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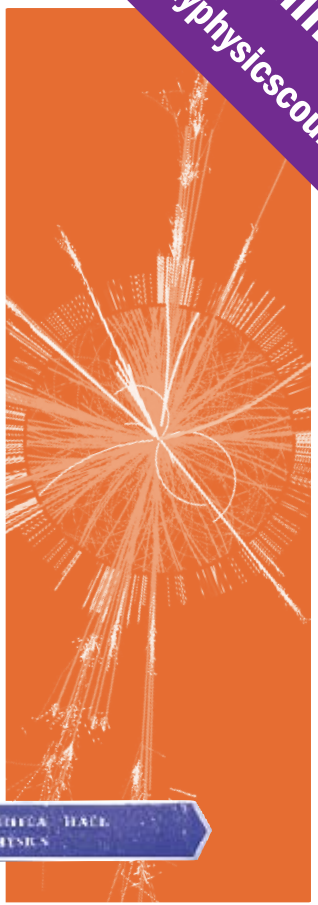
Physics on Course 2012

Physics degrees in the UK and Ireland



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Physics on Course 2012

Physics undergraduate degrees in the UK and Ireland commencing in 2012

IOP Institute of Physics

Image credits

p5: Bottom, second left: Apollo 11 astronaut Edwin "Buzz" Aldrin walks on the surface of the Moon. (credit: NASA/Science Photo Library).

p9: Bottom: robot dog (credit: Peter Menzel/Science Photo Library).

p11: Top right: the proposed High Power laser Energy Research facility (credit: HiPER); bottom left: an optical bench used to test laser components (credit: STFC).

p14: Right: William Herschel Telescope at La Palma (credit: Peter Menzel/Science Photo Library).

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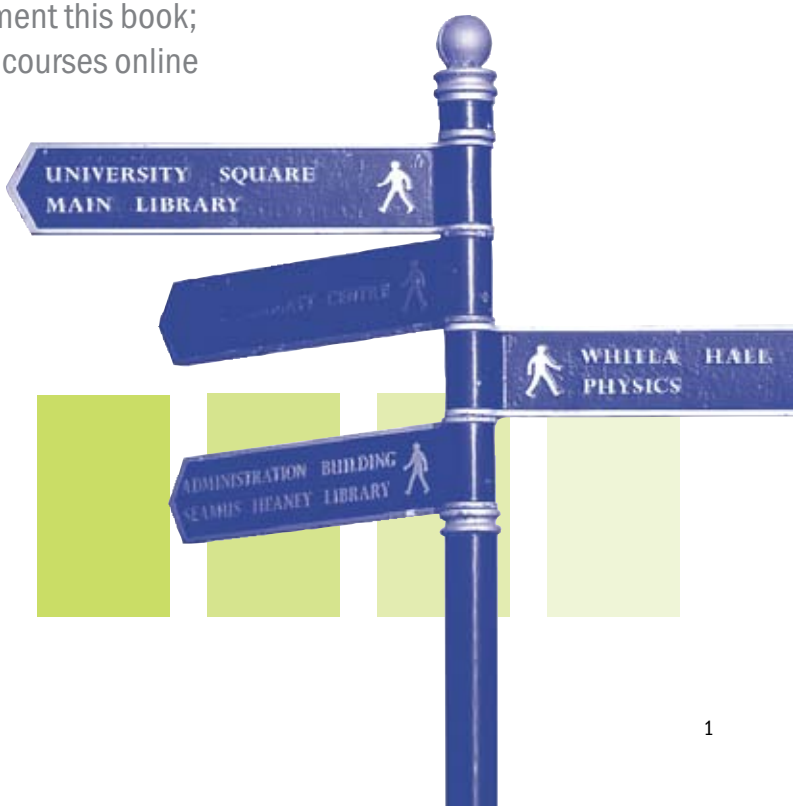
Editor: Taj Bhutta (e-mail taj.bhutta@iop.org)

Contents

Introduction

Welcome to the 2012 edition of *Physics on Course*; the most comprehensive guide to physics courses in higher education in the UK and Ireland. Choosing which course and which university to study at is an important decision; this book gives detailed listings, including entry requirements, so that you can make an informed choice.

To mark the 21st edition of *Physics on Course* the Institute of Physics has launched a new website to complement this book; you can now search and browse physics degree courses online at **www.myphysicscourse.org**.



Introduction

Free student membership of the Institute of Physics

If you are aged between 16 and 19 and studying physics you are able to join the Institute of Physics for free. By joining, not only will you become part of the UK's largest physics community, but you will get full access to the membership magazine *Physics World* online and *physicsworld.com*. You will also receive regular updates about upcoming science programmes, events, competitions and other exclusive 16–19 member offers. Find out more at **www.iop.org/16-19**.

Membership is also free once you start university. Anyone on a recognised or accredited physics degree course can join Nexus, the student wing of the Institute of Physics for undergraduate students. Find out more at **www.iop.org/nexus**.

The Institute of Physics is a leading scientific society promoting physics and bringing physicists together for the benefit of all.

It has a worldwide membership of around 40 000 comprising physicists from all sectors, as well as those with an interest in physics. It works to advance physics research, application and education; and engages with policy makers and the public to develop awareness and understanding of physics. Its publishing company, IOP Publishing, is a world leader in professional scientific communications.

16–19 | NEXUS | **IOP** Institute of Physics

Studying physics

What is physics?

Physics is so much. Physics is the search for the fundamental laws of the universe, a hunt for the building blocks of nature and a “theory of everything”.

Physics is behind the technology that put man on the Moon, made the internet possible and revolutionised surgery, and also the technology that will shape tomorrow’s world: quantum computers, nuclear fusion or perhaps the means to colonise the solar system.

Physics is both the everyday and extraordinary; from why the sky is blue and what causes a warm summer breeze, to quantum entanglement and black holes.

Physics is the non-superficial. Ideas are expressed in the unequivocal terms of mathematics, and are tested by observation and experiment.

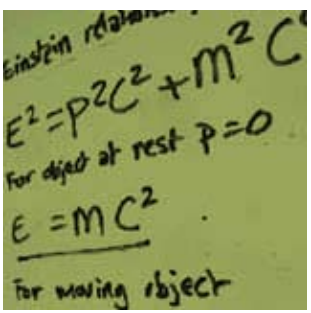
Physics is a human endeavour. It is the search for answers and a better understanding of our place in the universe. It is a journey of discovery in which progress is made through teamwork, discussion, debate and collaboration across the globe.

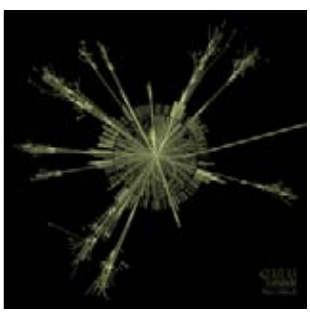
Physics is hugely influential. Discoveries have an impact, not just in closely related fields, such as engineering and telecommunications, but also in chemistry, medicine and even philosophy.

Physics covers it all, from the innermost workings of the atom to the edge of the visible universe.

"As well as enhancing our lives, new physics-based technologies will play a critical role in tackling global problems such as climate change."

Jess Adams, *solar energy researcher*





Top: Jess Adams, a solar energy researcher, presenting at a scientific conference in Hawaii; bottom (left to right): an ultrasound scan of an unborn baby; Apollo 11 astronaut Edwin "Buzz" Aldrin walks on the surface of the Moon; Einstein's relationship between mass, energy and momentum; sub-atomic particle tracks.

Studying physics

What can I do with a physics degree?

Physicists play a vital role in many technology-based industries, such as optoelectronics, nanotechnology, computing and renewable energy. Others work on investigating the universe; searching for extra-solar planets or looking for the remnants of the big bang. Others still go on to apply their knowledge in healthcare (medical physics), studying the processes of the Earth (geophysics) or the climate (meteorology).

The knowledge and skills that studying physics develops are important in other areas as well. Predicting future market behaviour is vital in finance, and so a physicist's ability to model complex systems is particularly valued in this sector, while a logical approach and ability to understand new technology is useful in law, for example, when patenting new inventions.

Physics provides a broad training in skills that are valued by all employers; an ability to grasp concepts quickly, a determination to find coherent answers, along with problem-solving, analytical, mathematical and IT skills. Even if you decide that you don't want to work in any physics-related industry after your degree, the skills and knowledge that you develop by studying physics will always help in whichever area you go into. Studying physics at degree level is a good way of keeping your options open.

> "I think that physicists can do pretty much anything. Our training can be applied to almost any activity, and it allows us to see things in ways that might not be obvious to others."
>
> **Simon Singh**, *science writer and broadcaster*

The salaries of physics graduates are also well above the national average*. Over a working lifetime, the average physics graduate earns 30% more than someone holding just A-levels. This compares favourably with the average for graduates in all subjects (23%) and is about double the advantage gained by studying subjects such as psychology, biological sciences, linguistics and history.

**The economic benefits of higher education qualifications*, PricewaterhouseCoopers LLP, January 2005.

"There are millions of students in the world, but to get a job you have to stand out from the crowd. Physics will help give you the edge; people are always impressed by a physics degree." **Steff Gualter**, *weather forecaster*

Profiles

Henry Lau, physics student

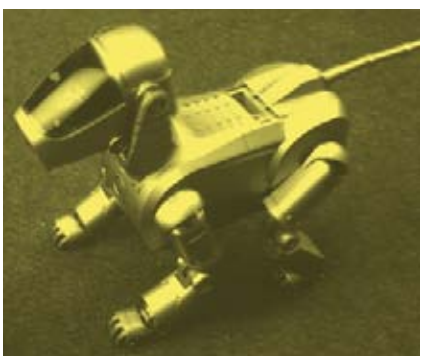
Henry was torn between continuing with physics or art at university. “Some of my best memories of school are the long afternoons in the art studio making sculptures. I really enjoyed turning my drawings into something real, but I also loved physics. I used to watch TV programmes about wormholes and multiple universes and found them fascinating. It was hard to choose which subject to carry on with. What really swung it for me was that I could keep my art going as a hobby – but physics is hard to study in your spare time.”

Henry decided to study Physics with Astrophysics at the University of Leicester. “My uni was great; I had lots of fun, made lots of friends and I really enjoyed my course. It was great being taught by world-leading physicists – we even had a retired astronaut teaching us for one term. Most of the teaching was in lecture halls but we also had smaller tutorial classes in which we had one-to-one help. It was in these classes that I realised just how creative physics can be; you often need to come up with new ways to visualise the relationship between things; trying out different ideas to work out the solution to a real-world problem is really satisfying. But my favourite part of the course was lab work; the best bit was probably programming a robot dog to act like planetary rover – we had to give it instructions so that it could detect and avoid obstacles, as if it was exploring a distant planet that was out of communication range.”

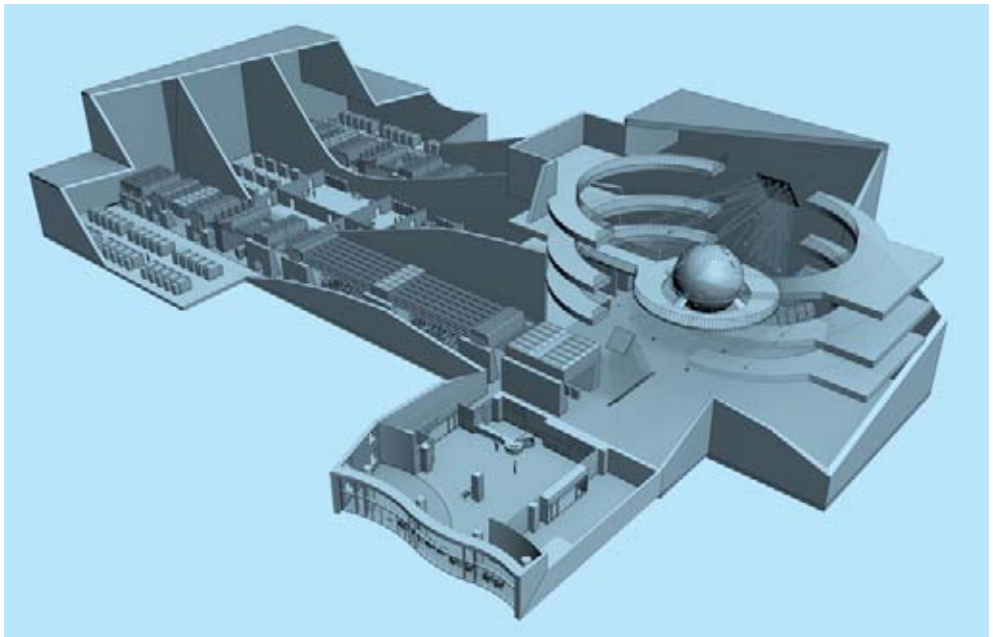
Having completed his degree, Henry is now studying for a master’s course in science communication at Imperial College in London. “I realised that what I liked most about science was explaining it to others, and science communication allows me to combine my artistic talent with my love of science through working on science magazines, films and the exhibitions.”

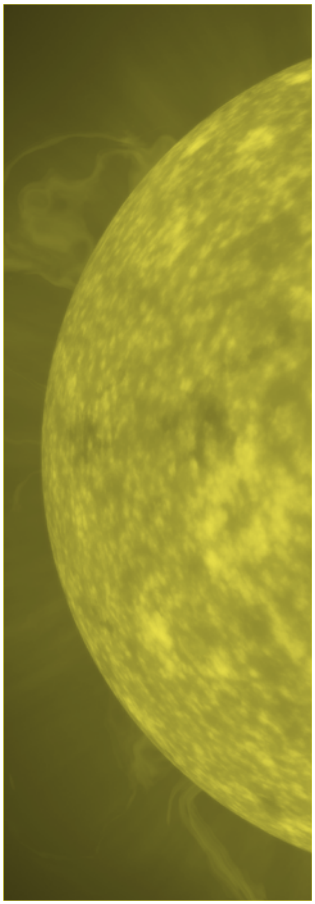
"I would definitely recommend doing a physics degree to anyone; it can take you so many places. Friends from my degree course are doing a wide range of things; from tracking flamingos in Kenya to making digital art or watching the skies for extreme gamma ray bursts."

Henry Lau, *physics student*



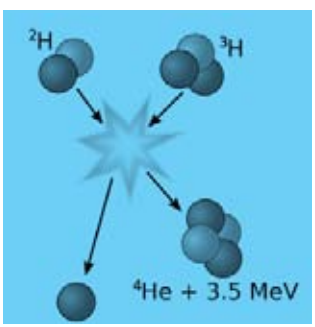
Top: Henry interviewing the environmental minister of El Salvador as part of his science communication course; bottom: a programmable robot dog.





"I play around with lasers all day, get sent to different countries courtesy of the lab and work with lots of other young people. What could be better?"

Kate Lancaster, *laser fusion scientist*



Top left: an artist impression of the proposed High Power laser Energy Research facility; top right: the Sun; bottom left: an optical bench used to test laser components; bottom right: artist's impression of the nuclear fusion process.

Profiles

Kate Lancaster, laser fusion scientist

Kate is one of the many physicists around the world who are investigating how to build a working nuclear fusion reactor. Fusion is the joining together of nuclei to release energy, and is the process that powers the Sun.

"Fusion is a really efficient way of getting energy and there is a plentiful supply of fuel – half a bath full of seawater and the lithium in a laptop battery would supply 30 years' worth of energy for one person," explains Kate. Another advantage of fusion is that, unlike conventional nuclear reactors that work by splitting apart nuclei, fusion does not produce high-level radioactive waste. "The only downside is that it's just really difficult to do because of the high temperatures involved – confining the fuel at 100 million degrees without touching it is very difficult. The Sun does it using its gravitational field, but we can't make a lab as big as a star!"

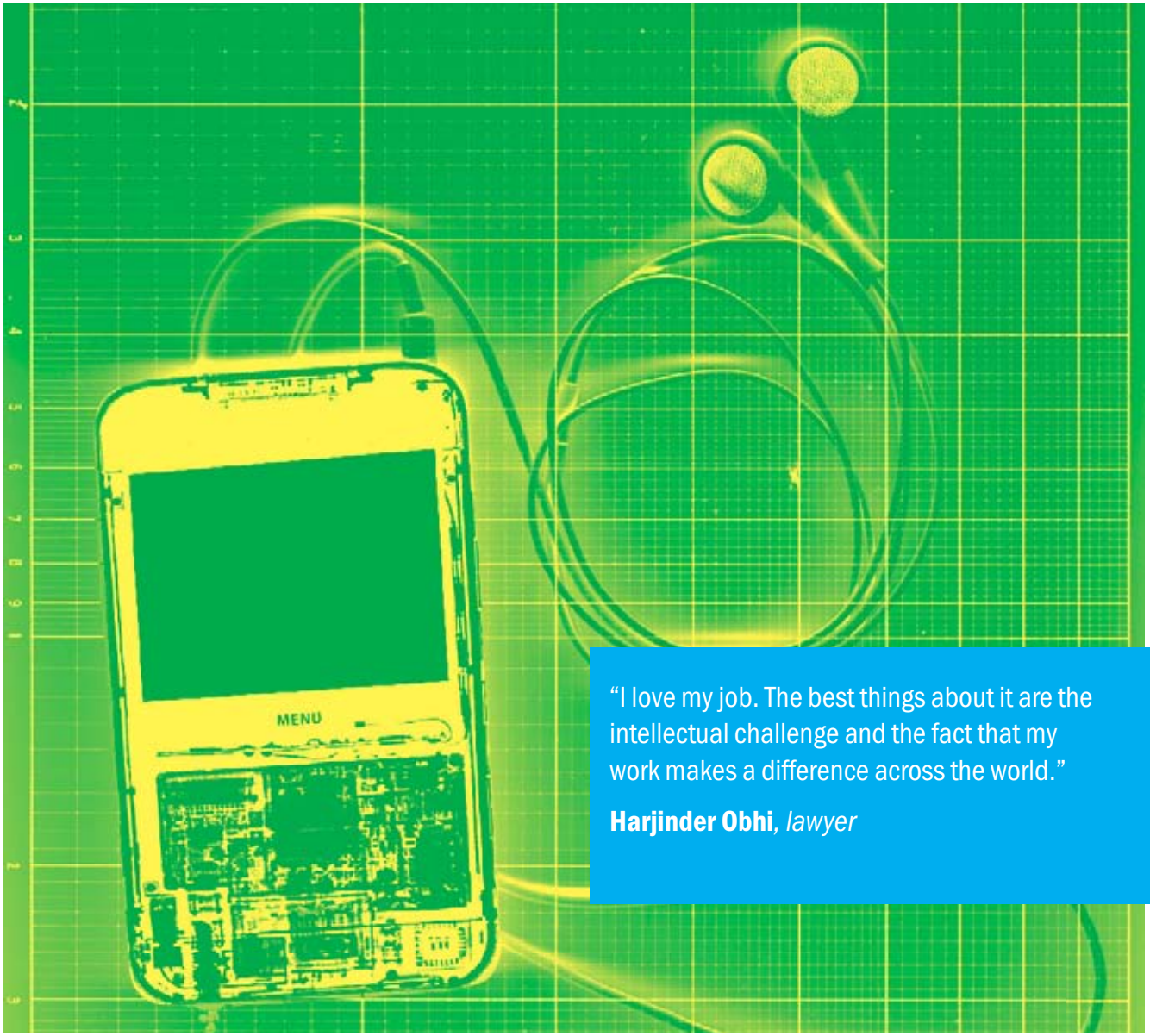
The team at the Rutherford Appleton Laboratory in Oxfordshire where Kate works is attempting to confine the fuel using very high power lasers. If they succeed, not only will they develop an almost limitless source of energy, but one that will not contribute to climate change. An added bonus for Kate is that she is doing a job that she loves: "I play around with lasers all day, get sent to different countries courtesy of the lab and work with lots of other young people. What could be better?"

Profiles

Harjinder Obhi, lawyer

"There are many people with a physics background in law," says Harjinder Obhi, a solicitor working as European Litigation Counsel for the internet search engine Google. "The way of thinking that physics develops is useful, as is the ability to understand technology when discussing the legal aspects of it. I took chemistry, maths, physics and general studies at A-level, then considered doing medicine, but after talking to a GP I realised that it wasn't for me. Instead I did a physics degree after being intrigued by physics at school." Harjinder followed his degree at Queen Mary, University of London with a PhD at the University of Cambridge in high-temperature superconductors. "It was the philosophical aspect of physics that inspired me to study it. Particularly quantum physics and how reality may be different from what we think it is," he says.

Despite his clear love for the subject, Harjinder was also interested in legal issues. "My interest in law was originally sparked by conversations I used to have with friends from the basketball team while doing my degree. We discussed things like 'Should man be able to patent a new form of life?' and I found those discussions fascinating," he says. During his PhD research, he also kept bumping into intellectual property law and copyright issues. So after completing his PhD, Harjinder studied to become a solicitor. He has worked in law ever since, initially in private practice and then in-house for technology companies. For the last two years he has been employed by Google as litigation counsel in its London office. "I love my job. The best things about it are the intellectual challenge and the fact that my work makes a difference across the world."

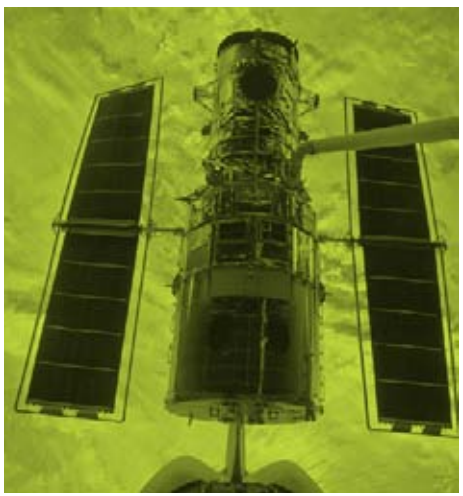


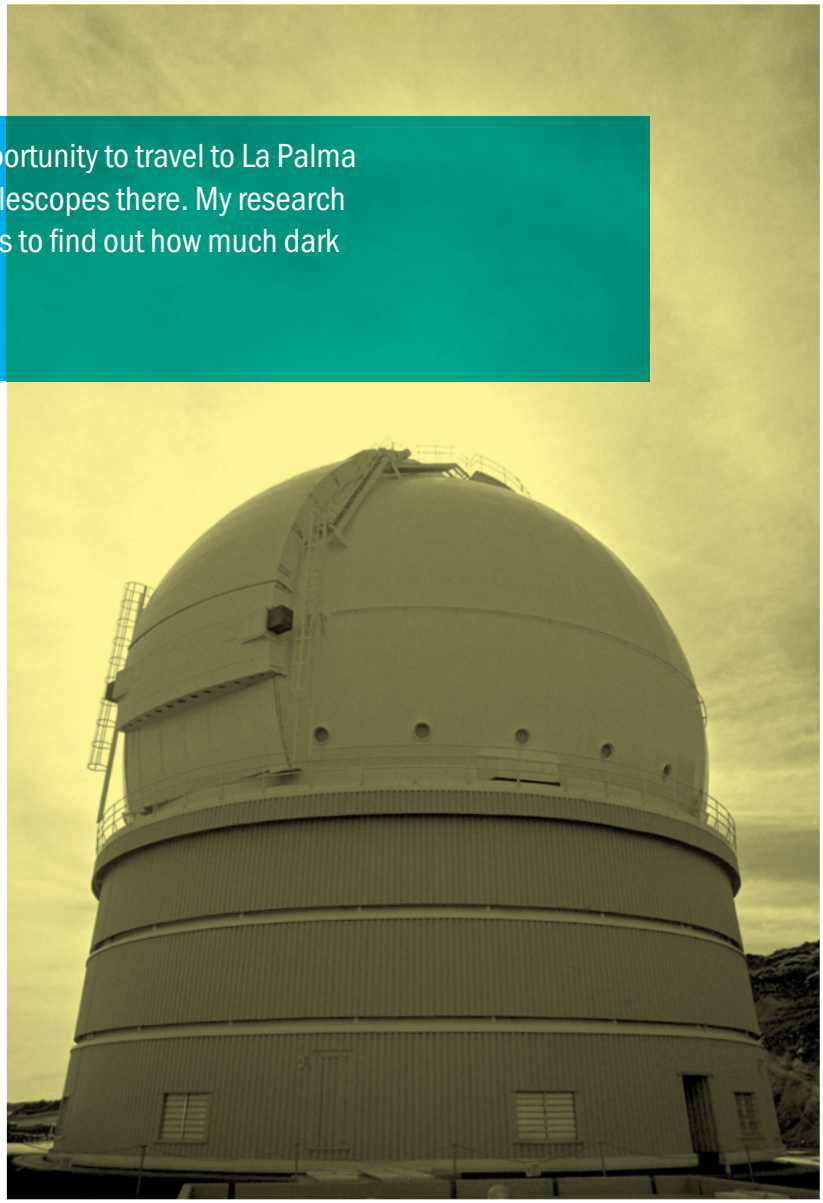
"I love my job. The best things about it are the intellectual challenge and the fact that my work makes a difference across the world."

Harjinder Obhi, *lawyer*

"What I loved most about it was the opportunity to travel to La Palma in the Canary Islands to use the large telescopes there. My research used the data collected from these visits to find out how much dark matter there is in the universe..."

Catherine Heyman, *astrophysicist*





Left: the Hubble Space Telescope; right: William Herschel Telescope at La Palma.

Profiles

Catherine Heyman, astrophysicist

Catherine uses NASA's famous Hubble Space Telescope, as well as several large telescopes in Hawaii, to try and understand some of the mysteries of the universe. "At the moment we're trying to get funding to build telescopes up in space that are bigger and better than Hubble," says Catherine, who was attracted to astrophysics as a teenager. "I was always fascinated by the universe when I was at school. I also had a great physics teacher who spent a week at NASA at a teacher's conference, and came back so enthused about space science that she inspired me to think about that aspect of physics."

Catherine studied an MPhys in Astrophysics at the University of Edinburgh. "My degree involved lots of lectures and experiments in the labs, but during my masters I got the chance to use a telescope in Scotland to measure the distance to a cluster of stars. This wasn't easy as it was often cloudy!" She then went on to do a PhD at Oxford. "What I loved most about it was the opportunity to travel to La Palma in the Canary Islands to use the large telescopes there."

"My research used the data collected from these visits to find out how much dark matter there is in the universe. Dark matter makes up more of the universe than normal matter (which is what we're made from) but beyond that we don't really know what it is. We do know that it's useful though, as it surrounds our galaxy and holds it together."

Choosing a physics degree course

The following pages list physics and related degree courses in the UK and Ireland. Deciding between them can be a daunting prospect. To narrow down the choice you could think about whether you want to live at home or on a campus. Which parts of physics interest you the most – the theoretical (mathematical) or the more applied (practical) side? Do you want to study physics alongside other sciences as part of an interdisciplinary programme, or specialise in a particular area such as medical physics, astrophysics or nanotechnology. Alternatively you can combine physics with a completely different subject such as music or a modern language or opt for a degree with a year in industry or abroad.

The various types of degree and their entry requirements are listed on pp 22–63 and are also available to search and browse online at **www.myphysicscourse.org**. If you want to become a professional physicist then it is worth considering a Master of Physics (MPhys) or a Master in Science (MSci)* degree. These degrees are a year longer than the standard BSc or BA course; the extra time being spent learning skills that will help you to bridge the gap between an undergraduate degree and postgraduate research. Most universities also give you the option of changing between a BSc/BA and MPhys/MSci degree during the first or second year.

Once you have made a shortlist of courses that interest you, you can find out more about individual physics departments from p66 onwards (or at **www.myphysicscourse.org**). Also try to visit the universities that you have shortlisted. Open days are a valuable opportunity to get a real feel of what it would be like to study at a particular university by talking with students and staff.

*An MSci degree is an integrated masters degree and is different from the postgraduate Master of Science (MSc), which is a one-year standalone qualification.

IOP accredited and recognised degrees

All of the courses listed in *Physics on Course* are either accredited or recognised by the Institute of Physics (IOP). Accredited degree programmes give a solid grounding in all of the core areas of physics and those that study these courses are eligible for professional awards such as chartered physicist. Recognised degree programmes contain sufficient physics for membership of IOP. Such programmes tend to be more interdisciplinary in nature and the amount and breadth of physics covered can be variable.

Find out which degrees are accredited by IOP at **www.iop.org/accreditation**.

Free membership of the Institute of Physics

Join IOP as a 16–19 member and become part of the UK's largest physics community at **www.iop.org/16-19**.

Degree content

Different degree courses emphasise different aspects of physics. Some focus on the more theoretical (mathematical) side, while others specialise in the applied and technological aspects. For combined degrees the relative weighting between physics and the second subject is indicated by the degree title. "Physics **with**..." degrees (e.g. physics with German) are courses that have physics as the major component (around 70–80% of the degree) with the rest of the time spent on the second subject, while "physics **and**..." degrees (e.g. physics and mathematics) devote roughly equal amounts of time to physics and the second subject.

