“I have found chemistry at Warwick engaging and rewarding. Everyone in the department is friendly and I feel like I really belong here.”

Louis Ammon | 3rd Year, BSc Chemistry
INSPIRED LEARNING
When you arrive as an undergraduate, you’ll find yourself surrounded by like-minded people who share your inquisitiveness about the world and treasure the application of knowledge. You’ll be inspired by our dedicated team of academics who, as world-leading researchers, use their expertise and enthusiasm for innovation and discovery to teach you about the chemical world.

A SENSE OF COMMUNITY
A strong departmental student network, providing tailored peer-to-peer support, and a University with over 250 societies ensures that our students quickly integrate into our friendly and diverse community.

SHAPING YOUR FUTURE
We provide an excellent all-round experience that allows you to explore and follow your curiosity. Our range of courses with flexible transfers and a wide variety of opportunities enables you to discover your interests and shape your future.

Outside of the classroom there are opportunities to carry out cutting edge research, take part in industrial placements, spend time abroad, volunteer in outreach and teach at a secondary school, giving you an edge that sets you apart in the international workplace. When you graduate, you will leave us with a broad skillset from a university whose graduates are the third most targeted by the UK’s top graduate employers†.

That’s just a glimpse into the world of discovery awaiting you here at Warwick. We look forward to meeting you soon!

The Department of Chemistry at Warwick is a thriving community of students, academics, researchers, and support staff. By joining our department, you will quickly share in our enthusiasm for chemistry and its applications, from medicine to renewable energy.

AN EXCELLENT ALL-ROUND EXPERIENCE THAT ALLOWS YOU TO EXPLORE AND FOLLOW YOUR CURIOSITY

HEMISTRY AT WARWICK

† The Graduate Market 2020, High Fliers Research Ltd.
IT’S THE PERFECT BALANCE

CHEMISTRY (BSc AND MChem)
Flexible course transfers and a wide range of optional modules in Years 3 and 4.

Our BSc and MChem Chemistry degrees provide the most widespread overview of the discipline of all our courses, with the maximum range of optional modules. In the third year you will use your experience of the themes and topics from years one and two to choose optional modules, tailoring your degree to your interests.

For students carrying on into the fourth year of an MChem degree, this is where you will have the opportunity to work on a single research project for the majority of the year.

OUR INTERNATIONALLY RECOGNISED ACADEMIC STAFF WORK AT THE CUTTING EDGE OF THEIR FIELDS.

Under their supervision, you might discover a significant improvement in solar cell technology, develop an electrochemical sensor for pharmaceutical analysis, a novel compound for cryopreservation of cells, a renewable polymer made from vegetables, an improved catalyst or an antibacterial agent extracted from plants. You will also choose optional modules to support your project and create a wide base of knowledge in other advanced areas of Chemistry.

ENTRY REQUIREMENTS

Typical A-Level offer
BSc: AAB to include Chemistry and a second Science
MChem: AAA to include Chemistry and a second Science

Typical IB offer
BSc: 36 points overall including 6 in HL Chemistry and 5 in either HL Maths, Physics or Biology.
MChem: 38 points overall including 6 in HL Chemistry and 5 in either HL Maths, Physics or Biology.

Access Courses: HE Diploma (QAA-recognised) including appropriate subjects with distinction grades in level 3 units. Please contact the Department of Chemistry before application.

We welcome applicants with non-standard qualifications, relevant experience, or other internationally recognised qualifications.

FLEXIBILITY

As an MChem applicant, if your exam results aren’t what you hoped for, you may be able to enter on a BSc course instead (subject to available spaces). Once here, you may be able to transfer onto an MChem if you meet the progression requirements (and UK visa regulations allowing).

In support of our aim to widen access to higher education for students of all backgrounds, we can also make ‘differential offers’ that are one or two grades below our standard offer. See warwick.ac.uk/ugdoffers for details.

