

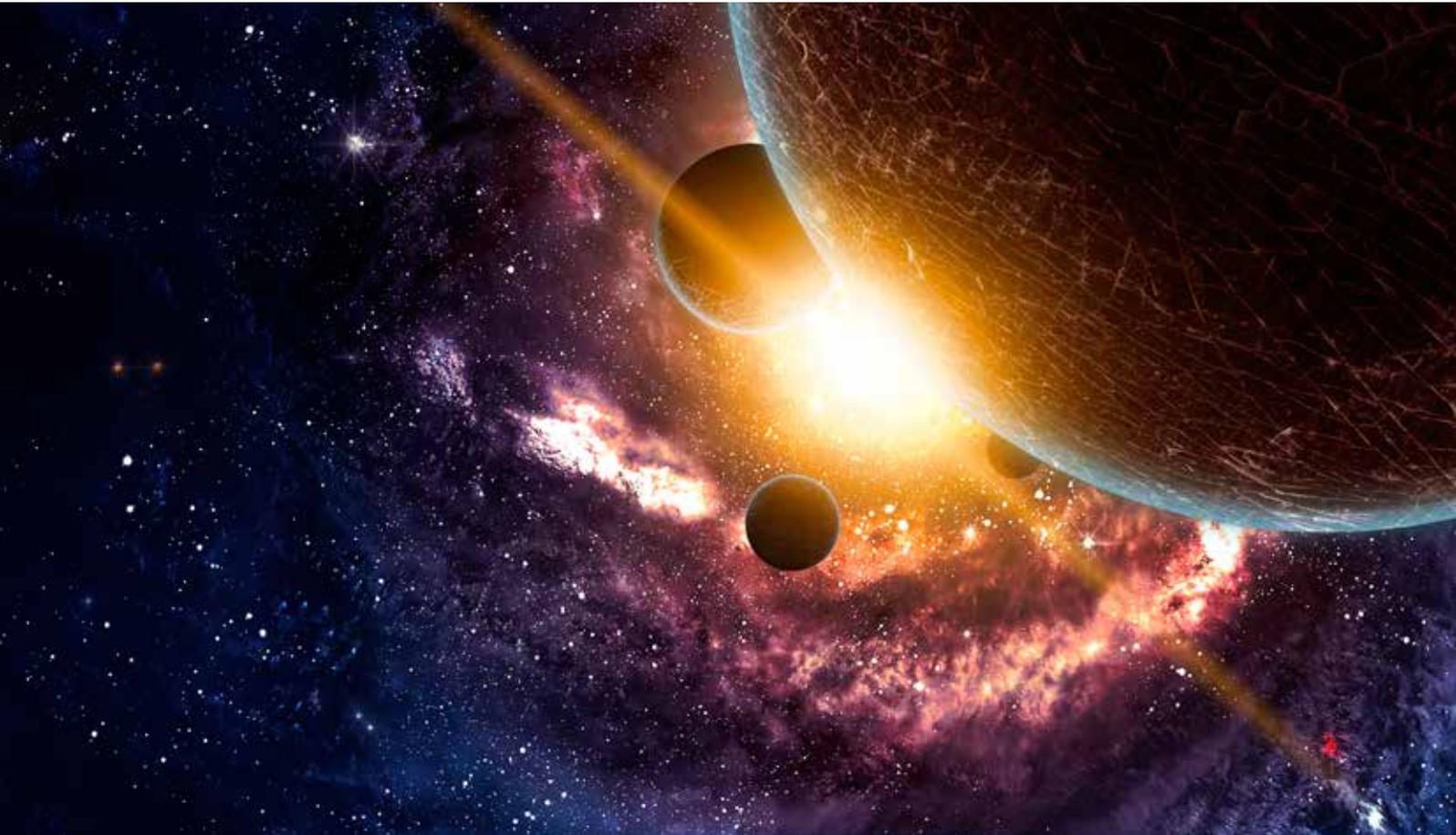


UNIVERSITY OF  
**LEICESTER**

College of Science and Engineering

Undergraduate Courses in

# Physics and Astronomy





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**Student achievement is high and the students have a real sense of belonging to the department.**

**Prof. Iain Steele, External Examiner,  
Liverpool John Moores University**

# Welcome to our department

We are a top 5 Physics department [\*] and our degrees are accredited by the UK Institute of Physics (IOP). The breadth of content and the quality of teaching in all of our degrees reflects the wide-ranging research excellence in the Department. No matter where your interests lie, you will be taught by international experts.

We are a friendly department of 44 research-active academic staff, admitting around 110 undergraduate students each year. This means one of the best staff-student ratios in the UK, a wide range of module choice, and the opportunity to be taught by academics who are passionately engaged in advancing their fields.

We pride ourselves on our commitment to teaching and excellent student support. Studying physics at Leicester will enhance your academic knowledge and problem solving ability, develop your confidence and communication skills, and provide excellent career opportunities.

Choosing your degree is one of the most important decisions you will make. We hope that you are considering studying with us, and that the information in this brochure will help you to make your choice. We would certainly encourage you to visit us at an Open Day or a post-application Visit Day, and to contact our admissions team ([physug@le.ac.uk](mailto:physug@le.ac.uk)) if you have any questions.

