



CARDIFF  
UNIVERSITY

PRIFYSGOL  
CAERDYDD

# Chemistry

Undergraduate  
degree programmes



# 94%

of graduates in  
employment or another  
activity 15 months after  
graduating.\*

\*Graduate Outcomes 2020/21

# 12th

in the UK for  
the impact of  
our research\*

\*THE (Times Higher  
Education) analysis of REF  
(Research Excellence  
Framework) 2021





# Chemistry enriches our lives daily, from ensuring we have clean water to providing effective medical interventions and reliable sources of energy.

Chemists transform materials, design molecules and develop tests to meet climate goals, support medical advancements, assist with forensics and food safety, among a wide range of exciting and creative career paths.

Progress needs chemistry, and chemistry needs your curiosity. From day one of our chemistry degrees you're not just mixing chemicals in a lab. You're tackling big challenges to find patterns in scientific puzzles. With our combination of student-focused spaces across our campuses and time spent in the lab, there are plenty of opportunities for you to build lasting bonds and networks with your fellow chemists.

Sustainability and inclusivity bonds our research and our communities. We live our values to be forward-thinking in direction and world-changing in ambition, whether in our world-leading research at Cardiff Catalysis Institute, our diverse Medicinal Chemistry and Chemistry for Sustainability MSc programmes, to our accessible pastoral support for all students and help with identifying meaningful placement options.

Led by world-renowned academics in cutting-edge facilities, you'll graduate from our programmes with the mindset and the skills to lead the charge into a greener, safer future.



**ChemSoc**, our dedicated society for chemistry students, provides opportunities for socialising and networking with your fellow chemists.





School of Chemistry

You'll find us in Cardiff University's iconic Main Building, where our School combines longstanding tradition with modern innovation.

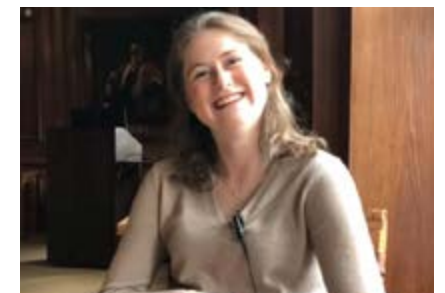
While the exterior reflects the rich history of the century of graduates who have passed through our doors, inside you'll find modern, dynamic teaching spaces. We've transformed our buildings through significant investment, so you'll benefit from state-of-the-art chemical apparatus to gain hands-on learning.

Our advanced resources across our buildings include mass spectrometry and chromatography, nuclear magnetic resonance, electron paramagnetic resonance, X-ray diffraction, general spectroscopy (UV-Vis, Infra-red) and solid-state characterisation, high-performance computing, scanning Electron Microscopy and an XPS surface analysis facility, amongst others.

The renowned Cardiff Catalysis Institute, based in the state-of-the-art Translational Research Hub, connects academic and industry experts to tackle complex global challenges like energy safety, food safety, and environmental planning.

Our Main Building also houses the Science Library and Green Shoots Cafe, creating a vibrant hub for our students to combine learning and socialising.

Directly opposite Cardiff University on Park Place, you'll also find our new Centre for Student Life which provides essential student support and career services, alongside our thriving Students' Union – rated second in the UK in the 2024 WhatUni Student Choice Awards.



**“The facilities are really good, the libraries are really beautiful and it's really easy to find a study space to study because there are so many of them.**

All of the newer buildings are really light, open spaces, and easy to focus. The lecture theatres are state-of-the-art and our recordings are very impressive. Even have comfy seats!”

**Vikki, Medicinal Chemistry (MSc)**







# Unlock a world of career opportunities



**“ Since graduating, I’ve been working for UK Government in the Department for Energy Security and Net Zero developing policies for the UK’s civil nuclear sector. For example, I have designed and delivered a £6 million programme to create UK supply routes for key medical radionuclides that could be used in cancer therapies, supported a project looking to use radioactive waste as a power source for future missions to Mars and more recently published a new planning framework for new nuclear projects in the UK.”**

**Eleanor, Chemistry (MChem) graduate**



Whether at the macro or the molecular level, Cardiff graduates are embedded in the industries that are giving us cleaner energy sources, safe food and water, guaranteeing our security and supporting justice.