All accredited degrees provide a solid grounding in modern and classical physics along with the associated mathematics and experimental techniques. The core topics covered include classical and quantum mechanics, relativity, solid-state physics, thermodynamics, statistical physics, electromagnetism, optics, oscillations and waves. Usually there is also the option to take more specialised modules in subjects such as astrophysics, particle physics, electronics, computing, biophysics or geophysics. Teaching is usually by lectures and laboratory work, backed up by tutorials and/or problem-solving classes*.

Duration

In England, Northern Ireland and Wales, a standard BSc or BA Honours physics degree usually requires three years, while in Scotland and the Republic of Ireland it normally takes four. Those with placements in industry or abroad can be a year longer. The Master of Physics (MPhys) and Master in Science (MSci) also require one additional year of study when compared with a BSc or BA.

*For full details of course content for accredited degrees see www.iop.org/accreditation.

Entry routes

In England, Wales and Northern Ireland the usual entry route is via A-levels. Physics and mathematics are required, along with either a third A-level or one or more AS awards in any other subject(s). In some cases Scottish universities allow those with A-levels to enter directly onto the second year of the degree. Entry to Scottish universities is usually via Scottish Highers and in the Republic of Ireland via Irish Leaving Certificate. However, many universities will also accept alternative qualifications, such as an appropriate Baccalaureate. Contact individual physics departments for further details.

If you don't have appropriate qualifications, some universities also offer foundation courses, which usually last one year full-time. After successful completion of the foundation year students can usually progress directly onto either a BSc/BA or MPhys/MSci degree. The procedure, however, varies between institutions and so it is best to check with the university admissions officer.

Integrated Sciences

This edition of *Physics on Course* includes listings for Integrated Sciences courses offered by the universities of Leicester, London South Bank and Bradford. Integrated Sciences is a modern interdisciplinary degree developed as part of the national HE STEM programme. The degree combines physics with chemistry and biology. Although the "flavour" of the course varies between universities, all programmes are designed to help students develop a multidisciplinary approach to problem solving by integrating theories and practice from across the sciences. All courses also have a strong focus on transferable skills, such as communication, problem solving and IT, to help graduates enter the workplace.

Further information about Integrated Sciences can be found at **www.integratedsciences.org.uk**.

National HE STEM Programme

Further information about the national HE STEM programme is available at **www.hestem.ac.uk**.

Degree listings

Guide

The following pages list physics degree courses in the UK and Ireland. The listings are made alphabetically by university, for listing by location please see the index.

Degree

The title, type and length of the degrees offered by each university are listed under the "degree" section. Unless stated otherwise, the duration of the degree is for full-time study.

Degree type

A university can award a degree with or without honours. Generally a degree without honours or an "unclassified" degree is awarded if a student has completed a full degree course but has not met the minimum requirements to merit a third-class honours degree. However, the meaning of "ordinary" and "honours" degrees can vary between universities; in Scotland, for example, an "ordinary" degree is usually a three-year full-time course, whereas an "honours" degree is usually a four-year full-time course.

University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leavin… Certifica…
Physics	BSc	3	P & M & …	n/a	AAB–ABB/Pass[1]	…AB (AH)	AABBB
	MSci	4	P & M & …	n/a	AAB–ABB/Pass	AAB (AH)	AABBB
Astrophysics	BSc	3	P & M & …	n/a	AAB–ABB/Pass[1]	…AB (AH)	AABBB
	MSci	4	P & M & …	n/a	AAB–ABB/Pass	AAB (AH)	AABBB
Theoretical Physics	BSc	3	P & M & …	n/a	AAB–ABB/Pass[1]	AAB (AH)	AABBB
	MSci	4	P & M & …				
Mathematics and Physics	BSc	3	P & M & …	n/a	AAB/Pass[2]	AAB (AH)	AAABB
	MSci	4	P & M & …	n/a	AAB/Pass		

For all course titles, first three years of MSci in parallel with BSc. Fourth year taught in c…
[1] Grades as stated and a pass in a fourth subject at AS level …
[2] A in mathematics and P…

Entry requirements

Typical grade offers for A-level, Scottish Highers and Irish Leaving Certificate, and/or UCAS points required for entry are listed under "Entry requirements". For information about alternative qualifications please contact the university.

Abbreviations

Qualifications

A-level	GCE Advanced level (full A-level)
AS	GCE Advanced Subsidiary (first half of a full A-level)
AH	(Scottish) Advanced Highers
SH	Scottish Highers
H	Higher level (of the Irish Leaving Certificate)
ILC	Irish Leaving Certificate

Subjects

The following abbreviations are used for subjects required for entry:

P	Physics
M	Maths
C	Chemistry
PS	Physical science
E	Engineering
B	Biology
Mus	Music
CS	Computer science
F	French
FM	Further maths
Engl	English
...	Any A-level or equivalent subject

University of Aberdeen

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physical Science	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physics with French[1]	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physics with Gaelic[1]	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physics with German[1]	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physics with Spanish[1]	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physics with Geology	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physics with Chemistry	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Physics with Philosophy	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Geology – Physics	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
Mathematics – Physics	BSc	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	MA	4[2]	M	240[3]	CCC	BBBB[2]	BBBB
Natural Philosophy	MA	4[2]	M	240[3]	CCC	BBBB[2]	BBBB
Philosophy – Physics	MA	4[2]	M	240[3]	CCC	BBBB[2]	BBBB
Physics – Education	BSc	3	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB
	BSc(Hons)	4[2]	M & ...	240[3]	CCC[2]	BBBB[2]	BBBB

Accommodation places are offered to all students not domiciled locally.
[1] Alternative language courses for beginners and qualified speakers.
[2] Students with BBC at A-level or BBB at Advanced Higher, including Maths and Physics, qualify for direct entry to year 2.
[3] UCAS tariff from not more than four subjects.
Admission is to degree of BSc or MA not to department.

See p66 for more information about the University of Aberdeen

Aberystwyth University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics with foundation year[1]	BSc	4	P & M	–	DD[2]	–	–
Physics	BSc	3	P & M	240	BC	BBBBC	BBBBC
	MPhys	4	P & M	240	BC	BBBBC	BBBBC
Physics with Planetary and Space Physics	BSc	3	P & M	240	BC	BBBBC	BBBBC
	MPhys	4	P & M	240	BC	BBBBC	BBBBC
Astrophysics	BSc	3	P & M	240	BC	BBBBC	BBBBC
	MPhys	4	P & M	240	BC	BBBBC	BBBBC
Mathematical and Theoretical Physics	BSc	3	P & M	240	BC	BBBBC	BBBBC
	MMath	4	P & M	240	BC	BBBBC	BBBBC
Space Science and Robotics	BSc	3	P & M	240	BC	BBBBC	BBBBC
	MPhys	4	P & M	240	BC	BBBBC	BBBBC
Physics with Business and Management	BSc	3	P & M	240	BC	BBBBC	BBBBC
Physics with Education	BSc	3	P & M	240	BC	BBBBC	BBBBC
Computer Science and Physics	BSc	3	P & M	240	BC	BBBBC	BBBBC
Mathematics and Physics	BSc	3	P & M	240	BC	BBBBC	BBBBC

[1] Students who join the foundation year – their choice of course is open until entry into the third year.
[2] Mature students do not need A-level grades.

See p66 for more information about Aberystwyth University

University of Bath

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3[3]	P & M & ...	_	AAA[2]	AAABB + AA (AH)[1]	AAAABB + AA (H)[4]
	MPhys	4[3]	P & M & ...	_	AAA[2]	AAABB + AA (AH)[1]	AAAABB + AA (H)[4]
Physics with Computing	BSc	3[3]	P & M & ...	_	AAA[2]	AAABB + AA (AH)[1]	AAAABB + AA (H)[4]
Mathematics and Physics	BSc	3[3]	P & M & ...	_	AAA[2]	AAABB + AA (AH)[1]	AAAABB + AA (H)[4]
Mathematics and Physics	MSci	4	P & M & ...	_	AAA[2]	AAABB + AA (AH)[1]	AAAABB + AA (H)[4]

[1] Scottish Advanced Highers: must be in mathematics and physics.
[2] A-levels: must include an A in mathematics and an A in physics.
[3] Duration is 4 years with a placement or year abroad.
[4] Irish Leaving Certificate: Higher must be in mathematics and physics.

See p68 for more information about the University of Bath

University of Birmingham

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc[1]	3	P & M & ...	–	AAB–AAA	AAA–AAB(AH)	AAAABB
	MSci	4	P & M & ...	–	AAA–A*AA	AAA–AAB(AH)	AAAABB
Physics and Astrophysics[2]	BSc[1]	3	P & M & ...	–	AAB–AAA	AAA–AAB(AH)	AAAABB
	MSci	4	P & M & ...	–	AAA–A*AA	AAA–AAB(AH)	AAAABB
Theoretical Physics	BSc[1]	3	P & M & ...	–	AAB–AAA	AAA–AAB(AH)	AAAABB
	MSci	4	P & M & ...	–	AAA–A*AA	AAA–AAB(AH)	AAAABB
Physics with Particle Physics and Cosmology	BSc[1]	3	P & M & ...	–	AAB–AAA	AAA–AAB(AH)	AAAABB
	MSci	4	P & M & ...	–	AAA–A*AA	AAA–AAB(AH)	AAAABB
Physics (International Study)	BSc[3]	4	P & M & ...[4]	–	AAB–AAA	AAA–AAB(AH)	AAAABB
	MSci[3]	4	P & M & ...[4]	–	AAA–A*AA	AAA–AAB(AH)	AAAABB
Physics with Nanotechnology	MSci	4	P & M & ...	–	AAA–A*AA	AAA–AAB(AH)	AAAABB
Theoretical Physics and Applied Mathematics	BSc	3	P & M & ...	–	AAA	AAA–AAB(AH)	AAAABB
	MSci	4	P & M & ...	–	A*AA	AAA–AAB(AH)	AAAABB

[1] An Intercalated year in Computer Science is available as an option (BSc only).
[2] A four-year degree programme with Study in a Continental University in year 3 is available as an option.
[3] Year 3 abroad studying in a Continental University.
[4] Plus appropriate language at a minimum of GCSE Grade B.

See p68 for more information about the University of Birmingham

University of Bradford

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Integrated Science	BSc (Hons)	3	P & C	240	CCC	–	–
Integrated Science (with sandwich year)	BSc (Hons)	4	P & C	240	CCC	–	–

See p69 for more information about the University of Bradford

University of Bristol

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
	MSci	4	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
Physics with Study in Continental Europe	MSci	4	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
Physics with a Year in Industry	MSci	4	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
Physics with Astrophysics	BSc	3	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
	MSci	4	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
Mathematics and Physics	MSci	4	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
Physics and Philosophy	BSc	3	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
	MSci	4	P & M	–	AAB[1]	AAB (AH)[1]	AAAABB
Physics with a Preliminary Year[2]	BSc	4	–	–	–	–	–
Chemical Physics	BSc	3	P & M & C	–	AAB	AAH (AH)	AAAABB
	MSci	4	P & M & C	–	AAB	AAH (AH)	AAAABB
Chemical Physics with a Year in Industry	MSci	4	P & M & C	–	AAB	AAH (AH)	AAAABB

[1] Must include an A in mathematics and an A in physics.
[2] Not available to applicants who have studied A-level maths or physics (either or both).

See p69 for more information about the University of Bristol

University of Cambridge

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Experimental and Theoretical Physics[1]	BA	3	M[3]	–	A*AA	[2]	[2]
	MSci	4	M[3]	–	A*AA	[2]	[2]

[1] First year of study will include three subjects and mathematics; second year of study will include physics plus a minor subject; third and fourth years of study will be physics only. Admission is via a college. The department provides a 3/4 year course leading to BA/MSci degrees. The fourth year offers a variety of specialised physics topics.
[2] Please consult with the college admissions tutors for details of entry with Scottish Highers, Irish Leaving Certificate or any other alternative qualification. Further information is available at www.cam.ac.uk/admissions/undergraduate/courses/natsci/requirements.html.
[3] Must also have either physics or further mathematics.

See p70 for more information about the University of Cambridge

Cardiff University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
	MPhys	4	P & M	–	AAB	AABB or ABB (AH)	AAAABB
Physics with Medical Physics	BSc	3	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
Physics with Astronomy	BSc	3	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
	MPhys	4	P & M	–	AAB	AABB or ABB (AH)	AAAABB
Astrophysics	BSc	3	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
	MPhys	4	P & M	–	AAB	AABB or ABB (AH)	AAAABB
Physics with Music	BSc	3	P & M & Mus	–	BBB	ABBB or BBB (AH)	AABBBB
Physics (with a professional placement)	BSc	4	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
Physics with Astronomy (with a professional placement)	BSc	4	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
Mathematics and Physics	BSc	3	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
Theoretical and Computational Physics	BSc	3	P & M	–	ABB	ABBB or ABB (AH)	AABBBB
Physics with a Preliminary Year	BSc	4	–	–	–	–	–

Typical offer for entry to the BSc course is ABB at A-level to include physics and mathematics (excluding general studies). Typical offer for entry to the MPhys course is AAB at A-level to include physics and mathematics (excluding general studies). Physics and Mathematics requires an A in Maths. Physics with Music requires Music A-level plus additional music proficiency.

See p72 for more information about Cardiff University

University of Central Lancashire

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M	280	BBC[1]	[5]	[6]
	MPhys	4	P & M	320	ABB[2]	[5]	[6]
Astrophysics	BSc	3	P & M	280	BBC[1]	[5]	[6]
	MPhys	4	P & M	320	ABB[2]	[5]	[6]
Mathematical Physics[3]	BSc (Hons)	3	P & M	300	ABC[4]	[5]	[6]
	MPhys	4	P & M	320	ABB[4]	[5]	[6]
Physics with a Year Abroad[3]	BSc (Hons)	4	P & M	280	BBC[1]	[5]	[6]
	MPhys	4	P & M	320	ABB[2]	[5]	[6]

[1] A-levels: must include a B in physics or B in mathematics.
[2] A-levels: must include an A in physics or A in mathematics.
[3] Subject to validation.
[4] A-levels: must include a B in physics and A in mathematics.
[5] For all of the BSc courses: 280 UCAS points (e.g. BBCCC Highers including a B in mathematics and a B in physics). For all of the MPhys courses: 320 UCAS points (e.g. BBBBB Highers including a B in mathematics and a B in physics).
[6] For all of the BSc courses: 280 UCAS points (e.g. BBCCC including a B in mathematics and a B in physics). For all of the MPhys courses: 320 UCAS points (e.g. BBBBB including a B in mathematics and a B physics).

See p74 for more information about the University of Central Lanchashire

Cork Institute of Technology

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Applied Physics and Instrumentation [2]	BSc (Hons)[3]	4	–	–	–	–	[1]
	BSc/HC[3]	3[3]	–	–	CDD	–	[1]
Instrument Engineering[2]	BSc (Hons)	4	–	–	CCC	–	[1]
Environmental Science & Sustainable Technology[2]	BSc (Hons)	4	–	–	CCC	–	[1]

[1] Places offered by Central Applications Office, Galway, on basis of Irish Leaving Certificate results.
[2] Students have the option of placement abroad in the third year for a minimum of eight weeks. It is also possible for the project in fourth year to be carried out abroad.
[3] BSc (Hons)/BSc courses in Applied Physics and Instrumentation feature an integrated ladder structure: students enter the BSc followed by BSc (Honours) (+1 year). Students who successfully complete year 2 of the BSc may exit with a Higher Certificate.

See p75 for more information about Cork Institute of Technology. For other Cork universities see University College Cork on p59.

Dublin City University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Applied Physics	BSc (Hons)	4	M & P[4]	–	BCC	–	[1]
Physics with Astronomy[2]	BSc (Hons)	4	M & P[4]	–	BCC	–	[1]
Physics with Biomedical Sciences	BSc (Hons)	4	M[5]	–	BCC	–	[1]
Science Education (Physics & Chemistry)[3]	BSc (Hons)	4	M & P[6]	–	BCC	–	[1]

[1] Places offered by Central Applications Office, Galway, on basis of Irish Leaving Certificate results. Direct applications may be made through the Office for Academic Affairs at the university.
[2] Includes a field trip to a Foreign Observatory.
[3] Graduates will have a teacher qualification.
[4] Must also have a third subject in either chemistry, biology or physical science.
[5] Must also have a second subject in either physics, chemistry or biology.
[6] Must also have a third subject in either chemistry or biology.

See p75 for more information about Dublin City University

Dublin Institute of Technology

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics Technology	BSc (Hons)	4	[2]	–	CCC	–	[1]
Physics with Medical Physics and Bioengineering	BSc (Hons)	4	[2]	–	CCC	–	[1]
Science with Nanotechnology	BSc (Hons)	4	[2]	–	CCC	–	[1]
Industrial and Environmental Physics	BSc (ord)	3	M	–	CDD	–	[3]

[1] Irish Leaving Certificate: must have either mathematics, physics, chemistry, biology or engineering (plus 5 other subjects). Places offered by Central Applications Office, Galway, on basis of Leaving Certificate results. Mature applicants welcome.
[2] Must have either mathematics, physics, chemistry, biology or engineering.
[3] Irish Leaving Certificate: must have mathematics (plus 4 other subjects). Places offered by Central Applications Office, Galway, on basis of Leaving Certificate results. Mature applicants welcome.

See p77 for more information about Dublin Institute of Technology. For other Dublin universities see Trinity College Dublin on p59 and University College Dublin on p60.

University of Dundee

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	M[1]	200	CDD	BCCC	[2]
	BSc (Hons)	4	M[1]	240	CCC	BBBB	[2]
	MSci	5	M[1]	240	CCC	BBBB	[2]
Physics and Mathematics	BSc (Hons)	4	M[1]	240	CCC	BBBB	[2]
Applied Physics	BSc (Hons)	4	M[1]	240	CCC	BBBB	[2]
Physics and Microelectronics	BSc (Hons)	4	M[1]	240	CCC	BBBB	[2]
Electronic Engineering and Physics	BEng	4	M[1]	240	CCC	BBBB	[2]

[1] And another science. Normal entry is via Scottish Highers or A-level. Suitably qualified students with 276 points may enter directly into the second year.

[2] BBC Highers including mathematics and physics. View our online prospectus at www.dundee.ac.uk/undergraduate/courses/physics.htm for the most up-to-date information on this.

See p76 for more information about the University of Dundee

Durham University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	–	A*AA[4]	A1A[2]	AAAAA[3]
	MPhys[1]	4	P & M	–	A*AA[4]	A1A[2]	AAAAA[3]
Physics and Astronomy	MPhys[1]	4	P & M	–	A*AA[4]	A1A[2]	AAAAA[3]
Theoretical Physics	MPhys[1]	4	P & M	–	A*AA[4]	A1A[2]	AAAAA[3]
Chemistry and Physics	MSci[1]	4	P & M & C	–	A*AA[4]	A1A[2]	AAAAA[3]
Mathematics and Physics	BSc	3	P & M	–	A*AA[4]	A1A[2]	AAAAA[3]
	MSci[1]	4	P & M	–	A*AA[4]	A1A[2]	AAAAA[3]

[1] In the fourth year of the MPhys you choose courses from the areas of astrophysics, applied physics, solid state physics and theoretical physics. MPhys and MSci students also do an extended research project (theoretical or experimental) with one of the department's research groups.

[2] Scottish Highers: with excellent Highers, an A1 in either mathematics or physics and an A in the other subject will suffice.

[3] Irish Leaving Certificate: must include A1 or A2 in mathematics and physics.

[4] An A* in either mathematics or physics and an A in the other subject.

See p77 for more information about Durham University

University of East Anglia

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Natural Sciences	BSc (Hons) MNatSci (Hons)	3 4	[1] [1]	– –	AAA A*AA	AAAAA AAAAA	AAAAAA AAAAAA
Natural Sciences with a Year in Industry	BSc (Hons)	4	[1]	–	AAA	AAAAA	AAAAAA
Natural Sciences with a Year in Australasia	BSc (Hons)	4	[1]	–	AAA	AAAAA	AAAAAA
Natural Sciences with a Year in North America	BSc (Hons)	4	[1]	–	AAA	AAAAA	AAAAAA
Natural Sciences with a Year in Europe	BSc (Hons)	4	[1]	–	AAA	AAAAA	AAAAAA
Chemical Physics	BSc (Hons)	3	P & M	–	BBB	BBBBB	BBBBBB
Chemical Physics with a Year in Industry	MChem	4	P & M	–	ABB	AABBB	AAABBB
Chemical Physics with a Year in North America	MChem	4	P & M	–	ABB	AABBB	AAABBB

[1] Three A-level subjects or equivalent are required, of which at least two should be sciences.

See p78 for more information about the University of East Anglia

University of Edinburgh

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	4[3]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
	MPhys	5[4]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Mathematical Physics	BSc	4[3]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
	MPhys	5[4]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Astrophysics	BSc	4[3]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
	MPhys	5[4]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Computational Physics	BSc	4[3]	P & M	–	ABB - AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
	MPhys	5[4]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Theoretical Physics	BSc	4[3]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
	MPhys	5[4]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Chemical Physics	BSc	4[3]	P & M & C	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
	MPhys	5[4]	P & M & C	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Computer Science & Physics	BSc	4	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Mathematics and Physics	BSc	4[3]	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Physics and Music	BSc	4	P & M	–	ABB–AAA[2]	AAAA–ABBB[2]	AAAAA–AABBB[2]
Physics with Meteorology	BSc	4	P & M	–	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]
Geophysics	BSc	4[3]	P & M	360	ABB–AAA[1]	AAAA–ABBB[1]	AAAAA–AABBB[1]

The information above shows the range of grades that will be considered for entry to our degree programmes. Typically, however, grades near the top of the range will be required. More detailed information can be obtained from www.ph.ed.ac.uk/studying/undergraduate/entrance-qualifications.

[1] Must include an A in mathematics and physics.

[2] Must include an A in mathematics, either an Associated Board Grade VII in a recognised instrument or an A-level/Higher/ILC in music at grade A, and physics.

[3] Duration is 3 years with direct entry into second year.

[4] Duration is 4 years with direct entry into second year.

See p79 for more information about the University of Edinburgh. For other Edinburgh universities see Heriot-Watt University on p35.

University of Exeter

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]
	MPhys (Hons)	4	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]
Physics with North American Study	MPhys (Hons)	4	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]
Mathematics and Physics	BSc (Hons)	3	P & M & ...[1]	340–380[1]	AAB–A*AA	AAA–ABB (AH)	A(1)A(1)AAA –AAABB[3]
Physics with Astrophysics	BSc (Hons)	3	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]
	MPhys (Hons)	4	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]
Physics with Professional Experience	MPhys (Hons)	4	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]
Physics with Australian Study	MPhys (Hons)	4	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]
Physics with Study in New Zealand	MPhys (Hons)	4	P & M & ...	320–360	ABB–AAA	AAB–BBB (AH)	A(1)AAAA –AABBB[2]

[1] A-level: an A in mathematics is required.
[2] With nothing less than B2.
[3] With nothing less than B1.

See p80 for more information about the University of Exeter

University of Glasgow

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics[2]	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Chemical Physics[2]	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Mathematics and Physics[2]	BSc or MA	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Physics and Applied Mathematics	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Physics and Astronomy[2]	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Physics with Astrophysics[2]	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Astronomy and Mathematics[2]	BSc or MA	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Astronomy and Applied Mathematics	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	5[4]	P & M	320	ABB[3]	ABBB[1]	–
Physics or Astronomy and certain Arts subjects	MA	4[4]	P & M	320	ABB[3]	ABBB[1]	–
Computing Science and Physics	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	4[4]	P & M	320	ABB[3]	ABBB[1]	–
Theoretical Physics	BSc	4[4]	P & M	320	ABB[3]	ABBB[1]	–
	MSci	4[4]	P & M	320	ABB[3]	ABBB[1]	–

All first-year students, not within daily travelling distance, who request accommodation on time are currently offered Hall accommodation.

[1] ABBB including, preferably, two from: biology, biotechnology, chemistry, computing studies, geography, geology, human biology, information systems, managing environmental resources, mathematics and physics. At least one of mathematics, physics or chemistry is desirable.

[2] MSci and BSc degrees share common years 1 and 2; thereafter separate and distinctive curriculum.

[3] ABB including, preferably, two from: biology, botany, chemistry, computing studies, environmental science, geography, geology, human biology, mathematics, physics, science (double syllabus), statistics and zoology. At least one of mathematics, physics or chemistry is desirable.

[4] Very able students can begin their courses at level 2, shortening their degrees by one year. For more information on which courses this applies to, and what the requirements are, please visit www.glasgow.ac.uk/physics.

See p82 for more information about the University of Glasgow

Heriot-Watt University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M	300	BBB	BBBBC or AABB	BBBB
Computational Physics	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M	300	BBB	BBBBC or AABB	BBBB
Physics with Environmental Science	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
Physics with Electronic Engineering	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M	300	BBB	BBBBC or AABB	BBBB
Engineering Physics	BSc	4[3]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[4]	P & M	300	BBB	BBBBC or AABB	BBBB
Mathematical Physics	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M	300	BBB	BBBBC or AABB	BBBB
Nano-science	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M	300	BBB	BBBBC or AABB	BBBB
Photonics and Lasers	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M	300	BBB	BBBBC or AABB	BBBB
Energy Science and Technology	BSc	4[1]	P & M	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M	300	BBB	BBBBC or AABB	BBBB
Chemical Physics	BSc	4[1]	P & M & C	300	BBB	BBBBC or AABB	BBBB
	MPhys	5[2]	P & M & C	300	BBB	BBBBC or AABB	BBBB

Accommodation guaranteed for those firmly accepting a place before 1 September.

[1] Duration can be 3 years; direct entry into second year is possible for applicants with good Advanced Highers or good A-levels.

[2] Duration can be 4 years; direct entry into second year is possible for applicants with good Advanced Highers or good A-levels.

[3] Duration can be 3 years; direct entry into second year is possible for applicants with good Advanced Highers or good A-levels. Includes industrial placement during summer vacation.

[4] Duration can be 4 years; direct entry into second year is possible for applicants with good Advanced Highers or good A-levels. Includes industrial placement during summer vacation.

See p82 for more information about Heriot-Watt University

University of Hertfordshire

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M	280	BBC	BBBBB	BBBBBC
Astrophysics[1]	BSc (Hons)	3	P & M	280	BBC	BBBBB	BBBBBC
Physics[1]	MPhys[2]	4	P & M	320	ABB	AABBB	ABBBB
Astrophysics[1]	MPhys[2]	4	P & M	320	ABB	AABBB	ABBBB

[1] Sandwich options and part-time study are possible on all degrees.
[2] The MPhys course is expected to be offered from October 2012 and is subject to academic validation. Entry requirements are indicative and may not be the final adopted requirements

See p84 for more information about the University of Hertfordshire

University of Hull

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	280	BBC	BBBBC	[3]
	MPhys	4	P & M	300	BBB	BBBBB	[3]
Applied Physics	BSc	3	P[1]	280	BBC	BBBBC	[3]
	MPhys	4	P & M	300	BBB	BBBBB	[3]
Physics with Astrophysics	BSc	3	P & M	280	BBC	BBBBC	[3]
	MPhys	4	P & M	300	BBB	BBBBB	[3]
Physics and Philosophy	BSc	3	P & M	280	BBC	BBBBC	[3]
Physics with Nanotechnology	BSc	3	P & M	280	BBC	BBBBC	[3]
	MPhys	4	P & M	300	BBB	BBBBB	[3]
Physics (with Foundation Science)	BSc	4	[2]	220–280	[4]	–	–

[1] A-level mathematics is not mandatory for entry to BSc Applied Physics.
[2] Physics and mathematics are not essential for entry onto this course.
[3] Consult admissions tutor.
[4] Flexible.

See p85 for more information about the University of Hull

Imperial College London

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc[1]	3	P & M & ...	–	A*AA[3]	AAA (AH)	AAAAAA
	MSci[1]	4	P & M & ...	–	A*AA[3]	AAA (AH)	AAAAAA
Physics with a Year in Europe	MSci	4	P & M & ...	–	A*AA[3]	AAA (AH)	AAAAAA
Physics with Theoretical Physics	BSc	3	P & M & ...	–	A*AA[3]	AAA (AH)	AAAAAA
	MSci	4	P & M & ...	–	A*AA[3]	AAA (AH)	AAAAAA
Physics and Music Performance[2]	BSc	4	P & M & ...	–	A*AA[3]	AAA (AH)	AAAAAA

[1] Transfers between BSc and MSci courses are possible before the end of the second year.
[2] Music at the Royal College of Music. ABRSM Grade 8 with Distinction in an appropriate instrument is usually required.
[3] A* in A-Level Mathematics is required.

