WHY STUDY CHEMISTRY AT BIRMINGHAM?

Chemistry is a dynamic subject that is constantly evolving to meet the needs of society. As chemists, you will develop a broad, multi-disciplinary outlook, which is vital if we are to help solve the problems we face in health care and medicine, sustainability and the environment.

Chemistry also impacts on all other areas of science, medicine and engineering. For example, we are helping biologists to understand the fundamental interactions and processes between the molecules that underpin life; indeed, no new medicine or pharmaceutical product would be developed these days without the expertise of synthetic and computational chemists. In collaboration with physicists and engineers we are making new materials which are improving our lives and changing the way we work. In this arena, Birmingham chemists are leading the development of new materials to provide for our ever increasing energy needs in an environmentally sustainable manner, as well as working with environmental scientists to understand global problems such as pollution and climate change. Choose Chemistry at Birmingham and you will have the opportunity to learn first-hand from researchers who are pushing back the boundaries of current knowledge in all of these important areas.

The School of Chemistry is home to many internationally leading researchers who are working in a wide range of areas including Nanoscale Chemistry, Chemical Biology, Hydrogen Storage and Fuel Cells, Synthesis of Therapeutic Molecules and Chemical Imaging. Importantly, our research influences our teaching, as our academics draw upon their scientific findings to inform their teaching and provide the cutting-edge content for our degree programmes.

PUTTING OUR STUDENTS FIRST

We strive to ensure our students experience an inspiring, engaging and supportive learning environment to equip them with the key skills needed to meet the challenges they may face in their futures. Our teaching is guided by the latest research and we employ many teaching innovations to enhance our students’ learning. We also provide a network of support, including individual organic, inorganic and physical tutors in the first two years of study, a dedicated personal tutor and welfare tutors, to support every aspect of our students’ experience. As a result, we are justifiably proud that our students regularly place us amongst the top Chemistry departments in the UK for student satisfaction.

OUR PROUD HISTORY AND EXCITING FUTURE

For over 100 years, the School of Chemistry has been at the forefront of chemistry teaching and research, developing generations of graduates whose careers have helped to shape our world. Our groundbreaking research has an international reputation for excellence, with a number of our researchers being awarded Nobel Prizes for their key contributions to increasing our understanding of chemistry to benefit society.

Recently, the School has been selected to host the UK’s only Doctoral Research and Training Centre focusing on physical sciences in medical research. This £7 million Centre, seeking to advance medical research, links the School of Chemistry with 18 industrial and five public sector partners.

The School of Chemistry has benefited from significant investment in its teaching and research laboratories, and analytical facilities. Funding has come from a wide range of sources to provide further state-of-the-art instrumentation, thus ensuring the department remains at the forefront of the application and development of chemical analysis.

The University of Birmingham has announced an investment of over £40 million in a new Collaborative Teaching Laboratory. This unique and exceptional facility is due for completion in the academic year 2018/19 and once open will house all of our undergraduate laboratory classes. This exciting new development will allow us to continue to advance our courses to meet the needs of our students and provide them with the necessary skills to meet the demands of their future careers. This new environment will be designed to exploit innovative teaching methods and high-tech IT systems, to go beyond the ‘classical bench laboratory’ to enhance the laboratory experience.

LEARN MORE

If you would like any further information, please contact the Chemistry Admissions Team

School of Chemistry
University of Birmingham, Edgbaston
Birmingham B15 2TT
Tel: +44 (0)121 414 4361
Email: ug-chemistry-admissions@contacts.bham.ac.uk
www.birmingham.ac.uk/chemistry
Degree programmes

Single Honours programmes

<table>
<thead>
<tr>
<th>Single Honours programmes</th>
<th>UCAS code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry (MSci/BSc)</td>
<td>F101/F100</td>
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<tr>
<td>Chemistry with Industrial Experience (MSci)</td>
<td>F104</td>
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<tr>
<td>Chemistry with Study Abroad (MSci)</td>
<td>F106</td>
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<tr>
<td>Chemistry with a Modern Language (BSc/MSci)</td>
<td>F1R9/F1RY</td>
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Chemistry BSc (F100) and Chemistry MSci (F101) are two of our most popular courses; both provide a thorough grounding in all aspects of modern chemistry as well as an opportunity to learn about the latest developments in cutting-edge research. Chemistry with Industrial Experience MSci (F104) is another flagship programme, which enables students to spend the third year of their degree in paid employment in an industrial setting. Students on their year out gain valuable work experience whilst improving their career prospects.