**Professor Paul O'Brien, Head of Department**

[\*] Source: Guardian leagues 2016, 2017



“ It is a challenging course but you leave with a broad knowledge of physics and a wide range of skills, which leaves you open to many different career options.

Emma, MPhys, Year 4 Student

## Why choose Physics at the University of Leicester?

### A department with a world class reputation

We are one of only three UK physics departments to have been awarded the prestigious status of a Centre of Excellence in Teaching and Learning (CETL), and our degrees are accredited by the UK Institute of Physics (IOP). Our research spans physics on all scales, from nanotechnology to cosmology, and we have strong links with space agencies and world-leading industrial partners. We host the Complexity node of DiRAC (the UK's supercomputing facility for particle physics, astrophysics and cosmology) and lead the UK's National Centre for Earth Observation Science.

### A flexible degree

You can choose to follow a broad physics course covering many topics or to specialise in astrophysics or space science and technology. You can easily mix and match option courses and even projects from different specialities to suit your individual interests and career aspirations as they develop throughout your time at University.

### A friendly, vibrant atmosphere

We have an excellent staff-student ratio (among the best in the UK)\* and we operate an open door policy. This means teaching staff make themselves available throughout the day for you to get the support you need. In addition to lecture theatres and dedicated

\* Source: Guardian University Guide

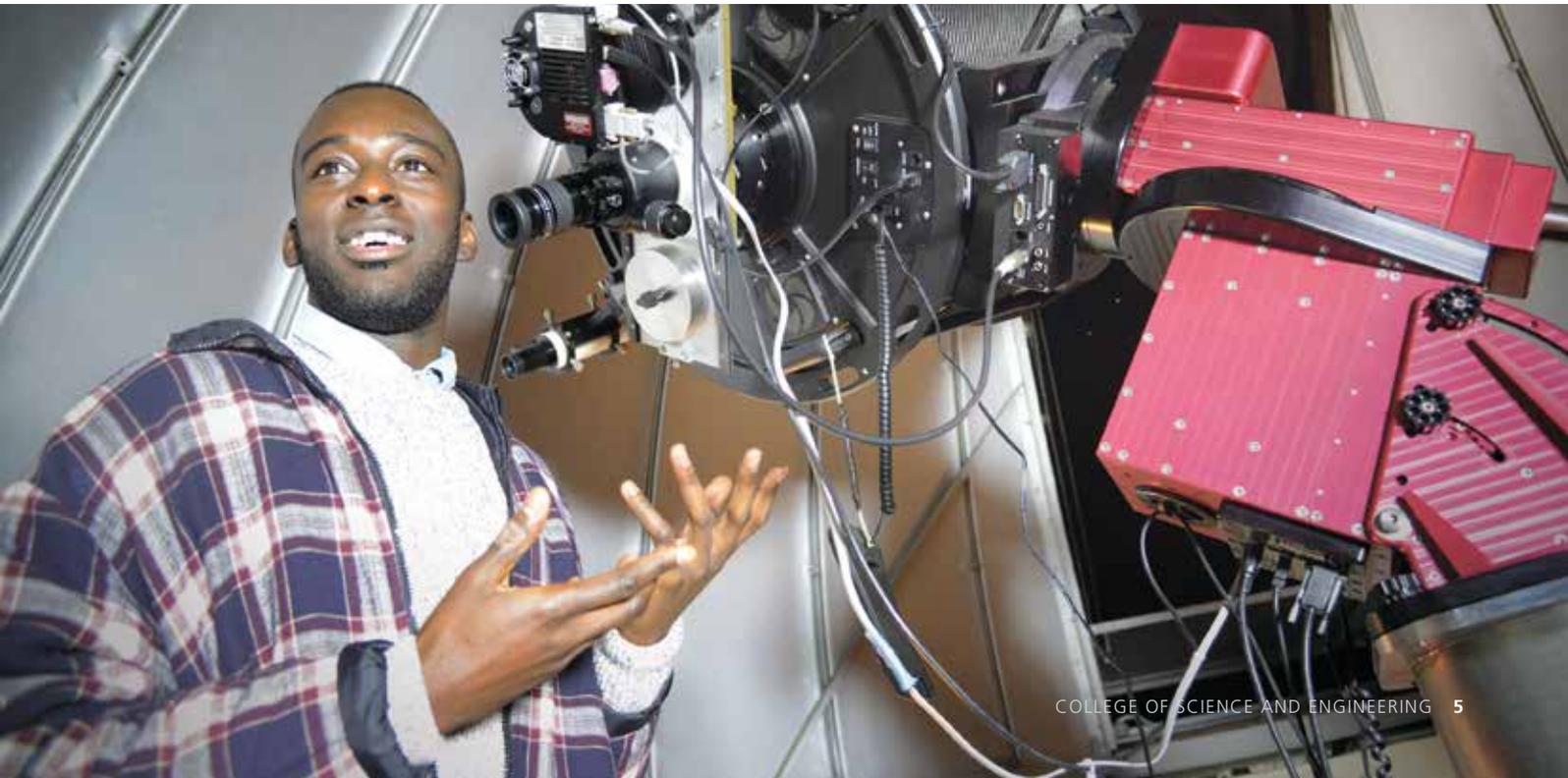
teaching laboratories, the main Physics building has a common room, computer suites, seminar rooms and quiet study areas for students. These help add to the strong sense of community in our department.