See p86 for more information about Imperial College London

Keele University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics with [1]	BSc (Hons)	3	P & ... & ... [3]	300–320	BBC	BCC (AH)	–
Physics and [2]	BSc (Hons)	3	P & ... & ... [3]	300–320	BBC	BCC (AH)	–
Astrophysics with [1]	BSc (Hons)	3	P & ... & ... [3]	300–320	BBC	BCC (AH)	–
Astrophysics and [2]	BSc (Hons)	3	P & ... & ... [3]	300–320	BBC	BCC (AH)	–

[1] Biochemistry/Biology/Chemistry/Computer Science/Geology/Mathematics/Applied Environmental Science/Information Systems/Medicinal Chemistry/Neuroscience/Sociology/Smart Systems/Philosophy/Politics/Music/Music Technology/Media, Communications and Culture/Marketing/International Business/Human Biology/Human Resource Management/History/Accounting/Economics/English/American Studies/Educational Studies/Business Management/Creative Computing/Criminology.
[2] Biochemistry/Biology/Applied Environmental Science/Chemistry/Computer Science/Economics/Educational Studies/English/French/Geology/History/Human Resource Management/Mathematics/Medicinal Chemistry/Neuroscience/Philosophy/Sociology/Music/Politics/American Studies/Criminology/Information Systems/Marketing/Media, Communications and Culture/Music Technology/Creative Computing/Human Biology/International Business/Smart Systems/Accounting/Business Management.
[3] The second subject may require a specific A-level/Scottish Advanced Higher subject.

See p87 for more information about Keele University

University of Kent

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	320[4]	BB[3]	[2]	[2]
	MPhys	4	P & M	320[4]	BB[3]	[2]	[2]
Physics with Astrophysics	BSc	3	P & M	320[4]	BB[3]	[2]	[2]
	MPhys	4	P & M	320[4]	BB[3]	[2]	[2]
Physics with Astrophysics with a year in the USA	MPhys	4	P & M	320[4]	BB[3]	[2]	[2]
Astronomy, Space Science and Astrophysics	BSc	3	P & M	320[4]	BB[3]	[2]	[2]
	MPhys	4	P & M	320[4]	BB[3]	[2]	[2]
Astronomy, Space Science and Astrophysics with a year in the USA	MPhys	4	P & M	320[4]	BB[3]	[2]	[2]
Physics Foundation[1]	BSc	4	–	[2]	DD[2]	[2]	[2]
Physics with a Year in the USA	MPhys	4	P & M	320[4]	BB[3]	[2]	[2]

[1] Physics Foundation leads to any BSc degree offered.
[2] Consult Admissions Tutor.
[3] Including grades BB in Physics and Maths A-Levels.
[4] 320 points from 3 A-Levels.

See p88 for more information about the University of Kent

King's College London

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M & ...	–	AAB	AAABB	AAAABB
	MSci	4	P & M & ...	–	AAB	AAABB	AAAABB
Physics with Medical Applications	BSc[1]	3	P & M & ...	–	AAB	AAABB	AAAABB
Physics with Theoretical Physics	BSc	3	P & M & ...	–	AAB	AAABB	AAAABB
	MSci	4	P & M & ...	–	AAB	AAABB	AAAABB
Physics with a year abroad	BSc[1]	3	P & M & ...	–	AAB	AAABB	AAAABB
Mathematics and Physics	BSc	3	P & M & ...	–	AAA	AAAAB	AAAABB
	MSci	4	P & M & ...	–	AAA	AAAAB	AAAABB
Physics and Philosophy	BSc	3	P & M & ...	–	AAB	AAABB	AAAABB
Physics and Philosophy with a year abroad	BSc	3	P & M & ...	–	AAB	AAABB	AAAABB

See www.kcl.ac.uk/ugp10/ and select "physics" for full details of entry requirements.

[1] An MSci version of this course is available. The final year of the MSci will involve a choice from about 25 optional modules in physics, theoretical physics, applied physics and astrophysics, taught in collaboration with other London colleges.

See p88 for more information about King's College London

Lancaster University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M	340	AAB	ABBBB[1]	[2]
	MPhys	4	P & M	360	AAA	AAABB[1]	[2]
Theoretical Physics	BSc (Hons)	3	P & M	340	AAB	ABBBB[1]	[2]
	MPhys	4	P & M	360	AAA	AAABB[1]	[2]
Physics with Particle Physics and Cosmology	BSc (Hons)	3	P & M	340	AAB	ABBBB[1]	[2]
	MPhys	4	P & M	360	AAA	AAABB[1]	[2]
Physics, Astrophysics and Cosmology	BSc (Hons)	3	P & M	340	AAB	ABBBB[1]	[2]
	MPhys	4	P & M	360	AAA	AAABB[1]	[2]
Physics, Astrophysics and Space Science	BSc (Hons)	3	P & M	340	AAB	ABBBB[1]	[2]
	MPhys	4	P & M	360	AAA	AAABB[1]	[2]
Physics/North America	BSc (Hons)	3	P & M	360	AAA	AAABB[1]	[2]
	MPhys	4	P & M	360	AAA	AAABB[1]	[2]
Theoretical Physics with Mathematics	BSc (Hons)	3	P & M	360	AAA[3]	AAABB[1]	[2]
	MSci	4	P & M	360	AAA[3]	AAABB[1]	[2]

[1] Scottish Highers: must include physics and mathematics at Advanced Higher level.
[2] Irish Leaving Certificate: offers will be made on the basis of five or six Higher level subjects. Please contact the Undergraduate Admissions Office (tel 01524 592028) for further information.
[3] A-levels: must include an A in mathematics.

See p89 for more information about Lancaster University

University of Leeds

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M & ...	340	ABB	ABB (AH)	ABBBBB
	MPhys (Hons)[1]	4	P & M & ...	340	AAB	AAB (AH)	AABBBB
Physics with Astrophysics	BSc (Hons)	3	P & M & ...	340	ABB	ABB (AH)	ABBBBB
	MPhys (Hons)[1]	4	P & M & ...	340	AAB	AAB (AH)	AABBBB
Physics with Nanotechnology	BSc (Hons)	3	P & M & ...	340	ABB	ABB (AH)	ABBBBB
	MPhys (Hons)[1]	4	P & M & ...	340	AAB	AAB (AH)	AABBBB
Physics (Industrial)[3]	BSc (Hons)	4	P & M & ...	340	ABB	ABB (AH)	ABBBBB
Physics (European)[4]	BSc (Hons)	4	P & M & ...	340	ABB	ABB (AH)	ABBBBB
Physics (European)[5]	MPhys (Hons)[1]	4	P & M & ...	340	AAB	AAB (AH)	AABBBB
Physics (North American)[6]	MPhys (Hons)[1]	4	P & M & ...	340	AAB	AAB (AH)	AABBBB
Medical Physics	BSc	4	P & M & ...	320	AAB	AAB (AH)	AABBBB
Theoretical Physics	MPhys (Hons)	4	P & M & ...	340	AAB	AAB (AH)	AABBBB
Theoretical Physics (North American)[7]	MPhys (Hons)	4	P & M & ...	340	AAB	AAB (AH)	AABBBB
Physics with Foundation Studies	BSc (Hons)	4	[2]	[2]	[2]	[2]	[2]
	MPhys (Hons)[1]	5	[2]	[2]	[2]	[2]	[2]
Theoretical Physics	BSc	3	P & M & ...	340	ABB	ABB (AH)	ABBBBB

All first-year students, not within daily travelling distance, who request accommodation "on time" are currently offered university accommodation.

[1] Progression to an MPhys programme of study is based on the academic performance at the end of year 2.

[2] Entry to this programme of study is decided on an individual basis but will normally require candidates to have good GCSEs in mathematics and science together with additional experience of science or technology to A-level standard. A-level passes are not essential.

[3] Either Physics, Physics with Astrophysics, or Physics with Nanotechnology with year 3 in an Industrial Placement.

[4] Either Physics, Physics with Astrophysics, or Physics with Nanotechnology with year 3 in France, Germany or Spain.

[5] Either Physics, Physics with Astrophysics, or Physics with Nanotechnology with one semester project with a research group in Denmark, France, Germany or Spain.

[6] Either Physics, Physics with Astrophysics, or Physics with Nanotechnology with year 3 in North America.

[7] With year 3 in North America.

See p90 for more information about the University of Leeds

University of Leicester

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics[1]	BSc	3	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
	MPhys	4	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
Physics with Astrophysics[1]	BSc	3	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
	MPhys	4	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
Physics with Nanotechnology[1]	BSc	3	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
	MPhys	4	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
Physics with Planetary Science[1]	BSc	3	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
	MPhys	4	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
Physics with Space Science & Technology[1]	BSc	3	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
	MPhys	4	P & M & ...	–	ABB–AAA	AAAA + AB (AH)	AAABB
Interdisciplinary Science[3]	BSc	3	[2]	–	ABB–AAA	AAAA + AB (AH)	AAABB
	MPhys	4	[2]	–	ABB–AAA	AAAA + AB (AH)	AAABB
Science Foundation Year[4]	-	1	–	–	BBC[5]	–	-

[1] Students may spend a year studying at a European University, or a semester at US, Canadian, or Australian institutions, which have reciprocal agreements with the University of Leicester. Students may also spend a year in industry.
[2] To include at least two science A-levels.
[3] Students studying interdisciplinary science can transfer to a single subject (Phyics, Chemistry, or Biology) at the end of year 2.
[4] Intended for mature students returning to education, or students who have not taken both Physics and Mathematics at A-level. Successful completion of the Foundation Year course permits progression to year 1 of any of the degree courses listed above.
[5] Please consult the admissions tutor.

See p90 for more information about the University of Leicester

University of Liverpool

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	300–340	BBB–AAB	AAB–BBB (AH)	ABBBB
	MPhys	4	P & M	320–360	ABB–AAA	AAA–ABB (AH)	AABBB
Physics with Astronomy	BSc	3	P & M	300–340	BBB–AAB	AAB–BBB (AH)	ABBBB
Astrophysics	MPhys	4	P & M	320–360	ABB–AAA	AAA–ABB (AH)	AABBB
Physics with Medical Applications	BSc	3	P & M	300–340	BBB–AAB	AAB–BBB (AH)	ABBBB
Physics with Nuclear Science	BSc	3	P & M	300–340	BBB–AAB	AAB–BBB (AH)	ABBBB
Physics for New Technology	BSc	3	P[1]	300–340	[2]	[2]	[2]
Physics with Ocean and Climate Studies	BSc	3	P & M	300–340	ABB	ABB (AH)	ABBBB
Geophysics (Physics)	BSc	3	P & M	320	BBB	BBB (AH)	BBBBB
Physics and Mathematics (Combined Honours)	BSc	3	P & M	300	ABB	ABB (AH)	ABBBB
Theoretical Physics	MPhys	4	P & M	320	ABB	ABB (AH)	ABBBB
Mathematical Physics	BSc	3	P & M	320	ABB	ABB (AH)	ABBBB
	MMath	4	P & M	320	ABB	ABB (AH)	ABBBB

[1] Where mathematics is not required it is still desirable.
[2] Special entry requirements – contact admissions tutor for details.

See p91 for more information about the University of Liverpool

Liverpool John Moores University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics with Astronomy	BSc/BSc (Hons)	3[1]	P & M & ...	300–340	BBB–AAB	AAB-BBB (AH)	ABBBB
Astrophysics	MPhys	4[1]	P & M & ...	320–360	ABB–AAA	AAA-ABB (AH)	AABBB

[1] Full-time course.

See p92 for more information about Liverpool John Moores University

For London universities see Imperial College London on p37, King's College London on p39, Queen Mary, University of London on p50, Royal Holloway, University of London on p51 and University College London on p61.

London South Bank University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Integrated Sciences (iSciences)	BSc	3	[1]	200	CDD	–	–
Integrated Sciences (iSciences) Sandwich	BSc	4	[1]	200	CDD	–	–

[1] Must include chemistry or equivalent plus another science or mathematics.

See p93 for more information about London South Bank University

Loughborough University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3[1]	P & M & ...	320	ABB	ABBBCC[3]	ABBBCC[3]
	MPhys	4[2]	P & M & ...	340	AAB	AABBCC[3]	AABBCC[3]
Engineering Physics	BSc (Hons)	3[1]	P & M & ...	320	ABB	ABBBCC[3]	ABBBCC[3]
	MPhys	4[2]	P & M & ...	340	AAB	AABBCC[3]	AABBCC[3]
Sports Science and Physics	BSc (Hons)	3[1]	P & M & ...	320	ABB	ABBBCC[3]	ABBBCC[3]
Physics and Mathematics	BSc (Hons)	3[1]	P & M & ...	320	ABB	ABBBCC[3]	ABBBCC[3]
	MPhys	4[2]	P & M & ...	340	AAB	AABBCC[3]	AABBCC[3]
Physics and Management	BSc (Hons)	3[1]	P & M	320	ABB	ABBBCC[3]	ABBBCC[3]
Physics with Cosmology	BSc	3[1]	P & M	320	ABB	ABBBCC[3]	ABBBCC[3]

A one-year course in science and engineering foundation studies or OpenPlus scheme with the Open University may allow entry to these courses for students with non-traditional qualifications.
All applicants making Loughborough their first choice are guaranteed a place in Hall in their first year.
[1] Duration is 4 years with a sandwich year.
[2] Duration is 5 years with a sandwich year.
[3] Typical offer for Highers or ILC is A/B physics/mathematicss, two grade Bs and two grade Cs in other subjects.

See p93 for more information about Loughborough University

University of Manchester

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics[1]	BSc	3	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
	MPhys	4	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
Physics with Astrophysics[1]	BSc	3	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
	MPhys	4	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
Physics with Theoretical Physics[1]	BSc	3	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
	MPhys	4	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
Physics with Study in Europe	MPhys	4	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
Physics with Philosophy	BSc	3	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
	MPhys	4	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
Mathematics and Physics	BSc	3	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA
	MMath & Phys	4	P & M & ...	–	AAA–A*AA	AAA (AH)	AAAAAA

[1] A limited number of students on these programmes will have the opportunity to spend one year of their course studying at the University of California or at the University of Toronto, or one semester studying at the University of Sydney, the Australian National University in Canberra or the National University of Singapore.

See p94 for more information about the University of Manchester

National University of Ireland, Galway

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics (via General Science GY301)	BSc	4	M[1]	–	BBB[2]	–	350 points[2]
Physics and Applied Physics GY315	BSc	4	M[1]	–	A*AA[2]	–	425 points[2]
Physics with Medical Physics GY316	BSc	4	M[1]	–	BBB[2]	–	355 points[2]
Physics with Astrophysics GY316	BSc	4	M[1]	–	ABB[2]	–	375 points[2]

[1] Must also have at least one of: physics, chemistry or biology.

[2] Places offered by Irish Central Applications Office (CAO), Eglington Street, Galway, www.cao.ie, competitive, 2010 requirements given as guide.

See p94 for more information about the National University of Ireland, Galway

National University of Ireland, Maynooth

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	4	P & M	–	DD	–	350 points
Physics with Astrophysics	BSc	4	P & M	–	CC	–	410 points
Physics and Chemistry	BSc	4	P & M	–	DD	–	350 points
Physics and Maths Physics	BSc	4	P & M	–	DD	–	350 points
Physics and Biology	BSc	4	P & M	–	DD	–	350 points
Physics and Computer Science	BSc	4	P & M	–	DD	–	350points
Physics and Maths	BSc	4	P & M	–	DD	–	350 points

See p95 for more information about the National University of Ireland, Maynooth. For other constituent universities of the National University of Ireland see University College Cork on p59 and University College Dublin on p60.

University of Nottingham

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics with Theoretical Physics	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics with Theoretical Astrophysics	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics with Astronomy	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Chemistry and Molecular Physics	BSc	3	P & M & C	–	BBB	BBB (AH)	BBBBB
	MSci	4	P & M & C	–	ABB	ABB (AH)	ABBBB
Mathematical Physics	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics and Philosophy	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics with European Language	BSc	4[2]	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4[2]	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics with Medical Physics	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics with Nanoscience	BSc	3	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
	MSci	4	P & M & ...	–	AAB–AAA	AAA-AAB (AH)	AAABB
Physics with a Foundation Year in Science	BSc	3[1]	[3]	[3]	[3]	[3]	[3]

Transfer between most of the above courses is possible.
[1] Candidates who successfully complete the Foundation Year can normally transfer to the Qualifying Year of our other degree programmes (BSc and MSci).
[2] Includes a sandwich year.
[3] Flexible entry requirements.

See p95 for more information about the University of Nottingham

Nottingham Trent University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M	260	BC	[1]	CCCCC
	BSc (Hons)	4	P & M	260	BC	[1]	CCCCC
	MSci	4	P & M	300	BB	[1]	CCCCC
Physics with Astrophysics	BSc (Hons)	3	P & M	260	BC	[1]	CCCCC
	BSc (Hons)	4	P & M	260	BC	[1]	CCCCC
Physics with Forensic Applications	BSc (Hons)	3	P & M	220	CC[2]	[1]	CCCCC
	BSc (Hons)	4	P & M	220	CC[2]	[1]	CCCCC
Physics with Nuclear Technology	BSc (Hons)	3	P & M	260	BC	[1]	CCCCC
	BSc (Hons)	4	P & M	260	BC	[1]	CCCCC
University Foundation Degree in Physics[4]	FdSc	2		120	E[3]	–	CCCCC

For other qualifications: consult admissions tutor.

[1] Scottish Highers: three passes at Higher grade, including a B in either mathematicss or physics.

[2] A-levels: must includes a C in physics and a C in either A-level or AS mathematics.

[3] A-levels: must be an E in either mathematicss or physics.

[4] Satisfactory completion of the university's Foundation Degree (FdSc) guarantees entry to year two of any of the BSc (Hons) physics programmes at Nottingham Trent University. In some cases this transfer may be possible at the end of year one of the FdSc.

See p96 for more information about Nottingham Trent University

The Open University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Natural Sciences [1]	BSc (Hons)	4[2]	[3]	[3]	[3]	[3]	[3]

[1] The BSc (Hons) Natural Sciences has various pathways through it, including ones which focus on 'Physics' and on 'Astronomy & Planetary Science'.

[2] Study is on a modular, part-time basis. Typically, 6 years are requried to complete a BSc (Hons) if studying at a part-time rate.

[3] No formal academic qualifications are required for entry to Open University courses.

See p97 for more information about the Open University

University of Oxford

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics[3]	BA	3	P & M	–	AAA[1]	AAAAA/AAAAB + AA/AAB (AH)[2]	AAAABB
	MPhys	4	P & M	–	AAA[1]	AAAAA/AAAAB + AA/AAB (AH)[2]	AAAABB
Physics and Philosophy[3]	MPhysPhil	4	P & M	–	AAA[1]	AAAAA/AAAAB + AA/AAB (AH)[2]	AAAABB

We welcome applications from students with alternative qualifications, such as the Welsh Baccalaureate, International Baccalaureate, Cambridge Pre-U and international qualifications. Please see www.ox.ac.uk for details.

[1] A-levels: must include an A in physics and an A in mathematics. An A-level or AS in further mathematics can be helpful to students in completing this course, but it is not required for admission. The University of Oxford will not use the A* grade when making offers for 2011 entry. A review of this policy will take place in time to advise those applying for entry in subsequent years.

[2] Scottish Advanced Higher: must include an A in physics and an A in mathematics.

[3] All applicants for physics or physics and philosophy are required to sit the physics aptitude test in November 2010. For more details please see www.physics.ox.ac.uk.

See p97 for more information about the University of Oxford

University of Portsmouth

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Applied Physics[1]	BSc (Hons)	3	[1]	220–260[1]	[1]	[2]	[2]

[1] 220–260 UCAS points to include 2 A-levels or equivalent with 80 points from A-level Physics, Mathematics or Electronics

[2] Acceptable on its own and in combination with other qualifications. See our website for full details

See p98 for more information about the University of Portsmouth

Queen Mary, University of London

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	320	ABB	BBB (AH)	BBB (H)
	MSci	4	P & M	340	AAB	AAB (AH)	AAB (H)
Theoretical Physics	BSc	3	P & M	320	ABB	BBB (AH)	BBB (H)
	MSci	4	P & M	340	AAB	AAH (AH)	AAB (H)
Astrophysics	BSc	3	P & M	320	ABB	BBB (AH)	BBB (H)
	MSci	4	P & M	340	AAB	AAB (AH)	AAB (H)
Physics with Particle Physics	BSc	3	P & M	320	ABB	BBB (AH)	BBB (H)
	MSci	4	P & M	340	AAB	AAB (AH)	AAB (H)

See p98 for more information about Queen Mary, University of London

Queen's University Belfast

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc[1]	3	P & M	280	BBC	–	BBBCC
	MSci[2]	4	P & M	340	AAB	–	ABBBBB
Physics and Applied Maths	BSc[1]	3	P & M	300	ABC	–	ABBBBC
	MSci[2]	4	P & M	340	AAB	–	ABBBBB
Physics and Computer Science	BSc[1]	3	P & M	280	BBC	–	BBBCC
Physics with Astrophysics	BSc[1]	3	P & M	280	BBC	–	BBBCC
	MSci[2]	4	P & M	340	AAB	–	ABBBBB
Theoretical Physics	BSc[1]	3	P & M	300	ABC	–	ABBBBC
	MSci[2]	4	P & M	340	AAB	–	ABBBBB
Physics with Medical Applications	BSc[1]	3	P & M	280	BBC	–	BBBCC
	MSci[2]	4	P & M	340	AAB	–	ABBBBB
Physics with Extended Studies in Europe	BSc[1]	3[3]	P & M	280	BBC	–	BBBCC
	MSci[2]	4[3]	P & M	340	AAB	–	ABBBBB

[1] BSc courses: must have BBC including a B in mathematics and a B in physics. With the exception of "Theoretical Physics" and "Physics and Applied Maths" BSc courses: must have ABC including an A in mathematics and a B in physics; Irish Leaving Certificate ABBBBC/AB2B2B2B2 at Higher Level including an A in mathematics and a B in physics.

[2] MSci courses: Irish Leaving Certificate ABBBBB at Higher Level including an A in either mathematics and physics. With the exception of "Theoretical Physics" and "Physics and Applied Maths" MSci courses: ABBBBB at Higher Level including an A in mathematics and a B in physics.

[3] Plus an extra year in Europe.

See p100 for more information about Queen's University Belfast

Royal Holloway, University of London

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
	MSci	4	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
Applied Physics	MSci	4	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
Theoretical Physics	BSc	3	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
	MSci	4	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
Astrophysics	BSc	3	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
	MSci	4	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
Physics with Particle Physics	BSc	3	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
	MSci	4	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
Physics with Music	BSc	3	M & P & Mus[2]	340	AAB[1]	AAB(AH)	AABBB[3]
Physics with Philosophy	BSc	3	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
Mathematics and Physics	BSc	3	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
	MSci	4	M & P & ...	340	AAB[1]	AAB(AH)	AABBB[3]
Foundation Year (Physics)[4]	FdSc	1	–	–	CCC	–	–

We accept a wide range of international qualifications - please contact the admissions tutor.

[1] Offers in the range AAA-ABB. Offers usually require at least A grade at A2 in both Mathematics and Physics

[2] Must include an A2 in Music.

[3] Typical offers usually require an A1 or A2 in both Mathematics and Physics at Higher Level.

[4] The Science Foundation Year is designed for those without the necessary Maths skills for direct entry to an undergraduate degree programme.

See p102 for more information about Royal Holloway, University of London

University of Salford

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3[6]	P & M & ...	260	BCC[1]	AABB/BCC (AH)	BBBCC
	MPhys	4[7]	P & M & ...	300	BBC[1]	AAAB/BBC (AH)	BBBBC
Pure and Applied Physics	BSc	3[6]	P & ...	220	[3]	[4]	CCCCC[5]
	MPhys	4[7]	P & ...	260	[3]	[4]	CCCCC[5]
Physics with Acoustics	BSc	3[6]	P & M & ...	260	BCC[1]	AABB/BCC (AH)	BBBCC
	MPhys	4[7]	P & M & ...	300	BBC[1]	AAAB/BBC (AH)	BBBBC
Physics with a year in North America	MPhys (Hons)	4 [7]	P & M & ...	280	BBC[1]	AAAB/BBC (AH)	BBBBC
Physics with Pilot Studies	BSc	3[6]	P & M & ...	260	BCC[1]	AABB/BCC (AH)	BBBCC
Physics with a Foundation Year	BSc	4[7]	[2]	–	[2]	–	DDDDD

[1] Key skills accepted. Entrance scholarships available.
[2] Students are normally expected to have studied mathematics/physics at A-level or equivalent. Individual cases discussed at interview.
[3] A-level/AS: typical grade offers are a minimum of 60 points in physics with another 140 from other subjects (mathematics at A-level must have been studied).
[4] Scottish Highers: typical grade offers are a minimum of 60 points in physics with another 120 from other subjects (mathematics at Highers must have been studied).
[5] Irish Leaving Certificate: CCCCC (including physics), must include at least a D in mathematics.
[6] Duration is 4 years if including a sandwich placement.
[7] Duration is 5 years if including a sandwich placement.

See p102 for more information about the University of Salford

University of Sheffield

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
	MPhys	4	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Theoretical Physics	BSc	3	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
	MPhys	4	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Chemical Physics	MPhys	4	P & M & C	–	AAB	AAABB + AB (AH)	AAAABB
Physics and Astrophysics	BSc	3	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
	MPhys	4	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Physics with Medical Physics	BSc	3	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
	MPhys	4	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Physics with Computer Science	BSc	3	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
	MPhys	4	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Physics with study in North America	MPhys	4	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Physics with study in Australasia	MPhys	4	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Physics and Philosophy	BSc	3	P & M & ...	–	AAB	AAABB + AB (AH)	AAAABB
Foundation Year leading to degree in Physics[1]	–	1	[2]	–	BBB	BBBBB	BBBBBB

[1] Intended for students who have not taken both physics and mathematics at A-level. Successful completion of the Foundation Year course permits progression to year 1 of any of the degree courses listed above.

[2] Must include one science subject (Physics, Chemistry, Biology) or Mathematics.

See p104 for more information about the University of Sheffield

University of Southampton

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M	340[4]	AAB	[2]	[2]
	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Physics with Astronomy	BSc	3	P & M	340[4]	AAB	[2]	[2]
	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Physics with Mathematics	BSc	3	P & M	340[4]	AAB	[2]	[2]
	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Physics with Photonics	BSc	3	P & M	340[4]	AAB	[2]	[2]
	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Physics with Space Science	BSc	3	P & M	340[4]	AAB	[2]	[2]
	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Physics with a Year of Experimental Research[3]	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Physics with Nanotechnology	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Physics with Astronomy (with a year abroad)[3]	MPhys	4	P & M	340[4]	AAB	[2]	[2]
Particle Physics (with a year abroad)[3]	MPhys	4	P & M & ...	340[4]	AAB	[2]	[2]
Physics with a Foundation Year[1]	BSc	4	[2]	[2]	[2]	[2]	[2]

[1] Intended for students wishing to transfer to science.
[2] Consult admissions tutor.
[3] Students interested in the year abroad/experimental research programmes should apply for the MPhys Particle Physics or Physics course (for CERN year abroad and year of experimental research) or MPhys Physics with Astronomy (for Harvard year abroad). Places on these programmes are limited and candidates will have the opportunity to compete for positions in year 2 of study.
[4] The 340 UCAS points should be from no more than 18 units.

See p106 for more information about the University of Southampton

University of St Andrews

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Astrophysics	BSc	3[1]	P & M	–	AAA	AAA (AH)	AAAA
	BSc	4	P & M	–	AAA	AAAA	AAAA
	MPhys	4[1]	P & M	–	AAA	AAA (AH)	AAAA
	MPhys	5[1]	P & M	–	AAA	AAAA	AAAA
Physics	BSc	3[1]	P & M	–	AAA	AAA (AH)	AAAA
	BSc	4	P & M	–	AAA	AAAA	AAAA
	MPhys	4[1]	P & M	–	AAA	AAA (AH)	AAAA
	MPhys	5	P & M	–	AAA	AAAA	AAAA
Physics with Photonics	MPhys	4[1]	P & M	–	AAA	AAA (AH)	AAAA
	MPhys	5	P & M	–	AAA	AAAA	AAAA
Theoretical Physics	MPhys	4[1]	P & M	–	AAA	AAA (AH)	AAAA
	MPhys	5	P & M	–	AAA	AAAA	AAAA
Mathematics and Theoretical Physics	MPhys	4[1]	P & M	–	AAA	AAA (AH)	AAAA
	MPhys	5	P & M	–	AAA	AAAA	AAAA
Chemistry and Physics	MSci	5	P & M & C	–	AAA	AAAA	AAAA
Computer Science and Physics	BSc	4	P & M	–	AAA	AAAA	AAAA
Physics and Logic & Philosophy of Science	BSc	4	P & M	–	AAA	AAAA	AAAA
Mathematics and Physics	BSc	3[1]	P & M	–	AAA	AAA (AH)	AAAA
	BSc	4	P & M	–	AAA	AAAA	AAAA
Gateway to Physics and Engineering[2]	BSc	4	P & M	–	ABB	ABBB	ABBB
	MPhys	5	P & M	–	ABB	ABBB	ABBB

[1] Assuming direct entry to level 2.
[2] For those who have experienced disadvantage but show high potential; includes intensive first-year programme.

