

Course Summary: March 30, 2026

Chemistry with Medicinal Chemistry

MChem Honours

- UCAS code: **F123**
- Full time
- 4 years

Our professionally accredited MChem degree focuses on the key aspects of chemistry that are most relevant and sought after by the pharmaceutical industry. This includes a year of advanced study at master's level.

You are currently viewing course information for entry year: **2026**

Next start date:

- September 2026

Tuition fees (Year 1)

- Home: **£9,790**
- International: **£31,500**

Entry requirements and offers

- A-Level: **AAB**
- IB: **33 points**

UCAS Institution name and code:

- NEWC / N21

Undergraduate Open Day

Start your university journey. Find where you belong. Friday, June 26 (9:00-16:00)

Saturday, June 27 (9:00-16:00)

[Book your place now](#)

Course overview

Our Chemistry with Medicinal Chemistry MChem degree extends our Chemistry with Medicinal Chemistry BSc degree by a year. It's perfect for anyone who wants to pursue a career in scientific research.

This exciting degree allows you to broaden your interests as you discover the subject. It includes the option to spend a year studying abroad or working in industry.

Medicinal chemistry is the discovery, design and synthesis of new clinical drugs and medicines. You'll explore the role of chemistry in:

- drug design
- cancer chemotherapy
- enzymology
- toxicology

You'll study medicinal, organic, inorganic and structural chemistry. You'll investigate modern analytical techniques and computational chemistry. You'll

research an investigative project where you'll work in an active research environment and create an original piece of work in chemistry. In your final year, your advanced modules can include:

- advanced methods in drug discovery
- advanced problem solving
- selectivity and stereo control in organic synthesis
- pericyclic and radical reactions

Your course and study experience - disclaimers and terms and conditions

Please rest assured we make all reasonable efforts to provide you with the programmes, services and facilities described. However, it may be necessary to make changes due to significant disruption, for example in response to Covid-19.

View our [Academic experience page](#), which gives information about your Newcastle University study experience for the academic year 2025-26.

See our [terms and conditions and student complaints information](#), which gives details of circumstances that may lead to changes to programmes, modules or University services.

Additional information

Flexible degree structure

Our Chemistry degrees share a common first year before offering different pathways and opportunities to specialise.

Explore what you enjoy and then branch out.

Quality and ranking

Professional accreditation and recognition

All professional accreditations are reviewed regularly by their professional body.

Modules and learning

Modules

The information below is intended to provide an example of what you will study.

Most degrees are divided into stages. Each stage lasts for one academic year, and you'll complete modules totalling 120 credits by the end of each stage.

Our teaching is informed by research. Course content may change periodically to reflect developments in the discipline, the requirements of external bodies and partners, and student feedback.

Optional module availability

Student demand for optional modules may affect availability.

Full details of the modules on offer will be published through the [Programme Regulations and Specifications](#) ahead of each academic year. This usually happens in May.

To find out more please [see our terms and conditions](#)

Our chemistry degrees share a common first year which explores the fundamentals of organic, inorganic, physical, and biological chemistry.

Modules

Compulsory Modules

Credits

Chemical Laboratory Skills 1	20
Chemical Skills and Professionalism	10
Fundamentals of Organic Chemistry	20
Fundamentals of Inorganic Chemistry	20
Fundamentals of Physical Chemistry	20
General Chemistry	10
Fundamentals of Biological Chemistry	10

Additional compulsory module information

If you have A Level Maths grade C or below you take the following compulsory module:

Mathematical Skills for Science (10 credits)

Optional Modules	Credits
Mathematical Skills for Science	10
Introduction to Scientific Computing for Chemists	10
Introductory Astrophysics	10

You'll study concepts in medicinal chemistry including:

- pharmacokinetics
- pharmacodynamics
- enzymes
- drug design

We'll also introduce you to structure-based drug design using CCP4 Molecular Graphics software.