Chemistry graduates are leaders in research and academia, entrepreneurs, leaders of industry and non-profit organisations, local, national

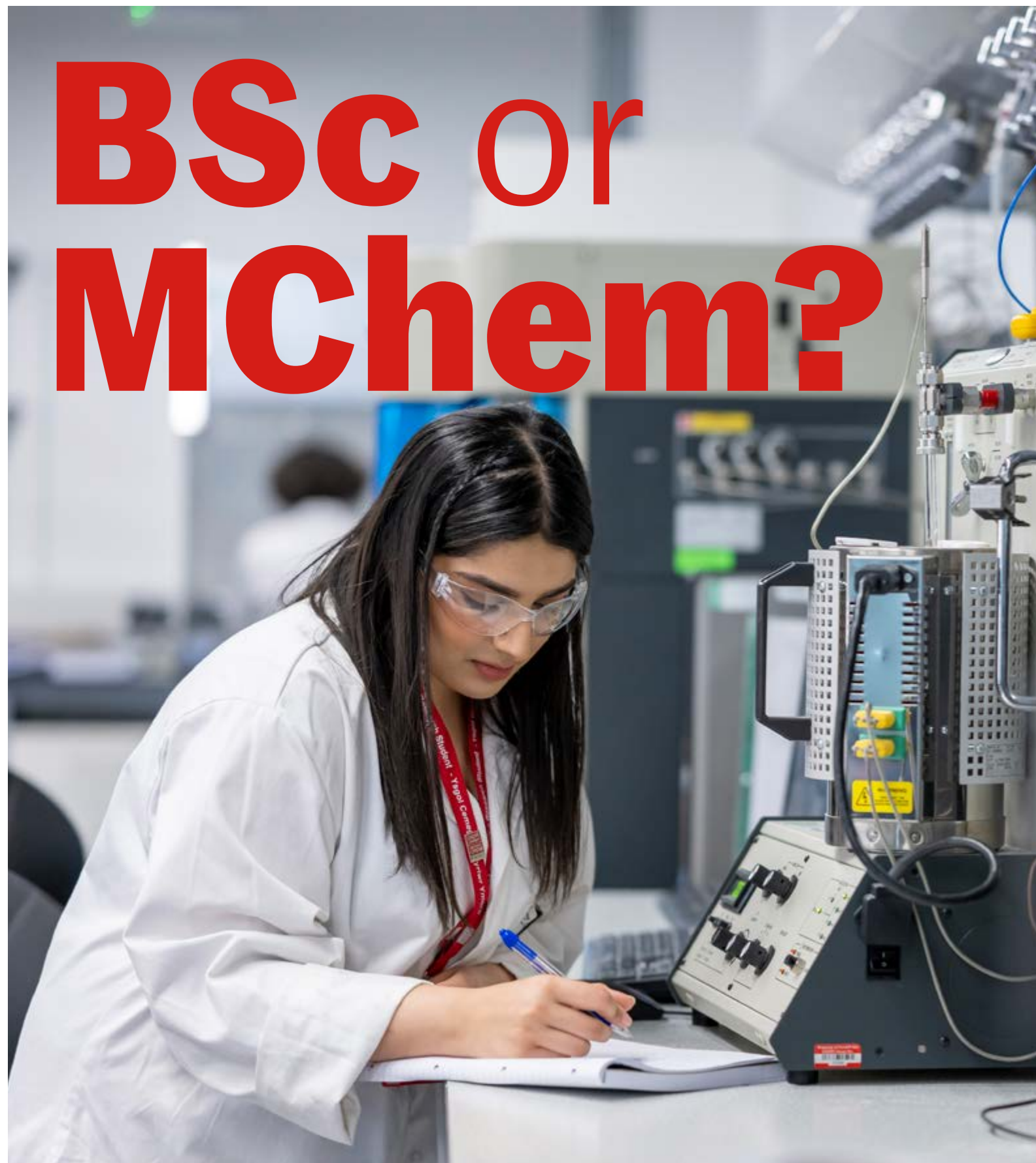
and international governmental workers, lawyers, teachers, journalists, environmentalists, and more.



**“ I joined Reuters, a large News & Media organization, after graduating. I worked in a business development role, working closely with international clients to broker agreements. I’m now working as an Account Manager for a high-growth FinTech called SBS Software. My time at Cardiff gave me the tools and connections that have significantly helped me since I graduated.”**

**Bayan, Chemistry (Bsc) graduate**





# BSc or MChem?

Our Chemistry degree is available as a three-year BSc or a four-year MChem. Or, you can add a sandwich year to undertake a year of study abroad or an industrial placement.