### **An outstanding track record in graduate employment**

We have strong links with world leading companies in industry, business and scientific research, and you will have the opportunity to enhance your CV by working on an optional ten week research project with one of our industrial partners. You can also add to your experience and achievements by mentoring students in local schools, spending time abroad at one of our partner universities, or working on one of our student led projects outside of the curriculum.

### **Accreditation**

All of our undergraduate degrees are accredited by the Institute of Physics (IOP). This means the syllabus covers the IOP approved "Core of Physics", supplemented with option modules based on the world leading research in the department.





# Physics and Astronomy Degree Courses

We offer three honours programmes in Physics and Astronomy, at both BSc and MPhys levels. All of our degrees share a common core of essential physics and mathematics, and offer a wide choice of short option courses in each year. Your degree “flavour” reflects the option courses you take in each year and your choice of research projects, but our degree programme is designed to give you plenty of flexibility to choose different options while you study.

## Which Physics Degree is right for me?

### Physics BSc/MPhys

This is for you if you wish to study the most fundamental of the sciences. Physics is concerned with the study of matter and energy on all scales from the sub-atomic to the size of the observable Universe. As a Physics student you will acquire an appreciation of the scope and impact of modern physics and the use of mathematics, computing and experimentation to solve important real-world problems.

You will study the fundamental theories of physics, from classical dynamics, waves and fields, to relativity, atomic and

particle physics. Through option courses and projects you have the opportunity to explore the diverse areas of physics the department actively researches, such as planetary science, climate physics, nanotechnology, astrophysics, medical physics, and space science.

### Physics with Astrophysics BSc/MPhys

This is for you if you want to understand the physics and mathematics of the constituent parts of the Universe at large. We run the longest established Physics with Astrophysics degree in the UK, on which you will be able to explore topics ranging from the lives and deaths of stars to the formation of galaxies, and from the search for exo-planets to the discovery of black holes.

All our Physics students study the same core of fundamental physics and mathematics, from classical dynamics, waves and fields, to relativity, atomic and particle physics. By choosing the Physics with Astrophysics degree you will study these alongside specialist astrophysics options and take part in research projects covering the major areas of astrophysics research, working with the members of the department’s two astrophysics research groups.

## Physics with Space Science and Technology BSc/MPhys

This is for you if you are interested in the study of the Solar System, space astronomy, Earth observation and human spaceflight – and the associated technology such as rocket propulsion and spacecraft instrument design. As a Physics with Space Science and Technology student you will acquire an appreciation of the scope and impact of modern physics and the use of mathematics, computing and experimentation to solve important real-world problems, and develop specialised knowledge of space science.

All our Physics students study the same core of fundamental physics and mathematics, from classical dynamics, waves and fields, to relativity, atomic and particle physics. By choosing the Physics with Space Science and Technology degree you will study these alongside specialist space science options and take part in research projects covering the major areas of space science and technology research. We have one of the largest campus-based space research centres in Europe, and the space science and technology options that you will study are based on the research we do.

This includes a strong involvement in the Bepi-Columbo mission to Mercury and detector design and development for satellites like the joint US-UK-Italian 'Swift', a remarkable observatory designed to study the most powerful explosions in the Universe.

## At A Glance

**Places: 110**

**Academic Staff: 44**

**Typical offers:  
AAB/ IB 32 pts for all courses**

## Frequently Asked Questions

### What is the difference between an MPhys and a BSc?

The BSc degree is a three year course and provides an excellent route to a very wide range of careers in industry and business. The MPhys degree is a four year course, aimed more at those considering a career or further training in scientific research.

### Can I change between degree courses?

Yes. Transfer between BSc and MPhys degrees is possible during first and second year. It is also possible to transfer between different speciality degrees as long as you have taken the required number of option courses.

### Will I miss out on some physics by doing a 'Physics with...' degree?

No. All our degrees are physics degrees, and include the IOP-approved "Core of Physics". Choosing a speciality "flavour" simply reflects your preference for option courses and projects.



“

The lecturers always have their door open when they are in, meaning that they're always willing to help you with work.

Aine, BSc, Year 3 student

## Course Modules

### Core and option modules

All our degree courses consist of a common core of physics and mathematics, plus option courses in each year. The core modules contain the essential physics and mathematics you need to ensure the widest possible employment opportunities once you graduate.

You will have the chance to shape your degree the way you want. The department offers option courses that explore a diverse range of topics in pure and applied physics. Our course is designed to be flexible so you can choose options and even research projects from any of these specialist areas.