Modules

Compulsory Modules	Credits
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Sustainable Solutions	10
Chemical Laboratory Skills 2	20
Structural Chemistry	10
Organic Chemistry	20
Inorganic Chemistry	20
Physical Chemistry	20
Medicinal Chemistry	10
Optional Modules	Credits
Scientific Computing for Chemists	10
Applied Computational Medicinal Chemistry	10
Chemistry of the Atmosphere	10

You'll study more advanced concepts in medicinal chemistry including:

- toxicology
- enzymology
- cancer chemotherapy
- chemotherapy of infectious diseases

You'll also study advanced organic and inorganic chemistry and explore topics including chemical nanoscience, synthesis and bioinorganic chemistry.

You'll take an employability module that includes a Professional Awareness Event. This is a great opportunity to interact with a range of companies.

Modules

Compulsory Modules	Credits
Professional Development and Employability Skills for Chemists	10
Advanced Organic Chemistry	20

Advanced Inorganic Chemistry	20
Advanced Medicinal Chemistry	20
Advanced Structural Chemistry	10
Chemical Laboratory Skills 3M	20
Analytical Chemistry in Practice	20

In your final year, you'll complete an investigative research project. You'll create an original, unpublished work in a modern area of chemistry. You'll work in an active research environment and generate a researcher development record. This record will highlight the skills you've learned during your research project.

You'll also study advanced methods in drug discovery, advanced problem solving and a range of optional modules.

Modules

Compulsory Modules	Credits
Research Project	70
Advanced Problem Solving	10
Advanced Methods in Chemical Biology and Drug Discovery	10
Optional Modules	Credits
Selectivity and Stereocontrol in Organic Synthesis	10
Pericyclic and radical reactions	10
Chemistry Far From Equilibrium	10
Contemporary Catalysis: Principles and Applications	10
Modern aspects of inorganic chemistry	10
Energy and Materials	10

Teaching and assessment

Teaching methods

You'll learn through a combination of:

- assessments
- assignments (written/fieldwork)
- coursework
- exams (practical/online)
- group work
- presentations
- seminar tasks/exercises
- practical Sessions

Assessment methods

You'll be assessed through a combination of:

- Assessments
- Assignments – written or fieldwork
- Coursework
- Dissertation or research project
- Examinations – practical or online
- Group work
- Practical sessions
- Presentations
- Seminar tasks/exercises

Skills and experience

Practical skills

You'll have the opportunity to develop professional laboratory skills through practical experience in our high-spec teaching labs.

You'll also develop strong analytical and problem-solving skills. These will enable you to pursue careers outside of Chemistry, including:

- accountancy
- patent law
- marketing

Business skills

You'll develop professional and employability skills. You'll have the opportunity to interact with alumni and leading companies.

You're able to develop business skills through:

- employability skills training across all stages
- work placements
- study abroad opportunities
- industrial visits

You'll develop key skills, including:

- writing proposals
- writing scientific reports and papers
- delivering presentations

You'll also network with industry at our Professional Awareness Day, empowering you to make decisions about your career.

Research skills

Research is at the heart of what we do. Our latest research discoveries feed into your curriculum. You'll learn on the cutting-edge of Chemistry. Our discoveries include:

- discovery of new anti-cancer drugs
- development of battery technology
- creation of nanoscale electronics

Opportunities

Study abroad

Gain a global perspective, enhance your academic profile and open doors to exciting new experiences by studying abroad for one semester or a full academic year at one of our partner universities overseas. Study abroad usually takes place in stage 3 of your studies and extends your degree by one year.

You'll have the choice to study at a leading international university, including:

- Monash University
- University of Hong Kong
- University of Pittsburgh

You can also opt for short-term global opportunities like summer schools, virtual exchanges or internships that usually take place over the summer months.

