

Course Summary: May 23, 2025

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 degrees, opening doors to diverse career paths across a range of industries.

You are currently viewing course information for entry year: 2025

Next start date:

• September 2025

Tuition fees (Year 1)

- Home: £9,535
- International: **£30600**

Entry requirements and offers

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

View contextual offers

UCAS Institution name and code:

• NEWC / N21

Course overview

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

No physics A-Level needed. This foundation year course is for students who don't have an A-Level, or equivalent, in physics.

This is a full-time programme of study covering core physics and mathematics topics, including:

- foundation mathematics
- foundation physics
- basic statistics
- applied mechanics
- materials science

Progression

If you finish 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

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.

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.

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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)

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 be taught via a range of approaches, including:

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

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 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:

- learn the practical applications of physics in cutting-edge technologies and advanced engineering
- develop expertise in experimental techniques, giving you the practical skills required in a wide range of physical science careers
- conduct research at a leading Russell Group university, showcasing your research and presentation skills
- develop experimental, analytical, computing and research skills through laboratory- and project-based modules

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
- computational physics
- quantum fluids
- astrophysics
- relativity
- nanoscale properties of materials

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, such as:

- cryogenics labs
- semiconductor labs
- High-Performance Computing

• data from the Large Synoptic Survey Telescope

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 Officer

A dedicated staff member is here to support you in transitioning from school to university study.

The Transition Officer works with Stage 1 undergraduates to provide:

- Stage 1 pastoral and academic support
- attendance and academic performance monitoring
- Stage 1 induction
- weekly drop-ins

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.

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

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.

Additional information

Advice on maths and science requirements

If you don't think you will have the exact mathematics and science qualifications referred to in our entry requirements by the time you need them, you may not be sure what to do.

- If you have a maths qualification but will not have it at A Level (or equivalent) when you start your degree, you should apply for the relevant degree with Foundation Year. We may give you the opportunity to take the Newcastle University Pre-Entry Maths Course* and the option to start in Year 1 if we think that this will be the best route for you.
- If you have A Level Maths (or equivalent) already but not at the required grade, you should contact us for advice. We may decide that you could be considered for Foundation Year entry, or it may be that this course is not the best option for you.
- If you will not have the equivalent of an A Level in the science subject (if any) required, you should apply for the relevant degree with Foundation Year.

If you are still not sure, don't worry. Whatever you apply for, our Admissions Tutors will help you decide which is the best route for you. They may, therefore, make you an offer for a different course from the one you apply for (eg Foundation Year entry instead of Year 1 entry).

*The Newcastle University Pre-Entry Maths Course aims to provide the requisite mathematical skills and concepts needed on our engineering, maths and physics degree courses and to prepare students for the modes of learning they will encounter. The materials for the course are delivered electronically and include opportunities to practise your skills. You study the materials in your own time and, when you are ready, you book your exam with the Engineering School to which you have applied. A fee of £150 is payable at the time of booking the exam or shortly before the date set for examination.

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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