See p107 for more information about the University of St Andrews

University of Strathclyde

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M	–	ABB	–	–
	BSc (Hons)	4	P & M	–	BBB	BBBB[2]	BBBB
Physics with Teaching	BSc (Hons)	3	P & M & Engl[1]	–	ABB	–	–
	BSc (Hons)	4	P & M & Engl[1]	–	BBB	BBBB[2]	BBBB
Mathematics and Physics	BSc (Hons)	3	P & M	–	ABC	–	–
	BSc (Hons)	4	P & M	–	BB	ABBB[2]	ABBB
Physics	MPhys	4	P & M	–	AAB	[3]	–
	MPhys	5	P & M	–	ABB	AABB[2]	AABB

[1] Please contact department regarding required English qualifications.

[2] Students entering the first year with Advanced Higher physics at B or better will be given an exemption from certain physics classes. Students entering year 1 with Higher mathematics at A and Advanced Higher mathematics at B will be given an exemption from certain mathematics classes.

[3] Direct entry to the second year of the MPhys degree is possible if an applicant has the following qualifications: AB in Advanced Higher physics and mathematics, plus two other Highers at AB or ABB including both Advanced Higher physics and mathematics plus another Higher at B.

See p108 for more information about the University of Strathclyde

University of Surrey

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc[3]	3[1]	M & P	220[4]	ABB[5]	ABBBB	ABBB
	MPhys[3]	4[2]	M & P	240[4]	AAB[5]	AABBB	AABB
Physics with Nuclear Astrophysics	BSc[3]	3[1]	M & P	220[4]	ABB[5]	ABBBB	ABBB
	MPhys[3]	4[2]	M & P	240[4]	AAB[5]	AABBB	AABB
Physics with Satellite Technology	BSc[3]	3[1]	M & P	220[4]	ABB[5]	ABBBB	ABBB
	MPhys[3]	4[2]	M & P	240[4]	AAB[5]	AABBB	AABB
Physics with Finance	BSc[3]	3[1]	M & P	220[4]	ABB[5]	ABBBB	ABBB
	MPhys[3]	4[2]	M & P	240[4]	AAB[5]	AABBB	AABB

[1] Duration is 4 years with optional professional training year.

[2] Includes a full year of research training.

[3] Transfers between all MPhys and BSc degree programmes are possible in the second year.

[4] Minimum points requirements from both mathematics and physics A-levels only.

[5] Any student with AS levels in mathematics and physics, but without full A-levels, should contact the department on an individual basis for advice on which course to apply for.

See p108 for more information about the University of Surrey

University of Sussex

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics (Research Placement)	MPhys	4	P & M	–	A*AA	AAAAA	[1]
Theoretical Physics (Research Placement)	MPhys	4	P & M	–	A*AA	AAAAA	[1]
Astrophysics (Research Placement)	MPhys	4	P & M	–	A*AA	AAAAA	[1]
Physics with Astrophysics (Research Placement)	MPhys	4	P & M	–	A*AA	AAAAA	[1]
Physics	BSc MPhys	3 4	P & M P & M	– –	BBB–AAB BBB–AAB	ABBBB ABBBB	[1] [1]
Theoretical Physics	BSc MPhys	3 4	P & M P & M	– –	BBB–AAB BBB–AAB	ABBBB ABBBB	[1] [1]
Physics with Astrophysics	BSc MPhys	3 4	P & M P & M	– –	BBB–AAB BBB–AAB	ABBBB ABBBB	[1] [1]
Astrophysics	MPhys	4	P & M	–	BBB–AAB	ABBBB	[1]
Physics and Astronomy degrees (with a Foundation Year)	BSc	4	[2]	–	[1]	[1]	[1]

[1] Please consult admissions tutor.
[2] Must have either physics or mathematics.

See p109 for more information about the University of Sussex

Swansea University

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	3	P & M	320	ABB	AABCC	BBBBBB
Theoretical Physics	BSc (Hons)	3	P & M	320	ABB	AABBC	BBBBBB
Physics with Nanotechnology	BSc (Hons)	3	P & M	320	ABB	AABCC	BBBBBB
Physics with Particle Physics and Cosmology	BSc (Hons)	3	P & M	320	ABB	AABCC	BBBBBB
Physics with Sports Science	BSc (Hons)	3	P & M	320	ABB	AABCC	BBBBBB
Physics with a Year Abroad	BSc (Hons)	4	P & M	320	ABB	AABCC	BBBBBB
Physics and Mathematics	BSc (Hons)	3	P & M	320	ABB	AABBC	ABBBBB
Physics and Computer Science	BSc (Hons)	3	P & M	320	ABB	AABCC	BBBBBB
Physics	MPhys	4	P & M	360	AAA	AABBC	ABBBBB
Theoretical Physics	MPhys	4	P & M	360	AAA	AABBC	ABBBBB
Physics with a Year Abroad	MPhys	5	P & M	360	AAA	AABBC	ABBBBB
Integrated 4-Year BSc Physics with Foundation Year	BSc (Hons)	4	[1]	[1]	[1]	[1]	[1]

[1] Please consult the admissions tutor.

See p109 for more information about Swansea University

Trinity College Dublin

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BA (Hons)	4	[2]	–	[1]	–	455 points[2]
Theoretical Physics	BA (Hons)	4	P & M	–	[1]	–	500 points[3]
Nanoscience, Physics and Chemistry of Advanced Materials	BA (Hons)	4	[2]	–	[1]	–	410 points[2]
Physics and Astrophysics	BA (Hons)	4	[2]	–	[1]	–	455 points[2]

[1] Offers are made based on the points required as set by the Irish Central Admissions Office (CAO) in each year. Up to four subject at A2 or AS level may be counted. The points awarded are: A2-level grade A: 150; B: 130; C:105; D:80; AS level grade A: 60; B: 50; C: 40; D: 30. The points required for each course are given above as a guide only.
[2] Including grade C in two science subjects at higher level or higher (refers to Irish Leaving Certificate only).
[3] Including grade B in both mathematics and physics at higher level or higher (refers to Irish Leaving Certificate only).

See p110 for more information about Trinity College Dublin

University College Cork

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	4	M	–	[2]	[2]	450–600 points
Astrophysics[1]	BSc (Hons)	4	M	–	[2]	[2]	450–600 points
Physics and Mathematics[1]	BSc (Hons)	4	M	–	[2]	[2]	450–600 points
Physics and Applied Mathematics[1]	BSc (Hons)	4	M	–	[2]	[2]	450–600 points
Chemical Physics[1]	BSc (Hons)	4	M	–	[2]	[2]	450–600 points
Education in Physical Sciences	BSc (Hons)	4	–	–	–	–	400–600 points

[1] 20–30 students study Physics in each of second, third and fourth years. Programmes are equivalent to a UK MSci. Fees are not charged to EU students.
[2] Please consult admissions tutor.

See p110 for more information about University College Cork

University College Dublin

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	4	[1]	–	ABB[2]	–	[3]
Theoretical Physics	BSc (Hons)	4	[1]	–	ABB[2]	–	[3]
Physics with Astronomy and Space Science	BSc (Hons)	4	[1]	–	ABB[2]	–	[3]
Physics and Science/Maths subject	BSc (Jt. Hons)	4	[1]	–	ABB[2]	–	[3]
Physics	BSc (Gen)	3	[1]	–	ABB[2]	–	[3]

[1] GCSE certificate with six passes at a minimum of grade C, including English, mathematics and laboratory science subjects plus A-levels as indicated.
[2] Competitive varies by year, but as an indication ACC or ASc.
[3] Places offered by Central Applications Office, Galway, on basis of Irish Leaving Certificate results. Passes in six subjects (including two at minimum HC3) including: English, Mathematics and one Laboratory Science subject.

See p111 for more information about University College Dublin

University College London

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc	3	P & M & ...	–	AAB–AAA[1]	AAA(AH)	AAABB
	MSci[3]	4	P & M & ...	–	AAB–AAA[1]	AAA(AH)	AAABB
Astrophysics	BSc	3	P & M & ...	–	AAB–AAA[1]	AAA(AH)	AAABB
	MSci[3]	4	P & M & ...	–	AAB–AAA[1]	AAA(AH)	AAABB
Theoretical Physics	BSc	3	P & M & ...	–	AAB–AAA[1]	AAA(AH)	AAABB
	MSci[3]	4	P & M & ...	–	AAB–AAA[1]	AAA(AH)	AAABB
Mathematics and Physics	BSc	3	P & M & ...	–	AAA[2]	AAA(AH)	AAABB
	MSci[3]	4	P & M & ...	–	AAA[1]	AAA(AH)	AAABB

[1] Must include AA in Maths and Physics plus a pass in a fourth subject at AS level, excluding general studies and critical thinking.
[2] Must include an A in mathematics and a B in physics, plus a pass in a fourth subject at AS level.
[3] The first three years of the MSci course is taught in parallel with the BSc. Fourth year is taught in common with the programmes of other colleges of the University of London.

See p112 for more information about University College London

University of Warwick

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics[1]	BSc	3	P & M & ...	–	AAA	AAB + AA (AH)	AAAAAA
	MPhys	4	P & M & ...	–	AAA	AAB + AA (AH)	AAAAAA
Mathematics and Physics[1]	BSc	3	P & M & ...	–	A*AA	AAA + AA (AH)	AAAAAA
	MMathPhys	4	P & M & ...	–	A*AA	AAA + AA (AH)	AAAAAA
Physics and Business Studies[1]	BSc	3	P & M & ...	–	AAA	AAB + AA (AH)	AAAAAA

[1] For offers based on alternative entry qualifications please see http://go.warwick.ac.uk/physics/undergraduate_study.

See p113 for more information about the University of Warwick

University of the West of Scotland

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics	BSc (Hons)	5[2]	P & M	120	DD[1]	BBC	BBC
	BSc (Hons)	4	P & M	120	DD[1]	BBC	BBC
	BSc	3	P & M	120	DD	BBC	BBC
Physics with Nuclear Technology	BSc (Hons)	5[3]	P & M	120	DD[1]	BBC	BBC
	BSc (Hons)	4	P & M	120	DD[1]	BBC	BBC
	BSc	3	–	120	DD	BBC	BBC

[1] Well qualified entrants offered direct entry to second year.
[2] Including a sandwich year.

See p113 for more information about the University of the West of Scotland

University of York

Degree			Entry requirements				
Title	Type	Duration (years)	Subjects	UCAS points	A-level	Scottish Highers	Irish Leaving Certificate
Physics[1]	BSc (Hons)	3	P & M & ...	–	ABB	AABBB	AABBBB
	MPhys	4	P & M & ...	–	AAB	AAAAB	AAAABB
Physics with Astrophysics[1]	BSc (Hons)	3	P & M & ...	–	ABB	AABBB	AABBBB
	MPhys	4	P & M & ...	–	AAB	AAAAB	AAAABB
Theoretical Physics[1]	BSc (Hons)	3	P & M & ...	–	ABB	AABBB	AABBBB
	MPhys	4	P & M & ...	–	AAB	AAAAB	AAAABB
Maths and Physics[1]	BSc (Hons)	3	P & M & ...	–	AAB	AAAAB	AAAABB
	MPhys	4	P & M & ...	–	AAB	AAAAB	AAAABB
Physics with Business Management[1]	BSc (Hons)	3	P & M & ...	–	ABB	AABBB	AABBBB
	MPhys	4	P & M & ...	–	AAB	AAAAB	AAAABB
Physics with Philosophy[1]	BSc (Hons)	3	P & M & ...	–	ABB	AABBB	AABBBB
	MPhys	4	P & M & ...	–	AAB	AAAAB	AAAABB
Physics with Foundation Year[1]	BSc (Hons)	4	[2]	–	[3]	[3]	[3]
	MPhys	5	[2]	–	[3]	[3]	[3]

For all BSc courses except "Maths and Physics" the standard offer is AB in mathematics and physics (with the A in either subject) plus B in a third A-level.

[1] All degrees can be taken with a year spent in Europe except "Maths and Physics" MPhys.

[2] Physics and mathematics are not essential.

[3] Flexible entry requirements.

See p114 for more information about the University of York

Information about universities

The following pages provide further information about university departments in the UK and Ireland and the physics-related courses that they offer.

Women in Physics: Project Juno

A university department can be awarded one of three levels by the Institute of Physics when they take steps to be more inclusive and ensure equality of opportunity for all staff and students. If a department has a Juno award this is indicated at the top of the departmental entry*.

IOP Juno Supporter departments have made a commitment to start meeting the Juno principles and looking at these issues within the department.

IOP Juno Practitioner departments are those that have been assessed as reaching a good level of gender awareness, according to the Juno principles.

IOP Juno Champion departments are those that have reached the highest level of inclusion and gender awareness, according to the Juno principles.

For more information about Project Juno, visit **www.iop.org/juno** or e-mail diversity@iop.org.

*Correct at time of going to press. Please see **www.iop.org/juno** for an up-to-date list of Juno departments.

Number of students at the university studying for an undergraduate degree.

University

Number of full-time undergraduates	**10 600**
Percentage reading science and engineering	**32%** 

IOP Juno Practitioner

Percentage of undergraduate students that are on a science or engineering course at the university.

School of Physics
Campus Building, University of Example
University Road, Any Town, A1 1AA

School of Physics academic staff: 30

Teaching content & philosophy: All physics courses provide students with a detailed understanding of the principles...

Further details about what you will learn on the courses offered by the university.

Further information:
Dr A Example
E-mail admissions@physics.university.ac.uk

Contact details for enquiries.

University of Aberdeen

Number of full-time undergraduates	**10 600**
Percentage reading science and engineering	**32%** 
IOP Juno Supporter	

Department of Physics
Fraser Noble Building, Old Aberdeen AB24 3UE
Tel 01224 272 518

Department of Physics academic staff: 12

Teaching content & philosophy: Our Honours Physics degree covers the principles that underlie the fundamental physical phenomena of nature and demonstrates how these principles are relevant to the world about us and to modern applications of physics in industry and research. We also offer joint honours degrees with mathematics, geology, philosophy and education, and a range of combined honours degrees. These include physics with a choice of modern languages, physics with geology, physics with chemistry, and physics with philosophy.

Special facilities/resources: We have been teaching physics at Aberdeen for 500 years. Our Honours course is broadened by input from the departments of mathematics, engineering, chemistry, biomedical physics and plant & soil science.

Special features of courses: Entry is for BSc or MA and not solely physics, allowing great flexibility of subject choice. Students can select courses from the wide range on offer and confirm their final honours subject after two years in the university. An ordinary BSc is also available and a three-year Designated BSc in all options for which Hons BSc can be taken.

Regulation on transfer between courses: Transfer is readily available in the early part of a course. Advisers of studies assist students in decisions.

Further information:
Dr N J C Strachan
E-mail physics@abdn.ac.uk
www.abdn.ac.uk/physics

University of Aberystwyth

Number of full-time undergraduates	**8500**
Percentage reading science and engineering	**27%** 

Institute of Mathematics and Physics
Penglais Campus, Physics Building, Aberystwyth SY23 3BZ
Tel 01970 628 624

Institute of Mathematics and Physics academic staff: 30

Teaching content & philosophy: Our degree schemes are driven by the specialist modules that complement the research expertise of the department built on top of the core material that is expected in a physics degree. This includes specialist research-led modules in space science and materials physics. There is a strong emphasis on small-group, laboratory-based teaching and project work designed to provide the problem-solving and communication skills essential to the working physicist. The Institute prides itself on its friendly, informal atmosphere, and students have excellent access to teaching staff.

Special facilities/resources: The department occupies a purpose-built building on a beautiful coastal campus. This houses large teaching laboratories along with lecture theatres, computing facilities, a library, research laboratories, 3D visualisation equipment, supercomputers, and a planetary terrain laboratory for testing Mars rovers.

Special features of courses: Individual and group projects often involve working with leading research groups and can include analysis of the latest data from space probes or international research facilities. Scholarships and awards worth up to £1700 per year are available. MPhys Physics with Planetary and Space Science and Astrophysics students have the opportunity to spend a semester studying space physics on the island of Svalbard in the high Arctic.

Regulation on transfer between courses: Transfer between courses is possible up to the start of year two.

Further information:
B Pinter, lecturer, Physics Admissions Tutor
E-mail imaps@aber.ac.uk
www.aber.ac.uk/en/imaps

PRIFYSGOL ABERYSTWYTH UNIVERSITY

www.aber.ac.uk/maps

Physics at Aberystwyth

A degree in physics at Aberystwyth will introduce you to the most fundamental and wide ranging of all sciences in an Institute which has a 125 year history of excellence in teaching and research.

MPhys and BSc degrees are offered in:

Physics
Physics with Planetary & Space Physics
Physics with Foundation Year
Astrophysics
Space Science & Robotics
Joint Honours schemes

We are known for our friendly, informal atmosphere and our commitment to small-group and laboratory based teaching, and topped the *Guardian University Guide 2009* table for student satisfaction. A strong emphasis is placed on undergraduate project work which is linked to active research interests. You may find yourself using the latest data from space probes or international research facilities.

Other degree features:

Planetary and Space Physics students can spend a semester in the Arctic
In-house supercomputing and 3D visualisation facilities
Scholarships available worth up to £1700 pa

Further information is available from the admissions tutor:

Email: **imaps@aber.ac.uk**
Tel: **01970 622802**
Or visit: **www.aber.ac.uk/maps**

Promoting Excellence in Teaching and Research

University of Bath

Number of full-time undergraduates	**9974**
Percentage reading science and engineering	**60%** 

Department of Physics
University of Bath, Bath BA2 7AY
Tel 01225 383673

Department of Physics academic staff: 29

Teaching content & philosophy: Our courses are designed to give students insight into the most exciting areas of contemporary physics and also to equip them with the professional skills needed to apply their knowledge after graduation. Considerable importance is attached to project, group, laboratory and computing work. All students have a personal academic tutor and weekly tutorials in groups of four or five. The teaching is rated as excellent (24/24) by the QAA.

Special facilities/resources: There are well resourced and newly refurbished undergraduate laboratories with a purpose-built MPhys laboratory and dedicated computer workroom. The computing facilities on campus include 460 networked PCs (24 hour, 7 day access) and a UNIX cluster, with parallel supercomputers. Students also undertake project work in state-of-the-art research laboratories.

Special features of courses: Both MPhys and BSc programmes allow study abroad or a salaried placement during the third or fourth years. Placements are usually in government or industrial research laboratories in the UK or overseas. A wide range of student choice is possible due to the modular course structure. Many optional modules are based on research specialisms.

The University of Bath: The university is on a campus site close to the centre of the World Heritage City of Bath. The city is famous for its Roman and Georgian buildings and for its musical, artistic and literary life. Students form a significant fraction of the population and are well catered for in the city.

Further information:
Prof. Paul Coleman and Dr Gary Mathlin, Admissions Tutors
E-mail ugphys.admissions@bath.ac.uk
www.bath.ac.uk/physics/undergraduate

University of Birmingham

Number of full-time undergraduates	**13 200**
Percentage reading science and engineering	**45%** 
IOP Juno Supporter	

School of Physics and Astronomy
University of Birmingham, Edgbaston, Birmingham B15 2TT
Tel 0121 414 4563

School of Physics and Astronomy academic staff: 40

The department and our courses: We are one of the largest departments in the country with internationally recognised research groups working on all length scales from the smallest fundamental particles to the astrophysics of the whole universe. Our programmes reflect this range and are available as either BSc or MSci entry – apart from Theoretical Physics and Applied Mathematics for which entry is joint. Much of the essential core material is taught in the first year thereby facilitating changes between specialisations in later years. The scale of the department allows us to offer a wide range of options in these years all taught by experts.

Special facilities/resources: The university has its own astronomical observatory, which forms part of the astrophysics programme but can be accessed by any student. Experimental work takes place in modern well equipped laboratories. There are also state-of-the-art computing laboratories to enable you to develop a full range of skills. In the third year there is the possibility of a group project developing an ability in teamwork. If you choose the MSci route you will undertake a research project within one of our research groups in your final year.

Teaching methods: You have a personal tutor in all years. You will meet your tutor weekly for the first two years – with a maximum tutorial size of four. In addition to lectures and laboratories we make use of other small-group teaching. There are mathematics example classes and physics workshops. The latter are designed to emphasise the universality of physics in explaining seemingly unrelated phenomena with the same concepts and laws; and to improve your teamwork and communication skills.

Careers: The problem-solving techniques developed in our physics courses – scientific thinking, mathematics, computing, model-building, experimentation, communication and teamwork skills – prepare our students not only for research work in universities and technology-based industries, but also for careers in such diverse areas as the financial sector, consultancy and even patent law. We have a dedicated careers officer who will offer support throughout the undergraduate career.

Further information:
Rachel Brown, Undergraduate Admissions Tutor
E-mail physics-adms@bham.ac.uk
www.ph.bham.ac.uk/admissions/

University of Bradford

Number of full-time undergraduates	**8783**
Percentage reading science and engineering	**49%** 

School of Life Sciences
University of Bradford, Richmond Building, Richmond Road, Bradford BD7 1DP
Tel +44 (0)1274 23 5692

School of Life Sciences academic staff: 6

Teaching methods: Assessment on our integrated science course is based on a mixture of essays, reviews, oral and poster presentations, problem-solving coursework, laboratory reports and unseen examinations. Each module is assessed during the semester in which it is taught, and has more than one type of assessment. Modules are supported through a Virtual Learning Environment and feedback is offered on all assessments. If you select the four-year course, formal recognition will be given to your placement year through the award of the Diploma in Industrial Studies.

Course contents: The integrated science degree is multidisciplinary in nature, with the IT, science and technology strands intertwined to equip the student with a knowledge of the subjects and the skills for their application. Appropriately for this area, in parallel to technical skills, students will also develop an understanding of the commercial and regulatory areas of this industry. The first year of the programme focuses on the fundamental chemical, engineering and IT building blocks required for sound understanding. The second year of the programme has a diverse range of study direction options, allowing the students to focus on two particular aspects. The third (final) year encompasses several study options, which creates specialism and is focused on preparing students for careers and employment.

Features of courses: The integrated science course builds on the expertise in teaching and extensive research within the School of Life Sciences, School of Engineering, Design and Technology and the School of Computing, Informatics and Media. These schools have an excellent record of providing courses that are practical and relevant to the needs of today's society. The course will combine skills in chemistry, engineering, technology and information technology. An optional placement year can be taken prior to the final year in the science, engineering or technology sectors.

Further information:
Neil Turner, Admissions Secretary
E-mail isci-admissions@bradford.ac.uk
www.brad.ac.uk/undergraduate/integrated-science-sls/

University of Bristol

Number of full-time undergraduates	**12 963**
Percentage reading science and engineering	**35%** 
IOP Juno Supporter	

School of Physics
H.H. Wills Physics Laboratory, Tyndall Avenue, Bristol BS8 1TL
Tel 0117 928 8731

School of Physics academic staff: 45

Teaching content and philosophy: At Bristol we offer a wide range of flexible degrees with excellent teaching and the opportunity to be involved in cutting-edge research. Teaching includes lectures, tutorials and problems classes, as well as laboratory and computational coursework. The development of transferable communication and research skills is integral to all courses. Core areas of physics are covered in the first two years allowing the maximum choice of options in the third and fourth years. Optional courses are taught by academics actively researching those topics, and the final-year research project sees students working closely with the active research groups and may lead to published results. We offer joint honours programmes in Physics and Philosophy, and Mathematics and Physics, and single honours programmes in Chemical Physics. The Physics and Philosophy programme is one of very few explicitly dealing with the philosophy of physics as opposed to the philosophy of science.

Special facilities/resources: New undergraduate teaching laboratories and a Nanoscience and Quantum Information Centre have opened in recent years. Facilities include high magnetic field/low-temperature equipment for superconductivity research, state-of-the-art atomic force microscopes for nanoscience, electron microscopes, X-ray diffractometers and modern telescopes for both optical and radio astronomy. We have spacious and well equipped lectures theatres, modern computing facilities and a dedicated physics library in the School of Physics and extensive links with international facilities, particularly in particle physics and astrophysics.

Special features: As well as maths and physics, first-year single honours physics students take a number of open units, such as languages, chemistry, astronomy, philosophy or additional mathematics. There is the option to spend the third year studying in Europe or working on research in industry. All programmes are accredited by IOP. The physics building is at the centre of the University precinct and close to the heart of Bristol, one of the most dynamic, historic and green cities in the UK. This integration into the buzz of city life gives Bristol a special atmosphere.

Regulation on transfer between courses: Transfer between BSc and MSci programmes is allowed up until the end of the second year. Transfer to single from joint honours programmes is permitted at the end of the first year. Other transfers are normally possible at the discretion of the department, if prerequisites have been met.

Further information:
E-mail physics-admissions@bristol.ac.uk, www.phy.bris.ac.uk/ugadmissions/home.html

University of Cambridge

Number of full-time undergraduates	**11 160**
Percentage reading science and engineering	**40%** 
IOP Juno Champion	

Department of Physics
Cavendish Laboratory, J J Thomson Avenue, Cambridge CB3 OHE
Tel 01223 337 420

Department of Physics academic staff: 70

Teaching content & philosophy: Theoretical and Experimental Physics within the Natural Sciences Tripos. Lectures, example classes, practical classes and projects. The majority of students progress to research degrees and we aim to provide the best possible foundation for further study. All students follow a common core for the first two and a half years, and may then choose courses that reflect the department's main research interests, in Astrophysics, High Energy Physics, Quantum Condensed Matter, and Soft Condensed Matter. The fourth year offers high-level exposure to a wide variety of topics of current interest. All fourth-year students conduct major research projects, many of which result in publications. Core courses are theoretically biased and mathematically demanding: all students take Mathematics in their first year, and most also take Mathematics in the second year.

Special facilities/resources: Individual tuition in colleges for undergraduates. Excellent research facilities for undergraduate projects and postgraduate research.

Special features of courses: Final-year students may take courses borrowed from Mathematics, Earth Sciences, the Judge Institute and Medical Physics. Transfer to and from other science subjects at all stages, including Astrophysics in the third and fourth years.

Regulation on transfer between courses: Various – guidance by college tutors.

Entry routes: Normal entry is to the Natural Sciences Tripos, in which students take three different bench subjects plus Mathematics in the first year. Alternative entry is to the Computer Sciences Tripos (with Physics and Mathematics), or the Mathematics Tripos (with Physics).

Undergraduate degrees: BA (Hons) (for the three-year course); BA (Hons) and MSci (for the four-year course).

Further information:
www.phy.cam.ac.uk/teaching

UNIVERSITY OF CAMBRIDGE

Department of Physics
Cavendish Laboratory

Physics at Cambridge

Physics at Cambridge is taken as part of the Natural Sciences Tripos. This provides a broad-based training, with increasing specialisation in later years. First year students choose from a variety of subjects, including earth sciences, materials science, chemistry and cell biology: in later years these can provide stepping stones to areas of applied physics such as geophysics, nuclear power and biophysics. Final year physicists are in demand to undertake their research projects in departments across the University, ranging from Mathematics to Plant Sciences.

In the first year, physics students read physics plus two other experimental subjects from a choice of six, and also take mathematics. In the second year physics students take two courses in physics, plus either mathematics or another experimental science. The third and fourth years are taught primarily within the Department of Physics, although some of our options courses are taught by related departments, such as Astrophysics and Mathematics.

It is possible to transfer to Natural Sciences to read physics at the ends of the first and second years, from Computer Science, Mathematics or Engineering, and also to transfer to other triposes at suitable points.

See www.cam.ac.uk/about/natscitripos/prospectus/ for more information.

Applying to Natural Sciences

Application for undergraduate courses is via the colleges – you may either specify a particular college on your UCAS form, or make an Open application, in which case a college will be allocated by computer. See www.cam.ac.uk/admissions/undergraduate/apply/ for more details.

We introduced a Master of Advanced Studies course in 2010-11. This is for students who already have an Honours Degree in Physics or a related discipline, and who would like to take the final year of the MSci as a standalone qualification. Application for the MASt is via the Board of Graduate Studies, www.admin.cam.ac.uk/offices/gradstud/admissions/.