In the first and second years the emphasis is on core material. In the third and fourth years the balance switches from core physics and maths to advanced specialist options and research projects. In each year you choose option courses to suit your interests – to qualify for a specialist degree you must take at least half of your options from within that specialism.

|                     | CORE   | OPTIONS  |   |   |
|---------------------|--|--|---|---|
| FIRST YEAR          | Dynamics<br>Electricity and Magnetism<br>Light and Matter<br>Waves and Quanta<br>Mathematical Physics 1<br>Laboratory Physics 1  | <b>Choice of 4 option courses</b><br>Digital Electronic Systems      Observational Astronomy      Terrestrial Planets<br>Great Experiments                  Planetary Exploration          The Sun and Stars<br>Modern Physics                      Space Technology   |   |   |
| SECOND YEAR         | Condensed Matter<br>Electromagnetic Fields<br>Scientific Inference<br>Mathematical Physics 2<br>(including Relativity and Particles)<br>Laboratory Physics 2                 | <b>Choice of 4 option courses</b><br>Fractals and Chaos                  Planetary Remote Sensing      Science Communication A<br>Galaxies and the Universe        Quantum Devices                  Sustainable Futures A<br>Jovian Planets and Moons        Spacecraft and Mission Design   Evolution of Mechanics<br>Stellar Structure                      Science Concepts   |   |   |
| THIRD YEAR          | Quantum Mechanics<br>Atoms and Nuclei<br>Radiation and Matter<br>Mathematical Physics 3<br>(MPhys only)<br>Physics Challenge<br>Skills Electives<br>Physics Research Project | <b>Choice of 4 option courses</b><br>Active Galaxies                      Planetary Science                  Physics in Education<br>Elementary Particles              Advanced Propulsion Systems    Spaceflight Dynamics<br>Human Spaceflight                  Stellar Evolution                    Climate Physics<br>Life in the Universe                Cosmology                          History and Philosophy of<br>Medical Physics                      Planetary Plasma Environments   Science<br>Magnetic Systems                  Sustainable Futures B |   |   |
| FOURTH YEAR (MPHYS) | Advanced Core Physics (see right)<br>Advanced Study Project<br>Advanced Research Project<br>Journal of Special Topics  | <b>Advanced Core (choice of 4)</b><br>Fluids<br>Dynamical Systems<br>Quantum Theory of Solids<br>Further and General<br>Relativity<br>Further Radiation and Matter<br>Further Scientific Inference   | <b>Choice of 4 option courses</b><br>Cosmological Structures<br>Nanostructures<br>Planetary Surfaces and<br>Atmospheres<br>Quantum Fields<br>Space Instrumentation<br>Space Plasmas | <b>Choice of 4 option courses</b><br>Statistical Mechanics<br>Supermassive Black Holes<br>Quantum Finance<br>High Energy Astrophysics |

Modules shown represent choices available to students in the 2016-17 academic year.  
 The range of modules available and the content of any individual module may change in future years.



## Teaching, Learning and Assessment

We aim to create a challenging and supportive learning environment which will help you to make the most of your studies. We have an excellent staff-student ratio and we are able to offer a large number of small-group activities in addition to traditional lectures. This means you will benefit from working directly with our leading academics. Our open door policy means that teaching staff will be available to talk, and you can get the support you need.

### Lectures

Each core module starts with lectures, and many different lecturing styles are used depending on the material that is covered. The first year core physics lectures are all based around a common

physics textbook – you will be given your own copy at the start of the year. During the first and second year, core lectures are complemented with tutorials, problem solving workshops, seminars and laboratory classes.

### Workshops

Workshop classes complement the core physics and mathematics modules. They provide an opportunity to work through exercises in small groups with teaching staff on hand to help you through problems.

### Seminars

Each core (physics and mathematics) module includes regular homework. Seminars are small group classes where

you receive your marked work, and talk through the problems and solutions from the previous week.

### Laboratory classes

Experimental work is an essential aspect of physics education and research, and laboratory training is an integral part of our degree programme. You will explore a range of experiments covering the main areas of physics in our dedicated teaching laboratories under the guidance of our expert research and teaching staff.

### Academic support

You will be assigned an academic tutor who will keep track of your progress. Tutorials are a very important part of our

first and second year: each week you will meet with your tutor and the rest of your tutorial group (usually 4-5 students per group) to discuss areas of the course or study skills, cover more advanced topics, or look into exciting new developments in physics research.

## Project work

Project work starts in the first year. Initially this is in the form of short research projects, in which groups of around four to eight students tackle problems that involve some aspect of both experimentation and theory.

By the third and fourth years, project work has developed to the stage where you will experience a genuine taste of research at the cutting edge. In your third year you will work in a small group under the supervision of a staff member, and in your fourth year you will work on a research project one-on-one with a member of staff.

In the third year you will also have the option of a project set by one of our colleagues in industry: working on a time-critical problem with industrial significance, reporting directly to the company involved.

## Computing classes

Computing is a vital component of both experimental and theoretical physics, and also a highly transferable skill. Training in scientific computation and programming, using our dedicated computing facilities, is built into our degree programme.

## Physics Challenge and Journal of Physics Special Topics

These innovative courses can be a great deal of fun, but serve a serious educational purpose.

In the weekly Physics Challenge, third year students work in teams to solve tricky, real world problems involving some imagination, estimation or approximation. Like many problems in science and industry, there are often no simple answers but the teams compete to find and present the best answers.

Our fourth year students write short research articles for the department's own Journal of Special Topics. This provides a crucial insight into the world of scientific publishing and peer review, as well as experience in communicating the results of scientific research.