Our Medicinal Chemistry degree is only available as a three-year BSc, with the option to add a sandwich year of study abroad.

## **Chemistry (BSc) -3 years**

The Bachelor of Science (BSc) is a three-year undergraduate degree offering a solid foundation in all areas of chemistry – organic, inorganic, and physical. It's ideal if you're looking to jump into your career as soon as possible or if you aren't committed to doing a postgraduate degree.

## **Chemistry (MChem) - 4 years**

The Master of Chemistry (MChem) is an integrated four-year course that includes everything in the BSc, plus an additional year of advanced study including a self-led research project. This option is perfect if you're considering a career in scientific research or want a competitive edge when applying for a PhD.

## **Add a year of study abroad or a placement year to your degree...**

Both BSc and MChem students can add a sandwich year to their degree between their second and third year. A placement year in industry gives you invaluable real-world experience in industry and research, boosting your CV when it comes to applying for graduate roles.

Our students have previously gone on 12 month placements to GlaxoSmithKline, AstraZeneca, Haleon, AWE, Freudenberg Performance Materials, PureLite, and more, spanning a range of industries and specialisms.

Or you can choose a Year of Study Abroad option that lets you broaden your horizons with travel, as you take up a year of study in a prestigious partner institution overseas – previous students have ventured to the United States, France, Australia, Spain, Italy, Canada and Ireland.

Both of our Year in Industry and Year of Study Abroad options can be added to your programme after you're enrolled, as long as you meet our academic requirements.



**“Moving from A-Levels to undergrad is quite a jump, and the professors here were really kind. If we had questions, we could always ask them. From BSc to MChem, that was a transition, but it was smooth because I had a professor who helped me get accustomed to everything, like how to balance my lectures and my labs.”**

**Petru, Chemistry (MChem)**





# Chemistry (BSc)

**Chemistry (BSc)**, UCAS code: **F100**

**Chemistry with a Placement Year Abroad (BSc)**, UCAS code: **F106**

**Chemistry with a Year in Industry (BSc)**, UCAS code: **F101**

**Ignite your passion for chemistry across workshops, lectures, practical sessions and tutorials, all exploring a wide breadth of chemical skills and observations.**

You'll build a solid foundation in core chemical processes and structures across physical, inorganic and organic chemistry, using problem solving skills and curiosity to develop your laboratory techniques and your critical thinking.

From the concepts of molecularity to spectroscopic transition, atomic structures to crystal field theory, systematic patterns of reactivity to compound properties, you'll find a great grounding in the chemical sciences from which to personalise your journey, as you progress to independent projects in your final year that reflect your own passions.

Alongside practical techniques, we'll enhance your communication and business skills within the chemical sciences through presentations, posters, and report-writing, so you can leap into a host of lucrative careers in research, medical science, environmental studies, law, communications and education seamlessly.

*Accredited by the Royal Society of Chemistry in line with requirements for Chartered Chem (CChem) status.*

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**“I'm glad I chose to study chemistry because every day I learn something new that blows my mind.** The structure of the course at Cardiff has allowed me to balance studies with extracurricular activities such as sports and societies which I believe is integral to everyone's university experience. I believe that this course will open many doors for my future.”

**Harry, Chemistry (BSc)**





# Chemistry (MChem)

**Chemistry (MChem)**, UCAS code: **F103**

**Chemistry with a Placement Year Abroad (MChem)**,  
UCAS code: **F102**

**Chemistry with a Year in Industry (MChem)**, UCAS code: **F104**

**Gain a solid grounding in the fundamentals of chemistry with an emphasis on research in our four-year, industry-ready degree.**

The first two years of the MChem course will focus your understanding on how chemistry actively shapes our world through organic, inorganic, and physical chemistry. During the third and fourth years, there is a greater emphasis on analysis, synthesis and problem-solving. In your fourth year, you'll undertake an extended research project which you'll design and set the scope according to your own interests.

You'll hone your practical skills and project management know-how by undertaking a project with a recognised research

group, working with the latest instrumentation and paving your way for a successful launch into your profession.

There's also an opportunity to experience a work-based learning placement within the chemical industries, where our lecturers will support you to learn about all the incredible options on offer across those sectors.