Cardiff University

Number of full-time undergraduates	**26 000**
Percentage reading science and engineering	**45%** 

School of Physics and Astronomy
Queen's Buildings, The Parade, Cardiff CF24 3AA
Tel 02920 874 458

School of Physics and Astronomy academic staff: 35

Teaching methods: Cardiff University is part of the prestigious Russell Group of Universities in the top tier of UK research. Cardiff School of Physics and Astronomy has an international reputation for excellence and a strong commitment to innovative and supportive teaching. You will be taught in a research environment and will benefit from interaction with researchers who are working at the frontiers of science in their areas of expertise.

Course content: A broad range of material is offered, which covers mainstream physics and the major growth areas as well as frontier subjects such as nanostructure optoelectronics, laser physics, gravitational waves, cosmology, interstellar medium and star formation. Degree schemes offer a balance of fundamental understanding and problem-solving skills. There are traditional lectures, tutorials and laboratory work; in addition, there are computer-based, project-based and skills-based modules. Our first-year programme of modules has also been recently modernised.

Features of courses: Small-group tutorials; emphasis on practical training; third-and fourth-year research projects; personal and academic tutors; professional placement options; opportunity to attend a residential course.

Facilities/resources: Final-year project work may be carried out in one of the school's many research laboratories, in the undergraduate observatory, or with a theoretical team. There is a modern library with computers, wireless capability and group study areas; a project resource centre; a Physics & Astronomy society (Chaos).

Transfer between courses: Degree scheme normally decided at end of first year; possible to transfer in certain schemes at the end of the second year. Most courses will allow transfer to four-year option leading to MPhys, subject to academic achievement in years 1 & 2.

Further information:
Dr Carole Tucker, Admissions Tutor, tel 02920 874 144
Miss Nicola Hunt, Admissions Administrator, tel 02920 876 457
E-mail admissions@astro.cf.ac.uk
www.astro.cardiff.ac.uk/admissions

Physics and Astronomy at Cardiff

Cardiff University's School of Physics and Astronomy offers the opportunity to study mainstream Physics or Astrophysics in an internationally renowned, friendly research environment. We are an expanding School with internationally recognised excellence in research and a strong commitment to providing high quality teaching and student support.

Tuition is provided by means of lectures, tutorials, laboratory sessions and problem-solving classes with additional options in Physics Careers, Industrial Placements and Science Communication.

We offer degrees of both three and four years duration in -

- Physics (BSc and MPhys)
- Physics with Astronomy (BSc and MPhys)
- Astrophysics (BSc and MPhys)
- Physics with Medical Physics (BSc)
- Physics with a Professional Placement (BSc)
- Physics with Music (BSc)
- Theoretical and Computational Physics (BSc)
- Joint honours Mathematics and Physics (BSc)

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

Contact details:
Dr Carole Tucker, Admissions Tutor
Tel: 029 2087 4144/6457
email: admissions@astro.cf.ac.uk

University of Central Lancashire

Number of full-time undergraduates	30 000
Percentage reading science and engineering	24%

School of Computing, Engineering and Physical Sciences
Preston, Lancashire PR1 2HE
Tel 01772 893 560

School of Computing, Engineering and Physical Sciences academic staff: 25

Teaching methods: Tuition is in small friendly groups for lectures, seminars, tutorials, laboratory classes and group work. You receive plenty of individual attention and personal feedback on your practice exercises and assessments, which are a mixture of coursework and exams. Teaching is carried out by members of the Jeremiah Horrocks Institute who include specialists in soft matter physics, advanced optics and astrophysics, ensuring that students see the connections between what they are studying and current research.

Course content: All courses cover core physics and specialist modules that vary with the degree title. Practical sessions enable you to explore the physical principles and to learn experimental skills such as designing experiments and evaluating your results. In year 1 you study classical mechanics, special relativity, quantum physics, electricity and magnetism. One module gives everyone a taste of astronomical observing and maths modules cover techniques required by physicists, such as vectors, multiple integrals, matrices and eigenvalues. Year 2 covers electromagnetism, quantum mechanics, differential equations and much more. Options allow you to choose between scientific computing, instrumentation and astrophysics. In year 3, depending on your degree title, you may take modules in condensed matter, nuclear and particle physics, physics of stars, relativity and cosmology.

Special features of courses: You will be able to carry out your final-year project within one of our research groups (nano-structured soft matter, solar physics or galaxy formation and evolution). The MPhys project occupies the whole final semester and gives a real taste of academic research, potentially using the university's high-performance computing facility or data from cutting-edge computer simulations and astronomical telescopes. Students on astrophysics strands can apply to spend time at the South African Astronomical Observatory.

Facilities and Resources: UCLan's high-performance computing facility is available to third- and fourth-year students working on appropriate projects. Alston Observatory is one of the largest purpose-built teaching observatories in the UK, and has recently been enhanced with a new digital planetarium. Dedicated physics laboratories were fitted out in 2007, including laser and nuclear laboratories.

Transfer between courses: You can transfer between any of the physics courses at the end of the common first year and between BSc or MPhys at the end of year 2.

Further information:
Physics Admission Tutor, e-mail cepsoffice@uclan.ac.uk, www.uclan.ac.uk/physics

Cork Institute of Technology

Number of full-time undergraduates	**7000**
Percentage reading science and engineering	**45%** 

Department of Applied Physics and Instrumentation
Rossa Avenue, Bishopstown, Cork, Ireland
Tel +353 21 4335595

Department of Applied Physics and Instrumentation academic staff: 17

Teaching content and philosophy: Lectures, laboratory classes, third-year placement, final year project. the department's courses are all based on a firm foundation of physical science and mathematics. These essential principles provide the basis for developing the knowledge, skills and competence needed for the specialist course applications.

Special facilities/resources: The departmental resources include specialist laboratories in instrumentation, automation, computing, applied physics and electronics with a focus on applications in industry and society. Students have access to other specialist laboratories within the Institute. The department has strong links to other European universities. Major research interests include: astrophysics, surface physics, scanning force microscopy, instrumentation, photonics.

Special features of courses: The BSc in Applied Physics and Instrumentation (three years full-time) and the BSc Honours in Applied Physics and Instrumentation (one year full-time add-on to BSc) form a ladder structure that also includes a step-off award of Higher Certificate in Science in Applied Physics and Instrumentation after year 2 of the ladder. The other BSc Honours courses are four year full-time ab initio courses.

Progression from the BSc to the BSc Honours requires a minimum overall average in the BSc of 50%. For all other stages, progression requires a minimum overall average of 40%.

Postgraduate: MSc and PhD by research opportunities exist within the department.

Further information:
Dr L McDonnell
E-mail liam.mcdonnell@cit.ie
www.physics.cit.ie

Dublin City University

Number of full-time undergraduates	**7000**
Percentage reading science and engineering	**40%** 

School of Physical Sciences
Glasnevin, Dublin 9 Ireland
Tel +353 1 700 5306

School of Physical Sciences academic staff: 17

Teaching content & philosophy: Four-year honours degree programmes containing a balanced blend of lectures, tutorials, modern laboratory sessions and industrial experience, which together provide the basic understanding and develop the analytical problem-solving and laboratory skills appropriate for modern scientists and engineers.

Special facilities/resources: Excellent teaching laboratories and specialist laboratories in photonics, high-power lasers, plasmas, semiconductors, surface science, nano-materials, sensors and astronomy. Windows and high-end UNIX computer laboratories. Thin client system. High-speed wireless broadband throughout physics school.

Special features of courses: Emphasis on laboratory skills development; specialisms include: optoelectronics, semiconductors and computational physics; industry orientation programme including paid eight-month placement; undergraduate research placement; group and individual undergraduate research projects. The Physics with Astronomy degree includes a field trip to a foreign observatory.

Undergraduate degrees: BSc in Applied Physics, BSc in Physics with Astronomy, BSc in Physics with Biomedical Sciences, BSc in Physics with a Language/Science International, BSc Science Education (teaching qualification), BSc Environmental Science and Health.

MSc in Plasma Science and Technology: A part-time web-based taught masters programme aimed at scientists and engineers in the workplace.

Postgraduate research opportunities MSc and PhD degrees by research in: Optical Chemical Sensors and Biosensors, Low-Temperature and Industrial Plasmas, Laser-Matter Interactions, Atomic Physics, Condensed Matter, Surface and Interface Science, Physics Education, Astronomy and Astrophysics.

Regulation on transfer between courses: Transfers possible – guidance by university tutors.

Further information:
Prof. Greg Hughes
E-mail Lisa.Peyton@dcu.ie
www.dcu.ie/physics

Dublin Institute of Technology

Number of full-time undergraduates	**12 000**
Percentage reading science and engineering	**30%** 

School of Physics
Kevin Street, Dublin 8, Ireland
Tel +353 1 402 4560

School of Physics academic staff: 29

Teaching content and philosophy: We offer four-year honours degree programmes in Physics Technology, Physics with Medical Physics & Bioengineering and Science with Nanotechnology. We also offer an ordinary degree in Industrial & Environmental Physics. Physics in the first and second years is delivered through the medium of problem-based learning. The emphasis throughout is on applied and experimental aspects, with laboratory work and problem-solving highlighted.

Special facilities/resources: Mainframe DEC computer system, work stations, modern laboratories for optics, medical physics and clinical measurement science, instrumentation, computing and computational physics.

Special features of courses: Main topics are medical physics, nanotechnology, environmental physics, renewable energy, instrumentation and solid state physics, computational physics, digital systems, sensors, optical and quantum technologies; options are medical imaging systems, optical communications, radiation and nuclear physics, microwaves, acoustics, materials spectroscopy, applied biophysics, statistical process control, holography and fluid dynamics. There is a major project in the final year. Professional development and key transferable skills, including modules on entrepreneurship, innovation, intellectual property and commercialisation are included in all of our programmes.

Other programmes: Ordinary degree in Industrial & Environmental Physics, with progression to honours degree; honours degree in Physics Technology; honours degree in Clinical Measurement Science (with one-year placement in third year); honours degree in Physics with Medical Physics & Bioengineering; honours degree in Science with Nanotechnology; honours degree in Optometry. Mature student applications welcome. Funded postgraduate research opportunities.

Regulation on transfer between courses: Advanced entry welcomed. Credit/distinction graduates of ordinary degree may transfer to honours degree programme. Other applicants assessed individually.

Further information:
Dr John Doran
Tel +353 1 402 3304, fax +353 1 402 3392
E-mail john.doran@dit.ie
www.physics.dit.ie

University of Dundee

Number of full-time undergraduates	**9700**
Percentage reading science and engineering	**19%** 
IOP Juno Supporter	

Electronic Engineering and Physics Division
Dundee DD1 4HN
Tel 01382 384 912

Electronic Engineering and Physics Division academic staff: 22

Teaching content and philosophy: Dundee's Physics degree course was recently ranked in eighth place in the *Guardian* League Table of all UK Universities (May 2009), making it the highest-ranked physics degree in Scotland at that time. This is due in no small part to the fact that we have one of the most favourable staff-to-student ratios, and our small and friendly department is able to cater for each student's individual learning needs. Our programmes are designed to deliver the optimum balance of classical and modern physics to best prepare our graduates for entry into a broad range of science and technology jobs. The majority of our academic staff work at the highest international level in research, but have also have had experience working in industry as well, and this is reflected in the practicality of our taught courses. Course modules are designed to encourage and develop problem-solving abilities, and hands-on laboratory classes reinforce the lecture material, making for confident physicists with a highly professional outlook.

Special facilities/resources: The undergraduate laboratories have been substantially refurbished and modernised in recent years. The undergraduate curriculum is broad, but has focused themes that play to the traditional research strengths of the division. We have also recently recruited several "new blood" academic staff with expertise tailored specifically to meet the demands of the emerging technological workforce. New research groups in areas such as Renewable Energy, Next-generation Microelectronics, Laser Development & Biophotonics, Nanotechnology and Biophysics have now been established. A somewhat unique aspect to the Dundee undergraduate experience is the opportunity, even in the first year, to actively participate with the research environment by joining the Undergraduate Research Group (www.cicass.net/urg.html). The university also has a state-of-the-art virtual learning environment that exploits innovative web-based resources to augment the lecture material.

Special features of courses: Options for a three-year degree without honours; choice of four-year honours courses; five-year MSci option. Direct entry to second year possible with appropriate qualifications.

Regulation on transfer between courses: Flexibility to transfer to Engineering and other science options at end of first year, with possibility to defer degree choice until end of second year.

Further information:
Dr Paul Campbell
E-mail p.a.campbell@dundee.ac.uk, www.dundee.ac.uk/elecengphysics

Durham University

Number of full-time undergraduates	**11 075**
Percentage reading science and engineering	**35%** 
IOP Juno Supporter	

Department of Physics
Rochester Building, The Science Laboratories
South Road, Durham DH1 3LE
Tel 01913 343 726

Department of Physics academic staff: 60

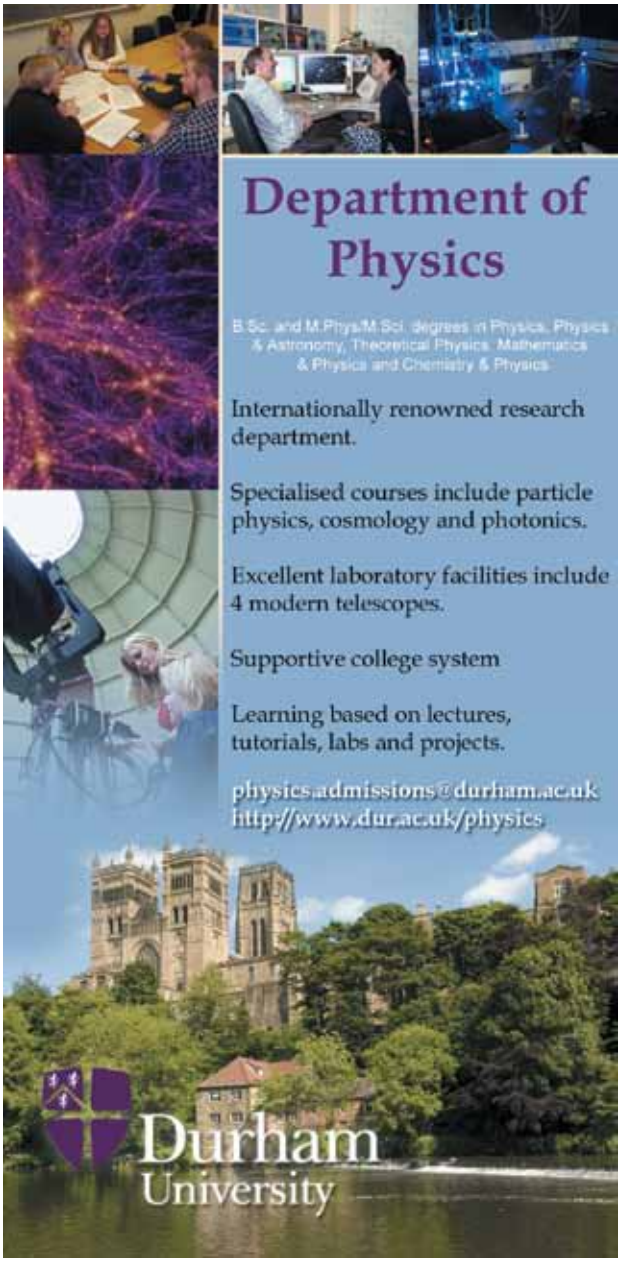
Teaching content and philosophy: Our aim is to combine the pure and applied requirements of modern physics in order to stimulate your excitement and understanding of physics and give you the best possible start in your career. A core of basic physics in the first and second years is used to provide a foundation for courses in Physics, Theoretical Physics, Physics and Mathematics, and Physics and Astronomy. Students may also take Physics courses as part of a Natural Sciences degree.

Special facilities/resources: Observatory facilities are available to students. An extensive range of materials analysis equipment (electron microscopes and X-ray apparatus) is used in student projects. The department has first-class research facilities in particle physics, astronomy and solid-state physics, and hosts the National Research Institute for Particle Physics Phenomenology and the Institute for Computational Cosmology. Project work in the final year of the MPhys is usually carried out with one of the research groups in the department.

Special features of courses: Durham's modular course structure allows a wide range of optional subjects. The basic physics core encompasses the fundamental principles and practices of the subject, and an extensive range of options allows you to develop a specialist interest in theoretical or practical physics, in technological applications, or in research subjects like Astronomy or Particle Physics. Throughout the course, the programme includes flexible learning and teaching styles, balancing formal teaching such as tutorials and lectures with active learning through self study, problem solving and project work.

Regulation on transfer between courses: Normally transfer between all of the physics-based honours degree courses is possible, and students are encouraged to follow their interests and needs, especially at the end of year one. Transfer (both ways) between the three- and four-year courses is possible.

Further information:
Admissions Secretary
E-mail physics.admissions@durham.ac.uk
www.dur.ac.uk/physics/undergraduate



University of East Anglia

Number of full-time undergraduates	**11 804**
Percentage reading science and engineering	**25%** 

Science Faculty
University of East Anglia, Norwich NR4 7TJ
Tel 01603456161

Science Faculty academic staff: 439

Teaching methods: All degrees include lectures, seminars/workshops and some laboratory work (depending on the modules chosen). A few modules also offer field work.

Course contents: There is a lot of flexibility in the courses offered at UEA. For this reason it is best to consult our web pages for course content.

Features of the Natural Sciences Programme: This programme allows students to combine modules from more than one school within the science faculty. Natural sciences students are registered at faculty level rather than within a particular school so that they have their own identity.

Transfer between courses: On the Natural Sciences programme it is possible to change from one of our three-year degrees to one of our four-year degrees or the other way round, providing that there is good academic achievement in years 1 and 2 of the course.

Further information:
Science Admissions Office
E-mail sci.admiss@uea.ac.uk
www.uea.ac.uk

University of Edinburgh

Number of full-time undergraduates	18 368
Percentage reading science and engineering	32%
IOP Juno Practitioner	

School of Physics and Astronomy
James Clerk Maxwell Building, The King's Buildings
Mayfield Road, Edinburgh EH9 3JZ
Tel 01316 517 067

School of Physics and Astronomy academic staff: 61

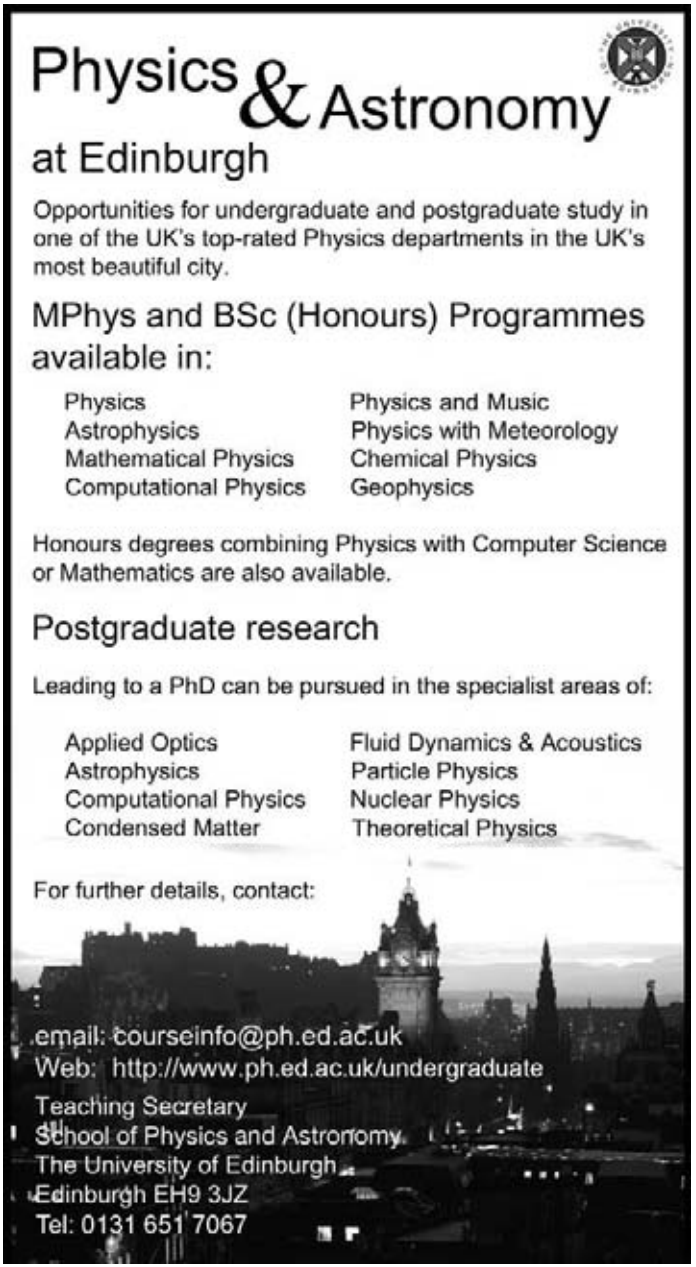
Teaching aims: To provide a thorough grounding in the fundamental principles of physics; to provide exposure to frontier activities, capitalising on the strengths of an active research environment; to provide a balanced training in the three methodologies of modern physics (experimental, theoretical and computational), with opportunities for specialisation; to develop general transferable skills related to communication, computing and problem solving.

Special facilities/resources: Range of research laboratories providing opportunities for advanced project work; Institute for Astronomy, housed in the Royal Observatory alongside the UK Astronomical Technology Centre; special computational physics laboratory complementing the school's UK-leading high-performance computing facilities; collaboration with other departments to provide extended range of specialist teaching.

Special features of courses: Broad range of degrees (BSc and MPhys, with single honours in experimental, mathematical, computational or astrophysics) sustained by wide research activity; fexible course structure allowing deferment of choice of degree to end of year one or two; fast-track stream leading to four-year MPhys and three-year BSc.

External ratings: Research Assessment Exercise (2008): equivalent of a 5* grade under the assessment scheme used in RAE 2001.

Further information:
E-mail courseinfo@ph.ed.ac.uk
www.ph.ed.ac.uk



University of Exeter

Number of full-time undergraduates	13 200
Percentage reading science and engineering	38%
IOP Juno Supporter	

Physics and Astronomy
Stocker Road, Exeter, Devon EX4 4QL
Tel 01392 72 5349

Physics and Astronomy academic staff: 40

The study of Physics and Astronomy is stimulating and thought provoking. Set in a beautiful location, our department provides an inspiring environment for you to address the intellectual challenges that arise as part of your scientific training.

Great reputation, great place to live: The University of Exeter is ranked 12th in *The Times Good University Guide 2011*, making it the highest ranked South West university. We have one of the highest National Student Survey rankings in the country, being in the top 10 since the survey began. Exeter is rated as one of the best places to live in the UK and is surrounded by some of the most stunning countryside and coastline in Britain. The physics building is located within 15 minutes of the city centre.

Wide range of programmes: We offer a choice of four-year MPhys and three-year BSc programmes, with the opportunity to specialise in astrophysics, spend a year studying abroad (North America, Australia or New Zealand), or undertake a paid industrial placement. The modules available to you within the programmes range from graphene science and cosmology, to the physics of medicine and metamaterials. You can also take modules in other subjects, such as a modern language.

Research-led teaching: We believe every physics student benefits from being part of a research-led culture and being taught by experts – you will discuss the very latest ideas in classes and tutorials. You will obtain first-hand experience of what it is like to conduct research by undertaking an extended project as a member of one of our research groups (MPhys) or by working on an industrially inspired problem (BSc).

Facilities and resources: There has been a recent multi-million pound investment in ultra-fast lasers, clean-rooms, nanofabrication, bio-imaging, microwave and computing facilities. Our educational resources include an astronomical observatory, newly refurbished teaching laboratories and a renovated 7th floor student learning environment.

Academic support: Groups of about four or five students meet every week with a lecturer or professor for tutorials. Weekly problem classes for both mathematics and physics modules provide further opportunities for support. Applicants who meet our minimum entry requirements will be invited to a visit day that will include the opportunity to meet current students and a discussion of your application with a member of staff. You are also welcome to visit us before completing your UCAS form.

Further information:
Dr Alastair Hibbins, Admissions Tutor, e-mail PhysUG@exeter.ac.uk
http://emps.exeter.ac.uk/physics-astronomy/undergraduate/

Physics and Astronomy

- 8th in the UK for world leading and internationally excellent research (RAE 2008), which includes star formation, graphene science, metamaterials and biomedical physics
- Excellent educational resources include an astronomical observatory, extensive computer suites, refurbished teaching laboratories and a renovated student learning environment
- Weekly, small group tutorials with academic staff
- An experimental or theoretical project of up to 2-year duration, as part of the MPhys programmes
- Multi-million pound investment in ultra-fast lasers, bio-imaging, microwave and computing facilities
- New clean room opened Spring 2011, including a £1m electron-beam lithography system for nanofabrication
- Single Honours degrees accredited by the Institute of Physics
- Opportunities to study abroad or take an industrial placement year
- A beautiful campus in an exceptional location – close to the city centre, stunning beaches and countryside

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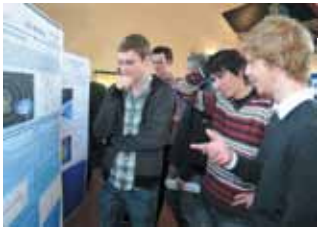
UNIVERSITY OF EXETER

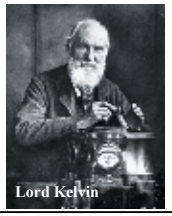
Tel. +44 (0)1392 725349
Email: physug@exeter.ac.uk
www.exeter.ac.uk/physics-astronomy

University of Glasgow

School of Physics and Astronomy



- Ranked 1st in Scotland in the Times Online Good University Guide 2010 and 2nd in the UK overall.
- The 2009 and 2010 Guardian University Guides, and the 2010 Complete University Guide, rank us top among UK Physics & Astronomy Departments for job prospects.
- Our flexible degree structures allow access to a wide range of different single and joint honours BSc and MSci degree programmes.
- Faster degree routes available for the most able students.

www.glasgow.ac.uk/physics

University of Glasgow

Number of full-time undergraduates	**15743**
Percentage reading science and engineering	**45%** 
IOP Juno Practitioner	

Department of Physics and Astronomy
Kelvin Building, Glasgow G12 8QQ
Tel 0141 339 8855

Department of Physics and Astronomy academic staff: 39

Teaching content and philosophy: The honours courses are structured so that all students study core courses and students reading honours physics alone take additional courses on applied physics. In their fourth year all students choose from a list of options that currently includes plasma physics, nuclear physics, particle physics, semiconductor physics and devices, signals noise and telecommunications, lasers, advanced quantum mechanics, gravitation and cosmology, medical imaging. MSci students have further optional courses.

Special facilities/resources: The breadth of practical work in pure and applied physics afforded by a well equipped honours laboratory and access to the specialised equipment of the experimental research groups. Teaching was rated "Excellent" in the recent Quality Assurance exercise.

Special features of courses: Common first two years of physics and first year of mathematics for all degrees. Entry to the MSci or BSc degree course is at the start of year three. Students meet regularly with members of staff in small groups for discussion and problem solving.

Regulation on transfer between courses: Generally possible after one or, in some cases, two years.

Further information:
www.gla.ac.uk/schools/physics

Heriot-Watt University

Number of full-time undergraduates	**5700**
Percentage reading science and engineering	**71%** 
IOP Juno Supporter	

School of Engineering and Physical Sciences
Riccarton, Edinburgh EH14 4AS
Tel 0131 451 3025

School of Engineering and Physical Sciences academic staff: 27

Teaching content and philosophy: Our courses deal with fascinating ideas about the fundamental nature of the physical world, such the mysterious quantum world of sub-atomic particles and the way the fabric of space and time is revealed by relativity theory. We also explore how these fundamental concepts form the basis of the important technological advances on which our society is based. The relevance of our courses to today's competitive industrial needs is due in large part to our highly successful research programme covering a wide range of topics including lasers, semiconductors, optoelectronics, optical fibre sensors environmental monitoring, quantum computing and nanotechnology.

Special facilities/resources: The department is at the forefront of innovative teaching methods including online teaching materials. The teaching laboratories are well equipped and fully supported by the university-wide computing network. The courses are up to date and presented by staff who are conducting state-of-the-art research in the various specialisms. Final-year project students gain real research experience by undertaking their final-year project work as part of one of the research groups in the department.

Special features of courses: Our courses have been designed to take account of changes in school qualifications. It is expected that increasingly students with good Advanced Higher or A-level qualifications will enter at second level and then proceed to obtain a BSc honours degree in three years or an MPhys in four years.The relatively small size of the department allows us to take a caring interest in each individual student and so he or she can achieve their full potential.

Regulation on transfer between courses: There is considerable flexibility in transferring between courses. The final choice of physics degree need not be made until after level 3. This enables you to select a programme of study appropriate to your developing interests and career aspirations. It is possible to study a wide range of science and engineering subjects in level 1 so that other degree options are open to you at level 2.