The journal has generated a great deal of media exposure for our students. It is also highly praised by the UK Institute of Physics who said that it was 'an excellent advertisement for the physics department in addition to being a valuable piece of work that the students could show prospective employers.' Highlights of the annual journal are available online at [go.le.ac.uk/physics-pst](http://go.le.ac.uk/physics-pst)

## Feedback and assessment

Our course is designed to provide regular, informative feedback throughout your studies. You will be able to get immediate help and evaluation of your work in workshops, labs, and tutorials, while

seminars and dedicated feedback sessions provide a structured review of your recent personal and group work.

You will be assessed by a variety of methods including formal examinations and course work (including workshop and seminar problem classes). Laboratory work is primarily assessed in real time and project work is assessed through written reports and oral presentations.

In the first year the overall assessment mark is approximately 30% continual assessment and 70% exam. The first year is a qualifying year; your final degree will be based on your marks in later years with relative weights 40/60 (second/third year for BSc) or 20/30/50 (second/third/fourth year for MPhys)

## How It Fits Together – A Typical Week

Your personal weekly timetable will change from week to week as the core lecture and laboratory modules progress, and it will depend on which options you are taking. The table gives an example of a typical week in the first year.

|                       |                    |
|-----------------------|--------------------|
| Core lectures         | 5 hours            |
| Option lectures       | 2 hours            |
| Tutorials             | 1 hour             |
| Seminars              | 2 hours            |
| Workshops             | 4 hours            |
| Labs & group projects | 6 hours            |
| Contact time          | 20 hours           |
| Private study         | 15-20 hours        |
| <b>TOTAL</b>          | <b>35-40 hours</b> |



“ A lot of time is spent in the lab, which exercises the practical and social side of physics. You learn report writing and analytical skills – it teaches you to be a scientist.

John, MPhys, Year 4 Student

## Resources and Facilities

As a Physics and Astronomy student you will have access to the outstanding facilities of the department and University. These include a supercomputer, clean rooms, microscopy centre, undergraduate observatories, teaching and research laboratories.

### Computers and study areas

We have two computer suites for students and wireless connectivity throughout the department and the rest of campus. These provide networked access to the University's campus wide service, including the 500-core undergraduate supercomputer. Our quiet study areas (one is reserved just for first year students) provide room to study in private or in groups, and more computer access. Students use these facilities for group work, report writing, data analysis, preparing presentations and scientific computing.

### Teaching space

The main Physics building houses two large and two small lecture theatres plus eight seminar rooms. Students spend most of their study time in the department, which creates a real community atmosphere.

## Common room

The department's common room is open to students and staff. It's a good place to mix, work informally or have a cup of coffee and some lunch.

## Library

We continually invest in all our facilities to meet the needs of all our students. The award-winning £32 million David Wilson Library is a light, airy, five-storey building providing state-of-the-art facilities for all our students.

We invest over £6 million per year in the Library. Self-service loan and return, group study rooms, hundreds of PCs, netbook loans, wireless access throughout, staffed Help Zones, 24/5 opening during term time, plus a bookshop and café create a first-class study environment.

Our Librarians can provide detailed advice on finding and using information, and help you make the most of the resources available in the Library and on the web. You can also use our online guides to finding information for your coursework.

There is access to over one million printed volumes and a digital library of 23,000 electronic journals and over 350,000 eBooks. Our electronic resources can be accessed from anywhere you have an Internet connection.

The Library: [www.le.ac.uk/library](http://www.le.ac.uk/library)

## Supercomputing

The department houses three supercomputers: ALICE (3000+ processing cores) is the University's High Performance Computing Cluster; DiRAC (4300+ cores) is part of the UK's integrated supercomputing facility for research in particle physics, astrophysics and cosmology; and SPECTRE (500 cores) the supercomputer reserved for undergraduate use (including physics computer workshops and projects).





“ Leicester Physics department has a wide range of research expertise and I really enjoyed the opportunities to work on cutting-edge research projects as an undergraduate.

Sarah, MPhys, PhD

## Research in Physics and Astronomy

We have a track record of over 50 years of world leading research in the department. Our research interests range from supermassive black holes to the smallest nanoparticle.

All of our 44 teaching staff (professors and lecturers) are research active with reputations built on an international level. The teaching you receive and knowledge you acquire will be based on this pioneering research. The department also employs over 100 research and technical staff and supports more than 60 PhD students.

Our research spans all scales, from the sub-atomic to the cosmological, and from lab-based experimental physics to supercomputer-based theoretical astrophysics.

Our purpose-built Michael Atiyah building houses the Space Research Centre and provides laboratories, clean rooms, and facilities for Earth Observation Science and Bio-imaging.

We have one of the largest campus-based space research centres in Europe, with close links with ESA and NASA. This includes a strong involvement in the European Space Agency's (ESA's) JUICE – a mission to the Jupiter system planned for launch in 2022 – and astronomy satellites like Swift, a NASA-Italy-UK space observatory studying the most powerful explosions in the cosmos.

You can find more about the research in the department on our website

**[www.le.ac.uk/physics](http://www.le.ac.uk/physics)**

## Student research projects

We encourage our students to get involved in research. In your third and fourth year, you will have a real opportunity to make a contribution to physics research.

The wide ranging research interests in the department are reflected in the enormous range of undergraduate projects that we offer.

