

Physics and
Astronomy

UNIVERSITY OF
Southampton

LEARNING
AT THE
**FRONTIERS
OF PHYSICS**

Physics and Astronomy
Undergraduate courses 2016

WELCOME

Physics and Astronomy at the University of Southampton is ranked within the UK top 20 and has consistently received the highest rating for research for more than a decade. Our students learn from physicists and astronomers who are world leaders.

We believe that close links with international research institutions and industry are very important. Our flagship degrees and international placement programmes provide our students with opportunities to learn at the forefront of physics. Students also benefit from our research-grade facilities, which include two roof-top observatories and a specialist photonics laboratory with high quality laser equipment.

We work hard to provide a secure, friendly environment in which to learn. We support our students across the broad range of issues which can occur when leaving home for the first time via a personal tutor and a highly experienced senior tutor. We encourage the students Physics Society, which has won a Gold Award from the Institute of Physics, to provide a community in which students can help each other and have fun whilst studying with us. For example they run a parenting scheme to help new entrants settle in.

We hold Athena SWAN Bronze status and are active supporters of Juno, promoting equality and diversity within our organisation. We were recently commended by the Institute of Physics for our friendly and supportive staff-student relations. I hope you will choose to study here and look forward to welcoming you to our community.

Professor Jonathan Flynn
Head of Physics and Astronomy

Ranked
UK TOP 20
and
TOP 100
worldwide

97%

of MPhys students
were satisfied with
their course
NSS 2014

94%

of research rated
world leading or
internationally
excellent
REF 2014

Placements at
world-renowned
organisations
such as CERN

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CHOOSE SOUTHAMPTON: A GLOBAL UNIVERSITY

The city of Southampton has a history of innovation and exploration. As a forward-thinking University, we uphold these values in our education and research; join us to forge your successful future.

- ➔ Our students can study in 54 countries across the world
- ➔ Our 195,000 graduates are part of a network of professionals that covers 180 countries
- ➔ Our academics make a difference on every continent
- ➔ Our business, government and non-government organisation partners span the globe
- ➔ We are part of the Worldwide Universities Network, an international higher education collaboration from around the world



ASTROPHYSICS IN THE USA

Mark Graham spent a year doing research at the world-renowned Harvard-Smithsonian Center for Astrophysics in Boston

**Commercialisation
of Crystal Technology**
Our wavelength conversion crystals can change the colour of laser light and are having widespread global impact in the laser, defence and display industries



**Teide Space
Science**
MPhys Physics with Space Science student Christine McCullough worked at the Teide Observatory during a field trip to Tenerife

We have
322
partnerships in
54 countries
around the
world

We are an
institution in the
TOP 1%
of global
universities

Brighter world
Our multidisciplinary
nanophotonics researchers
have improved LED lights,
used the world over, enabling
a more efficient commercial
production process
in Taiwan



**EXPERIMENTAL
PARTICLE
PHYSICS IN
SWITZERLAND**

As part of his MPhys Particle Physics degree, Ali Farzaneh Far worked at CERN, Geneva, on the hardware trigger for the ATLAS experiment at the LHC



**SHOOTING
STAR**

Michael Bargeron, second year MPhys with Astronomy student, will represent the UK in shooting at the 2015 World University Games in Gwangju, Korea, July 2015

 **Find out more**
www.southampton.ac.uk/global

WHAT'S YOUR AMBITION? TO BE AN ASTRONOMER

Mark Graham

MPhys Physics with Astronomy
(with a year abroad)
Fourth Year

MPhys Physics with Astronomy student, Mark Graham, has always wanted to be an astronomer and was attracted to Southampton because of its reputation for high quality teaching and research, and the opportunity to study at the Harvard-Smithsonian Center for Astrophysics in the USA.

As part of his course, Mark went on a two week trip to Tenerife where he completed a spacecraft design study and a practical observational project at the Mount Teide Observatory. After this experience Mark was inspired to work towards the year abroad programme, but as well as aiming high academically, he immersed himself in University life and all the societies on offer.

Mark went on to achieve his goal, spending a year doing research abroad in Boston. Mark explains, "As soon as I arrived, I was thrown into research learning about programming, data calibration and imaging. I was even lucky enough to travel to Mauna Kea in Hawaii to observe for four nights. The Center for Astrophysics has a thriving working environment with talks and seminars every day from top scientists. It really is one of the best places to do astronomy!"

Mark is now looking to the future, and after graduating, hopes to embark on a PhD at Oxford. He said, "I want to take forward all that I have learnt in my degree and on my year abroad and continue researching in astronomy."