Chemistry with Study Abroad MSci (F106) offers students the chance to spend their third year studying abroad at one of our partner institutions. Placements are available in a number of countries including: Australia, Canada, Finland, France, Germany, Italy, New Zealand, Singapore, Spain, Sweden and USA. Chemistry with a Modern Language BSc/ MSci (F1R9/F1RY) provides students with the opportunity to study chemistry whilst developing their modern language skills. Current languages available are: German, French, Spanish, Mandarin and Japanese.

Major/Minor Honours programmes

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<tr>
<td>Chemistry with Pharmacology (BSc/MSci)</td>
<td>F1B2/F1BG</td>
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<tr>
<td>Chemistry with Business Management (BSc/MSci)</td>
<td>F1N1/F1N2</td>
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If you are looking for a programme in which chemistry is the dominant subject but which also allows you to gain expertise in a second discipline, then a Major/Minor (2/3 chemistry, 1/3 minor subject) degree programme may be for you.

Chemistry with Pharmacology BSc/MSci (F1B2/F1BG) will give you a solid grounding in core aspects of chemistry, whilst at the same time learning about the science of drugs and the toxic and therapeutic effects that chemical agents have on the body. This degree will be attractive to students who wish to become professional chemists in the pharmaceutical, biotechnology and life sciences industries.

Chemistry with Business Management BSc/ MSci (F1N1/F1N2) will teach you core aspects of modern chemistry, while giving you an opportunity to apply the scientific and analytical tools developed in a science degree to understanding how business, finance and the economy work.

Single Honours programmes with a Foundation Year

We also offer Foundation Year courses, which upon successful completion, allow entry into our BSc or MSci degree programmes.

Chemistry with Foundation Year (F103) is designed for students who have not taken the subjects required to apply for direct entry on to one of our Honours Chemistry degree programmes, but have still performed well. It also caters for those with unconventional qualifications, mitigating circumstances or returning to study after a period away.

The Birmingham International Academy is designed for international students with an excellent academic record but who do not possess the appropriate qualifications for direct entry on to a UK honours degree. The programme is also ideal for those who wish to improve their academic and linguistic skills before beginning undergraduate study.

SCHOLARSHIPS

The School of Chemistry offers scholarships and prizes which seek to promote and reward academic excellence.

School Scholarships

Birmingham Chemistry offers a large number of entry scholarships to Home/EU students, up to a value of £5,000. To be eligible, students must place Birmingham Chemistry as their firm choice before their UCAS deadline. For the latest details, including eligibility criteria, please visit our scholarships website*.

* Please see our website for the latest scholarship information. [www.birmingham.ac.uk/chem-scholarships]

School Prizes

The School is committed to recognising sustained academic excellence and is proud to offer a range of named prizes to reward outstanding performance. These prizes are awarded to successful students at the end of each academic year.

University Scholarships

The University offers a range of scholarships including Music and Sports Scholarships for students who excel in these areas. For more details, please go to the following webpage: [www.birmingham.ac.uk/students/fees/undergraduate/index.aspx]

BP STEM Scholarships

UK students joining the School of Chemistry on Single Honours Masters Chemistry Programmes (UCAS Codes: F101, F104, F106) will also be eligible to compete for the highly prestigious BP STEM Scholarships worth up to £20,000 (£5,000 per academic year). Successful students will be selected by BP and typically hold at least A*A*A at A level (or the equivalent in other qualifications).
Our commitment to teaching excellence

The School of Chemistry is dedicated to providing an inspiring, engaging and supportive learning environment in which our students can excel. Our staff are passionate about their subject and are able to use current research to inform their teaching, ensuring our graduates have knowledge at the very forefront of our developing discipline. We are also constantly evolving in the way we teach, both through the use of technology and through innovative teaching approaches, to ensure an optimal learning environment is available to all our students and that our students develop a range of graduate employability skills.