Recent undergraduate projects include: searching for black holes, developing equipment to produce nanoparticles, investigating the Martian magnetosphere, looking at the quantum physics of graphene, and modelling galactic mergers.

## Postgraduate research opportunities

The department offers PhD opportunities in the following areas: experimental and theoretical condensed matter physics, earth observation science, radio and space plasma physics, space projects and instrumentation, theoretical astrophysics, and X-ray and observational astronomy.

More information at: [www.le.ac.uk/physics](http://www.le.ac.uk/physics)

## Technology transfer

The department's ground-breaking work in detector technology has led to three spin-out companies which operate out of the Space Research Centre at the University. Bioastral specialise in gamma-ray detectors for cancer care in the medical industry. Spectral ID produce award winning detectors which detect high end counterfeit goods, and CityScan detect and map atmospheric pollution.

## Observatory

The University observatory has two computerised telescopes: a 20-inch PlaneWave with CCD camera, and a 12-inch Meade. Students use the telescopes for projects, for public outreach events and (via a booking system) simply for looking at the sky!



# Employability and Careers

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**I loved my time on the SURE internship, the department was very friendly and gave me a great insight into the work of a researcher.**

**Amy, MPhys, Year 3 Student**

As a Physics student at the University of Leicester you will gain experience and confidence in problem solving, experimentation, analysis, computer programming and independent thinking. Group projects in the first, second and third years develop communication, presentation and team working skills, while research projects in the third and fourth years help to nurture the skills required of a successful scientific researcher.

In addition to the experience you will gain from the core-curriculum there are many optional activities which you can use to build your skills and enhance your CV.

## Develop links to industry

As part of your third year you can choose to work directly with one of our industrial partners on a ten week project. During these optional Group Industrial Research Projects (GRIPs) you will obtain an understanding of the needs of business through applied research into a relevant industrial problem. You will gain invaluable project, budget and team management experience in a workplace environment working on a project that has real impact for the industrial clients.

Recent projects have covered the spectrum from investigating nuclear magnetic resonance signals in oil field boreholes for Weatherford International, to building a new beehive monitoring system for the Leicestershire Bee Keepers Association.

You can also use vacation employment at an approved industrial post to count towards your degree or opt to spend your third year on an industrial placement. The careers tutor in the department will offer advice and assist you in finding a post.

## Summer Undergraduate Research Experience (SURE)

SURE is a prestigious six-week summer programme in which we support around ten undergraduate students undertaking research within the department and the Space Research Centre.

## Graduate careers

Physics graduates have a very wide range of career opportunities. A physics degree is seen by employers as evidence of success on an intellectually demanding course, one that includes mathematical, computational, and practical problem solving, and project work. The chart overleaf outlines the primary destinations of recent graduates.

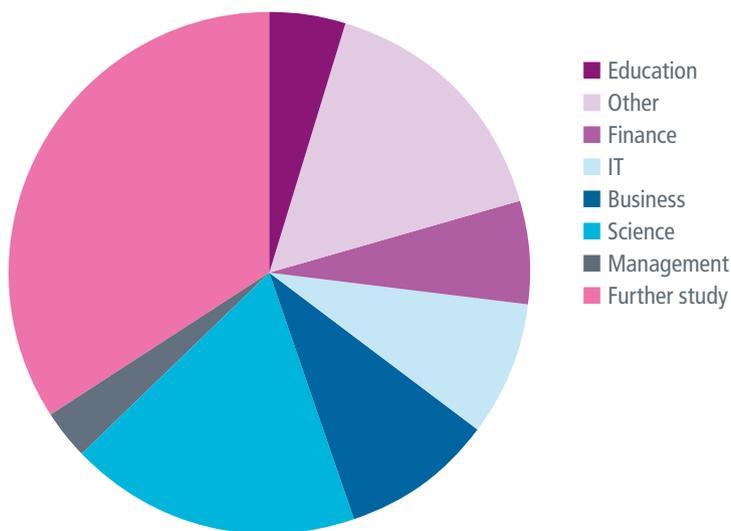
## Destination of Leavers

### Examples of careers of our physics graduates

- Teaching
- Accountancy
- Computer game design
- Journalism
- Industrial research
- Finance
- Management Consultancy
- Medical Physics

### Examples of courses entered by graduates undertaking further study

- PhD Fusion research
- PhD Astrophysics
- MSc Space Exploration and Development
- MSc Atmosphere, Ocean and Climate



Data source: 2012/13 Destinations of Leavers from Higher Education (DLHE) survey

## Career Development Service

The Career Development Service can help you gain the extra dimension you need to stand out – real-world skills and qualities that will not only enhance your early career prospects, but will stay with you for life. The way to make the most of you is to work with them the moment you arrive at Leicester.

The Career Development Service looks at the bigger picture and encourages you to be reflective and think about what you want out of a career. You can then explore your options and begin looking at what you need to do to fulfil those big ambitions.

Your academic talent is a key ingredient to success, but having relevant experience is another vital element in securing that dream role after you graduate. The Career Development Service provides a multitude of opportunities to ensure you're able to acquire the experience needed to get that all important foot on the ladder. So whether you want to make a difference in the voluntary sector, reach the top in high-flying business or be the next big thing in media, there are specially designed programmes and activities that can support you in getting the skills, experiences and exposure you need.

