Course Summary: May 25, 2025

Biomedical Genetics BSc Honours

- UCAS code: **B901**
- Full time
- 3 years

This accredited biomedical genetics degree will equip you with an in-depth knowledge of how genes affect health and disease, so you're ready for a career at the forefront of the medical genetics industry.

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

Next start date:

- September 2025

Tuition fees (Year 1)

- Home: **£9,535**
- International: **£30000**

Entry requirements and offers

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

View contextual offers

UCAS Institution name and code:

- NEWC / N21

Course overview

Our Biomedical Genetics BSc Honours degree focuses on developing your scientific and experimental skills and equips you with the advanced knowledge you'll need to ensure you graduate fully prepared for your rewarding career in science.

You'll develop an understanding of what causes diseases like cancer, how new technologies and drug treatments can help patients, and how to study genetic aspects of diseases.

We are a National Centre of Excellence in biomedical research and you will be taught by our world-leading and expert staff. You will graduate with a cutting-edge knowledge of the industry.

Studying a range of topics, from human molecular genetics, genetic diagnostic, evolution, genomic, biochemistry, microbiology and physiology, our varied, but in-depth curriculum allows you to find your interests in the field.

You will further your research skills through your final-year project. This gives you the practical experience of planning and conducting research that employers seek.

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 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.

Quality and ranking

Professional accreditation and recognition

All professional accreditations are reviewed regularly by their professional body.

Additional information

Transfer to our Medicine or Dentistry degree

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 UCAT score, a personal statement and, if shortlisted, an interview.

Find out about transferring courses

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
- regulation of the cell signalling and cell cycle
- gene expression
- evolution
- cytogenetics
- bioinformatics
- cancer biology

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

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

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
- regulation of the cell signalling and cell cycle
- gene expression
- evolution
- cytogenetics
- bioinformatics
- cancer biology

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

Modules

Compulsory Modules	Credits
Biochemistry and Genetics of Signalling and the Cell Cycle	20
DNA Replication, recombination and Repair	10
Medical genomics: from DNA to disease	20
Evolution	20
Approaches to analysis of genes and genomes	10
Essential Biomedical Research Skills	20
Control of Eukaryotic Gene Expression	10
Cell and Molecular Biology of the Immune System	10

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:

- gene expression
- DNA replication, recombination and repair
- regulation of the cell signalling and cell cycle
- evolution
- cytogenetics
- bioinformatics
- cancer biology

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

Modules

Compulsory Modules	Credits
The Molecular Basis of Cancer	10
Evolution and Genomics	10
Integrated Genetics	10
Diagnostic Medical Genetics	20
Genetic variation in common disease	10
Genetics of Development and its Disorders	10

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
Research project for exchange students	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 2024-25.

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.

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
- Seminar tasks/exercises

Skills and experience

Practical skills

In your final year, you'll work alongside industry-recognised scientists in one of our research institutes while completing your research project.

This will allow you to develop advanced research and scientific skills, while also getting an insight into a career as a researcher.

Business skills

We make sure you have plenty of opportunities to gain work experience to enhance your employability while studying. This includes:

- vacation studentships in a University research laboratory
- paid work in one of our research institutes through our Laboratory Assistant Scheme
- employability ambassador scheme
- student mentoring scheme

Research skills

As a National Centre of Excellence in biomedical research, you're guaranteed an education right at the cutting edge of the discipline, so you'll always be aware of the latest developments and innovations in the field.

Opportunities

Study abroad

Experience life in another country by choosing to study abroad as part of your degree. We offer a wide range of destinations and opportunities for students, and we can help you decide which option would work for you (including free language courses before you go, and helping you apply for funding). 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. You can even take a summer placement in an overseas research laboratory.

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, and your degree title will show you have achieved the placement year. A work placement is not available if you're spending a year studying abroad. 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

There is a great demand for graduates in the biomedical and biomolecular sciences within the health services and industry, particularly leading or working as part of research teams, and many of our students choose this career path.

A large proportion of our graduates choose to take a further degree either a medical, master's, PhD or teaching qualification, before embarking on permanent employment.

Recent Biomedical and Biomolecular Sciences BSc and MSci Honours graduates have taken up roles such as:

- clinical specialist
- laboratory analyst
- research technician
- clinical data associate
- trainee clinical scientist
- research PhD student
- medical writer

Work in a range of industries

Sectors employing bioscientists include:

- pharmaceuticals
- biotechnology
- education
- healthcare
- chemical
- cosmetics and toiletries
- food and drink
- scientific writing
- research and development
- patent law
- business analysis
- software engineering
- clinical trials management

Find out more about the career options for Biomedical and Biomolecular Sciences from Prospects: The UK's Official Careers 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
- 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 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

This brochure is created from web content and is up to date at the time of creation (see the first page for creation date). If you are on screen you are able to use the live links that are highlighted in blue. If reading in print, the URLs provided above will help you to navigate back online. Full details of the University's terms and conditions, including reference to all relevant policies, procedures, regulations and information provision, are available at: **www.ncl.ac.uk/pre-arrival/regulations**