[↪](#) **Find out more**

Join our ambitious community -
Find us on Facebook:

**Physics and Astronomy
Southampton**

OUR PEOPLE

Southampton scientists have a passion to change the world through their research and collaborations with global partners

- Our lecturers push the boundaries of knowledge
- You are taught differently; our research informs your education
- We provide you with a rich curriculum with additional opportunities to broaden your multidisciplinary knowledge
- You are involved with important research as it unfolds
- We offer you a vibrant culture of partnership and collaboration in our academic community

DR JAMES BATEMAN

UNDERSTANDING THE UNIVERSE

Dr Bateman is part of a collaborative team in Physics and Astronomy at Southampton that were able to contribute to the question of the nature of Dark Matter – the missing 85 per cent of matter in the Universe. Their research proposed a new fundamental particle that could explain why no one has managed to detect Dark Matter.

SOLAR ECLIPSE SPACE FLIGHT

Our Spaceflight Society (SUSF) launched a balloon to follow the solar eclipse from the upper atmosphere, using a raspberry pi and pi camera to capture data and photographs: <http://susf.co.uk/launches/eclipse/>



DR CAITRIONA JACKMAN
**SPACE ENVIRONMENT
RESEARCHER**

Dr Caitriona Jackman studies the magnetic environment of planets. Dr Jackman analyses data from spacecraft like Cassini (Saturn) and MESSENGER (Mercury) or from telescopes like the Hubble Space Telescope. She travels the world to present her results



DANIEL SANDFORD
**BBC NEWS
CORRESPONDENT**

The BBC's Home Affairs correspondent is a familiar face on our screens. His physics degree was put to good use when he reported from Chernobyl

 Find out more
www.southampton.ac.uk/people

CHANGE THE WORLD

Improving the efficiency of LED lights

Millions of displays, signs and products all over the world have brighter LED lighting, thanks to pioneering nanophotonics research by a multidisciplinary team at Southampton.

The team, led by Professor Pavlos Lagoudakis, harnessed the capabilities of photonic crystals to improve the light efficiency of LEDs, leading to the creation of spinout company Mesophotonics Ltd.

Their photonic crystals research was eventually bought by Taiwanese LED manufacturer Luxtaltek Corporation who used it to increase the production and brightness of their LED chips.

These LED chips are now used globally in the company's multi-million pound production of digital displays, traffic signs, household appliances and vehicle products.

By influencing the business strategy of one of the world's LED manufacturers, the research has also contributed to an international move towards more energy efficient lighting.

GLOBAL IMPACT

The new technology has resulted in higher production to supply the global market and employs more than 300 people in its production facilities

IMPROVED TECHNOLOGY

Brighter LED lighting has improved
the world's digital displays
and products

ENERGY EFFICIENT

Nanophotonics research has
enabled an international move
towards more energy
efficient lighting

 **Find out more**
[www.southampton.ac.uk/
researchfacilities](http://www.southampton.ac.uk/researchfacilities)

WORLD-CLASS RESEARCH

The University of Southampton is internationally recognised for the quality of its research-led teaching and Physics ranks among the very best in the UK.

Physics and Astronomy was one of just five UK physics departments to achieve the highest 5* rating in the first two research assessments. Our world-leading research status was once again confirmed in the 2014 Research Excellence Framework (REF), with 94% of our research rated world leading or internationally excellent. Many of our teaching staff are eminent experts in their research areas, including a Fellow of the Royal Society, Britain's top accolade for scientific achievement, and several others with major academic awards.

Our academic staff members have the enthusiasm and knowledge to inspire the excellent students we teach at all levels of study. We embrace physics from quarks to cosmology across three research groups:

- Astronomy (including Space Environment Physics)
- Quantum, Light and Matter
- Theoretical High-Energy Physics

QUANTUM, LIGHT AND MATTER

Explore lasers, photonics, nanoscience and the world of quantum mechanics, investigating the interaction between light and matter at scales down to one billionth of a metre

ASTRONOMY

Research ranges from white dwarfs, neutron stars and black holes through the development of ground- and space-based telescopes to the space environment of the Solar System

Joe Spencer and Paul Gow in one of our research laboratories used for final year projects



THEORETICAL HIGH-ENERGY PHYSICS

Unlock some of the deepest mysteries of the structure and evolution of the Universe, the unification of forces and the interactions of elementary particles

 Find out more
www.phys.soton.ac.uk/research



“Southampton has a great reputation for physics and the course is so flexible. You can choose two optional modules a year throughout the first three years and five modules in your final year. I’m currently taking a computer science module and an advanced computing engineering module. If you want to do something different you normally just have to ask.”