The Career Development Service has its own network of graduate employers who tell them what they want in an employee in terms of skills and knowledge. Graduate employers visit campus all year round, offering workshops and talks on different career pathways. You have the chance to network, get the inside knowledge on industries and find out exactly what employers are looking for. [www.le.ac.uk/careers](http://www.le.ac.uk/careers)

# Course Opportunities

## Undergraduate Ambassadors in Schools

During year three you can opt to gain first-hand experience of physics education through a mentoring scheme with physics teachers in local schools. If you take part in the Ambassador Scheme you will work with a class for half a day a week over one semester. You will have the opportunity to act as a positive role-model for young people interested in physics, as well as gaining experience in communicating the subject, and in organisational and interpersonal skills.

## Study Abroad

Broaden your horizons with a year abroad. You can choose to spend your third year studying physics at one of our partner universities in Europe (University of Groningen, Netherlands), Canada (McMaster University, Ontario) and Australia (La Trobe University, Melbourne). We are also happy to assist with exchange visits to additional Universities.



### Alexandra Fogg, Physics with Space Science and Technology MPhys

I am an MPhys Physics with Space Science and Technology Student, and in my third year went on a semester exchange at McMaster University in Canada. I decided to go on exchange as I thought it would give me many new skills and independence, but it was so much more than that. Engaging in another culture never stops being exciting, and every day brought new experiences. Although I was very nervous in the run up to my time abroad, it was four of the best months of my life, and I will always look back on it fondly. The opportunity to travel and experience a different education style has given me irreplaceable skills which have amplified my employability. To anyone who isn't sure whether they want to study abroad, you won't regret it if you do!

### **Elliott Spender, Physics MPhys**

I am a third year undergraduate physics student studying for my combined masters. In the first semester of my third year I had the opportunity to study at McMaster University in Ontario, Canada. Before I had even got a place at University I wanted to study abroad, travel is something I love doing and I applied as soon as I could.

Studying abroad is more than just academic, the social and cultural education is invaluable so I took the

opportunity to experience as much as I could. During my time there I canoed across lakes and white water rivers, hiked over and under waterfalls, climbed icy mountains in the USA, went to local food and drink festivals and met people from all over the world, some of which I am still in regular contact with and planning to go travelling again soon.

I can safely say that studying abroad has been the most valuable and enjoyable experience of my life so far.



### **Ellie Hesketh, Physics with a Year in Industry BSc**

I originally applied to the straight Physics BSc course but at the start of my 2nd year I realised a Year in Industry would be a really good opportunity for me as I didn't have much science / engineering work experience. After securing a placement at Rolls-Royce PLC in Derby, I changed course to include my Year in Industry (which was only a case of filling out a very short form!).

My role at Rolls-Royce involved mostly website editing in a small 'Knowledge Management' team, but I also spent a month in the Nuclear sector.

I absolutely loved my placement year, and gained loads of practical industry

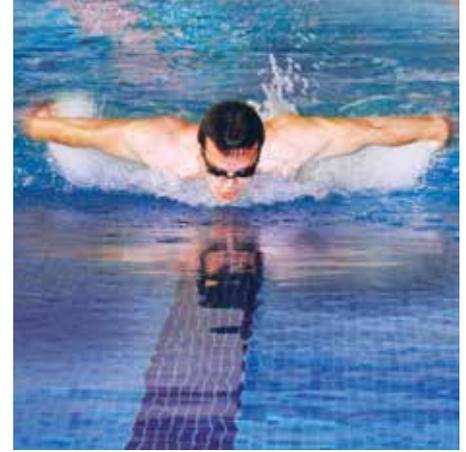
skills that I feel will really help me in any future career I go into.

The Physics and Astronomy department here at Leicester really supported me during my year out, and they were only ever a phonecall away if I needed anything. The head of teaching also visited me at work to see how I was getting on and for me to show him what I had been working on.

I have had a fantastic time studying at Leicester. The department is very friendly and they have an 'open-door' policy where students can go and ask lecturers any questions about the

course at any time. There is a wide variety of modules that you can take, so there is something for everyone!





## Student Life

### Campus

On our bustling compact campus it's impossible to walk from one end to the other without bumping into someone you know along the way. The campus is a vibrant community, with all manner of places to meet, eat and drink, as well as study. We're committed to providing you with high quality facilities and resources that meet the needs of modern and ambitious students.

### Students' Union

The Students' Union is brimming with opportunities that will make your time at Leicester unforgettable. The spectacular Percy Gee building boasts superb facilities, including the fantastic live music venue, O<sub>2</sub> Academy Leicester. You are encouraged

to get involved with the SU – there are over 200 student societies covering a huge range – sport, politics, media, performing arts and much, much more. It's a great way of meeting new people, gaining skills or trying something completely different!

**[www.leicesterunion.com](http://www.leicesterunion.com)**

### Accommodation

Our accommodation offers you a wide variety of choice, whether you fancy self-catered or catered, en-suite or standard.

**[www.le.ac.uk/accommodation](http://www.le.ac.uk/accommodation)**

Private accommodation is available through our lettings agency, SUlets.

