

Course Summary: December 24, 2024

Biochemistry BSc Honours

- UCAS code: **C700**
- Full time
- 3 years

This Biochemistry degree will equip you with knowledge and skills essential for a successful career in science, industry, medical research, and healthcare.

You are currently viewing course information for entry year: **2025**

Next start date:

- September 2025

Fees (per year)

- Home: **Not set**
- International: **£30000**

Entry requirements and offers

- A-Level: **AAB**
- IB: **34 points**

[View contextual offers](#)

UCAS Institution name and code:

- NEWC / N21

Course overview

This degree explores how cell components are formed and interact at a molecular level. You'll develop your understanding of what causes diseases such as cancer, and how powerful new technologies can be used in drug design and synthesis.

We're a National Centre of Excellence in biomedical research and our world-leading, expert staff teach on our degree programmes. This means you graduate with cutting-edge knowledge in human health and disease.

Biochemistry is the study of life at the molecular level. This degree mainly focuses on human body functions. You'll also explore the chemical processes that occur in cells of other living organisms, from bacteria to humans.

Alongside improving your knowledge and skills in molecular biology, biomedical sciences and biotechnology, you'll also learn industry-standard analytical techniques. These are used to discover or design new drugs.

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'll 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 2024-25.

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](#)

All of our Biomedical and Biomolecular Sciences degrees are divided into two phases:

- phase 1 is shared by all degrees and provides a broad introduction to biomolecular sciences

- phase 2 provides specialist topics relating to your degree

This flexible structure gives you the chance to try a broad range of topics, helping you to see where your interests lie before you specialise.

Phase 1 (Stage 1 and part of Stage 2)

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

Phase 2 (remainder of degree)

- You'll study topics such as:
 - DNA replication, recombination and repair
 - cell signalling and cell cycle
 - proteins, enzymes and analysis
 - protein trafficking and membrane
 - biochemistry of cancer, chronic diseases and gene expression
 - applied and integrated biochemistry

You'll complete a research project in an area linked to your degree that interests you.

Modules

Compulsory Modules	Credits
Biochemistry	15
Genetics	15
Microbiology and Immunology	15
Cell Biology	15
Professional and Practical Skills for Bioscientists	30
Pharmacology	15
Physiology	15

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Modules

Compulsory Modules	Credits
Biochemistry and Genetics of Signalling and the Cell Cycle	20
DNA Replication, recombination and Repair	10

Proteins and Enzymes	20
Protein Trafficking and Biological Membranes	20
Advanced Protein Analysis	10
Essential Biomedical Research Skills	20
Control of Eukaryotic Gene Expression	10
Cell and Molecular Biology of the Immune System	10

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You'll complete a research project in an area linked to your degree that interests you.

You'll select a module designed to boost your professional skills in a relevant employment area.

Modules

Compulsory Modules	Credits
Integrated Biochemistry	10
Biochemistry of Gene Expression	20
Applied Biochemistry	20
Biochemistry of Cancer and Chronic Diseases	20

Additional compulsory module information

You also take one of the following modules (shown in the optional list below):

[Research Project](#) (40 credits)

OR

[Research Project for Exchange Students](#) (40 credits)

Optional Modules	Credits
Research in Biochemistry & Genetics	10
Business Enterprise for the Bioscientist	10
Health and Illness: Professional and Societal Perspectives	10
Science Communication	10
Bioethics	10
Bioinformatics	10
Research Project	40

Information about these graphs

We base these figures and graphs on the most up-to-date information available to us. They are based on the modules chosen by our students in 2023-24.

Teaching time is made up of:

- scheduled learning and teaching activities. These are timetabled activities with a member of staff present.
- structured guided learning. These are activities developed by staff to support engagement with module learning. Students or groups of students undertake these activities without direct staff participation or supervision

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'll 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 final year, you'll complete a research project on a topic that interests you. This gives you practical experience of planning and conducting research, boosting your CV with desirable research skills.

Most students do their project work in one of our research institutes. Here, you're working alongside leading scientists. You'll develop advanced scientific skills and get an insight into a career as a researcher.

Your project may be:

- a laboratory project in one of our internationally rated research institutes
- a laboratory project in a research laboratory abroad
- a clinical study under the supervision of one of the medically qualified staff working within our Faculty
- a project with a local school or college
- an IT-based project

Business skills

In third year, you'll select a module, designed to boost your professional skills in an employment area that we know many of our graduates progress to, for example

- business for the bioscientist
- 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 get to make a direct contribution to world-leading research through opportunities with our research institutes.

You'll have many opportunities to develop technical laboratory competencies, teamwork and professional skills, through:

- practical lab sessions
- final-year research project

Other opportunities include:

- paid part-time laboratory assistant
- summer vacation research placement
- one-year professional placement in industry

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

Get career ready with a work placement and leave as a confident professional in your field. You can apply to spend 9 to 12 months working in any organisation in the world, and receive University support from our dedicated team to secure your dream placement. Work placements take place between stages 2 and 3.

You'll gain first-hand experience of working in the sector, putting your learning into practice and developing your professional expertise.

If you choose to take a work placement, it will extend your degree by a year. Your degree title will show you have achieved the placement year. Placements are subject to availability.

[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

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
- SOLAR – a student-led outreach group teaching school children science
- 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 award-winning 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

From 1 January 2021 there is an update to the way professional qualifications are recognised by countries outside of the UK

Check the government's website for more information.

Find out more...

- Go online for information about our full range of degrees:
www.ncl.ac.uk/undergraduate
- To watch videos about student life in Newcastle, visit
www.ncl.ac.uk/lovenewcastle
- Visit **www.ncl.ac.uk/tour** to take virtual tours of the campus and city
- 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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www.ncl.ac.uk/pre-arrival/regulations

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