* Your further science subjects should include Mathematics, Further Mathematics, Physics, Biology, Geology or Statistics. You must also pass your science practical if your Science A Level includes a separate practical assessment.

Oxygen

What I enjoy about my course is the light bulb moment and the satisfaction you get when you solve an extremely hard problem or understand a challenging concept.

As you learn more about chemistry, you will begin to understand that the subject is critical in your everyday life, from household products to the battery in our phones.

Junting Jiang | 1st Year, BSc Chemistry

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Oxygen

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IT’S THE PERFECT BALANCE

Your further science subjects should include Mathematics, Further Mathematics, Physics, Biology, Geology or Statistics. You must also pass your science practical if your Science A Level includes a separate practical assessment.

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CHEMISTRY WITH MEDICINAL CHEMISTRY (BSc AND MChem)

Optional modules available in Years 3 and 4 highlight interdisciplinarity.

Our BSc and MChem Chemistry with Medicinal Chemistry degrees provide a solid foundation in chemistry coupled with specialist knowledge in advanced medicinal chemistry/biochemistry. During specialist modules taken in Years 3 and 4, you will explore the process of medicinal drug discovery, starting from the initial concept of a new product, to the discovery stage, clinical trials, scale-up and production. You can explore the biochemistry of these processes, and how this leads to medical breakthroughs. In addition to research-led teaching from top academics in their field, you will benefit from external lectures given by pharmaceutical industry leaders.

You will carry out a range of interdisciplinary experiments in your first two years that will prepare you for an experimental project in the area of Medicinal Chemistry during your third year. Your fourth year research project will also be based on your specialism, and you can expect to be working on drug discovery of novel antibiotic, anticancer or anti-inflammatory compounds through organic synthesis or natural product isolation.

STATE-OF-THE-ART INSIGHT AND ANALYSIS DELIVERED BY PHARMACEUTICAL INDUSTRY LEADERS

TYPICAL A-LEVEL OFFER:

BSc: AAB
MChem: AAA

(see page 6 for full entry requirements)
CHEMISTRY WITH INDUSTRIAL PLACEMENT (MChem)

Full year in industry in third year and academic research project in fourth year.

Your industrial placement will take place in your third year and you will return to Warwick in your final year to complete your MChem research project. If you are not sure whether you want to go into research or industry, this will give you the opportunity to explore both options and find out what is right for you.

You will be fully involved and responsible for finding a placement, ensuring that you are selecting a field that suits you, develops your transferable skills, and gets you employment ready. You will be supported to find your placement by the Student Opportunity Department and a dedicated careers advisor. You will have access to online training materials, workshops and training sessions as well as individual advice and feedback to guide you through the process and refine your applications.

DURING YOUR PLACEMENT

You will study by distance-learning the core elements of the year 3 syllabus, worth 25% of the year, to enable you to access fourth year optional modules. The distance learning is well-supported, and you will have access to our virtual learning environment and lecture capture as well as regular contact with the Chemistry department. However the majority of your grades for your third year will come from assessed work components that demonstrate the competencies that you develop during your placement, such as report writing and presentation skills.

“My degree in Chemistry at Warwick gave me the most hands-on lab experience and the opportunity to learn from my own findings. For me, this was the best preparation for my career working as a Process Development Chemist in industry. Additionally, my degree gave me a great deal of flexibility where I was able to spend a year working in industry and chose my modules in my final year. As well as lab experience, I developed skills in scientific writing, presenting, research and analysis which would be beneficial in any career.”

Dikwitila Fundu | Process Development Chemist, Johnson Matthey (MChem Chemistry with Industrial placement graduate)

OPPORTUNITIES IN INDUSTRY OR ABROAD

CHEMISTRY WITH INTERNATIONAL PLACEMENT (MChem)

Term abroad in third year carrying out research in an overseas institution.