Further information:
Admissions Tutor
E-mail physics@eps.hw.ac.uk
www.eps.hw.ac.uk/departments/physics.htm

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Heriot-Watt University, Edinburgh EH14 4AS

Tel: 0131 451 3025
e-mail: physics@eps.hw.ac.uk
Web: http://www.phy.hw.ac.uk

University of Hertfordshire

Number of full-time undergraduates	**25 000**
Percentage reading science and engineering	**25%** 

School of Physics, Astronomy and Mathematics
College Lane, Hatfield, Herts AL10 9AB
Tel 01707 284 605

School of Physics, Astronomy and Mathematics academic staff: 28

Teaching content and philosophy: Honours degree courses are available in Physics and Astrophysics. We place strong emphasis on developing problem-solving techniques, nurturing independent thought and originality, and enhancing skills and physical understanding through practical work. We combine traditional physics teaching with modern approaches, such as blending scientific research and transferable skills, to create degrees that are strongly focused on the requirements of employers in teaching, in industry and in scientific research. Our graduates work in a wide range of sectors including scientific research, the nuclear industry, art conservation and teaching. Scholarships are available for entrants with excellent qualifications.

Course contents: Our degrees provide a solid grounding in physics and astrophysics, underpinned by modern research. Second- and third-year options offer the opportunity to specialise in areas such as applied mathematics, computational physics, astrophysics or space sciences. Closely supervised project work forms a substantial element of the final year of study and is often based on research carried out locally or with international collaborators.

Facilities and resources: The department has modern purpose-built laboratories with a range of excellent instrumentation. The University Observatory at Bayfordbury provides some of the best facilities in the UK for teaching astronomical techniques. The school hosts one of the largest astrophysics research groups in the UK: the Centre for Astrophysics Research, with more than 50 astronomers from postgraduates to professors. The university's award-winning Learning Resources Centre has 24/7 access and contains three floors of PCs and workstations as well as multimedia suites and TV studios.

Transfer between courses: Our first year is common to both Physics and Astrophysics degrees, allowing easy transfer between courses at the end of the first year. Both Physics and Astrophysics degrees are available with sandwich options. Subject to validation, we expect to offer an integrated Masters of Physics (MPhys) in both Physics and Astrophysics from October 2012. Flexible part-time degree options are also available to all students.

Further information:
Dr Mark Thompson, Admissions Tutor
E-mail physics-admissions@herts.ac.uk
www.herts.ac.uk/courses/schools-of-study/physics-astronomy-and-mathematics

University of Hull

Number of full-time undergraduates	13 824
Percentage reading science and engineering	25%

Department of Physics
Cottingham Road, Hull, East Yorkshire HU6 7RX
Tel 01482 465 501

Department of Physics academic staff: 9

Teaching content and philosophy: Lectures, small-group tutorials, practical classes that include both individual and group work and presentational skills. Emphasis on training for research and industrial employment through final-year research project.

Special facilities/resources: Modern undergraduate laboratories including lasers, optoelectronics, electronics, acoustics, materials experiments and a computer suite. Well equipped research laboratories for characterisation of organophotonic and semiconductor materials and devices and laser development and applications. Well stocked departmental library for private study.

Special features of courses: Core courses in physics and applied physics (years one/two) with specialisms in years three and four. A wide range of modules available throughout the university as free electives. All courses have a research project as part of final assessment. The final years of the MPhys courses have a research orientation. A particular feature of the Applied Physics BSc is that A-level maths is not mandatory for entry, making this course particularly suitable for the more practically oriented student. A Physics BSc degree incorporating a foundation year is available to allow access for students whose background or qualifications do not permit normal entry. The programme in Physics with Astrophysics has the option of spending time at an observatory abroad.

Regulation on transfer between courses: Transfer is possible between all courses up to the end of the second year.

Further information:
Admissions Tutor
E-mail physics@hull.ac.uk
www2.hull.ac.uk/science/physics.aspx

Imperial College London

Number of full-time undergraduates	**8600**
Percentage reading science and engineering	**77%** 
IOP Juno Champion	

Department of Physics
The Blackett Laboratory, Prince Consort Road London SW7 2AZ
Tel 020 7594 7513

Department of Physics academic staff: 105

Teaching content and philosophy: The courses cover both the fundamental aspects of physics and its modern applications. Special emphasis is given to research results and to preparing students for international careers. The first two years concentrate on providing a strong foundation in modern and classical physics, mathematics and experimental techniques but include some options. Years three and four complete core physics but are largely devoted to a wide range of advanced physics and mathematical options plus a major research project. Options are also available in humanities and business. By appropriate choice of options and project, students can tailor their degree to a number of specialisms including Astrophysics, Medical Physics, Optics and Lasers, Theoretical Physics, or to choose a broad balanced programme over a range of topics.

Special facilities/resources: Wide range of research facilities available for use in student projects. Almost all areas of current physics research covered in options. Extensive computing facilities including large cluster of PCs.

Special features of courses: Wide range of 28 advanced options plus15 Humanities/ Business School options. Small group tutorials and a wide range of opportunities for individual help. Joint course available with the adjacent Royal College of Music "Physics and Music Performance" and also a course with a year spent at a top university in another European country (France, Germany, Italy, Spain or Switzerland). The whole degree programme benefits from our strong international, particularly European, connections, which result in wide recognition.

Regulation on transfer between courses: Flexible system of transfers between courses.

Further information:
Dr Robert Forsyth
E-mail ph.admissions@imperial.ac.uk
www.imperial.ac.uk/physics

Keele University

Number of full-time undergraduates	7500
Percentage reading science and engineering	25%

School of Physical and Geographical Sciences
Lennard-Jones Labs, Keele University, Keele, Staffordshire ST5 5BG
Tel 01782 733 527

School of Physical and Geographical Sciences academic staff: 12

Special features of courses: Students study a second subject in equal weight alongside Physics or Astrophysics for two years of the degree. In the third year, it is possible either to study Physics or Astrophysics exclusively (Major/Minor Honours BSc), or to continue studying the second subject as well (Dual Honours BSc). A wide range of subject combinations is possible, including (for example) Physics or Astrophysics with Mathematics, Chemistry, Computer Science, Geology or another natural science; or with Business Management, English, Music Technology, Philosophy or another humanities subject or social science.

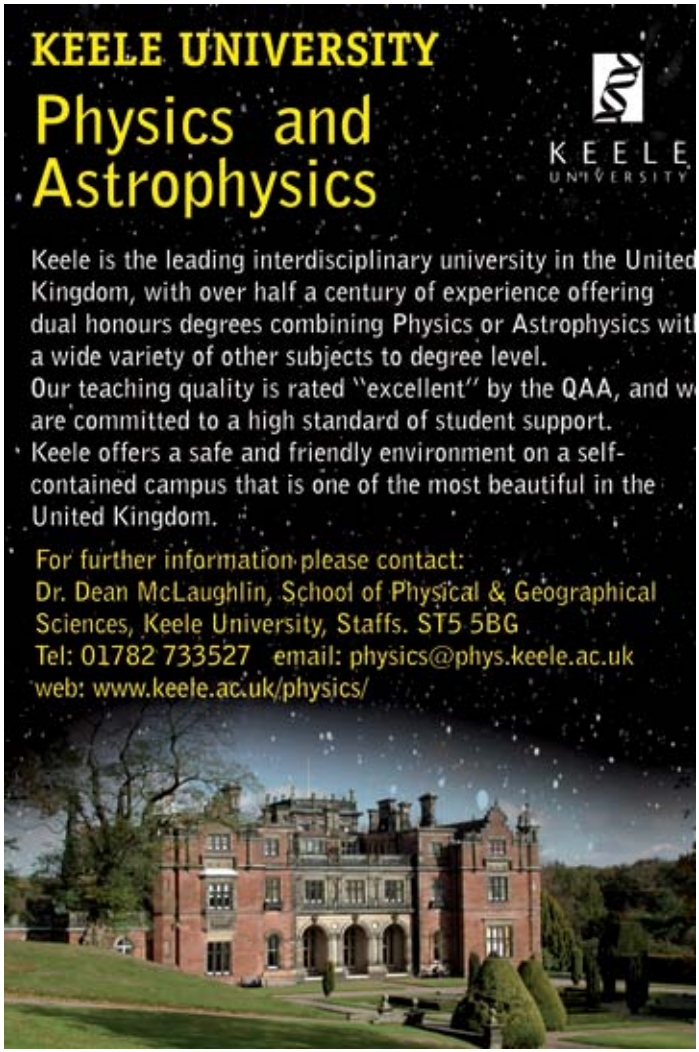
Course content and philosophy: Modular course structure. An integrated treatment of fundamental themes leads to final-year options informed by research in the department. Essential mathematics and computing are taught within the course. Core physics modules are Mechanics, Gravity & Relativity*; Oscillations & Waves*; Nature of Matter*; Electricity* & Magnetism; Quantum Mechanics*; Statistical Mechanics and Solid State Physics*; Optics and Thermodynamics*; Nuclear Physics; Electromagnetism*; and a Project*. The astrophysics core comprises the physics modules denoted by (*), plus Stellar Structure and Stellar Astrophysics. Third-year options, all of which are open to both physics and astrophysics students, include further Quantum Physics; Polymer Physics; Particles, Accelerators & Reactors; Computational Methods in Physics & Astrophysics; Physics of Compact Objects; Physics of Galaxies; Physics of the Interstellar Medium; Life in the Universe; and Cosmology. Tutorials, labs and project/dissertation work consolidate specialised physics knowledge and develop generic, transferable skills in analytical thinking, modelling, communication and presentation, teamwork, and IT.

Special facilities/resources: Good provision of local and networked computing facilities. A recently refurbished, on-campus observatory with a 0.6 m telescope is accessible to students.

Transfer between courses: Transfer between Physics and Astrophysics in the first year.

Other information: Teaching in the department is rated excellent (22/24) by the QAA. The university offers courses and certifications in several foreign languages, which are not part of the Physics degree but are free of charge to interested students. It is possible in the second year to spend a semester studying abroad.

Further information:
Dr Dean McLaughlin
E-mail physics@phys.keele.ac.uk,www.keele.ac.uk/physics



University of Kent

Number of full-time undergraduates	12 300
Percentage reading science and engineering	20% 

School of Physical Sciences
Ingram Building, Canterbury CT2 7NH
Tel 01227 823 759

School of Physical Sciences academic staff: 12

Teaching content and philosophy: A broad spectrum of courses is covered, starting with core units such as Mathematics and Physics, progressing into advanced courses such as Wave Mechanics and Quantum Physics. Specialised units in Astrophysics are also offered. Our Physics degrees are accredited by the Institute of Physics and we aim to provide thorough training in a stimulating learning environment to equip our graduates to collaborate and compete successfully throughout their careers.

Special features of courses: Teaching is via lectures, practical classes, console sessions, tutorials and workshops. A choice of three-year BSc and four-year MPhys courses are available. The BSc programme offers a broad training in Physics, where you acquire the numeracy, theoretical and practical problem-solving and communication skills so highly regarded by future employers. In the MPhys programme, core physics knowledge and skills are enhanced with further in-depth training required for a physics-based career, including practical aspects of the research process and involvement with major projects within the school's research groups (Applied Optics, Forensics, Materials Research and Space Science and Astrophysics). In your final year, the combination of specialist units and an attachment to one of our research teams will open avenues for even deeper exploration using our cutting-edge research facilities. You might find yourself involved in the design of space-probe instrumentation, mapping the retina of a patient's eye using fibre optics, taking the Channel Tunnel to Paris for neutron scattering work or doing light gas gun experiments to test whether life could survive meteor impact into planets. The MPhys with a year in the USA allows students to go to North America to spend their third year at one of our partner universities.

Regulation on transfer between courses: The first year gives flexibility for transferring between our specialisms and degrees.

Special facilities/resources: Following investment of £1.8 m, we are now located in a newly refurbished building with new facilities within the campus. The campus overlooks the beautiful city of Canterbury and its cathedral (in which the graduation ceremony takes place) and is within easy reach of London and Europe. Kent not only offers a great location but also first-class teaching, fantastic facilities and an excellent social life.

Further information:
E-mail spsrecruit@kent.ac.uk
www.kent.ac.uk/physical-sciences

King's College London

Number of full-time undergraduates	13 700
Percentage reading science and engineering	28% 
IOP Juno Supporter	

Department of Physics
Strand, London WC2R 2LS
Tel 020 7848 2155

Department of Physics academic staff: 27

Teaching content and philosophy: Our programmes have a common core of physics modules, to provide a sound training in the fundamentals of physics, while offering the flexibility to accommodate various interests, including theoretical physics, medical physics and computing. We also offer joint honours programmes with Philosophy and with Mathematics. Our programmes are not only designed to teach physics to a high standard, but also to give you transferable skills, which will give you a headstart in your career.

Special facilities/resources: The department moved recently into newly refurbished space, with views over the Thames to the London Eye and Westminster. The central location of our department in the very heart of London gives easy access to major libraries and many leading societies including the Institute of Physics. Physics students have their own dedicated computer facilities and well equipped undergraduate laboratories. The department's own strong research base, and its links with physicists working in biomedical sciences in the College, provide the opportunity to undertake final-year projects, using state-of-the-art facilities, in exciting and cutting-edge areas of research in physics, including biophysics, condensed matter physics, nanotechnology, biomedical imaging, X-ray physics, and theoretical particle physics and cosmology.

Special features of courses: We offer a range of programmes, some specialising in physics, some combining physics teaching with another discipline. Students also have the opportunity to spend a year in leading universities in the USA and Europe. A feature of the MSci is that final-year students may take courses from a consortium of University of London physics departments. All third-year and final-year MSci students do supervised projects, which allow them to experience some of the excitement of research. Each student has a personal tutor and will attend a tutorial session throughout their first year. Staff and students are members of the Maxwell Society, a departmental body that organises social and academic events and lectures.

Regulation on transfer between courses: There are no administrative difficulties in such transfers provided academic requirements can be satisfied.

Further information:
Julia Kilpatrick
E-mail julia.kilpatrick@kcl.ac.uk
www.kcl.ac.uk/physics

Lancaster University

Number of full-time undergraduates	**8721**
Percentage reading science and engineering	**20%**
IOP Juno Practitioner	

Department of Physics
Lancaster LA1 4YB
Tel 01524 594786

Department of Physics academic staff: 40

Teaching content and philosophy: Lancaster is one of the top physics departments in the UK (rated number one in the 2008 Research Assessment Exercise). We are a medium-sized, friendly department with a wide range of degree courses that provide a sound basis for careers in science and a wide variety of other professions. Each of our degree schemes is based on a core of classical and modern physics, leading to a choice of specialisation in later years. We offer courses in experimental and theoretical physics, and you can tailor your degree scheme to your interests. We teach our students in small groups as well as in workshops, laboratories and lectures, and pride ourselves on the high level of support we offer.

Special facilities/resources: The department has world-leading research activities in Low Temperature Physics; Nonlinear Biomedical Physics; Nanoscale Dynamics and Mathematical Physics; Mid-Infrared Optoelectronics and Nanostructures; Particle Physics and Accelerator Science; Cosmology and Astroparticle Physics; Space Plasma Environment and Radio Science. Students benefit from involvement in research projects associated with our first-class research groups and we offer a wide range of optional courses inspired by our research interests. The department has well equipped teaching laboratories, lecture theatres and full computing facilities for undergraduates. There is also an active student-run Physics Society, which newcomers are highly encouraged to join.

Special features of courses: We offer four-year MPhys and three-year BSc (Hons) degrees in: Physics; Physics, Astrophysics and Cosmology; Physics, Astrophysics and Space Science; Theoretical Physics; Physics with Particle Physics and Cosmology. Each has a substantial amount of project work in the final year. We also offer joint honours degrees across our physics and mathematics departments in Theoretical Physics with Mathematics (four-year MSci and three-year BSc). Furthermore, Lancaster University has one of the best developed North American exchange programmes in the UK, and our students can spend their penultimate year studying in the USA or Canada. Students on the Physics/North America programme undertake the equivalent of any one of our other degrees schemes (excluding the Theoretical Physics with Mathematics joint degree).

Further information:
Dr David Burton
E-mail physics-ugadmissions@lancaster.ac.uk
www.physics.lancs.ac.uk

University of Leeds

Number of full-time undergraduates	**22 175**
Percentage reading science and engineering	**38%** 

School of Physics and Astronomy
EC Stoner Building, Leeds LS2 9JT
Tel 01782 733 527

School of Physics and Astronomy academic staff: 35

Teaching content and philosophy: At Leeds, we incorporate our world-class research into our excellent teaching (rated 24/24 in the government Assessment Exercise). Study ranges from lectures and tutorials to example classes, student-led seminars and web-based assignments. Experimental physics is learned through continually assessed lab work where each student has their own apparatus, leading up to a final-year research project. Advanced, optional modules allow many topics in physics and astronomy to be studied in greater depth. Students also study core mathematics and computing and learn skills valued by graduate employers.

Special facilities/resources: A large computer cluster in the school is for the exclusive use of our students. Adjacent are the physics quiet study room and the physics coffee bar. Wireless internet is available throughout. Our well equipped teaching labs are supplemented by a scanning probe microscopy suite and onsite telescopes with CCDs. Summer placements offer high-achieving students paid work experience in our research labs.

Special features of courses: The school works with small tutorial groups, typically four students in year one, and provides additional support for students from non-traditional backgrounds. Elective modules can be selected from many disciplines across the university. In years three and four students have a wide choice of advanced modules, linked to the research in the school, ranging from the very small studying nanoscale processes and quantum information to the largest scales observed in cosmology. Final-year projects are within a research group, where students are involved with an internationally recognised team and use state-of-the-art equipment. We offer study abroad for either a semester or a year in year three at universities in France, Germany, Denmark, Spain, Canada or the US. Students can alternatively choose to spend their third year in industry. A Physics in Schools module is available for those interested in teaching. The university is a 10 minute walk from the city centre and on the edge of the Yorkshire Dales.

Regulation on transfer between courses: Transfer between the BSc and MPhys can be considered at the end of the second year.

Further information:
Sarah Gardner, Admissions Secretary
E-mail physics.admissions@leeds.ac.uk
www.physics.leeds.ac.uk

University of Leicester

Number of full-time undergraduates	**8899**
Percentage reading science and engineering	**44%** 
IOP Juno Supporter	

Department of Physics and Astronomy
University Road, Leicester LE1 7RH
Tel 0116 252 3575

Department of Physics and Astronomy academic staff: 41

Degree courses: Five interlinked honours degrees (over three years for BSc and four years for MPhys) with a common core of physics and mathematics, plus a wide range of specialist options based on the department's world-leading research in physics, astrophysics, nanotechnology, planetary science and space science. Also Interdisciplinary Science BSc and MSci includes 1/3 physics (plus chemistry, biology and earth sciences).

Facilities and resources: The department is a Centre of Excellence for Teaching and Learning (CETL) with newly equipped laboratories and a wide range of experimental and computational facilities. There are state-of-the-art teaching areas and seminar rooms, undergraduate observatories (including remote access to a robotic telescope on Mallorca), 2048-core ALICE supercomputer, nano-microscopy centre, dedicated physics undergraduate computer suites and common room, clean rooms and a media centre. The department runs one of the largest university-based space research programmes in Europe.

Teaching methods: The degree offers a wide choice of material and different teaching methods to suit individual interests and aspirations. Teaching is by lectures, small-group tutorials, experimental and computer programming laboratories, problem-solving workshops and research-based learning. Project work begins in the first year and culminates in research-level projects for final-year students. In each year it is possible to advance a number of specialised courses (particularly mathematical courses) from later years. It is possible to take a year in Europe, or a semester in the US, Australia or Canada. Students may also spend a year in industry.

Transfer between courses: Transfers are possible as follows: (i) from BSc to MPhys for the first year, at the discretion of the department; (ii) from MPhys to BSc for the first two years; (iii) from Interdisciplinary Science to Physics, Chemistry or Biology after two years.

Scholarships and fees: Up-to-date information about the fees at the University of Leicester, and the scholarships and bursaries available to University of Leicester physics students can be found at www2.le.ac.uk/study/fees.

Further information:
Dr Mervyn Roy
E-mail physics_admissions@le.ac.uk
www2.le.ac.uk/departments/physics/admissions

University of Liverpool

Number of full-time undergraduates	13 500
Percentage reading science and engineering	35% 
IOP Juno Supporter	

Department of Physics
Liverpool L69 7ZE
Tel 0151 794 3416

Department of Physics academic staff: 39

Top-quality teaching and research: The department achieved the maximum 24/24 in the Teaching Quality Assessment, and Grade 5 in the Research Assessment Exercise, and this corresponds to "international excellence".

Teaching content and philosophy: The first year has a core of basic physics and leads to greater specialisation in subsequent years. There is considerable choice of optional courses in the second and third years.

Special facilities/resources: There is emphasis on the use of computing facilities, with access to the university system from the first year onwards. Computer-based data analysis is an integral part of the practical work.

Special features of courses: Small tutorial classes enhance student learning in each year. The Physics MPhys includes a three-month fully funded project overseas.

Regulation on transfer between courses: Considerable flexibility for transfer between courses on successful completion of the first or second year. Transfer between the BSc and MPhys is possible during the first two years.

Further information:
Dr David Hutchcroft
E-mail DHcroft@liv.ac.uk
www.liv.ac.uk/physics

UNIVERSITY OF LIVERPOOL

Physics Honours Courses @ The University of Liverpool

The Department of Physics achieved a 24/24 in the Teaching Quality Assessment and offers the following Honours Courses:

Three Year	***BSc***
Physics	F300
Physics with Astronomy	F3F5
Physics and Mathematics	FG31
Mathematical Physics	F326
Physics with Medical Applications	F350
Physics with New Technology	F352
Physics with Nuclear Technology	F390
Physics with Ocean and Climate Studies	F3F7
Geophysics (Physics)	F656
Combined Honours Physics with: Computer Science, Geology, Ocean and Earth Science or Psychology	BCG0

Four Year

Physics	(MPhys)	F303
Astrophysics	(MPhys)	F521
Theoretical Physics	(MPhys)	F344
Mathematical Physics	(MMath)	FGH1
Physical Sciences, four year route including a foundation year at Carmel College	(BSc)	F308

The Physics research in Particle Physics, Nuclear Physics, Condensed matter, Nanotechnology and Astronomy is all rated as of International quality and offers excellent opportunities for MSc or PhD research.

Please see the departmental website for more information and details of bursaries.

Admissions, Department of Physics
University of Liverpool
Liverpool L69 7ZE

Web: www.liv.ac.uk/physics
Tel: 0151 7943416
Email: Physics@liv.ac.uk

Liverpool John Moores University

Number of full-time undergraduates	**12 126**
Percentage reading science and engineering	**35%** 

Department of Astrophysics/Astronomy
Astrophysics Research Institute, Twelve Quays House, Egerton Wharf
Birkenhead CH41 1LD
Tel 0151 231 2909 / 2941

Department of Astrophysics/Astronomy academic staff: 14

Teaching content and philosophy: Our BSc (Hons) Physics with Astronomy and MPhys Astrophysics degrees are taught in collaboration between Liverpool John Moores University's Astrophysics Research Institute and the Department of Physics at the University of Liverpool. The courses combine the teaching and research excellence of the two departments. In the first year students study mainly physics, mathematics and computing. Astronomy is introduced gradually until by the third or fourth year it forms the majority of the course. Lectures are supported by laboratory work and small-group tutorials. The teaching on the courses was awarded the maximum score (24/24) by the QAA and a 97% satisfaction score in the last National Student Survey.

Special facilities/resources: The £2 m robotic Liverpool Telescope is situated on La Palma in the Canary Islands and is controlled from the Astrophysics Research Institute. This is the largest robotic telescope in the world and regularly observes explosive events (such as supernovae and gamma ray bursts), as well as monitoring stars and galaxies. Observations from this telescope will be available to students, for example during project work in the final year. Students will also have access to a selection of smaller telescopes including a computer controlled 12 inch telescope and a specialist solar telescope.

Special features of courses: Students will be trained in the use of computers for data reduction analysis and presentation from an early stage. At the end of the second year there is a week-long field trip to the Observatorio del Teide in Tenerife, where students gain experience of making astronomical measurements at a professional observatory. Students undertake project work during their final year at the Astrophysics Research Institute. Some projects will include data from the Liverpool Telescope or the solar telescope at the Institute.

Transferring between courses: There is an opportunity to transfer between different physics courses at the University of Liverpool throughout the first year and between the BSc (Hons) Physics with Astronomy and MPhys Astrophysics courses at the end of the second year and vice-versa.

Further information:
Dr Andy Newsam
E-mail admissions@astro.ljmu.ac.uk
www.astro.ljmu.ac.uk

London South Bank University

Number of full-time undergraduates	18 900
Percentage reading science and engineering	22% 

Department of Applied Sciences
Faculty of Engineering, Science and the Built Environment, 103 Borough Road
London SE1 0AA
Tel 020 7815 7182

Department of Applied Sciences academic staff: 43 Academics and 10 Technical

Teaching content and philosophy: Our Integrated Sciences for Sustainability programme has been supported by the National HE STEM Programme. It is supported by IOP as part of the development of a new generation of interdisciplinary degrees, with physics at their core. London South Bank University's Integrated Sciences offering is focused on sustainability as this is one of the major challenges we face as a society today. This focus falls naturally with the strengths in environmental sciences and sustainable energy systems of the Faculty of Engineering, Science and the Built Environment.

Our modules in the first and second year aim to provide a strong base in physical science, by covering those fundamental topics common to most physics programmes (classical mechanics, thermodynamics, atomic and nuclear, optics). In the second year key modules focus on sustainability through the study of atmospheric and global processes, as well as a set of problem-based learning (PBL) exercises. These modules develop and integrate the physical, biological and chemical concepts that underpin sustainability. In the final year, students pursue further studies in conventional and alternative energy systems and can opt to deepen their study of biological concepts of sustainability or of the role of science in society.

Special facilities/resources: The faculty maintains extensive facilities to support the wide range of practically-based subjects in its areas of interest. The facilities include: engineering, biochemical, environmental biology, microbiology, and integrated science laboratories, engineering workshops, computer suites, and studios (for design and architecture).

Special features of the course: A special feature of the course is the PBL approach that is implemented as a whole-year module in the second year of study, whereby the students are given a brief description of a problem and are asked to solve it. This approach is aimed at enhancing their problem-solving skills, as well as their initiative and sense of responsibility in finding a solution to an environmentally related problem that combines knowledge and understanding of physics, biology or chemistry.

Further information:
Prof. John Mawson, Head of Department
E-mail mawsonj@lsbu.ac.uk
www.lsbu.ac.uk/esbe/departments/appsci

Loughborough University

Number of full-time undergraduates	10 900
Percentage reading science and engineering	50% 

Department of Physics
Loughborough, Leicestershire LE11 3TU
Tel 01509 223 343

Department of Physics academic staff: 18

We were awarded 23 out of 24 in the 1999 QAA Review of Physics and Astronomy Teaching. The National Student Surveys in 2005 and 2006 rated Physical Science in Loughborough the best in the country, in 2008 the Physics Department in Loughborough was ranked the top for overall student satisfaction.

Teaching content and philosophy: The department's programmes aim to teach physics both as a fascinating subject worthy of study for its own sake, and as a training for employment in industry and academic research. To this end, all programmes give students the option of a year of paid employment in industry in the UK or abroad. The MPhys programme includes a 60 credit (50% of year's credits) experimental or theoretical research project, which may be performed at Loughborough or at an outside research institution or employer.

Special facilities/resources: Project work allows students to become involved in the department's experimental and theoretical research, which is mainly focused in quantum physics, solid-state physics and in applied physics. The university's library and computing facilities are particularly good as are the student accommodation, the sporting facilities and the attractive campus.

Special features of programmes: The Engineering Physics programme allows students to spend most of the time after the second year in one of several engineering disciplines, making use of one of the strongest engineering faculties in the UK. The Sports Science and Physics programme may be particularly attractive to those considering a career in teaching. All programmes permit students to take a year in industry or alternatively study abroad. A one-year programme Physics with Foundation Year and OpenPlus scheme with the Open University allow entry for applicants with non-standard qualifications.

Regulation on transfer between courses: Most programmes include transfer possibilities at the end of the first year, depending on options chosen. Transfer between Physics and Engineering Physics is possible up to the end of the second year. A portfolio of bursaries and scholarships are available.

Further information:
Victoria Webster
E-mail Physics@lboro.ac.uk
www.lboro.ac.uk/departments/ph

University of Manchester

Number of full-time undergraduates	**26 500**
Percentage reading science and engineering	**40%** 
IOP Juno Practitioner	

School of Physics and Astronomy
Oxford Road, Manchester M13 9PL
Tel 0161 275 4210

School of Physics and Astronomy academic staff: 80

The department: The school, which includes the Jodrell Bank Observatory, is one of the UK's largest physics departments with more than 700 undergraduate students. It has just had a major £10 million refurbishment and a brand new £60 million additional building. It is the only physics department in the UK to be both in the top five for the volume of world-leading and internationally excellent research and to have the maximum rating for teaching and student support, as reported by the RAE and QAA government assessment panels, respectively. It is the only physics department in the UK to have consistently achieved an overall satisfaction score of over 95% in the National Student Survey.