[Find out more about study abroad](#)

Work placement

Work Placements During your degree you can apply to spend 9 to 12 months on an industrial placement, in the UK or abroad. Your work placement is a great opportunity to gain practical experience, acquire key business skills and make industry contacts. You'll get University support from our dedicated team. Work placements usually take place between Stages 2 and 3 and extend your degree by a year.

Recent chemistry industrial placements include:

- Placement student at Procter and Gamble
- R&D Analytical Chemist at Reckitt Benckiser
- Drug Substance and Product Analyst at GSK
- Placement student at AkzoNobel

[Find out more about work placements](#)

If you take an assessed year abroad or industrial placement, you'll study both the Advanced Inorganic and Advanced Organic Chemistry modules via distance

learning, alongside an 80 credit project.

Facilities and environment

Facilities

The Bedson Building is the home of Chemistry and is located on our city-centre campus. It's based in the [School of Natural and Environmental Sciences](#).

Here you will benefit from well-resourced teaching and research laboratories and facilities including:

- advanced instrumentation for analytical chemistry
- mechanical, glassblowing and electronic workshops
- facilities for the synthesis and characterization of novel materials
- extensive computational resources for molecular modelling and dynamics

We also have analytical research facilities which include:

- mass spectrometry
- nuclear magnetic resonance (NMR) spectroscopy
- ion beams
- X-ray diffraction

These resources offer you invaluable hands-on experience, preparing you for a successful career in Chemistry.

Support

We take your health and wellbeing seriously and are committed to supporting you throughout your studies so you can fulfil your potential at university. This support includes:

- a personal tutor who is an academic member of staff who can help you with academic and personal issues throughout your degree
- a peer mentor scheme which pairs you with a current student from your course to help you navigate your first year at university
- a staff-student committee, to give you an opportunity to have a say in how your degree works
- support, treatment and guidance on mental and physical health from our [wellbeing team](#)

Your future

Join a network of successful graduates

Employers hold our graduates in high regard. Our graduates go on to work in a wide variety of sectors, including:

- drug development
- pharmacologist
- data analyst
- laboratory technician

Benefit from strong industry links

You'll also benefit from our well-established links with organisations within the industry, such as:

- Astra Zeneca
- GlaxoSmithKline
- Proctor & Gamble

Sustainable solutions

The Sustainable Solutions module at Newcastle University offers you the opportunity to collaborate with industry professionals on projects that address real-world sustainability challenges. This hands-on experience enhances your problem-solving skills and prepares you for successful careers in sustainability-focused roles.

You'll have many opportunities to interact with industry through:

- guest speakers
- visits
- industry networking events
- opportunities to attend conferences

Careers support

During your second year, you'll attend our Professional Awareness Day. We invite a broad mix of businesses to the event, carry out mock interviews and hold Q&A sessions with alumni. You're empowered to make decisions about your future career.

In your final year, you will have one-to-one meetings with an academic to discuss your professional future.

Our Careers Service is one of the largest and best in the country, and we have strong links with employers. We provide an extensive range of opportunities to all students through our ncl+ initiative.

[Visit our Careers Service website](#)

Recognition of professional qualifications outside of the UK

If you're studying an **accredited degree** and thinking about working in Europe after you graduate, the best place to find current information is the [UK Government's guidance on recognition of UK professional qualifications in EU member states](#). This official resource explains whether your profession is regulated in another country, what steps you need to take, and which organisation you should contact.

Find out more...

- Go online for information about our full range of degrees:
www.ncl.ac.uk/undergraduate
- Watch videos about student life in Newcastle by visiting our YouTube channel at **www.youtube.com/@newcastleuni**
- Watch a virtual tour of our campus at
<https://youtu.be/vJUfHcqB7l8?si=8lUrf7kTxXbgdfr1>
- Book for an Open Day to come and see us in person
www.ncl.ac.uk/openday
- Contact us online at **www.ncl.ac.uk/enquiries** or phone +44 (0)191 208 3333

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<https://www.ncl.ac.uk/student-welcome/student-contract/>

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