Technology is rapidly advancing and, as it evolves, it offers ever more opportunities to enhance teaching and learning. As a School we embrace the use of technology and at the heart of the student learning experience is our institutional Virtual Learning Environment (iVLE), Canvas. The iVLE enables 24/7 online access to lecture handouts, lecture recordings, quizzes, online submission facilities, assessment feedback, discussion fora as well as administrative and timetable information.

We incorporate technology in our teaching, such as audience response handsets (commonly known as ‘clickers’) to interact with students during lectures, pencasts to capture audio as we write and lecture capture software to record lectures. Some teaching sessions use an innovative teaching approach known as ‘lecture flipping’. This involves students watching some short screencasts or reading related learning material and answering questions online, including identifying any areas of difficulty or questions on the material studied, in advance of class. This approach then allows lecture time to be tailored to the needs of the students by just focusing on the areas identified and questions raised by students. Remaining class time can then be used as a highly interactive problem solving session.

A COLLABORATIVE TEACHING LABORATORY FOR ENHANCED LEARNING FROM 2018/19

The University is investing in a brand new £40 million laboratory teaching facility that will completely transform the way chemistry, along with other sciences, technology, engineering and mathematics are taught here at the University of Birmingham. This exciting development will allow us to reinvent the chemistry practical laboratory experience by exploiting new innovative teaching methods and advanced IT systems to deliver a transformational teaching environment. It is also designed to encourage and enable inter-disciplinary working, producing graduates with the kinds of collaborative skills and experience that future employers want to see.

Chemistry students will also benefit from hands-on access to the latest state-of-the-art equipment and modern educational technologies in a purpose-built facility which also supports informal inquiry and independent learning. The new laboratory will incorporate a wet lab, dry lab and e-lab for innovative approaches to teaching and learning for a high-quality experience through curriculum innovation and student support facilities and services.
Employability and key skills

The employability of our graduates is paramount and explains why employability support and skills-training is embedded throughout all of our courses, right from Year 1.

The University has recently invested an additional £3.5 million in its award-winning employability services. Central to its employability strategy has been to establish close partnerships with employers in order to develop a package of internships and work experience opportunities, which are designed to put our students ahead of the game when they enter the jobs market. For more information, please go to the following website: www.birmingham.ac.uk/undergraduate/careers/index.aspx

Our degree programmes equip Birmingham Chemistry graduates with the subject-specific and generic skills that they will need when seeking employment after graduation. Generic skills-training is embedded throughout the course. Here we develop areas that employers view as crucial: written and spoken communication skills, presentation skills, team working, interpersonal skills and problem solving.

By the time our students graduate, they are able to analyse problems and interpret complex data, propose innovative solutions and design new molecules and materials to solve challenging societal needs. With highly developed laboratory skills, ranging from meticulous analytical work and the measurement of physical properties to the ability to carry out multi-step synthetic procedures, they are primed to enter the workplace and bring new ideas to fruition.

WHAT BIRMINGHAM CHEMISTS DO

‘My lab experiences at Birmingham, and my summer placements within the School, convinced me to pursue a career in chemistry. I am now working towards a PhD in synthetic organic chemistry at Oxford University, thanks to the training, preparation and guidance that I received at the University of Birmingham.’

JOHN ILUPEJU (Chemistry MSci) PhD student, University of Oxford

‘I have very fond memories of my undergraduate days at Birmingham and the quality of teaching there was outstanding. I currently work at Nature Publishing Group in London and after spending a couple of years as an associate editor at Nature Nanotechnology, I have been made chief editor of Nature Chemistry.’

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Careers for Birmingham Chemistry graduates

A Chemistry degree from the University of Birmingham is highly respected by employers.

Birmingham Chemistry graduates possess excellent core skills in numeracy and literacy, as well as highly developed problem-solving, team-working, communication and IT skills. These skills, combined with an in-depth knowledge of chemistry, equip our graduates well for today’s fast-changing job market, and ensure they are highly sought after by a breadth of employers across the chemical industries and beyond.

Career destinations for Birmingham chemists
Previous graduates have pursued successful careers as chemists in the chemical, pharmaceutical, healthcare and food and drink sectors, working for employers including AstraZeneca, GlaxoSmithKline, BASF, Procter & Gamble, Reckitt Benckiser, Severn Trent Water, Johnson Matthey and AkzoNobel; others have taken positions as project managers, business analysts, management consultants and accountants in blue-chip companies including Marks and Spencer, RBS, HSBC and Ernst and Young. Many of our graduates also choose to study for a PhD, before following careers in research or industry.