Your international placement will take place in term three of your third year, and will replace the core and extended laboratory modules. You will have the opportunity to choose from our partner institutions and could explore neighbouring cultures by studying in Europe or travel to the other side of the globe to Australia or Singapore. Funding is available to contribute to travel costs, visas and accommodation, and many students opt to travel around their destination for a few weeks before or after their placement.

DURING YOUR PLACEMENT

You will spend a minimum of 13 weeks working with an academic, in their group, on an authentic research project and may even make a discovery that gets published in a scientific journal. During the project you will develop a wide range of transferable skills including team work, communication, problem solving, analysis and independent investigation.

Your fourth year will be spent at Warwick carrying out another research project that spans the academic year alongside optional modules. This degree programme is ideal if you are considering a career in research, either academic or industrial, and want to explore different fields and have an overseas experience.
YEAR 1 - Common to all courses
- Inorganic Chemistry
- Organic Chemistry
- Physical Chemistry
- Foundation laboratory

YEAR 2 - Common to all courses
- Selective Organic Synthesis
- Mechanistic and Biological Chemistry
- Electrons in Molecules and Solids
- Transition Metal Chemistry
- Materials and Polymers
- Statistical Mechanics and Electrochemistry
- Further Laboratory

YEAR 3*
- Advanced Organic Chemistry and Laboratory
- Advanced Inorganic Chemistry and Laboratory
- Advanced Physical Chemistry and Laboratory
- Advanced Analytical Chemistry
- Molecular Pharmacology (Chemistry with Medicinal Chemistry only)

YEAR 3 - tailor your degree to your interests
Optional Modules:
- Molecular Structure and Dynamics
- Bioorganic Chemistry
- Polymer and Colloid Science
- Energy
- Communicating Science
- Extended Lab (core for MChem)
- Coordination and Bio-Inorganic Chemistry
- Secondary School Teaching

YEAR 4
- Research Project and Methodologies
  Conduct a research project in collaboration with one of our research academics
- Advanced Medicinal and Biological Chemistry (Chemistry with Medicinal Chemistry only)

YEAR 4 - Optional modules
- Synthetic Chemistry I (Organic)
- Synthetic Chemistry II (Metallo-organic)
- Synthetic Chemistry III (Macromolecular)
- Electrochemistry and Nanotechnology
- Medicinal and Biological Chemistry
- Advanced Computational Chemistry
- Chemical Biology

Visit our website for detailed module descriptions, please note that modules are subject to change.

*MChem with Industrial Placement students spend a full year in industry during Year 3 with some distance learning.

*MChem with International Placement students take the summer term abroad which replaces the laboratory sessions.

PROBLEM-SOLVING, TIME MANAGEMENT, COMMUNICATION, PRESENTATION AND NUMERICAL SKILLS

Whether you want to study a broad Chemistry curriculum, specialise in Medicinal Chemistry, carry out research at an overseas institution or undertake an industrial placement, Warwick Chemistry has a course that will fit.

TRAINING BEYOND CHEMISTRY
As well as enriching your subject knowledge, our Chemistry degrees will develop your analytical and problem-solving, time management, communication, presentation and numerical skills, all of which are highly valued by employers.

Each of the subject areas you study in year one includes essential skills component. These include an exciting new series of coding workshops, where you will learn how to programme with Python, among other digital skills that you will use as part of your degree and beyond Warwick, intercultural communication workshops that will enhance your global employability; and research and analytical skills that will spark your intellectual curiosity for the subject.
The laboratory component of all of our courses is delivered in our excellent undergraduate laboratories, and underpins all of the Chemistry that we teach.