**[www.sulets.com](http://www.sulets.com)**

## Sports Facilities

You can enjoy a workout, take a swim or build up a sweat in a fitness class at our modern sports centres on campus or at Manor Road (next to our accommodation). You can also get involved with our sports clubs, which welcome members of all abilities. Keen competitors can also represent the University through Team Leicester, the hotly-contested Varsity matches and our thriving Intramural events.

[www.le.ac.uk/sports](http://www.le.ac.uk/sports)

## Library

The award-winning David Wilson Library is a light, airy, five-storey building providing state-of-the-art facilities for all our students.

We invest over £6 million per year in the

Library. Self-service loan and return, group study rooms, hundreds of PCs, netbook loans, wireless access throughout, a staffed Help Zone in the Library and online, 24/5 opening during term time, plus a bookshop and café create a first-class study environment.

There is access to a digital library of over 50,000 electronic journals and 500,000 eBooks – as well as over one million printed volumes. Our digital library can be accessed from anywhere you have an internet connection.

Our Librarians provide detailed advice on finding and using information, and help you make the most of the resources available in the Library and on the web. You can also use our online guides to finding information for your research or coursework.

[www.le.ac.uk/library](http://www.le.ac.uk/library)

## Attenborough Arts Centre

The Attenborough Arts Centre is the University's own arts centre, offering a vibrant programme of events, music, spoken word, and exhibitions in its new gallery and performance spaces. Attenborough Arts offers you the chance to try something new, from a variety of arts courses to hula hoop dancing or creative writing. There are special discounts for students. Or if you just want a break from your studies you can enjoy free lunchtime music performances or have a drink at the café.

[www.attenborougharts.com](http://www.attenborougharts.com)





“ The panel was very impressed by the comprehensive coverage of the IOP Core of Physics

IOP degree accreditation report (2013)

## Applying to the Department of Physics and Astronomy

**All applications must be made through the UCAS system. The UCAS codes for each of our courses are given below.**

| COURSE TITLE                                    | COURSE CODE | DURATION          |
|---|-------------|-------------------|
| BSc Physics                                     | F300        | 3 years full-time |
| MPhys Physics                                   | F303        | 4 years full-time |
| BSc Physics with Astrophysics                   | F3F5        | 3 years full-time |
| MPhys Physics with Astrophysics                 | F3FM        | 4 years full-time |
| BSc Physics with Space Science and Technology   | F365        | 3 years full-time |
| MPhys Physics with Space Science and Technology | F366        | 4 years full-time |

# Entry Requirements

## A-levels

We ask for three A-levels, including Physics and Mathematics, at grades AAB.

## International Baccalaureate

32 points, typically including higher level Physics and Maths.

## Other qualifications

We welcome applications from students with other qualifications (e.g. European baccalaureate, Foundation year, Scottish Highers, BTEC, etc.) or relevant professional experience. Please email [physug@le.ac.uk](mailto:physug@le.ac.uk) with any questions.

## Your application

We treat each application individually – we will look at your predicted grades and existing qualifications, your reference, and your personal statement.

## Personal statement

We are looking for students who are well motivated and passionate about their subject. The personal statement is your chance to show that you fit the bill! Try to give a sense of your personality. Demonstrate your enthusiasm for Physics and Astronomy and tell us about your interests and achievements outside of the curriculum.

## Offers and visit days

When we make you an offer (typically within a few weeks of receiving your application) we will invite you to visit the department on one of our UCAS Visit Days. During the visit you will have a chance to see our facilities and chat to current students and staff. You will also have the opportunity to view the campus and student accommodation.

## Admission onto the course

### If Leicester is your first choice

If you achieve your offer grades you will definitely have a place on the course.

If you narrowly miss your offer we will try to find you a place on the course and, every year, we are able to admit a few students in this position – typically those with the strongest grades in Physics and Mathematics, or those with additional relevant qualifications, for example, Further Maths or an EPQ.

### If Leicester is your insurance choice

If you achieve your offer grades at Leicester, but fail to make the grades at your first choice institution you are guaranteed a place on the course.

## Fees, scholarships and bursaries

For up to date information, please take a look at:

[www.le.ac.uk/study/fees](http://www.le.ac.uk/study/fees)



@uniofleicester · /uniofleicester



### For more information

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This brochure was published in June 2016. The University of Leicester endeavours to ensure that the content of its prospectus, programme specification, website content and all other materials are complete and accurate. On occasion it may be necessary to make some alterations to particular aspects of a course or module, and where these are minor, for example altering the lecture timetable or location, then we will ensure that you have as much notice as possible of the change to ensure that the disruption to your studies is minimised.

However, in exceptional circumstances it may be necessary for the University to cancel or change a programme or part of the specification more substantially. For example, due to the unavailability of key teaching staff, changes or developments in knowledge or teaching methods, the way in which assessment is carried out, or where a course or part of it is over-subscribed to the extent that the quality of teaching would be affected to the detriment of students. In these circumstances, we will contact you as soon as possible and in any event will give you [30 days] written notice before the relevant change is due to take place. Where this occurs, we will also and in consultation with you, offer you an alternative course or programme (as appropriate) or the opportunity to cancel your contract with the University and obtain a refund of any advance payments that you have made.