Course Summary: March 27, 2026

Physics with Foundation Year BSc Honours

- UCAS code: **F304**
- Full time
- 4 years

Our Physics with Foundation Year BSc will prepare you for one of our Physics BSc or MPhys degrees, opening doors to diverse career paths across a range of industries.

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: **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

This foundation year will help you develop the knowledge you need to progress to one of our Physics BSc degrees.

No physics or mathematics A-Level needed. This foundation year is designed for students without A-Level (or equivalent) qualifications in mathematics or physics. It will provide you with the essential knowledge needed to progress to a Physics BSc or MPhys degree.

The full-time programme covers core topics in physics and mathematics, including:

- mechanics
- statistics
- materials science
- electrical circuit analysis

You'll also explore fundamental physics concepts such as:

- forces
- energy
- atomic structure
- radioactivity
- chemistry
- data analysis
- computational techniques

Progression

On completion of the foundation year, you're guaranteed a place in Stage 1 of these degrees:

- Physics BSc Honours
- Theoretical Physics BSc Honours
- Physics with Astrophysics BSc Honours
- Physics MPhys
- Theoretical Physics MPhys
- Physics with Astrophysics MPhys

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.

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

You'll cover core topics including foundation mathematics, foundation physics and an individual project.

Modules

Compulsory modules

- Electricity and Magnetism (10 credits)
- Group Project (10 credits)
- Mechanics (10 credits)
- Introduction Computing (10 credits)
- Core Mathematics A (30 credits)
- Core Mathematics B (30 credits)
- Concepts in Thermal and Quantum Physics (10 credits)
- The Physics of Oscillations (10 credits)

Teaching and assessment

Teaching methods

You'll be taught via a range of approaches, including:

- lectures and seminars
- small group tutorials
- problem classes
- laboratory sessions
- practical computing sessions

You'll also engage in independent study. You'll receive support and guidance on selecting and using relevant reading materials effectively.

Assessment methods

You'll be assessed through a combination of:

- Assessments
- Examinations – practical or online
- Projects
- Reports

Skills and experience

Practical experience

This foundation year will prepare you for Stage 1 of our Physics BSc and MPhys degrees. It'll equip you with skills that are in demand by employers across the globe.

Using our high-spec facilities, and working alongside our expert staff, you'll:

- gain experimental experience in our state-of-the-art laboratories
- work on lab and project-based modules, based on real-world challenges
- develop analytical and computational skills, using industry-relevant software
- enhance your written and oral communication skills
- learn from experts in the field at a leading Russell Group university

Business skills

Physics graduates are highly valued for their transferable skills. You'll graduate with strong abilities, including:

- problem-solving
- a logical, analytical mindset
- big data analysis
- communication
- teamwork

You'll also learn how to present data in numerical, graphical and tabular form. You'll select and process data to provide relevant information for technical problems.

Research skills

You'll benefit from our interdisciplinary approach and the diverse research strengths of our expert academic staff. We have research expertise in:

- novel electronic materials
- semiconductor devices
- nanoscale properties of materials
- computational physics
- quantum fluids
- quantum matter
- observational astrophysics
- astrophysical fluids
- cosmology
- quantum gravity

Explore the research we're doing in the School of Mathematics, Statistics and Physics

Student stories

Adam, a 2022 graduate, shares the highlights of his course, why he chose Newcastle, and advice for new students.

Read about Adam's experience studying Physics BSc

Facilities and environment

Facilities

As a physics student at Newcastle University, you'll be based at our city-centre campus in the School of Mathematics, Statistics and Physics' Herschel Building.

The school has high-specification laboratory facilities equipped with leading experimental and computational physics capabilities, as well as access to world-class telescopes and space missions, such as:

- cryogenics labs
- semiconductor labs
- High-Performance Computing
- data from the Vera Rubin Telescope

- dark lab
- NASA's Kepler/K2, TESS
- JWST space telescopes ESA's PLATO space mission

The Herschel Building also has dedicated study and social spaces, and a computing area.

Find out more about our facilities, including a 360 tour

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
- Student Wellbeing Advisors who can offer comprehensive listening and support and signpost you to other University support services or external support agencies

Transition team

A dedicated member of the team will be there to support you as you move from school to university study.

The Transition Officer works with Year 1 undergraduates to provide:

- Year 1 pastoral and academic support
- weekly drop-ins
- training sessions on report writing and professionalism

You'll also benefit from our:

- induction programme, including social events, to help you settle in quickly
- activities and events run by our student-run society, PhysSoc
- peer supported academic drop-in sessions to help with assignments

Your future

We have research links with the following companies and external organisations:

- Littelfuse
- the De Beers Group
- DEFRA
- STFC
- NASA
- LOFAR
- intel
- CPI

Graduating with a degree in physics

Possible career paths for physics graduates include:

- engineering

- medicine
- finance
- nanotechnology
- oil, gas and renewable energy
- telecommunications

You'll gain transferable skills that are highly valued by employers such as problem-solving, analytical, mathematical, communication, presentation, teamwork and computing skills.

Further study, including postgraduate courses for secondary school teaching and PhD courses, are further options available to physics graduates.

This Foundation Year provides a pathway into our Physics BSc and MPhys courses. Our degrees lead to a range of career opportunities across diverse industries.

Previous graduates from our Physics courses have gone onto roles within 15 months of graduating, including:

- Technical Graduate at DXC Technology
- Electric Vehicle Finance Proposition Manager at HSBC
- Secondary Science Teacher at Laidlaw Schools Trust
- Trainee Clinical Scientist at NHS
- Graduate Data Engineer at Serios Group
- Graduate Physicist at Tracerco Business Consultant at EY
- Commercial Financing Executive at Lindt

Make a difference

Careers support

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=8IUrf7kTxXbgdfr1**
- 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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