- Our industry-standard facilities are bright, modern and well-equipped.
- You will carry out experiments in a small group, so you will be able to get lots of hands-on experience with specialist equipment, and will get to know your lab group very well.
- Knowledgeable and helpful demonstrators and staff are always on hand to help you learn the practical techniques and guide your understanding.
- The experiments are carefully designed so you will learn standard techniques and then apply your knowledge to investigation and problem solving.
- Many of our practicals are unique and innovative because they have been designed by our academic researchers. Students may get to work on an NMR spectrometer that uses the Earth’s magnetic field to create images (similar to the MRI scanners used in hospitals), use a 3D printer to print objects, and use lasers to study chemical reactions.
- All the equipment that you need is provided, including your laboratory coat, book and glasses, and we have never charged for breakages so you can learn in a stress-free environment.

WHAT WAS YOUR FAVOURITE MODULE?

"Easily labs, it’s the most fun by far and I like the range of topics covered in them. Also I feel I learn a lot from doing the lab book write ups before the actual labs”

Ollie Luke Bennett | 1st Year, BSc Chemistry
A PLACEMENT ABROAD CAN BE CHALLENGING BUT IT IS SO REWARDING AND ALLOWED ME TO STEP OUTSIDE MY COMFORT ZONE

“Choosing to go on a placement abroad is the best thing I have ever done. I grew in confidence during my time at Monash - both in my skills as a chemist and also in a wider sense. Spending time at Monash has given me the chance to travel, explore, and have many new and exciting experiences. A placement abroad can be challenging but it is so rewarding and allowed me to step outside my comfort zone and achieve things I would never have thought possible before I went.”

Gaby Newson | (MChem Chemistry graduate and Graduate Analyst, High Value Manufacturing at Innovate)
Lectures are the main way that the content and theory is delivered. You will encounter a range of lecturing styles that help you to learn in different ways including making your own notes, annotating printed handouts, problem solving activities and interactive quizzes. Lecture theatres are equipped with the latest technology including visualisers, cameras and sockets for student use. We endeavour to record all undergraduate lectures so you can watch them later to enhance your understanding.

Modules in the first and second year are supported by tutorials with small groups of approximately 6-7 students. These sessions are integrated with lectures to reinforce key concepts; questions are set in advance, handed in and marked before the sessions so that the tutor can ensure that you progress your learning and get the maximum benefit.

Workshops are problem solving classes where questions are set for you to attempt. Typically run in groups of 20-40 students, these provide opportunities for you to work with your peers as well as ask questions and get assistance from academic staff and teaching assistants on hand.

Laboratory classes are amongst the most interesting and exciting part of any Chemistry student’s life. Classes in our state-of-the-art undergraduate labs will form an integral part of your learning.

All of the teaching and learning activities are accessible through the virtual learning environment (VLE) - a one stop location for everything you need. Each module has its own area containing module information, contacts for teaching staff, lecture notes, tutorial and workshop questions, recordings, forums and often interactive quizzes. These stay with you throughout your time at Warwick so you can always access information and feedback from previous years.

You will be assessed by a mixture of examinations and coursework with a minimum of 25% of each year being assessed work. There is one period each year when all Chemistry examinations take place, allowing you to concentrate on other work during the rest of the year and consolidate your knowledge and understanding across all modules. In years one and two the examinations take place at the very end of the academic year, whilst in years three and four exams are set earlier in the year, allowing a focus on labs or research in the latter stages.

Coursework activities are integrated throughout the curriculum, and you will meet similar themes in different settings to strengthen and unify your understanding. You will encounter a range of assessment types that prepare you for employment including written reports, group projects and oral and poster presentations.

• We believe that feedback should be accessible, timely and help you to continuously improve.
• We use a virtual learning environment so that you can see your feedback whenever you want and wherever you are.
• We subscribe to a policy of returning all grades and feedback within 20 working days.
We want our students to succeed and thrive. We know your degree is a large investment of your effort, time and money, and that is why we have established many methods both in the Department of Chemistry and at the University to support our students.

When you arrive at Warwick Chemistry, you will be assigned a personal tutor, an academic member of staff with whom you will have regular scheduled meetings to discuss your progress and development as well as being your first point of contact for assistance. The department’s senior tutors are always available as an expert source of guidance to assist students who have additional needs.