*Accredited by the Royal Society of Chemistry in line with requirements for Chartered Chem (CChem) status.*



**“Having an opportunity to experience and learn a large scope during the start of my degree meant I got a ‘big picture’ understanding of how chemistry is applied in industry/academia.”**

**Emily, Chemistry with a Placement Year Abroad (MChem)**



# Medicinal Chemistry (BSc)

**Medicinal Chemistry (BSc)**, UCAS code: **150**

**Medicinal Chemistry with a Year Abroad (BSc)**, UCAS code: **151**

**As a medicinal chemist, we'll equip you with the chemical and computational skills to design interventions that make a real-world difference.**

Medicinal chemists are pioneering new drug discoveries, vaccines, and evolving applications for existing therapies to guarantee our health and wellbeing into the future.

With our strong foundation in analytical and organic chemistry, you'll be able to confidently overcome challenges throughout the entire life cycle of drug synthesis and development.

Complementing your lab skills, you'll build a range of project management and business skills from reporting, presentations, poster creation, science communications and computational work. In your final year, you'll design a self-led project under the guidance of our expert staff, where you'll get used to presenting your findings as you would in industry, setting you apart as a candidate and as a scientist.

**“ I love the specificity of the course, as I wanted to do a course that combines my love for chemistry and biology.**

Medicinal chemists have access to an amazing biological organic laboratory. We have access to great analytical equipment and technology that I didn't ever imagine getting to use.”

**Elizabeth, Medicinal Chemistry (BSc)**





# Applications

To be considered for entry onto any of the undergraduate courses we offer, you should apply through UCAS: [www.ucas.com](http://www.ucas.com)

## Entry requirements

These typical requirements are for guidance. Please check our website for the latest information. All applicants normally require GCSE Mathematics grade C/grade 4 and GCSE English grade C/grade 4, or equivalents.

**A level:** Typical offers would be in the range of ABB-BBC, and must include a grade B in chemistry or above. You will need to pass the science practical element of the A-level if this is part of your programme of study.

## Extended/International Project Qualification:

Applicants with grade A in the EPQ/IPQ will typically receive an offer one grade lower than the standard offer. Please note that any subject specific requirements must still be met.

## International Baccalaureate:

32-30 overall or 665-655 in 3 HL subjects. Must include grade 5 in HL chemistry.

## The Advanced Skills

**Baccalaureate Wales** will be accepted in lieu of one A-Level (at the grades listed above), excluding any specified subjects.

## General Studies, Critical Thinking, Citizenship Studies

or similar are not accepted for entry. We will accept a combination of BTEC subjects, A-levels, and other qualifications, subject to the course specific grade and subject requirements.

Our grade range covers our standard offer and contextual offer. We carefully consider the circumstances in which you've been studying (your contextual data) upon application. Eligible students will be given an offer that is lower than the standard offer (usually the middle or lower end of the advertised grade range)..

## International applicants

We welcome applications from international students. Your qualifications must be comparable to UK qualifications, and more information is also available on our website at: [www.cardiff.ac.uk/international](http://www.cardiff.ac.uk/international)










## How to find the School

School of Chemistry  
Cardiff University  
Main Building  
Park Place  
Cardiff, CF10 3AT

## Key

-  School of Chemistry
-  University and NHS buildings
-  Student residences

## Important Legal Information

The contents of this brochure relate to the Entry 2026 admissions cycle and are correct at the time of going to press in April 2025. However, there is a lengthy period of time between printing this brochure and applications being made to, and processed by us, so please check our website at: **[www.cardiff.ac.uk](http://www.cardiff.ac.uk)** before making an application in case there are any changes to the course you are interested in or to other facilities and services described here. Where there is a difference between the contents of this brochure and our website, the contents of the website take precedence and represent the basis on which we intend to deliver our services to you.

### Your degree:

Students admitted to Cardiff University study for a Cardiff University degree.

This brochure is printed on paper obtained from well managed sources using vegetable-based inks. Both the paper used in the production of this prospectus and the manufacturing process are FSC® certified. The printers are also accredited to ISO14001, the internationally recognised environmental standard.

When you have finished with this brochure it can be recycled, but please consider passing on to a friend or leaving it in your careers library for others to use.

Thank you.

Mae'r ddogfen hon hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

Cardiff University is a registered charity, no. 1136855

This prospectus can be made available in alternative formats, including large print (text), Braille and on audio tape/ CD.

To request an alternative format please contact Laura Roberts:

Tel: **029 2087 4455**

Email: **[RobertsL9@cardiff.ac.uk](mailto:RobertsL9@cardiff.ac.uk)**





**To find out more about the  
School of Chemistry**

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Tel: +44 (0)29 2087 4023

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