



UNIVERSITY OF  
LINCOLN

Physics

School of Mathematics  
and Physics



## Physics Courses at Lincoln and Where They Could Take You

The University of Lincoln has an excellent track record for graduate employment, with 95 per cent of our most recent graduates in employment or further study within six months of finishing their course, according to the latest Destinations of Leavers from Higher Education survey.

### BSc (Hons) Physics

Physics is a fascinating subject concerned with the most fundamental laws governing the world around us. The knowledge and problem-solving skills of physicists are vital for new discoveries and advances in technology that affect all of our lives.

The BSc (Hons) Physics degree combines fundamental and applied physics with mathematics and computational training. It aims to develop problem-solving skills and also includes a research component. The degree combines compulsory and elective modules, as well as project work.

The University of Lincoln is dedicated to achieving excellence in research and aims to

provide a friendly, approachable culture for students to join.

At Lincoln, you can study the most fundamental aspects of physics such as Quantum Physics, Condensed Matter Physics and Physics of the Universe, as well as being exposed to applied fields such as Industrial Physics and Experimental Physics. Students will be given opportunities for team and individual project work, which will culminate in a final-year individual project.

Physics graduates are well placed for careers in research and development, process control, and regulatory roles in organisations around the world. Some may go on to roles in education or to further study at postgraduate level.

### MPhys Physics

The MPhys (Master of Physics) degree combines theory with practical laboratory work and substantial research training. Students who choose to enrol on the MPhys programme will follow the same pathway as the BSc (Hons) degree for three years before

continuing their studies for a fourth year at an advanced level, examining in greater depth topics such as Nanophysics, Advanced Instrumentation and Theoretical Physics. Students can also undertake substantial additional project work.

This degree is designed for those seeking to develop thorough skills as an independent physicist. Students may have the opportunity to contribute to research and write an academic paper.

Throughout the course, there are extensive opportunities to hone practical skills in preparation for careers in a variety of sectors including energy, aerospace, defence, education and engineering.

### Industrial and Research Focus

As a part of their degree, our Physics students follow an Industrial Physics module where they can meet leading industrialists and have an opportunity for summer or year-long placements (subject to availability and selection) as well as the opportunity to engage in, or learn from, industrial research projects. Our students can take part in elements of research work from their first year through to their final year. That can include group study in year one, a group project in year two and individual projects in years three and four.

### Investing in the Future

The University of Lincoln has invested £200 million in its award-winning campus, with a further expenditure of £130 million planned over the next 10 years. Our Physics students can benefit from facilities at the Joseph Banks Laboratories and the new £28 million Isaac Newton Building.

### Careers Guidance

At Lincoln, our Careers & Employability Team has qualified advisers who can work with you to provide tailored, individual support and careers advice during your time with us. This service can include one-to-one coaching, CV advice and interview preparation to help you maximise future opportunities.

Graduates also receive one-to-one support for a year after completing their course, including access to events, vacancy information and website resources. Access to online vacancies as well as virtual and website resources are available for the following two years.

For more information on the full range of services available through the Careers & Employability Team at Lincoln, please visit [www.uolcareers.co.uk](http://www.uolcareers.co.uk)



## Welcome to Physics at Lincoln



“It is my great pleasure to welcome you to the Physics programmes at the University of Lincoln.

Physics develops our understanding of the world around us, from faraway galaxies to the smallest elementary particles. It challenges our thinking and changes our lives through developments in new knowledge about the most fundamental laws of nature. Physics is also often the first step in creating the modern technology around us, and so plays a key role in the advancement of society.

At Lincoln, we bring together fundamental and applied physics with rigorous mathematics and computational training. We aim to develop broad problem-solving skills and this can include a substantial research component as well exposure to the industrial physics environment.

Physics at Lincoln has been developed to follow UK Institute of Physics requirements. If you choose to join us, you will be part of a vibrant and diverse community of scientists and students who are passionate about physics. We are committed to help you develop the skills to pursue a variety of exciting and fulfilling careers.

If you would like to know more about Physics at Lincoln, please contact us using the details at the back of this brochure, or visit us at an Open Day. We look forward to hearing from you soon.”

**Dr Marco Pinna**  
Physics Programme Leader

## Learn From Experts

Physics students at Lincoln can be taught by, and work alongside, experienced and practising academics who are conducting research on the front lines of modern physics. The University also hosts high-profile visiting speakers as part of our Great Minds lecture series. Previous speakers have included Astronomer Royal Sir Martin Rees, spacecraft engineer Abbie Hutty and scientist Lord Robert Winston.