The department works closely with the central Wellbeing Support Services to make sure that students with disabilities, specific learning difficulties or health issues are supported in their course activities.

A programme of skills modules in the first and second years introduce and train you to use Chemistry-specific software, access literature and online resources, communicate scientific information effectively and write in a recognised academic style.

Your academic support librarian provides targeted support in your area, helping you to access subject-specific resources and information. Based in the library, situated right next door to Chemistry, the librarian will run workshops, provide training resources and be on hand to answer queries.

Your dedicated careers advisor is on hand to offer one to one guidance on career options, job searches, applications and building your profile. They also offer regular skills sessions on employability, CV writing and interview techniques, plus bespoke careers and networking events with opportunities to meet potential employers.

Students for whom English is a second language can access tailor-made programmes in English language at the Centre for Applied Linguistics. The programmes on offer teach language in the context of the academic disciplines and are designed and taught by an experienced team of trainers and tutors.
The transition to university life is a major change. We know that the first few weeks of your course is a crucial time and have designed a programme of induction activities and support to help you settle in and make new friends.

- **Induction sessions** are spaced throughout the first term to provide information on everything from what to do if you get fresher’s flu to who to ask if you have problems. All of the content and resources are also made available on the Virtual Learning Environment for ready reference whenever you need it.

- A comprehensive and detailed student handbook is available and will become your first point of call whenever you aren’t sure. The undergraduate office has a team of helpful and friendly staff who can assist with any administrative queries you might have in relation to your course, such as timetabling, assessment, or exams.

- Outdoor team building sessions in the first week help you to form strong links. There are many small group teaching activities, which are great for learning and forming close knit bonds with fellow students.

- You will have your own personalised timetable that synchronises to your phone so you always know where you need to be.

- As part of your induction, we’ll send you on an orienteering session with your group to find key locations across campus. You can use the interactive map to search for buildings, facilities and rooms, and to get directions from any point on campus to any other point.

- The laboratory module starts gently with a set of introductory experiments so you can get used to carrying out practicals independently before being assessed. You will spend a lot of time with your laboratory group during the first year, so we make sure that you have opportunities to get to know each other quickly.

- You will be allocated a student mentor who will send you a welcome letter and use social media to put you in contact with the rest of your lab group before you get here so that you will have a head start before you arrive. We are very proud of the community spirit built by our friendly undergraduates, and your student mentor will have been specially chosen for their accessibility and willingness to go the extra mile to help out. Regular meetings with your mentor will give you first hand advice and tips throughout the first year.

"I have taken on many roles in the Chemistry society including Education Officer and Outreach Officer. As Education Officer I organise weekly ChemCafe sessions where all year groups can come together to discuss homework problems, lab reports etc. in a relaxed environment. As outreach officer, I organised visits to schools to give fun and exciting science demonstrations to children and young adults.”

Emily Brogden | 3rd Year, BSc Chemistry
EXAMPLES OF BREAKTHROUGHS MADE AT WARWICK

- New graphene-based materials
- Synthetic cells for gene regulation
- Organic solar cells for portable electronics
- Trailblazing developments in the fight against HIV

You will have opportunities to contribute to this type of cutting-edge research, working alongside academics at the forefront of their subjects and continually making groundbreaking advances. You will carry out your practical work in state-of-the-art laboratory space and your findings could be selected for publication in a scientific journal.

The fourth year of our MChem degrees contain the largest research component with a project spanning the academic year. However there are opportunities to get involved in research much earlier and you may want to carry out a summer project to find out if research is for you.

VACATION EXPERIENCE

We encourage all of our students to take part in paid research internships through Warwick’s Undergraduate Research Support Scheme (URSS). These research projects are entirely optional, taken in the summer holiday (typically between years 2 and 3), provide a wonderful experience that is not formally assessed and are great fun. Recent research projects have included studying the structure of graphene, working on platinum anti-cancer drugs, developing novel anti-inflammatory drugs, and investigating proteins of key importance in Alzheimer’s Disease.