Emma Tattershall
MPhys Physics

FLEXIBLE LEARNING

We give you the chance to study subjects not directly linked to your degree.

At Southampton you can tailor your course to follow your interests and improve your employability. Our degrees include time for optional modules, allowing you to deepen knowledge in your main subject, to combine it with other disciplines, or to study interdisciplinary topics. You can broaden your experience with modules ranging from business skills to local and global sustainability.

Our single honours MPhys and BSc degrees give the greatest flexibility. We recommend applying for the four-year MPhys, but you can transfer to or from the BSc up to the end of the second year.

Alternatively, you may pick a set of options in a subsidiary subject as part of one of our combined honours programmes:

- Physics with Astronomy
- Physics with Space Science
- Physics with Photonics
- Physics with Mathematics
- Physics with Nanotechnology

You can move from combined to single honours and, if you have taken the appropriate options, from single to combined honours.

 Find out more
www.southampton.ac.uk/flexible

YOUR STUDENT EXPERIENCE

Our six campuses all offer a friendly, vibrant and diverse atmosphere for work and leisure.

Campuses

Physics lectures will be based at the University's Highfield Campus, in the north of Southampton. Set in green and pleasantly landscaped surroundings, it's an easy walk or bus ride to the city centre. On campus you will find new and refurbished student facilities including the Students' Union Bridge Bar, the Jubilee Sports Centre, the Hartley Library, a 330-seat Uniplex cinema and three leading arts venues: the Nuffield Theatre, Turner Sims Concert Hall and the John Hansard Gallery. There is also a range of cafes, restaurants, a bookshop, post office and several major banks on site.

We have six other sites – Avenue Campus; Bolderwood, Southampton General Hospital; the National Oceanography Centre; and Winchester School of Art.

Social life

The Students' Union (SUSU) is one of the largest in the UK and offers a range of social spaces to eat great food, hear top bands, see the latest films and get information and advice. SUSU organises a vibrant programme of events and diverse societies, from cultural and course related to sport and politics.

Activities take place on campus and further afield, nationally and internationally.

As a Physics student you will automatically become a member of SUSU and Physoc, our student-led society dedicated to promoting Physics. Physoc has twice been recognised as the best Undergraduate Physics Society in the UK by the Institute of Physics.

Physoc promotes physics through activities such as their annual Nobel Prize talk, employer events and community outreach projects including the Light Express Roadshow and our mobile planetarium – the Soton Astrodome:

www.astrodome.soton.ac.uk

The society also has a lively programme of weekly sports activities and socials.

www.physoc.org.uk

Other Physics societies to choose from include:

- Astrosoc focuses on practical observing with our roof top telescopes: www.astrosoc.susu.org
- Southampton Spaceflight Society has launched a teddy bear and chocolate bunny into space: www.susf.co.uk





03



02

- 01 Relax in our cafes
- 02 Physics foy
- 03 Get involved in Physics outreach activities
- 04 The Bridge Bar
- 05 Try shooting at Wide Lane



You can socialise with friends in one of our bars or cafes on campus and in our halls of residences, as well as in the city of Southampton

04



05

Accommodation

Get the best out of your student life; stay in one of our 6,500 student rooms in halls. You can choose from a range of room types that includes a new development of over 1,400 rooms in Southampton city centre.

Live in either self-catered halls of residence with well-equipped communal kitchens, or part-catered accommodation where you enjoy the benefits of breakfast and evening meals throughout the week, plus some other meals at the weekend.

If you are a registered first-year undergraduate student new to the University, starting a full-time course, with no dependents, you will be guaranteed an offer of halls accommodation as long as you fulfil

the full criteria of the guarantee, which includes applying before 1 August.

To uphold the guarantee, in years of exceptional demand we may offer accommodation in a twin shared room at the start of the academic year for a short, temporary period of time.

For more information on our guarantee to you, visit www.southampton.ac.uk/guarantee

Women in Science

We hold Athena SWAN Bronze status and actively support Theano, a networking organisation for staff and students to promote women in science. We are also an Institute of Physics Project Juno Supporter, helping to address the under-representation of women in university physics and to encourage better practice and environments for both women and men.



Find out more

University Residences
 T: +44 (0)23 8059 5959
 E: accommodation@southampton.ac.uk
www.southampton.ac.uk/accommodation

SHAPE YOUR FUTURE

90%

of MPhys graduates are
in employment or further
study after six months
Unistats

over
84%

of our physics students are
in professional and managerial
positions within six months
after graduating
DLHE

A degree from Southampton opens up doors for diverse career opportunities

We are very proud of our students' record in securing employment. In 2014, 90 per cent of our MPhys students were in work or study within six months of graduating, with average salaries of around £24k across diverse career areas from research to industry and business to broadcasting.