Teaching content and philosophy: The courses all have a common core supplemented by a very wide range of option units. We concentrate on teaching in small groups with workshops, small-group tutorials in both Physics and Maths and one-to-one tuition with our Physics Help Service.

Special facilities/resources: We have modern teaching and research laboratories, a well stocked library and extensive computer clusters. Many final-year projects are undertaken within one of the school's many research groups using their advanced facilities.

Special features of courses: In addition to a multitude of options available in physics, students can also select course units from other areas across the university's full range of subjects, including maths, modern languages, chemistry, computing, geology, biophysics, philosophy, economics and music. Opportunities exist to spend part of the course at a university in Europe, North America, Australia or Singapore.

Regulation on transfer between courses: Transfer between BSc and MPhys courses is possible up to the start of year three. Transfer into physics is possible from any physics-based course up to the start of year three.

Further information:
Prof. Fred Loebinger, Admissions Tutor and Mrs Val Brennan, Admissions Administrator
E-mail ug-physics@manchester.ac.uk
www.manchester.ac.uk/physics

National University of Ireland, Galway

Number of full-time undergraduates	**11 000**
Percentage reading science and engineering	**25%** 
IOP Juno Supporter	

School of Physics
University Road, Galway
Tel 353 91 492490

School of Physics academic staff: 18

Accredited degree courses on offer in the School of Physics encompass the study of the universe from the largest galaxies to the smallest subatomic particles and include topics ranging from the atmosphere and environment to medical physics. However, the importance of physics isn't limited to the 'hard sciences'. Increasingly, physicists are turning their talents to diverse fields such as molecular biology, archaeology, medicine, the arts and even the world of finance. In Galway, we have a strong tradition of providing 'hands-on' degrees in physics and our graduates are much in demand.

Teaching in the School of Physics is strongly influenced by programmes of advanced research and graduate education. These programmes are based on our research clusters: Applied Optics & Laser Applications; Atmospheric and Environmental Physics; and the Centre for Astronomy. Access to the expertise and facilities of these clusters can be made available to industrial partners.

Further information:
Tess Mahoney, School Administrator
E-mail tess.mahoney@nuigalway.ie
www.nuigalway.ie/physics/

National University of Ireland, Maynooth

Number of full-time undergraduates	6500
Percentage reading science and engineering	25% 

Department of Experimental Physics
NUI Maynooth, Maynooth, Co. Kildare, Ireland
Tel +353 1 708 3641

Department of Experimental Physics academic staff: 8

Teaching content and philosophy: Lectures, laboratory classes, problem-solving tutorials. Students are introduced to a broad range of topics, including astronomy. Honours class sizes are small and individual and group projects are offered to students in their final year. Computational Physics and interfacing to PCs are emphasised in the laboratory curriculum.

Special facilities/resources: The department is well stocked with a broad range of modern equipment in new and purpose-built undergraduate and postgraduate laboratories, opened in the summer of 1998. Honours students at third and fourth level have their own group rooms with full computer and study facilities.

Special features of courses: The programme offers Single Honours in Experimental Physics and in Physics with Astrophysics as well as combined honours in Experimental and Mathematical Physics (or in combination with Biology, Chemistry, Computer Science and Mathematics). The department has a policy of special emphasis on individual attention at all levels to help the student attain his/her full potential.

Further information:
Prof. J Anthony Murphy
E-mail physics.department@nuim.ie
http://physics.nuim.ie

University of Nottingham

Number of full-time undergraduates	20 000
Percentage reading science and engineering	37% 
IOP Juno Supporter	

School of Physics and Astronomy
University Park, Nottingham NG7 2RD
Tel 0115 951 5165

School of Physics and Astronomy academic staff: 46

Teaching content and philosophy: Through specialised options and external modules, students can develop their own interests around a common core of physics. Lectures taught by friendly, approachable staff are supplemented by coursework, laboratory experiments, problem classes, research projects and small tutorial groups, which all form part of an integrated programme of continuous assessment. Synoptic elements, bringing together the concepts taught in the core physics syllabus, form an important part of the course and also greatly enhance students' transferable skills. Nottingham graduates are highly sought after in the job market; the University is in the top three targeted by the major employers.

Special facilities/resources: Students are guaranteed a place in university-regulated accommodation in their first year. Approximately £50 m has been awarded in the last five years to support teaching and world-class research programmes in astronomy, magnetic resonance imaging, semiconductor physics, nanotechnology, quantum physics, etc. The school's excellence was further recognised by the award of the Nobel Prize in 2003. We also host a research and production facility for the major electronics company e2v. The close ties between teaching, industry and research in the school mean that undergraduates tap directly into this expertise and can exploit the cutting-edge facilities here in their project work.

Special features of courses: Computing is taught using the fully integrated MATLAB environment, which enables students to progress from basic programming to sophisticated numerical analysis and the computer control of experiments. Options are available from most faculties, including modules in languages, management skills, music, etc. Various opportunities exist for study overseas as part of the courses offered, including a year in Europe in the Physics with European Language degree, a year at the University of Toronto, or a term spent on a physics project in China. Communications and problem-solving skills are actively developed in all years. Original research plays an important role in all courses: in the final MSci year, for example, students apply the skills that they have acquired by undertaking a major research project as a professional consultant in either industry or academia.

Regulation on transfer between courses: Transfer between courses is straightforward as long as appropriate modules have been taken.

Further information:
Prof. Michael Merrifield, e-mail julie.kenney@nottingham.ac.uk
www.nottingham.ac.uk/physics

Nottingham Trent University

Number of full-time undergraduates	15 879
Percentage reading science and engineering	11%

Physics Division
Clifton, Nottingham NG11 8NS
Tel 0115 848 8351

Physics Division academic staff: 20

Teaching content and philosophy: Our focus is on developing people as individuals and on providing a flexible range of options to enable you to follow your interests and to study subjects as varied as the Big Bang, superconductivity or fingerprint analysis. You will develop core subject knowledge and the skills needed to secure your chosen career. This philosophy places great emphasis on a balanced range of assessments including problem solving and laboratory skills, team working and individual projects. We have an open-door policy so that staff are approachable and accessible.

Special facilities/resources: Facilities are modern, purpose-built and located on the Clifton campus close to Nottingham's vibrant city centre. Laboratories are well equipped with specialist provision for teaching including 3D biomechanical motion analysis, electron microscopy, radioisotope analysis, fingerprint analysis, a crime scene house, a radiotelescope and telescope loan for project use. IT facilities include 24 hour access, we also have an on-campus observatory.

Special features of courses: A sandwich year in industry in the UK or overseas is an option on all BSc (Hons) courses. The Foundation Degree in Physics is a two-year qualification in its own right with options for a one calendar year top-up degree or entry to year two of a BSc (Hons) dependent on your performance. 95% of Nottingham Trent University graduates gain employment within six months of graduating. Physics at Nottingham Trent University holds a prestigious EPSRC Platform Grant. This has only been achieved by 10 physics or astronomy departments in the UK.

Regulation on transfer between courses: MSci Physics, BSc (Hons) Physics, BSc (Hons) Physics with Astrophysics and BSc (Hons) Physics with Nuclear Technology share a common first year. Depending on your grades you can transfer between them at the end of that year.

Further information:
E-mail sci.enquiries@ntu.ac.uk
www.ntu.ac.uk/sat

The Open University

Number of full-time undergraduates	250 000
Percentage reading science and engineering	30% 
IOP Juno Practitioner	

Department of Physics and Astronomy
Walton Hall, Milton Keynes MK7 6AA
Tel 01908 653 229

Department of Physics and Astronomy academic staff: 30

Teaching content and philosophy: The Open University has no formal academic entrance requirements. By studying appropriate combinations of modules, students can obtain a BSc (Hons) Natural Sciences, specialising in either "Physics" or "Astronomy & Planetary Science" (or a combination of these). Students can also obtain an honours BSc (Open) by combining modules from different subject areas, to match their interests or career objectives. Possibilities include combining physics with computing, electronics, other sciences or a language.

Special facilities/resources: The university has an open-access policy, which offers enhanced support and assistance to less well qualified students. Advice on academic and personal matters is available and special facilities and back-up are provided for disabled students. All students have access to a personalised online Virtual Learning Environment through which to manage their study.

Special features of courses: An honours degree requires at least 360 CATS points (typically 10–12 modules). Study is generally undertaken on a part-time basis and typically lasts for six years. However, it is possible to complete the degree in a shorter time with a more concentrated study rate. Teaching is conducted through a very wide range of media, including student-active texts, DVDs and the internet. Although students study mainly at home, support and tutorials are provided by local tutors.

Regulation on transfer between courses: Students are free to choose any combination of modules, but named degrees require completion of specific combinations. Credit transfer from other institutions is possible.

Study at the OU then transfer to a residential university: You can also study Physics as part of the Open Plus scheme. Open Plus allows you to gain your degree by studying part-time for two years with the OU followed by two years full-time with one of our partner universities. For more details, please visit the Open Plus website.

General information: All Open University undergraduates are regarded as part-time students: there are about 250 000. Accommodation is not provided because Open University undergraduates study at home.

Further information:
Physical Science Qualifications Director
E-mail physics@open.ac.uk
www3.open.ac.uk/study/undergraduate/science/physics-and-astronomy/index.htm

University of Oxford

Number of full-time undergraduates	10 000
Percentage reading science and engineering	43% 
IOP Juno Supporter	

Department of Physics
Clarendon Laboratory, Parks Road, Oxford OX1 3PU
Tel 01865 272 200

Department of Physics academic staff: 96

Teaching content and philosophy: Years one and two cover a common core of physical and mathematical topics, which provide a solid foundation to succeed in any branch of physics. Learning is through a mix of lectures, classes, tutorials and practical work. The third and fourth years see increasing opportunity to specialise, both in taught courses and research projects. Equal importance is attached to developing physical understanding and analytical skills, so students are well prepared for careers in and outside of physics.

Special facilities/resources: The collegiate system offers many pastoral and academic benefits, particular the provision of regular tutorials. We have excellent library provision and regularly updated laboratory and computing facilities.

Special features of courses: Both the three- and four-year courses require a research project. Project work gives the experience of solving genuine research problems and may result in journal publication. Various short options on topics of special physical interest, language courses or physics education are available throughout the degree course. The Physics and Philosophy degree provides an excellent opportunity to combine deep scientific understanding with reflection on the philosophical impact of such knowledge.

Regulation on transfer between courses: The two physics courses are identical until the beginning of the third year. Students unsure of which to take are advised to apply for four years. It may be possible to transfer to other science courses after the first year, but this is decided on an individual basis.

Undergraduate degree: BA Hons in Physics (three years), MPhys in Physics (four years), MPhysPhil in Physics and Philosophy (four years).

Further information:
E-mail enquiries@physics.ox.ac.uk
www.physics.ox.ac.uk/

University of Portsmouth

Number of full-time undergraduates	18 863
Percentage reading science and engineering	38% 

School of Earth & Environmental Sciences
Burnaby Building, Burnaby Road, Portsmouth PO1 3QL
Tel +44 (0)23 9284 5550

School of Earth & Environmental Sciences academic staff: 15

The Applied Physics degree has been supported by the National HE STEM Programme.

Teaching content and philosophy: This newly designed course is explicitly focused on the applications of physics in both the everyday and the extraordinary contexts. It is based upon active and problem-based learning and explicitly recognises the importance of employability. Lectures and small group tutorials are blended with practical work and individual and group projects. The essential development of core knowledge and skills is motivated by the investigation and solution of exciting problems of current concern to industry and society. Specific units are enhanced by contributions from industrial collaborators and by visits to physics-related industrial and medical facilities. The specialist content of the course in later years is strongly influenced by expertise within the School of Earth and Environmental Sciences, the Institute of Cosmology and Gravitation and physics-related groups in medical sciences.

Special facilities/resources: Portsmouth is a campus university embedded in a city which provides an excellent coastal environment. The School has a wide range of analytical equipment. Additional support is available to students through a commercial on-line tutoring system. Students are currently eligible to apply for SEPNET bursaries to support summer placements.

Special features of course: The course has been selected for support by the National HE STEM Programme to develop the embedding of employability skills in the curriculum.

Further information:
Admissions Tutor
E-mail sci.admissions@port.ac.uk
www.port.ac.uk/departments/academic/sees

Queen Mary, University of London

Number of full-time undergraduates	13 500
Percentage reading science and engineering	40% 
IOP Juno Supporter	

School of Physics
G O Jones Building, Mile End Road, London E1 4NS
Tel 020 7882 5030

School of Physics academic staff: 27

Teaching methods: Our degree programmes are delivered by staff through a mixture of lectures, tutorials and laboratory sessions. As well as gaining subject knowledge, you will gain valuable IT, communication and team-working skills. You will also spend time working in our undergraduate laboratory where you test theories that you learn about in lectures.

Course content: You take eight different modules in each academic year (four in each semester). Our degrees are structured so that you take a number of compulsory modules. These ensure that you graduate with the requisite knowledge of physics as a subject. A full outline of the structure of each of our degree programmes can be found on our website.

Features of courses: In your final year you will complete a research project supervised by academic staff from our research groups: particle physics, theoretical physics, condensed matter and materials physics and astronomy. Student support is very important to us and we have a dedicated Student Support Officer, who advises on careers and any other issues that may affect you. The fourth year of the MSci draws from many options taught in collaboration with other colleges of the University of London.

Facilities/resources: We have a well equipped undergraduate laboratory with 46 spacious work stations, two optics rooms providing a further 11 work stations and four specialist vibration-free surfaces for sensitive experiments. The laboratories are open access and we have two members of staff offering technical support during working hours. Each station has a PC with internet access and has an adjustable height function. It is a well funded resource with a mix of traditional and modern equipment. The modules Scientific Measurement (first year) and Physics Laboratory (second year) are taught here.

Regulation on transfer between courses: Transfers are possible between all course programmes during the first year and between most until commencement of the third year.

Further information:
Dr Eram Rizvi, Admissions Tutor
E-mail physics@qmul.ac.uk
www.ph.qmul.ac.uk

Queen's University Belfast

Number of full-time undergraduates	13 000
Percentage reading science and engineering	35%
IOP Juno Supporter	

School of Mathematics and Physics
University Road, Belfast BT7 1NN
Tel 02890 973941

School of Mathematics and Physics academic staff: 31

Teaching content and philosophy: Students may choose from a range of degree courses designed to meet the skills and scholarship needs, and to facilitate the career aspirations of most physics graduates. Our courses also exploit the academic strengths and skills of staff across the breadth of the School of Maths and Physics. Computing and transferable skills are taught as integral components of all physics courses and are also available as specialist options. Teaching methods comprise lectures, laboratories, tutorials and problem/analysis classes; these initially provide a broad introduction to fundamental aspects of physics and subsequently, in final years, facilitate a critical and in-depth study of many of its modern developments.

Special facilities/resources: Extensive PC facilities are available to students. Where possible, final-year students are assigned to join one of our active research groups so as to perfect their laboratory skills and taste the flavour of postgraduate work. For relaxation, students have a choice of several superb local sporting facilities, or they may indulge themselves in the vibrant university environment of theatres, pubs and bistros. 70% of first-year students (nearly all of the students are from outside the Belfast area) are accommodated in Halls.

Special features of courses: Students are taught in small groups and special student needs are therefore more easily identified and readily catered for. In addition to defined core material, specialist options are available that reflect the extensive research interests of the department.

Regulation on transfer between courses: The modular structure allows students to leave decisions on degree options until the end of year one. In-course transfer between BSc and MSci degree courses is possible, if other attendant conditions are met. Entry is to the School of Maths and Physics and is into level 1 for a three-year honours BSc or a four-year honours MSci degree.

Further information:
Dr Tom Field
E-mail physics@qub.ac.uk
www.qub.ac.uk/mp

Department of Physics and Astronomy

Queen's University Belfast

Degree courses in:

Physics
Physics with Astrophysics
Physics with Medical Applications
Theoretical Physics
Applied Maths and Physics
Computer Science with Physics
Physics with extended studies in Europe

are available at Department of Physics and Astronomy, which has been awarded excellent grades for teaching and research

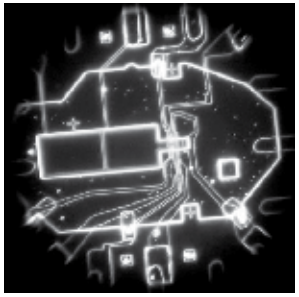
Postgraduate PhD places and advanced undergraduate work are in the areas of

Atomic and molecular physics
Plasma and laser interaction physics
Astronomy and planetary science
Nanostructured media
Atomistic simulation

Further information from:
Dr Tom Field
Department of Physics and Astronomy
Queen's University Belfast
Belfast BT7 1NN
www.physics.qub.ac.uk
physics@qub.ac.uk

Physics for the 21st Century



The Department of Physics at Royal Holloway is internationally recognised for teaching and research excellence in a wide range of areas including: nanophysics and nanotechnology, quantum matter, high-energy and particle physics, superconducting/superfluid physics, experimental quantum computing and theoretical physics.

- 4 year MSci and 3 year BSc Honours degrees, including Physics, Astrophysics; Physics with minor subjects such as Philosophy and Music; Joint Honours programmes such as Physics with Mathematics or Computer Science
- A friendly, supportive environment with high quality student accommodation
- A beautiful campus with state-of-the-art teaching and research facilities
- Easy access to London but more affordable environment

Royal Holloway has pioneered teaching and research in Physics since the 1880s.

For further information, please call 01784 443506 or email physics@rhul.ac.uk

Royal Holloway
University of London

www.rhul.ac.uk/Physics/

Royal Holloway, University of London

Number of full-time undergraduates	**6800**
Percentage reading science and engineering	**30%** 
IOP Juno Practitioner	

Department of Physics
Egham Hill, Egham, Surrey TW20 0EX
Tel 0178 444 3506

Department of Physics academic staff: 26

Teaching methods: We employ both traditional and advanced methods including lectures, tutorials, problem-solving classes, hands-on experiments and extended research projects to teach modern physics, making the study of physics exciting, enjoyable and deeply satisfying. We aim to develop a deep conceptual understanding and analytical thinking, as well as employer-relevant skills. Our excellent staff-student ratio promotes an informal professional atmosphere, open-door access to staff and an emphasis on one-to-one and small-group teaching.

Course contents: We provide a solid foundation in advanced and core physics topics from Newton through Einstein to Hawking, covering everything exciting in physics and all that employers expect of a graduate physicist. An extensive choice of in-house options and longer projects from particle accelerators to nanophysics is complemented by the MSci fourth year; taught in collaboration with other University of London Colleges it provides a range of final-year options greater than any other UK institution.

Features of courses: All courses are IOP accredited. The MSci Physics degree is the most flexible and popular programme. All our programmes are based on a highly adaptable modular system and a small number of non-physics modules may also be studied. There are also opportunities for study abroad years and an extensive range of summer studentships, you might find yourself in an international research lab for the summer!

Facilities/resources: Well equipped teaching laboratories accommodate a wide variety of apparatus allowing you to investigate key results in experimental physics and to develop your own exploratory skills. A rooftop astronomical observatory away from the bright lights of London is dedicated to teaching. Final-year projects are usually embedded within the research groups, providing the best possible access to state-of-the-art equipment and professional know-how. Extensive nanophysics, quantum matter, particle and high-energy physics, cryogenic (superfluid and superconductor) and other research facilities provide emphasis in our teaching. There are, of course, extensive and specialist computing facilities. The Bedford Library and Student Union are less than 50 m from the department and most Halls of Residence areas are 10 minutes walk away.

Transfer between courses: Admission to all programmes is on the same basis and transfer between physics programmes is usually straightforward in the first two years.

Further information:
Dr Phil Meeson, Admissions Tutor, tel 0178 444 3506
E-mail Physics-Admissions@rhul.ac.uk, www.rhul.ac.uk/physics

University of Salford

Number of full-time undergraduates	**14 829**
Percentage reading science and engineering	**15%** 
IOP Juno Supporter	

Joule Physics Laboratory
Newton Building, Greater Manchester M5 4WT
Tel 0161 295 5303

Joule Physics Laboratory academic staff: 17

Teaching content and philosophy: The Joule Physics Laboratory offers degree programmes that combine the excitement and rigour of fundamental physics with the particular skills needed by the teaching, business and industrial sectors. We have a long tradition of links with industry through research collaborations and through the organisation of industrial "years out". It is possible to arrange industrial years both in the UK and in Europe. We have recently had significant funding through the HESTEM programme to redesign the curricula with an employability focus while still retaining all the essential features of a traditional physics degree. The newly designed course combines traditional teaching in physics with an employer engagement programme centered on seminars from outside speakers designed to expose students to the diverse range of employment opportunities open to physics graduates.

Special facilities/resources: We have well equipped dedicated experimental and computational laboratories. Physics and mathematics understanding is backed up by means of computer-aided learning packages. We are also commended for being able to offer extensive research projects in the final year involving the latest research facilities.

Special features of courses: We teach all programmes in a modular format. A core of modules each year is common to all of our programmes, the remainder are options. Students can graduate with a named degree in physics with a speciality by following prescribed options. All courses can be integrated with professional practice that is separately certificated. For students on the MPhys course there is an option to undertake level 3 of the course at a partner institution in North America. There is a major, open-ended project in the final year often undertaken in collaboration with one of the research groups at Salford. Strong research groups exist in areas such as photonics, complexity, nanomaterials, chemical and biophysics, magnetism, and materials synthesis and characterisation.

Regulation on transfer between courses: Students can transfer from the BSc to the MPhys at the end of the academic year in either year 1 or year 2 provided a satisfactory level of attainment has been achieved.

Further information:
Prof. Ian Morrison
E-mail i.morrison@salford.ac.uk
www.cse.salford.ac.uk/physics

University of Sheffield

Number of full-time undergraduates	16915
Percentage reading science and engineering	34%

Department of Physics and Astronomy
Hicks Building, Hounsfield Road, Sheffield S3 7RH
Tel 0114 222 4362

Department of Physics and Astronomy academic staff: 32

Teaching content and philosophy: While the principal mode of teaching is the traditional lecture, the Sheffield course also emphasises small-group work in weekly tutorials, continuously assessed laboratory work, independent study and extended experimental, theoretical or computational projects.

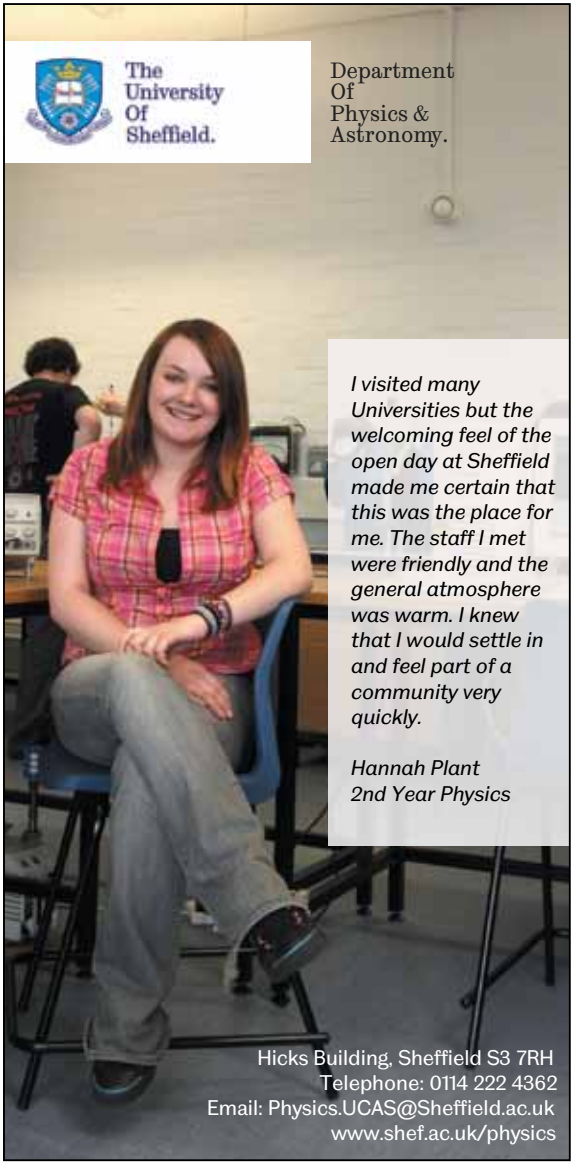
Special facilities/resources: The department has strong research groups in astronomy and astrophysics, particle physics and particle astrophysics, astro-particle theory and cosmology, semiconductor physics and molecular and macromolecular materials. The research groups provide a wide selection of projects for year-four MPhys students, and many year-three projects also involve work with a research group. As well as our extensive research laboratories, we have well equipped teaching laboratories, a media room for presentations by staff and students, a study room for third- and fourth-year students and an IT suite with networked computers. We also have two astronomical laboratories for student use – one equipped with a 36 cm reflecting telescope on the roof of the department, the other, in the nearby Peak District, has a 0.6 m computer-controlled optical telescope.

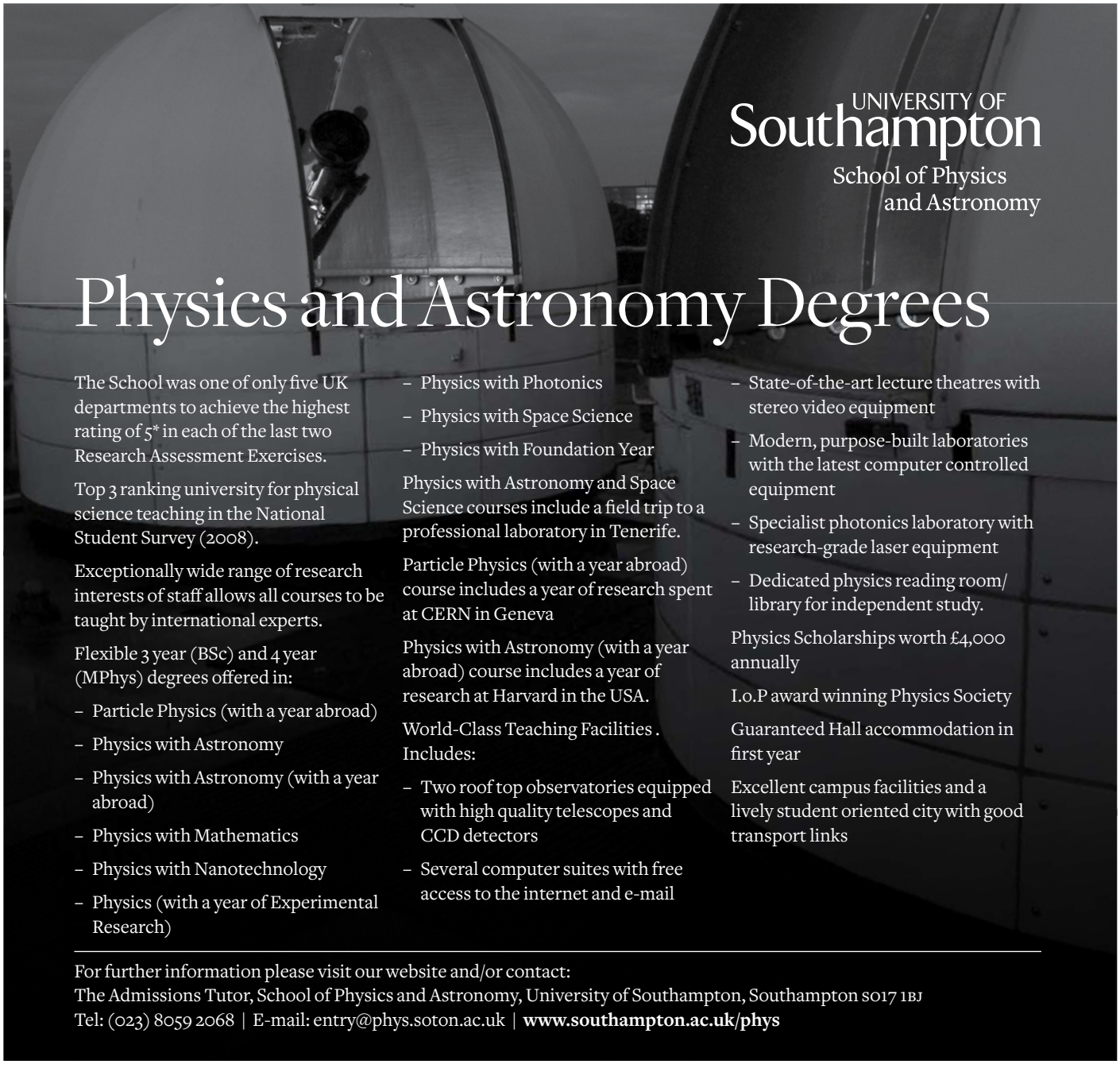
Special features of courses: A wide range of option courses including astrophysics, computing science and medical physics, plus the opportunity to spend year three of a four-year course in North America, Australasia or, for astronomy students, at the astronomical observatory on La Palma in the Canary Islands. Third-year astronomy students may also spend a week on Tenerife doing an observational project. Both the BSc and MPhys courses include project work developing skills in research and communication, the extended MPhys project normally involves close collaboration with a research group in the department. Links to departmental research are emphasised throughout the course and students are encouraged to attend a wide-ranging programme of seminars and colloquia.