You may also decide to undertake research experience further from Warwick in your vacation time. We can help you to participate in 3 month European placements. This is currently offered as part of the European ERASMUS programme*. 

*Find news on how the UK departing the EU may affect the Erasmus scheme at warwick.ac.uk/studyabroad
Guiding our students to successful careers is among our top priorities.

Our visibility in the employment market, alongside the sound practical, theoretical, and communication skills obtained in all of our degrees, means that our graduates are highly valued.

You will benefit from an excellent Student Opportunity Department, which provides free careers support even after you graduate. We will also support you in accessing opportunities to gain work experience through URSS, industrial and professional experience options during your degree and bursaries for summer work experience in a range of sectors. Opportunities to meet employers from small and large companies are provided both in department and across the university.

As a Warwick Chemistry graduate, you have many career options. Chemistry is an extremely versatile degree that will allow you to develop a range of practical and theoretical skills highly valued in the world of both work and academia.

EXAMPLES OF JOB ROLES:
- Analytical chemist
- Patent attorney
- Management consultant
- Risk analyst
- Chemistry teacher
- Software developer

"I work as a Process Control Specialist at Amazon UK, where I manage the outbound workflow for multiple sites throughout the UK and EU, remotely overseeing hundreds of associates. We launch new sites as part of a designated team and work to improve the operational efficiencies within fulfilment centres using the latest in-house tech. We are required to work as technical consultants to internal departments or external clients.

The ability to learn quickly, analyse large data sets and solve problems are vital to the role. Soft skills are also crucial and enable us to effectively manage stakeholders – especially those with conflicting interests. Overall, these are some of the most valuable skills that I picked up during my time at the University of Warwick whilst studying Chemistry. It’s an excellent, top tier university. I believe that Warwick invests heavily in making sure that their students and their staff learn from cutting edge of science and contribute to its developments. We have a strong Alumni support system, connecting people even after they have graduated and this makes you part of something much bigger than yourself."

Alaina Emmanuel | Process Control Specialist, Amazon UK
(former BSc, MSc and PhD student at Warwick)

90% OF OUR GRADUATES SECURED EMPLOYMENT OR FURTHER STUDY WITHIN SIX MONTHS OF GRADUATING**

26TH IN THE WORLD FOR OUR EMPLOYER REPUTATION***
HOW TO APPLY
Applications are made through UCAS ucas.com
If you are made and accept an offer, and meet all conditions we will confirm your place and look forward to warmly welcoming you at the start of your life here at Warwick.

For more detailed information about how we process applications please visit: warwick.ac.uk/study/undergraduate/apply

OVERSEAS APPLICANTS
At Warwick, we welcome applications from across the globe, and have dedicated teams available to advise and support, as well as a global network of Agents and Representatives. For more information on applying from your country see: warwick.ac.uk/io

STUDENT FEES AND FUNDING
We want to ensure that, wherever possible, financial circumstances do not become a barrier to studying at Warwick. We provide extra financial support for qualifying students from lower income families.
warwick.ac.uk/studentfunding

ACCOMMODATION
Warwick Accommodation has around 7000 rooms across a range of well-managed, self-catering residences. We also have an excellent network of support staff in the Residential Life Team.
warwick.ac.uk/accommodation

DISCOVER MORE
To find out more about the University, including opportunities to visit and engage with your department of choice, visit: warwick.ac.uk/undergraduate/visits

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Disclaimer: This course information was accurate at the time of publication (May 2020). Our course and module content and schedule is continually reviewed and updated to reflect the latest research expertise at Warwick, so it is therefore very important that you check the relevant course website for the latest information before you apply and when you accept an offer. For full terms and conditions, please visit warwick.ac.uk/ugtermsandconditions