

Course Summary: March 29, 2026

Biochemistry MSci Honours

- UCAS code: **C701**
- Full time
- 4 years

This four-year Biochemistry MSci degree prepares you for a career at the forefront of life-saving medical developments with advanced knowledge and practical skills.

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

Next start date:

- September 2026

Tuition fees (Year 1)

- Home: **£9,790**
- International: **£30,900**

Entry requirements and offers

- A-Level: **AAB**
- IB: **34 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 Biochemistry integrated master's degree studies life at the molecular level. You'll develop an understanding of what causes diseases like cancer and how new technologies and drug treatments can help patients.

You'll explore the chemical processes that occur in cells of other living organisms, from bacteria to humans. You'll also gain knowledge and skills in molecular biology, biomedical sciences and biotechnology.

You'll learn how analytical techniques used by the industry – particularly in pharmaceutical and biotech companies – are used to discover or design new drugs or solve environmental problems.

The course includes topics such as:

- DNA replication, recombination and repair
- control of gene expression
- molecular basis of cancer and chronic diseases
- applications of biochemistry in real-world problems such as biofuels, drug-design, nano-circuits and bio-sensing

BSc or MSci?

Some of our degrees are offers at two levels:

- three-year Bachelor of Science (BSc)
- four-year Master in Science (MSci)

Our MSci degrees include an additional year of advanced study at master's level, where you will gain additional research and practical experience to increase your employability and have the opportunity to work alongside our world-leading experts.

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

Transfer to Medicine or Dentistry

There is flexibility to transfer between our degree programmes at the end of the first year if you find your interests change.

You can also apply to [transfer to our Medicine or Dentistry degree](#). This opportunity is open to UK, EU and international students. It is competitive, with a

limited number of places available. Students are selected on the basis of academic performance in the first year, a UKCAT score, a personal statement and, if shortlisted, an interview.

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](#)

The first two semesters of our programme and subsequent core modules are designed to give students a core knowledge and understanding of biochemistry. The rest of the programme aims to develop students' knowledge of the breadth and scope of biosciences, with exciting modules in cutting-edge areas, and an in-depth knowledge of research skills.

Stage 1

You're introduced to biomolecular sciences through a series of modules.

These modules will be active for those students starting the programme in September 2026.

Compulsory modules	Credits
Molecules of Life	20
Infectious Threats: past, present and future	20
Core Skills in Biosciences	20
Core Concepts in Biosciences	20
Therapeutic Mechanisms	20
Cells to Systems	20

These modules will be active for those students starting the programme in September 2026.

Compulsory modules	Credits
Skills for Bioscientists: Techniques, Tools, and Applications	20
Genomics and Gene expression in Disease	20
Anatomy and Cellular Systems	20

Compulsory modules	Credits
Proteins: Structure, Function and Biochemistry	20
Biochemistry of Gene Expression	20

You'll take **one optional module** from each of the following list:

Optional modules	Credits
Bioinformatics for Biosciences	20
Cell Signalling in Health and Disease	20
Immunology of Health and Disease	20
Microbial Genomics and Genome Mining	20
Nature's Tinkerer: Mechanisms of Evolutionary Change	20
Protein Trafficking: Mechanisms and Roles in Disease	20
Business Enterprise for Bioscientists	20
Respiration and Digestion: Global challenges in Health and Disease	20

You will undertake an extended individual research project which begins in the final semester of Stage 3 and continues throughout your final year. Alongside this you will have an extensive choice of optional modules to help you tailor your degree to your interests.

These modules will be active for those students starting the programme in September 2026.

You take the following compulsory modules:

Compulsory modules	Credits
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Becoming a Bioscientist: Skills for Research and Beyond	20
Research Project for Stage 3 MSci	40
Biochemistry of Disease	20
Applied Biochemistry for Drug Discovery	20

You take **one optional module** from the following list:

Optional modules	Credits
Rare Diseases: Genetic Variants to Physiological Function and Therapies	20
Microbiota and Pathogens in Fundamental Research and the Clinic	20
In vivo research	20
Neurodegenerative and Neurological Disorders of the Nervous System	20
Patterns and Determinants of Disease in Human Populations	20
Evolutionary Genomics in Fundamental Research and the Clinic	20
The Application of Bioinformatics Techniques to Biomedical Data	20
Therapeutic Applications of Cell Signalling	20
Applied Technologies for Biosciences	20

You will undertake an extended individual research project which begins in the final semester of Stage 3 and continues throughout your final year. Alongside this you will have an extensive choice of optional modules to help you tailor your degree to your interests.

These modules will be active for those students starting the programme in September 2026.