Regulation on transfer between courses: Transfers between single and dual honours are possible up to the end of year 1 (year 2 for some programmes); transfer between MPhys and BSc up to the end of year 2.

Accommodation: The university guarantees to make a place available in university accommodation to all single first-year undergraduates who have firmly accepted an offer of a place at the university by early July.

Further information:
Dr Lee Thompson and Mrs Ann Davis
E-mail physics.ucas@sheffield.ac.uk, www.sheffield.ac.uk/physics





UNIVERSITY OF
Southampton
School of Physics
and Astronomy

Physics and Astronomy Degrees

The School was one of only five UK departments to achieve the highest rating of 5* in each of the last two Research Assessment Exercises.

Top 3 ranking university for physical science teaching in the National Student Survey (2008).

Exceptionally wide range of research interests of staff allows all courses to be taught by international experts.

Flexible 3 year (BSc) and 4 year (MPhys) degrees offered in:

- Particle Physics (with a year abroad)
- Physics with Astronomy
- Physics with Astronomy (with a year abroad)
- Physics with Mathematics
- Physics with Nanotechnology
- Physics (with a year of Experimental Research)
- Physics with Photonics
- Physics with Space Science
- Physics with Foundation Year

Physics with Astronomy and Space Science courses include a field trip to a professional laboratory in Tenerife.

Particle Physics (with a year abroad) course includes a year of research spent at CERN in Geneva

Physics with Astronomy (with a year abroad) course includes a year of research at Harvard in the USA.

World-Class Teaching Facilities . Includes:

- Two roof top observatories equipped with high quality telescopes and CCD detectors
- Several computer suites with free access to the internet and e-mail
- State-of-the-art lecture theatres with stereo video equipment
- Modern, purpose-built laboratories with the latest computer controlled equipment
- Specialist photonics laboratory with research-grade laser equipment
- Dedicated physics reading room/ library for independent study.

Physics Scholarships worth £4,000 annually

I.o.P award winning Physics Society

Guaranteed Hall accommodation in first year

Excellent campus facilities and a lively student oriented city with good transport links

For further information please visit our website and/or contact:
The Admissions Tutor, School of Physics and Astronomy, University of Southampton, Southampton SO17 1BJ
Tel: (023) 8059 2068 | E-mail: entry@phys.soton.ac.uk | **www.southampton.ac.uk/phys**

University of Southampton

Number of full-time undergraduates	**12 500**
Percentage reading science and engineering	**30%** 

School of Physics and Astronomy
Highfield, Southampton SO17 1BJ
Tel 023 8059 2068

School of Physics and Astronomy academic staff: 40

Teaching content and philosophy: The school has maintained its position as one of the UK's top departments in the latest Research Assessment Exercise. For the second RAE running more than half of our research was ranked as World Leading or Internationally Excellent – an achievement that was called 5* in 2001 – we are one of only five physics schools to achieve this in two successive RAEs. Our world-class researchers provide high-quality, cutting-edge and dynamic teaching. Our degree programmes are modular with a wide range of optional courses, all taught by experts in the field. Teaching is based on lectures and student-centred coursework, including tutorials and problem classes, lab work, projects, dissertations and seminars. Care is taken to develop skills that employers require. Success rates are high and students go on to a wide range of interesting and rewarding careers.

Special facilities/resources: The school is situated on the main campus of the university, in close proximity to the library and sporting and social facilities, and 10–15 minutes walk from student residences. Our teaching labs are large and comprehensively equipped, with computers much in evidence. There is a specialist photonics lab equipped with research-grade lasers and also two rooftop observatories, each housing a high-quality telescope with a CCD detector. Students have access to a dedicated reading room and also a computer suite with free access to the internet and e-mail. Most final-year projects are conducted in research labs alongside professional research staff.

Special features of courses: Students studying Physics with Astronomy or Space Science have the opportunity to undertake a field trip to the University of Laguna in Tenerife. Top Astronomy students can spend their final year doing research work at the Harvard Smithsonian Institute in the US. Top Particle Physics students can spend their final year undertaking research at CERN in Geneva. Top students interested in quantum materials can spend the final year working in our research laboratories, as part of our research teams. Students studying Physics with Photonics benefit from the expertise and facilities of our world-famous Optoelectronics Research Centre.

Regulation on transfer between courses: Transfers between BSc and MPhys degrees and from single to joint honours are possible up to the end of the first semester of the second year.

Further information:
Prof. Nick Evans, Admissions Tutor
E-mail entry@phys.soton.ac.uk, www.phys.soton.ac.uk

University of St Andrews

Number of full-time undergraduates	**5952**
Percentage reading science and engineering	**32%**
IOP Juno Supporter	

School of Physics and Astronomy
North Haugh, St Andrews, Fife KY16 9SS
Tel 01334 463111

School of Physics and Astronomy academic staff: 30

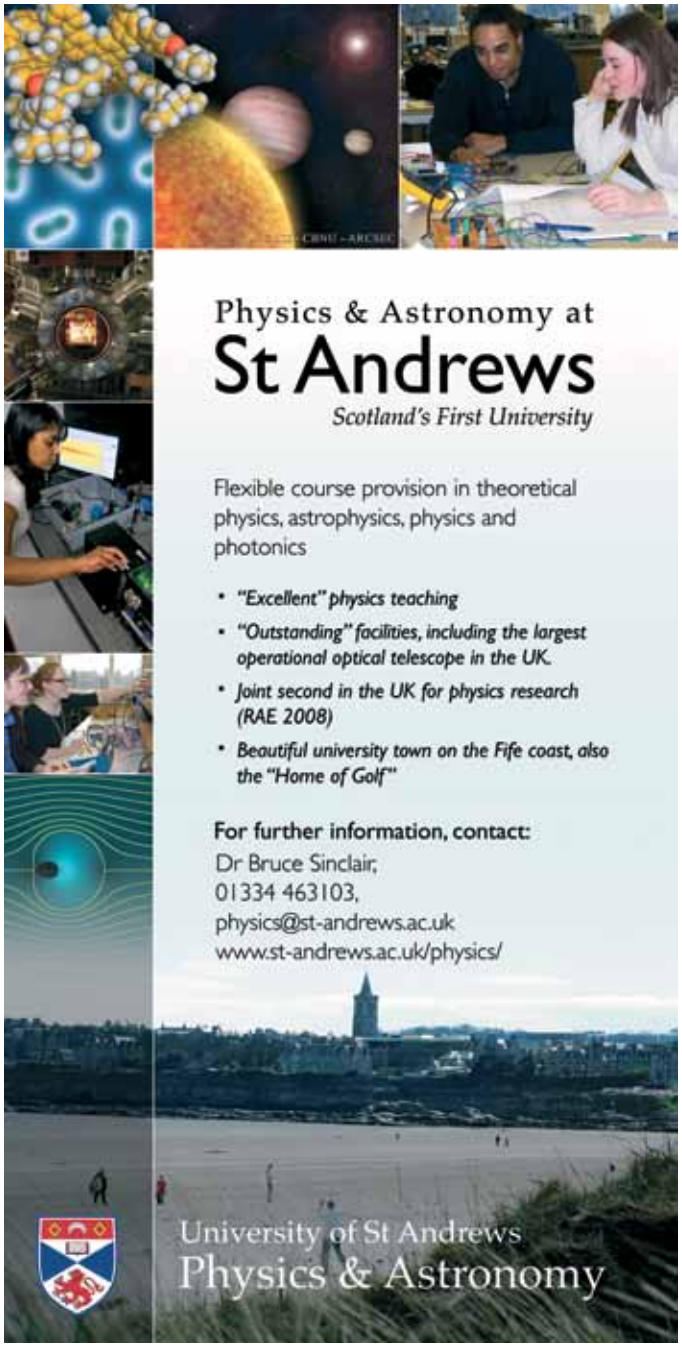
This modern School of Physics and Astronomy is part of the well respected University of St Andrews, Scotland's first university. Choice and flexibility are features of the BSc and MPhys honours degree programmes. Well qualified entrants may choose to enter in year two and complete an honours BSc degree in three years or an MPhys degree in four.

We aim to stimulate students' interest in their subjects and to develop a thorough understanding of physics (and where appropriate astronomy). This is aided by relatively small class sizes and weekly tutorials, which in years two and three for example consist of only four or five students, with a tutor. Lectures develop both the pure and applied aspects of physics, building up from the introductory lectures in year one to the modules in the final years which prepare students to appreciate the research literature. Appropriate laboratory work illuminates and extends the understanding of topics covered in lectures, as well as developing important practical skills. Problem solving and communication skills are actively developed.

St Andrews is a university town of only 18000 people, located in a beautiful location on the Fife coast. Students coming from across the UK and further afield form a major part of the community and student-organised activities abound. Students are admitted to the Faculty of Science and can postpone their decision on degree subject (within or outside this School) until the start of year three.

With 30 teaching staff the school is large enough to provide comprehensive coverage at undergraduate level. With another 80 research staff and students it is lively enough to produce internationally recognised research in astronomy and astrophysics, photonics, magnetism and superconductivity, and terahertz technologies. In 2008 the Research Assessment Exercise rated St Andrews as joint second for research quality among UK physics departments. Yet the School remains small enough that students and staff can interact closely. Students comment on the enthusiastic and student-friendly nature of the teaching staff. The final-year research projects carried out individually by all students are normally undertaken with one of the research groups under the supervision of a member of the teaching staff.

Further information:
Dr Bruce Sinclair
E-mail physics@st-andrews.ac.uk
www.st-andrews.ac.uk/physics



University of Strathclyde

Number of full-time undergraduates	**11 000**
Percentage reading science and engineering	**50%** 
IOP Juno Supporter	

Department of Physics
John Anderson Building, 107 Rottenrow, Glasgow G4 0NG
Tel 0141 548 3362

Department of Physics academic staff: 33

Teaching content and philosophy: The degree courses have a modular structure with a mixture of compulsory, optional and elective classes. This provides great flexibility giving students the freedom to pick classes most suited to their interests and ambitions. The degree programmes are designed to provide a sound knowledge and understanding of the laws and methods of physics and their application to technological and multidisciplinary problems. Core topics are common to all courses and the later years contain a large element of project work. Furthermore, by suitable choice of optional classes a student can opt to specialise in a given area of physics.

Special facilities/resources: Workshop-based tutorials in first year onwards. There are extensive departmental computing and instrumentation laboratories with topic-specific experiments. Final-year students undertake projects with research groups in the department in areas such as lasers and optoelectronics, computational physics, non-linear and quantum optics, relativistic electron beams and cyclotron masers, solid-state spectroscopy and optical oceanography.

Special features of courses: Direct entry to the second year of the MPhys degree is possible for students with either A-levels or Advanced Higher qualifications. Students on the MPhys degree can opt to take an industrial placement in the vacation between the third and fourth year. In the final two years of the MPhys degree a student can specialise in a given area of physics and graduate with a degree indicating that specialisation. The BSc Physics with Teaching course is a Joint Honours degree, which combines a full physics degree with a professionally recognised teaching qualification. The Mathematics and Physics degree is a Joint Honours degree offered jointly by the Mathematics and Physics Departments.

Regulation on transfer between courses: Transfer between all degrees is possible up until the start of the third year.

Further information:
Dr Nigel Langford
E-mail study@phys.strath.ac.uk
http://phys.strath.ac.uk

University of Surrey

Number of full-time undergraduates	**9700**
Percentage reading science and engineering	**54%** 

Department of Physics
Guildford, Surrey GU2 7XH
Tel 01483 689 247

Department of Physicsy academic staff: 24

Study physics at Surrey because:
- Our unique MPhys degree will let you do research with the world's top scientists.
- The Surrey Professional Training Year will give you the best possible start in the job market.
- Our range of specialist degree programmes will give you the edge in high-tech fields from brain scanning to launching satellites.
- We are good at teaching physics as well as doing it.
- Our outstanding research will give you access to state-of-the-art facilities.
- We are a friendly department, where students can really talk to their lecturers.
- Our degrees are flexible and you are not "locked into" the programme you put on your UCAS form.
- We are top for jobs. In 2009 (the latest available statistics), 96.9% of Surrey's graduates entered employment or further study, compared with the national average of 89.9%. This is the best figure of any chartered university in the UK.

Outstanding degree programmes: The Surrey physics degrees all come in both MPhys and BSc "flavours" and we offer the following general and specialist programmes.
- Straight Physics: maximum flexibility maximum choice.
- Physics with Nuclear Astrophysics: find out why we are all made of stardust.
- Physics with Satellite Technology: Surrey Satellite Technology Limited, a university spin-off company, designs and builds satellites on campus.
- Physics with Finance: understand why the big banks are hiring "rocket scientists" in the city.

Bonuses of campus life:
- First-year students are guaranteed university accommodation.
- Our pleasant campus is only 15 minutes walk from the centre of the historic, cathedral city of Guildford and only 35 minutes by train from the heart of London.
- All student rooms are fitted with a telephone providing free on-campus calls and a voice-mail service. They are also equipped with free fast internet access.
- All students have 24 hour access to well equipped computing facilities with free internet access.
- Excellent social facilities with more than 120 clubs and societies supported by the Students' Union.

Further information:
Prof. Jim Al-Khalili, Admissions Tutor
E-mail j.al-khalili@surrey.ac.uk, www.surrey.ac.uk/physics/

University of Sussex

Number of full-time undergraduates	**7000**
Percentage reading science and engineering	**34%** 
IOP Juno Supporter	

Department of Physics and Astronomy
Pevensey 2 Building, Falmer Campus, Brighton BN1 9QF
Tel 01273 678 557

Department of Physics and Astronomy academic staff: 28

Teaching content and philosophy: Our teaching was rated "Excellent" in the most recent assessment of teaching quality. Our research was rated internationally excellent in the latest research assessment. You will learn through a variety of methods, including workshops, practical laboratory work, lectures and tutorials. We offer a huge variety of courses and provide a flexible option scheme allowing you to customise your degree. We offer degrees in Physics, Astrophysics and Theoretical Physics and Minors in Astrophysics.

Special facilities/resources: We have well equipped teaching laboratories, a non-campus rooftop observatory and a computer-controlled 0.5 m reflecting telescope. IT training is integrated into all of our courses and you will have 24 hour access to an extensive range of computing facilities. Campus facilities are excellent, and include shops, banks, restaurants and coffee bars, a health centre, dentist, optician and pharmacy. A variety of pubs and bars, a theatre and cinema, art gallery, excellent sporting facilities and numerous clubs and societies mean that you are never stuck for entertainment.

Special features of courses: Scholarships of £1000 for students who obtain AA in maths and physics at A-level and firmly accept our conditional offer. The final year of the MPhys degree has a research orientation with most of the courses on specialised topics. We offer a four-year BSc programme to students without the usual background in physics and maths. This includes an initial foundation year and can lead into any of the BSc degrees we offer. Students can choose to spend six months studying in an English-speaking university in Canada or Sweden. The unique Research Placement degrees offer paid summer project work in a world-leading research group. Some degree programmes are available for part-time study.

Further information:
Dr Simon JM Peeters
E-mail ug.admissions@physics.sussex.ac.uk
www.sussex.ac.uk/physics/

Swansea University

Number of full-time undergraduates	**8900**
Percentage reading science and engineering	**33%** 
IOP Juno Supporter	

Department of Physics
Singleton Park, Swansea SA2 8PP
Tel 01792 295 849

Department of Physics academic staff: 21

Teaching content and philosophy: Our teaching strategy combines a mixture of lecture and laboratory modules, project work, residential trips and tutorials, ensuring that the key skills – communication, numeracy, team working and problem solving – are taught. Excellent teaching – the only physics department in Wales to receive the government's highest grade in the most recent Teaching Quality Assessment.

Course contents:
- Choice of Single and Joint Honours and BSc and MPhys programmes;
- Year Abroad programmes with universities in North America, Australia, Italy, Spain, France, Germany and Austria;
- Modular courses including physics of fundamental particles like quarks and leptons, antimatter, the quantum world, superconductivity and lasers, the shape of the universe;
- The specialised research interests of the teaching staff means that students benefit from a rigorous treatment of the subject and acquire highly sought after skills.

Course features:
- Scholarships available;
- All projects, both at BSc and MPhys, are closely supervised;
- Final year of the MPhys schemes involves specialised courses and a full semester working on a cutting-edge research project;
- MPhys students have the possibility of performing their project at CERN.

Facilities and resources:
- Well equipped teaching labs and excellent computing facilities;
- Research projects in areas including cold matter, lasers and optics, antimatter, nanoscale technology, all with expert supervision;
- Internationally leading research in experimental and theoretical physics, with 90% of our research classed as excellent or internationally leading;
- Research grants awarded from STFC, EPSRC, Leverhulme Trust, the EU, The Royal Society, HEFCW, and various industrial and government sources.

Transfer between courses: Our course structure is flexible and modular, allowing for transfers between different schemes up until the start of the third year.

Further information:
Admission Tutor
E-mail physics@swansea.ac.uk, www.swansea.ac.uk/physics/

Trinity College Dublin

Number of full-time undergraduates	**11 000**
Percentage reading science and engineering	**30%** 

School of Physics
Dublin 2, Ireland
Tel +353 1 896 1675

School of Physics academic staff: 29

Teaching content and philosophy: The school offers four-year courses leading to degrees in Physics, Physics and Astrophysics, Theoretical Physics, and Nanoscience, Physics and Chemistry of Advanced Materials. Structured teaching through lectures, tutorials and laboratory and project work provides a firm grounding in all branches of physics and brings students into contact with the forefront of international research as practised in the school. About 50 students graduate each year from the school.

Special facilities/resources: Large and active research groups in areas that include surface and interface physics, magnetic materials, molecular electronics, lasers and optoelectronics, foam physics, environmental radiation, nanotechnology, astrophysics, and computational and theoretical physics. The school is closely integrated with an adjoining centre for nanoscience (opened in 2007). It is on a historic city-centre campus, which provides a wide range of student facilities.

Special features of courses: A broad-base for first two years; specialist options (including Physics and Astrophysics or Nanoscience, Physics and Chemistry of Advanced Materials) and a project in final year; some projects are undertaken at laboratories/observatories outside Ireland. College scholarships are available.

Regulation on transfer between courses: Flexible between all courses in first two years (exception: no transfers are allowed into Theoretical Physics) – college tutors give advice.

Further information:
School Administrator
E-mail physics@tcd.ie
www.physics.tcd.ie

University College Cork

Number of full-time undergraduates	**19 000**
Percentage reading science and engineering	**20%** 

Department of Physics
Kane Building, College Road, Cork, Ireland
Tel +353 21 490 2468

Department of Physics academic staff: 12

Teaching content and philosophy: Courses are taught through lectures and laboratory classes supplemented by tutorials, problem-solving sessions and seminars. Laboratory classes vary from classic experiments to open-ended research projects. Fourth-year students do a 3–4 month research project and write a minor thesis. Competitive opportunities for work experience are available in the summer following third year.

Special facilities/resources: A major photonics and microelectronics research centre (Tyndall Institute, www.tyndall.ie) is closely affiliated and several physics academics are group leaders there. The department encourages interdisciplinary and cutting-edge research. The major research groups are: optoelectronics and nonlinear optics, photonic devices and systems, laser spectroscopy, solid-state and electronic structure theory, plasma fusion studies, and observational astronomy. See www.physics.ucc.ie for current details.

Special features of courses: A strong emphasis on fundamental physics at the beginning of the BSc degree programme ensures a secure foundation for modern physics later on. Physics majors may choose from a wide range of subsidiary subjects including pure or applied mathematics and computer science. Course fees are not charged to EU students.

Regulation on transfer between courses: See www.ucc.ie.

Further information:
Prof. John McInerney, Head of Department
E-mail j.mcinerney@ucc.ie
www.physics.ucc.ie

University College Dublin

Number of full-time undergraduates	**14 400**
Percentage reading science and engineering	**50%** 

School of Physics
Belfield, Stillorgan Road, Dublin 4, Ireland
Tel +353 1 716 2210

School of Physics academic staff: 21

Teaching content and philosophy: Students wishing to pursue degree in Physics, Physics with Astronomy and Space Science or Theoretical Physics should apply through CAO course DN200MPS. UCD Science provides a flexibility of choice in first-year subjects to include physics, mathematics and applied and computational mathematics. A total of 10 science modules must be taken in stage 1, allowing students to tailor their study plans to focus on physics or to sample more widely to explore their interests. Before commencing year 3, all physics students take a range of modules that are designed to provide a good foundation in the basic concepts and principles of physics and the mathematics competency required to support their physics. There are specialised modules for Physics with Astronomy and Space Science and Theoretical Physics degree programmes.

Special facilities/resources: Active research groups in astrophysics, space science, atomic and molecular physics, nanobiophysics, relativity theory, condensed matter physics, radiation physics, and particle physics. The school is part of a large campus with expanding student village and excellent sports facilities. UCD Science recognises that students need support that extends beyond their academic needs and a wide range of support services is provided.

Special features of courses: In line with the UCD Horizons structure, students have free choice of two modules from across the university in all years (except in year 4).

Regulation on transfer between courses: No formal regulations, individual cases considered by Heads of Schools.

Undergraduate degrees: BSc (Hons) in Physics, BSc (Hons) in Physics with Astronomy and Space Science, BSc (Hons) in Theoretical Physics, BSc (Joint Hons) in Physics and another Science/Maths subject.

Further information:
The Secretary, UCD School of Physics
E-mail marian.hanson@ucd.ie
www.ucd.ie/physics

University College London

Number of full-time undergraduates	**11 000**
Percentage reading science and engineering	**40%** 
IOP Juno Practitioner	

Department of Physics and Astronomy
Gower Street, London WC1E 6BT
Tel 020 7679 2446/7144

Department of Physics and Astronomy academic staff: 60

Teaching content and philosophy: The courses aim to provide a flexible education both for those graduates planning careers in science and those entering some other field, by studying in-depth a subject that provides insights into the universe in which we live. All courses are built around the IOP core and most are available either as a three-year BSc or a four-year MSci.

Special facilities/resources: The department's extensive research interests in both physics and astronomy provide a wide range of topics for final-year projects: research groups include Atomic, Molecular, Optical and Positron Physics; Condensed Matter and Materials Physics (including the new London Centre for Nanotechnology); High Energy Physics; Astronomy, Astrophysics and Atmospheric Physics. Astrophysics students use a superbly equipped and recently refurbished Observatory with two 24" and several smaller telescopes. Students have access to the expertise of the Mullard Space Science Laboratory. All students are provided with access to email and the internet, and are welcome to join the active student-run Physics Society, "Event Horizon".

Special features of courses: Modular course unit system permits great flexibility; small-group tutorials; problem-solving classes; emphasis on project and group project work, particularly in the third and fourth years; astronomy field trip to professional observatory; fully integrated communications skills programme. Fourth-year MSci options from a wide-ranging programme taught in collaboration with other London Colleges.

Regulation on transfer between courses: Transfers are possible between all courses during the first year and between many courses during the second and third years.

Further information:
Prof. Alan Aylward
E-mail physast-admissions@ucl.ac.uk
www.phys.ucl.ac.uk/

University of Warwick

Number of full-time undergraduates	12 800
Percentage reading science and engineering	33% 
IOP Juno Champion	

Department of Physics
Gibbett Hill Road, Coventry CV4 7AL
Tel 02476 574 327

Department of Physics academic staff: 59

Teaching content and philosophy: The main Physics, and Mathematics and Physics degrees are designed to offer a broad and flexible education. They lead to a BSc after three years or an MPhys/MMathPhys after four.

Special facilities/resources: Warwick is strong in research. In their final year students benefit from interaction with the research community when they can undertake a small research project of their own.

Special features of courses: At Warwick all departments aim to keep as many courses as possible open to students from other disciplines and students are actively encouraged to take outside courses. These help students to see physics in the context of science and education generally.

Regulation on transfer between courses: Transfers are possible after the first year. In the third term of the first year students register for the three-year (BSc) or four-year (MPhys or MMathPhys).

Further information:
Dr Nicholas d'Ambrumenil
http://go.warwick.ac.uk/physics

University of the West of Scotland

Number of full-time undergraduates	6085
Percentage reading science and engineering	33% 
IOP Juno Supporter	

Faculty of Science and Technology
High Street, Paisley, Scotland PA1 2BE
Tel 0800 027 1000

Faculty of Science and Technology academic staff: 70

Teaching content and philosophy: Teaching is achieved by approachable, dedicated staff in a friendly atmosphere through a mix of lectures, laboratory classes, computer-based learning and tutorials. First-year teaching includes study skills and small-group tutorials. The courses cover the full range of physics and its applications. Later years include seminars and extensive project work.

Special facilities/resources: Physics at UWS has access to a wide range of equipment for use in laboratories and projects. The undergraduate laboratories are located adjacent to research labs and they include access for X-ray Diffraction and Scanning Electron Microscopy. For their projects, undergraduates have access to the three UWS research groups, which are part of the Scottish Universities Physics Alliance (SUPA). The Experimental Nuclear Physics Group has extensive computing facilities and develops electronics and experimental equipment for use in state-of-the-art nuclear spectroscopy research. The Thin Film Centre has large-scale experimental facilities for research into thin-film properties and applications. Microscale Sensors has equipment and software for design, fabrication and characterisation of ultrasonic, magnetic and optical devices. These groups also offer opportunities for postgraduate study.

Special features of courses: There is flexibility of choice between degrees in the Faculty of Science and Technology. The physics course has recently been revised to include modern presentations of topics such as nanotechnology, advanced optics, ultrasonics and medical technologies, taught by specialised staff. The Honours project is emphasised, including opportunities for practical, theoretical and computational work as well as project management. The new degree programme entitled Physics with Nuclear Technology will be offered from 2011. This programme is designed for students with an interest in employment in the expanding nuclear sector or with an interest in nuclear-physics research. Physics with Nuclear Technology at UWS is the only course of its kind in Scotland.

Regulation on transfer between courses: The first two years are organised within a flexible Science Degrees Scheme, with specialisation in physics in years three and four.

Further information:
E-mail uni-direct@uws.ac.uk
www.uws.ac.uk/schoolsdepts/es/physics

University of York

Number of full-time undergraduates	**10 383**
Percentage reading science and engineering	**37%** 
IOP Juno Practitioner	

Department of Physics
Heslington, York YO10 5DD
Tel 01904 322 241

Department of Physics academic staff: 30

Teaching content and philosophy: The aim is to provide a coherently structured, broad-based set of courses, within a modular framework, most of which can be taken as a four-year MPhys course. Importance is attached to project work, personal study and communications skills. Excellent National Student Survey (NSS) scores reflect the dedication of staff to teaching, with a friendly and open attitude. Teaching received the maximum 24/24 score in the last Teaching Quality Assessment.

Special facilities/resources: There are excellent facilities for undergraduates, including workshops, specialist laboratories, computing services, observatory and 3m dish radio telescope on campus. Student-exchange schemes (SOCRATES and ERASMUS) exist with German, French and Italian universities. It is possible to spend an additional year in Europe as part of most courses. A wide range of research activities, of international standing, are pursued. There is also the possibility for some undergraduates to participate in summer vacation research projects. Campus facilities are excellent, with everything you need immediately "on hand".

Special features of courses: There is considerable flexibility to change courses during the first year. Transfer between BSc and MPhys courses is normally possible in the first two years. Particular emphasis is put on tutorial teaching in the first two years. A range of options is available throughout the course and all undergraduates do a substantial research project in their final year. A Foundation Year is available, which enables entry to courses without the normal A-level (or equivalent) requirements.

Regulation on transfer between courses: At the discretion of the relevant Boards of Studies, applications normally accepted if in good academic standing.

Further information:
Dr MIJ Probert, Senior Admissions Tutor
E-mail physics-undergraduate-admissions@york.ac.uk
www.york.ac.uk/physics/

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The Open University

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The Institute of Physics accredit a pathway through this degree that can lead to Chartered Physicist status.

Remember – if you aren't taking physics A-level or equivalent we have introductory modules to bring you up to speed. There are no formal entry requirements for this degree.

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E-mail: general-enquiries@open.ac.uk

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