One of Lincolnshire’s most famous sons, Sir Isaac Newton, was born at Woolsthorpe Manor, near Grantham, in 1642. The mathematician and physicist is said to have pondered the nature of gravity after witnessing an apple fall from a tree in his garden, and a graft of that tree is currently being matured here at the University of Lincoln.



**Dr Manuela Mura**  
Senior Lecturer

Dr Mura received a doctorate from King’s College, London. Her PhD thesis titled *Theoretical characterization of STM images of*

*assemblies of flat organic molecules on metal surfaces* was awarded the prestigious Tadicion-Rideal Prize for Molecular Science in 2010 and also the Springer PhD Thesis Prize.

Dr Mura’s research centres on nanophysics with the two main areas concentrating on solid state nanophysics and molecular biophysics. She is an expert in a variety of computer simulation techniques in Condensed Matter Physics.

Physics students can benefit from her wide-ranging experience and ongoing interdisciplinary collaborations with the Schools of Life Sciences and Chemistry, as well as national and international research partners.



**Dr Martin Greenall**  
Senior Lecturer

Dr Greenall obtained his PhD in statistical mechanics at Imperial College London. He then worked as a postdoctoral

researcher at Edinburgh University, Leeds University and at the Jülich Research Centre in Germany. He then moved to the National Centre for Scientific Research in Strasbourg, France on a personal EU Marie Curie fellowship. In 2013, he took up a position as a lecturer at Aberystwyth University, before joining the University of Lincoln in 2015.

Dr Greenall’s research centres on the theory and computer simulation of polymers, and he has also published on glass formation, liquids at interfaces and Brownian motion. He has worked on both fundamental and applied research problems, and has also collaborated

closely with industrial scientists on the design of polymer capsules for drug delivery.

In his career he has lectured on a range of topics, including dynamics, electrostatics and statistical mechanics, and received two teaching awards during his first year at the University of Lincoln.



*The University has invested heavily in Science, Technology, Engineering and Mathematics (STEM) subjects with the creation of the Isaac Newton Building. At Lincoln, we constantly invest in our campus as we aim to provide the best learning environment for our undergraduates. The University strives to ensure students have access to specialist equipment and resources, to develop the skills they may need in their future career.*



## Research Expertise in Physics

Physics students at Lincoln will join an active academic community of world-class scientists. You will be given the opportunity to access state-of-the-art resources, including experimental and computational laboratories.

Physicists in Lincoln work closely with industrial partners and are currently engaged in interdisciplinary research across various countries, including Canada, Germany, Japan, the Netherlands, Spain and the USA.

Our research encompasses experimental and theoretical physics in fast-developing modern fields such as nanophysics using a variety of methods involving quantum, atomistic and macroscopic physics. One particular area of interest is the quest to understand self-assembly at the nanoscale level, which can aid in the design of the smart nano-materials of the future. We are also expanding our research onto the much larger, cosmic scale with the field of astrophysics.

### Vibrant Physics Community

The city of Lincoln is home to the public Lincoln Astronomical Society, which was

formed in 1959 and has its own observatory. Physics students can join the Institute of Physics (IOP) and be involved in various activities connected to the IOP Lincoln Centre, which is a part of the East Midlands Branch of the Institute of Physics. The University of Lincoln hosts the annual Edward Delaval Lecture in Physics and the Robert Grosseteste Lecture in Astrophysics.

*“I would absolutely recommend this course. Lecturers are on hand to answer your questions, which helps students gain a real understanding. There is also lots of group work so we can bounce ideas around and work as a team.”*

**Sorcha Hulme**  
BSc (Hons) Physics

# Find Out More

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There are many ways for you to engage with the School of Mathematics and Physics, and the University of Lincoln. Whether you want to visit us and take a look around, join our online community or find out more information, we are here to help. Call us on **+44 (0)1522 886644**, email **mathsphysics@lincoln.ac.uk** or read on to find out other ways to get in touch.

## Open Days

The University holds Open Days throughout the year, which offer a great opportunity for you and your family to explore the campus, speak to lecturers and find out more about student life at Lincoln. For more information and to book your place, please visit: **www.lincoln.ac.uk/opendays**

## International Students

The University of Lincoln aims to provide a vibrant and dynamic atmosphere for international students who are looking to study in the UK. Please visit **www.lincoln.ac.uk/international** for more information.

## Social Media

To keep up-to-date with the latest news and information from the University, join our online communities.



**lincolnmathsphys**  
**universityoflincoln**



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All information accurate at the time of print. For the latest information, please visit our website.