Compulsory modules	Credits
Research Project	80

You choose **two optional modules** from the list below:

Optional modules	Credits
The Biological Study of Behaviour	20
Ageing & Health	20
Experimental Medicine & Therapeutics	20
Drug Discovery & Development	20
Cancer Studies	20
Chromosome Biology and Cell Cycle Control in Health and Disease	20
Clinical Epidemiology	20
The Biological Basis of Psychiatric Illness & its Treatment	20
Biology of Ageing	20
Applied Immunobiology of Human Disease	20
Molecular Microbiology	20
Biomolecular Research in Health and Disease	20
Sensory Systems	20
Scientific Basis of Neurological Disorders	20
Regenerative Medicine & Stem Cells	20
Transplantation Sciences	20
Genetic Medicine	20

Optional modules	Credits
Mitochondrial Biology and Medicine	20
Diabetes	20
Cardiovascular Science in Health and Disease	20
Bioscience Research Development and Enterprise	20
Comparative Cognition: Information Processing in Humans and Other Animals	20
Exercise in Health and Disease	20
Drug Delivery and Nanomedicine	20
Human Health and the Impact of Microbial Genomics	20
Therapeutic Applications of Cell Signalling Pathways	20
Bioinformatics for Biomedical Scientists	20
Mechanisms in Genetic Disease: from Genotype to Phenotype	20

Teaching and assessment

Teaching methods

You'll learn through a combination of lectures, practical laboratory classes, and small group seminars.

To support your learning, you will be able to access online resources such as lecture and teaching materials and recordings on our main Virtual Learning Environment.

You also have the chance to attend optional research talks, aimed especially at first-year students, as part of our biomedicine+ programme.

Assessment methods

You'll be assessed through a combination of:

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

Skills and experience

Research skills

In your third year, you will complete a research project on a topic that interests you. This will give you practical experience of planning and conducting research, boosting your CV with desirable skills.

During your final year, you will undertake a 10-week research project, and work alongside research staff, in either one of our cutting-edge research laboratories or in one of our laboratory-based projects in different parts of Europe.

You'll plan, design and conduct your experiments under the supervision of a member of academic staff, learning advanced research technical skills.

Business skills

Our programme has been designed with your future career path in mind, alongside employers to boost your professional skills in an employment area that we know many of our graduates progress to, for example:

- microbiology
- healthcare organisation and practice
- science communication
- research in biochemistry
- bioethics
- bioinformatics

You'll have the chance to take a 6-to-8-week summer research placement in a research lab and develop strong professional skills, or a one-year professional placement in industry or in a research laboratory.

Practical skills

Biochemistry is a practical science. You'll have many opportunities to develop technical laboratory competencies, as well as essential professional skills.

You'll develop fundamental biochemistry techniques, bioinformatics knowledge and data analysis and problem-solving skills through practical laboratory sessions.

You'll also have opportunities to further develop your technical and transferable skills, by applying for a part-time laboratory assistant job during your second year working in one of our research labs, and contributing to the world-leading research carried out in our institutes.

Opportunities

Study abroad

Experience life in another country by choosing to study abroad as part of your degree. You'll be encouraged to embrace fun and challenging experiences, make connections with new communities and graduate as a globally aware

professional, ready for your future.

You can choose to spend up to a year studying at a partner institution overseas.

If you choose to study abroad, it will extend your degree by a year.

[Find out more about study abroad](#)

Work placement

Apply your practical skills, increase your confidence and gain real-life work experience to accelerate your career. Take a 9-12-month industrial placement in the UK or abroad. Work placements usually take place in stage 3 of your studies and extend your degree by one year.

[Find out more about work placements.](#)

Facilities and environment

Facilities

You'll be based in the School of Biomedical, Nutritional and Sport Sciences in the Faculty of Medical Sciences at our city-centre campus. The Faculty is also home to Dentistry, Medicine, Psychology and Pharmacy, making it a vibrant environment for learning and research.

Our facilities include:

- a dedicated medical library with a wide range of specialist books and journals
- spacious modern teaching laboratories
- hi-tech computer clusters and study spaces
- cutting-edge research laboratories and equipment facilities
- flexible student social spaces
- being less than two minutes' walk of the sports centre

[Find out about the School of Biomedical, Nutritional and Sport Sciences](#)

Support

You'll have the support of an academic member of staff as a personal tutor throughout your degree to help with academic and personal issues.

Peer mentors will help you in your first year. They are fellow students who can help you settle in and answer any questions you have, when starting university.

We have study skills ambassadors; peers who can help you with your studies including maths support.

We also have Phase Advisors who monitor your academic progress, and in-school Wellbeing Advisors who can help you manage issues affecting you during your studies.

Your future

Graduates from our Biochemistry degrees have gone on to work in internationally recognised companies, such as:

- BUPA
- Helena Biosciences Europe
- Cellmark
- Fujifilm Diosynth Biotechnologies
- Quantum Pharmaceutical
- GlaxoSmithKline Plc

Learn more about the careers our graduates have pursued on the [School of Biomedical, Nutritional and Sport Sciences website](#).

Make a difference

Careers support

Throughout your studies, there will be many opportunities to engage with industry including:

- site visits
- guest lectures
- employability fairs
- industrial placements
- internships
- advice from industry

Develop your employability with the support of the School through:

- summer placements
- internship opportunities
- opportunities to participate in clinical work shadowing
- becoming a student rep or ambassador
- mock interviews
- CV interviews
- careers clinics
- earning open badges
- enterprise challenge events
- assistance with applying to medicine/dentistry/postgraduate study

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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