and this helped me realise the interest I have in organic and synthetic chemistry. Therefore, my 3rd year research project was focused on the synthesis of pyridazines, which was my favourite part of my course, as I was able to work more independently on a project. Apart from the chemistry related modules, I undertook some career modules as well, which helped me prepare for interviews and decide that I want to study for a Master’s and a PhD with expertise and focus on synthetic and organic chemistry. The laboratory experience and knowledge that I gained impacted my career positively as I was able to be accepted for a Master’s degree and also secured two internships the past two summers. The first internship was mainly computational chemistry and the second one was focused on chemical risk assessments.

The Chemistry Department at Lancaster University affected my career in a positive way and enhanced my career prospects. My time at Lancaster University has been amazing as it is a safe and friendly place to live and study and also offers academic excellence!
Entry requirements

A levels

**BSc Hons Chemistry:**
Our typical offer is ABB.

**MChem Hons Chemistry, MChem Hons Chemistry (Study Abroad) and MChem Hons Chemistry (with Industrial Placement):**
Our typical offer is AAB.

A level Chemistry is required for all of our courses. We also typically ask for an A level in a second science. The third A level can be in any subject.

We also require a pass in the chemistry practical endorsement.

**Additional requirements**
We require at least a grade 6 or B in GCSE Maths and a grade 4 or C in English Language.

Many chemistry students are surprised by the maths content of degree-level chemistry. To prepare our students for this, all our programmes include introductory mathematics modules to cover this material. We therefore do not require A level Maths (or equivalent).

For any other qualifications, please refer to our website lancaster.ac.uk/chem-undergrad

Making the right decision

**Admissions**
All applications to study on our degree programmes must be completed through UCAS, the UK Universities and Colleges Admissions Service (seeucas.com for more details).

**Choosing either a BSc or MChem**
If you are uncertain whether you want to study for three or four years, bear in mind it is possible to switch between the BSc and MChem at any point during your first two years of study at Lancaster. However, this is subject to internal progression requirements; you must obtain an upper second class mark overall in your studies to be allowed to remain on the MChem programme.

**Study Abroad and Industrial Placement**
It is advisable that you apply for the Study Abroad or Industrial Placement variant of your chemistry degree through UCAS. These courses are subject to higher internal progression requirements than our other degrees. You are free to switch to a standard degree at any time.

**Help from a Chemistry Unibuddy Ambassador**
We recognise that this can be a stressful time, especially when you will have so many questions about universities and their departments. To help you make an informed decision, we have a number of current chemistry students who have volunteered to be available to answer any questions you might have about life and study at Lancaster, through the University’s online unibuddy platform. All you have to do is visit lancaster.ac.uk/study/chat and choose a chemistry unibuddy ambassador to chat to.

It’s your chance to ask one of our current students what life here is really like!

Experience Lancaster

Lancaster University is a diverse, varied, exciting, vibrant and close-knit community; you couldn’t ask for a better student experience.

Lancaster University is situated in a 560 acre picturesque parkland campus, just three miles from the centre of Lancaster. It offers the very best of city, countryside and coast.

On campus you will find everything you need from shops, library, student learning zone, a £25 million pound sports centre, supermarkets, pharmacy, dentist, medical centre, and hair dressing salon to a variety of restaurants, bars, cafes and lots, lots more.

Lancaster is one of a small number of leading UK universities to operate a college structure. All students join one of our eight undergraduate colleges – Bowland, Cartmel, County, Furness, Fylde, Grizedale, Lonsdale and Pendle.

For more information please visit lancaster.ac.uk/lancaster

Take a virtual tour at lancaster.ac.uk/virtual-open-day
Keep up-to-date with all the news on
Getting to know the Department

Having the opportunity to get to know each other is very important to us.

Offer Holder Events
If you are made an offer we’ll invite you to one of our on-campus or Digital Offer Holder Events. It’s not compulsory, but we highly recommend you come along to get a feel for studying chemistry at Lancaster.

On-campus Offer Holder Events
The structure of these events provides the opportunity for you to find out more about us and what it’s like to live and study here. You will receive a presentation detailing the degree programmes and a tour of the Department and the University. You will also have the opportunity to meet with some of our current academics and students and take part in a practical chemistry session in one of our teaching labs.

Digital Offer Holder Event
If you are unable to visit you can still join us digitally for a live presentation and a tour of the Department. You will still have the opportunity to chat to staff and students.

For more information please visit lancaster.ac.uk/chemistry
Get in touch

We are passionate about our subject and are always happy to answer any questions about our degrees and the application process.

If you have any further questions then please don’t hesitate to contact the Department.

E: chemistry@lancaster.ac.uk

We look forward to hearing from you.

Follow us on social media

LancUniChem
lancasterunichem
Lancaster UniChemistry
lancasterunichemi

Train journey times

For more information, please visit lancaster.ac.uk