CAREERS
Many of our graduates progress to become professional scientists; however, the problem-solving and transferable skills developed on our programmes make them equally sought after in marketing, law, accountancy, business, retail, public services, web design, computing and IT, publishing and investment analysis.

CHEMICAL INDUSTRY
Pharmaceutical industry, household and cosmetic products, food companies, petrochemical industry, agrochemicals, bulk chemicals, specialty chemicals, research and development, process research, analytical chemistry, technical sales and marketing.

OTHER
Water companies, forensic science, health services, environmental protection, IT, accountancy, law, marketing, web design, and many more.

FURTHER DEGREES; PhD, MRES, MSC

TEACHING

‘My time at Birmingham was excellent. I have developed transferable skills, gained academic knowledge and made friends for life. After my degree, I went on to complete a PGCE in science and am now teaching pupils in a large inner city school.’

SAM HOLYMAN
(Chemistry with Business Management BSc) Teacher, Swanshurst School

‘A career in chemistry wasn’t for me, but I wanted something challenging that required those skills that I had learnt during my chemistry degree. I found a “city” job at Deloitte & Touche in London.’

HELEN BROWN
(Chemistry with Analytical Science BSc) Tax Consultant, Deloitte & Touche
The University

For over one hundred years, learning and research at the University of Birmingham have played key roles in the success of the city, the region and the world, contributing greatly to the advancement of knowledge and its application.

Built on a foundation of science and engineering, the University of Birmingham offers one of the largest subject bases in the UK, spanning physical sciences and engineering, the life sciences, medicine and dentistry.

The green and leafy Edgbaston campus of the University, located two miles south of Birmingham city centre, has been ranked as one of the top campus environments in the country. It houses all the amenities that you would expect to find in a small town, including shops, banks, bars, libraries and sports facilities, all of which serve to make your time here a pleasant experience.

Research and teaching
Birmingham is a research-rich university, with a strong belief in research-led teaching. Our groundbreaking research into the treatment of cancer, pioneering work on new energy technologies and exciting developments in nanotechnology illustrate how we are pushing forward the boundaries of knowledge and impacting on our lives and society. Our world-leading research informs the content of our degree courses, and in combination with continual investment and improvement in the latest teaching technologies and methodologies, keeps the campus teaching and learning environment fresh and up-to-date for both students and staff. Birmingham welcomes students who are keen to be challenged and develop original thinking. We stimulate natural curiosity and enable original ideas to flourish through dialogue between different disciplines.

Sport and the Arts
Sport and the Arts are central to life at Birmingham. Birmingham has a very strong reputation for sporting excellence, being ranked consistently in the top three UK universities for sport, and has nurtured several recent Olympic and internationally renowned sportsmen and sportswomen. Even if your sporting prowess does not extend to competing at the highest levels, University Sport Birmingham brings together some of the highest quality indoor and outdoor sporting facilities in the country, including a swimming pool, gym, sports halls, athletics track, floodlit astroturf pitches and much more. Indeed to add to these facilities, the University has just opened a new £35 million sports centre, which includes the city’s first 50-metre swimming pool amongst the state-of-the-art multi-sports facilities. These facilities, coupled with professional coaching and imaginative fitness and sports programmes, ensure we are able to offer sporting opportunities to suit all tastes and abilities.

The University has its own art gallery, called the Barber Institute of Fine Arts. Admission is free and it boasts works by some of the greatest artists from across the globe. Music is also a distinctive part of Birmingham life. The University has two symphony orchestras, a Big Band, a number of choirs, a symphonic wind band, a jazz orchestra and a brass ensemble. Public performances are regularly staged both on campus, in the Barber Institute and the recently completed 450-seat Bramall Concert Hall, and further afield including the iconic Symphony Hall in Birmingham.
STUDENT LIVING

The student villages offer a range of accommodation, where you can choose from single-study bedrooms with shared facilities, or have your own en-suite bathroom. If you prefer to cook for yourself, you can opt for a self-catered flat with a communal living room and kitchen. Alternatively, you can choose the Meal Plan, where your meals are provided. Around a ten-minute walk from the main campus, the main halls of residence site is the Vale Village, where the residences are located in landscaped parkland overlooking a lake. The Village provides a safe and secure environment and a focus for student life, as well as all the amenities that you will need, including launderettes, shops, cafes and unlimited internet access in all rooms.

