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.

**INSPIRED LEARNING**
When you arrive as an undergraduate, you’ll quickly 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**
A degree from one of the UK’s top chemistry departments, highly ranked for both teaching and research and whose graduates are sought after by employers, will equip you for anything. It is 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.

**OPPORTUNITIES OUTSIDE THE CLASSROOM**
Opportunities to carry out cutting-edge research, take part in industrial placements, spend time abroad, volunteer in outreach and teach at a secondary school give you the edge to set yourself 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!
OMETHING FOR EVERYONE

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.

THE IMPORTANCE OF FLEXIBILITY

There is a high degree of flexibility in our courses, allowing you to transfer with ease from one course to another at any time in the first two years. What’s more, you may receive a dual offer on application allowing you to enter on a BSc route and then transfer to an MChem later if you meet the progression requirements (subject to UK visa regulations for overseas students).

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.

YEAR ONE

In the first year, you will take the five core modules which provide a solid foundation in Chemistry. You will develop competency in fundamental chemistry techniques and equipment in our excellent laboratories, and will take part in problem-solving activities where you will apply your knowledge and understanding. Modules in the three main subject areas, Organic, Inorganic and Physical Chemistry, will enable you to understand core theories and principles of the subject. The mathematics module provides learning support to help you to understand the concepts behind much of the chemistry syllabus. The module is structured to allow you to concentrate your time on the areas which you find most challenging, and aims to equip you with the skills and confidence to tackle more advanced areas in subsequent years.

YEAR TWO

This year is also common to all courses, and explores the core areas in greater depth as well as branching out into specialist Chemistry topics that are geared to your interests. Organic chemistry develops into the study of the synthesis, mechanisms and spectroscopic analysis of carbon based compounds. The structures and reactivities of transition metals and their complexes are explained and principles of symmetry enable you to explain observed phenomenon. Modules in electrochemistry, materials, polymers, biological and medicinal chemistry give you a flavour of the specialist areas that you could pursue.

PROBLEM-SOLVING, TIME MANAGEMENT, COMMUNICATION, PRESENTATION AND NUMERICAL SKILLS
What I enjoy the most about studying Chemistry is that it’s the perfect balance between theory and hands-on practice. You can really get to see how what you’ve learnt about in lectures translates in the labs. Lecturers also tend to give more and more examples based on what’s being done in the industry so you can grasp how those concepts affect the world around you and it gives an idea of what you could be doing later on in life. I think that the department of Chemistry is one of the best run, most efficient and supportive departments at Warwick. If you have any administrative question the undergraduate office can always provide answers and if you’re struggling with the material the lecturers are always helpful. They’re all ready to help you out after a lecture, in tutorials, via email, or if you stop by their office. The best advice I can give to other students is to go and talk to your lecturers because you’ll always end up getting more out of the material.

Maëlys Vincent

(2nd year MChem Chemistry with Medicinal Chemistry with International placement student)
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.

BENEFIT FROM EXTERNAL LECTURES GIVEN BY PHARMACEUTICAL INDUSTRY LEADERS

TYPICAL A-LEVEL OFFER:
BSc: AAB-ABB
MChem: AAA-AAB
(see page 6 for full entry requirements)
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.

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.

OPPORTUNITY TO EXPLORE BOTH OPTIONS

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 Student Careers and Skills 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 the core content, 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.

TYPICAL A-LEVEL OFFER:

MCHEM: AAA-AAB

(see page 6 for full entry requirements)

“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 choose my modules in my final years.

As well as lab experience, I developed skills in scientific writing, presenting, research and analysis which would be beneficial in any career.”

Dikivita Fundu Process Development Chemist, Johnson Matthey (MChem Chemistry with Industrial placement graduate)
The laboratory component of all of our courses is delivered in our excellent undergraduate laboratories, and underpins all of the Chemistry that we teach.

The teaching facilities have all been refurbished recently and 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 machine that uses the Earth’s magnetic field to create images (similar to MRI), 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.
For me undergraduate labs were a major milestone in my education which made me feel like I was contributing to science and enabled me to thrive and achieve things I never thought would be possible. The state of the art facilities available to you, as well as the freedom you are given in labs, means that you can step outside of your comfort zone and experience theory in action. Being able to apply knowledge you have learnt in lectures allows you to understand what is happening at each step of the reaction, helping you to make improvements, or know when something is not going to plan. I have been able to partake in experiments in all areas of chemistry from synthesis to computer simulations which has broadened my knowledge and aided me to find my strengths and weaknesses.