THE GUILD OF STUDENTS

The hub of undergraduate student life is the Guild of Students, Birmingham’s students’ union. The Guild was one of the first students’ unions in the country and its mission is to ‘enhance the student experience’. More than 160 student groups and societies are supported by the Guild of Students, covering all areas of interest from Manga to Motor Racing, guaranteeing a packed calendar of social events to enhance your student experience. You can also get involved in our student radio station, BURN FM, or the student newspaper Redbrick.
Birmingham – the city

Come to study at Birmingham and enjoy living in one of Europe’s youngest and most exciting cities. Birmingham is changing fast. A massive regeneration scheme over the past 20 years has reinvented the city and this renaissance is set to continue.

Over 40% of our graduates choose to stay in the region following graduation, and for good reasons. Birmingham is a thriving, modern commercial centre and home to one of the largest financial districts outside London, offering Birmingham graduates great opportunities. Birmingham has also been designated as one of six Science Cities in the UK, recognising its industrial heritage and importance in the further development of the UK science base.

Major attractions of Birmingham are its culture, cuisine and entertainment, the retail experience it offers, and its location at the heart of some of the UK’s most beautiful countryside.

Entertainment, Arts and Culture
There is always something going on in Birmingham. In addition to a choice of cafes, restaurants and venues, bringing flavours from across the globe, there are theatres, museums, cinemas, nightclubs and bars in abundance. If you like live entertainment, then take your pick from comedy clubs, local music gigs and top shows at Birmingham’s principal theatres.

Near the city centre are the International Conference Centre and the National Indoor Arena, where many international sporting events take place, such as the World Indoor Athletics and All-England Badminton Championships. Birmingham also played host to the US Athletics Team, while they were preparing for the 2012 London Olympics. Symphony Hall, home of the world-renowned City of Birmingham Symphony Orchestra, provides a magnificent setting for classical music, while the National Exhibition Centre is a prominent stop off for star names in rock and pop. Star City is Birmingham’s biggest cinema complex with 30 screens, six of which are devoted to Bollywood films, while the home of the Royal Shakespeare Company is just an hour away in Stratford-upon-Avon.

Cuisine
Birmingham has recently been placed in the top 20 visitor destinations by the New York Times for its culture and cuisine. Boasting more Michelin-starred restaurants than anywhere in Britain outside London, and originating the famous Balti dishes, it is no wonder the New York Times dubbed Birmingham the UK’s ‘foodiest town’.

Shopping
In the heart of the city, Bullring Shopping Centre is Europe’s largest city retail development and includes the award-winning, iconic Selfridges building. The Mailbox development houses a wide range of high-end designer chains, including Harvey Nichols, and a range of canalside restaurants.

Birmingham hosts four major markets, as well as all of the principal chain stores. There is also a wealth of smaller shops and retail centres, where you can find everything from fresh herbs and spices for authentic international dishes to hand-crafted jewellery made in Birmingham’s unique Jewellery Quarter, responsible for 40% of the UK’s jewellery production.

The Heart of England
Located in the heart of the country, Birmingham has much to offer visitors. With Warwickshire, the Malvern Hills and the Ironbridge Gorge all nearby, you are never more than a short drive from some of the UK’s most scenic countryside.

Birmingham is at the centre of the UK’s motorway and rail network and with its own international airport, it is easy to get almost anywhere in the world. The University is served by its own railway station, called University, giving easy access within minutes to the city centre and destinations beyond.
Around £9 billion has been ploughed into the city centre over the past 20 years and Birmingham continues to attract significant investment. The landscape of the area has changed, and stylish apartments and offices have replaced factories and warehouses. An astounding £800 million and 8,000 jobs were brought into the city of Birmingham’s economy through the construction of the Bullring shopping centre alone.
This leaflet was written several months in advance of the start of the academic year. It is intended to provide prospective students with a general picture of the programmes and courses offered by the School. Please note that not all programmes or all courses are offered every year. Also, because our research is constantly exploring new areas and directions of study some courses may be discontinued and new ones offered in their place.