Without the opportunities given to you in undergraduate laboratories, I do not feel that my passion for science could have thrived. Seeing chemistry occurring first hand and you being a part of it is the only way to fully progress and succeed in this field and the facilities available to you at Warwick makes this possible.

Georgia Thornton (4th year MChem Chemistry student)
Examples of research projects undertaken by our students during their international placements.

**Catalysts for Conversion of Diphenyl Quaterphenylene to Diphenyl Norbornadiene in Molecular Solar Thermal Systems**

**Monash University, Australia**

**Optimisation of Diamine Electrolytes for use in Hydrogen Peroxide Fuel Cells**

**Barcelona, Spain**

**Applications of Electroanalytical Techniques in the Prediction and Determination of Antiretroviral Drug Metabolites**

**Chalmers University, Sweden**

**Bicyclic Thymine: A Novel Fluorescent Base Analogue**

**Eindhoven, Netherlands**

**Inkjet Printed Luminescent Solar Concentrators**

**Modena, Italy**

**A 3D-MOF with Single-Molecule Magnets as Linkers: Assembly Strategy, Structural Characterisation and Magnetic Behaviour**

**Toulouse, France**

**Organometallic Compound with Anticancer Activity: Improving Cytotoxicity using Thymidine as “Trojan Horse”**

**Nanyang Technical University, Singapore**

**Bicyclic Thymine: A Novel Fluorescent Base Analogue**

**Chalmers University, Sweden**

**Inkjet Printed Luminescent Solar Concentrators**

**Eindhoven, Netherlands**

“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)
A VARIETY OF TEACHING STYLES TO SUIT EVERYONE

Lectures are the main way that the content and theory is delivered, and all students taking a module attend the lectures at the same time. 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.

A RANGE OF LECTURING STYLES THAT HELP YOU TO LEARN IN DIFFERENT WAYS

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 sat 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 unite 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.
• 93% of Chemistry* students agreed they were able to contact staff when needed in the 2017 NSS.

*JACS level 3
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 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.
HAT TO EXPECT WHEN YOU ARRIVE

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 having 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 synchronizes 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.

The mentoring scheme is just one of the many projects coordinated by ChemSoc, our departmental student society. ChemSoc also run a wide range of exciting activities, including regular socials, sports events and an annual Ball. Their flagship event is the weekly **Chemistry Café**, which offers an informal environment in which to meet new people, seek help with chemistry-related issues, participate in skills workshops, and listen to invited speakers—all accompanied by free pizza! ChemSoc also coordinates an excellent programme of Outreach activities, to help inspire young people in science.
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.

Vacation Experience

We encourage all of our students to take part in paid research internships through Warwick’s Undergraduate Research Scholarships 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, which can be organised directly with industrial partners, or through the IAESTE exchange network.

Opportunities for Research Training

We are a research-driven community with an enviable reputation for creating new knowledge, and our research informs and contributes to our teaching, making it relevant and up to date.

New graphene-based materials, synthetic cells for gene regulation, organic solar cells for portable electronics, and trailblazing developments in the fight against HIV are just a handful of the breakthroughs made at Warwick.

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 your MChem degree contains 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.
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 Careers and Skills 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.

"I work as a Process Control Specialist at Amazon UK where I manage the outbound workflow at 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 fulfillment 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 this 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)
FIND OUT MORE

HOW TO APPLY
Applications are made through UCAS ucas.com

We do not typically interview applicants. Offers are made based on your predicted and actual grades, along with your personal statement. Occasionally, some applicants may be interviewed, for example candidates returning to study or those with non-standard qualifications. After completing your application through UCAS and being made an offer you will be invited to an offer holder day. warwick.ac.uk/study/undergraduate/apply

OFFER HOLDER DAYS
A perfect opportunity to visit our campus and experience what it is like to be a student at Warwick. warwick.ac.uk/opendays

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/study/undergraduate/studentfunding

ACCOMMODATION
Warwick Accommodation has over 6,000 rooms across a range of well-managed self-catering residences. There is an excellent network of support staff in the Residential Life Team. warwick.ac.uk/accommodation

Course information was accurate at the time of printing. 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 website for the latest information before you apply and when you accept an offer. See our website for the latest information warwick.ac.uk/chemistry
For full terms and conditions, please visit warwick.ac.uk/ugtermsandconditions