Our department is part of the South East Physics Network (SEPnet) and we offer joint outreach activities, such as talks by speakers from industry. SEPnet has a dedicated Physics Employer Engagement Officer who works with our students to find paid internships for 8 weeks in the summer vacation. This year Southampton students have secured at least 23 SEPnet placements. Many of our students have received job offers after graduation as a result of their placement.

Partner companies include:

BAE Systems
CERN@School
ISIS
Merck Chemicals
NPL
Phoenix Photonics
Roke Manor
Selex ES
thingswedontknow.com
Thoughtified

“The enthusiasm and output of the Southampton students working on the LHC experiments has been very impressive. We look forward to having many more of them in the future.”

Dr Claire Shepherd-Themistocleous

RAL Particle Physics Department

 **Find out more**

Find out more about SEPnet placements, visit

www.phys.soton.ac.uk/placements

WHAT'S YOUR AMBITION?

TO TURN 'STREETLIFE' INTO A GLOBAL ONLINE COMMUNITY

Paul Ettinger

BSc Physics & Electronics, 1980
Current position: Co-Founder, Caffè Nero
and Chairman, Streetlife.com

As co-founder of the Caffè Nero chain of coffee shops, which opened its first branch in the United States last year, Paul Ettinger is a truly global businessperson. His latest venture, Streetlife.com, sees him enter the world of web entrepreneurship, as he attempts to turn Streetlife into a global online community.

Southampton was Paul's first choice because of the reputation of the Physics and Electronics departments, but he also liked the atmosphere of the campus and proximately to his home city of London.

Paul has used the skills learnt as a student in his current ventures. He says: "During my time at the University I got involved with lots of extra-curricular activities. As captain of the ski club I took 120 people to the Alps every year which really helped me develop key organisational and administrative skills. I also really grew in confidence."

Paul has enjoyed a diverse career since graduating from Southampton, he explains: "After University I went to work as an engineer in the Sahara desert for two years which was a tremendous experience. After two years I decided that I wanted to work in general management instead. I worked in industry for 12 years in various general management roles and during that time did an MBA in France. It was through a friendship that I made during my MBA course that I got involved in setting up Caffè Nero which has now grown to become a global coffee shop chain with over 600 stores and 4,000 members of staff."

Paul added: "Alongside my role as International Development Director at Caffè Nero I am also Chairman of the local social network 'Streetlife.com'. I still use the skills I learnt in my degree now, and in particular the technology training I received as a student at Southampton gave me the confidence to undertake the Streetlife project."

Find out more about our graduates, visit www.phys.soton.ac.uk/graduates





 **Find out more**

What's your ambition? Tell us
on Twitter @AstroPhysSoton:
#myambition

COURSE OVERVIEW

Physics and Astronomy are dynamic subjects, with continuous progress from new discoveries and innovations. By choosing to study physics at Southampton you will benefit from being taught by research-active physicists who enjoy an outstanding international reputation in their diverse research areas. You will also have access to career-enhancing placement opportunities. We encourage our students to support each other in a friendly, collaborative and stimulating environment, nurturing the physicists of the future.

Choose Southampton

- Ranked among the top 100 universities in the world (QS World Rankings 2014/15)
- Flagship programmes with opportunities to work at prestigious placements including CERN and Harvard-Smithsonian Center for Astrophysics
- Flexible degree courses with innovative curriculum design and excellent student achievement that has been recognised in the National Review of Teaching Quality
- Exceptional research-grade facilities including rooftop observatories and a specialist photonics lab

Top

20

UK ranking physics department
The Guardian University Guide 2016, The Times Good University Guide and The Complete University Guide 2015

94%

of students were satisfied with
the quality of their course
*National Student Survey
NSS 2014*

Undergraduate laser laboratory

A degree in physics is not just about learning facts – physicists are skilled at analysing new systems and understanding how to investigate them and model their behaviour.

Structure

A common feature of all programmes is the mix of compulsory ‘core’ modules and options. Normally you take eight modules each year. Core modules cover essential topics required for any career in physics. As you progress through your degree, you will have increasing flexibility to choose options. A typical first year student has 20 contact hours per week.

Learning

Experimental work allows students to apply their knowledge. This takes place in our modern laboratories where students have access to the latest apparatus and a wide range of computer-controlled equipment. In the laboratory, academic and research staff are on hand to advise and help students. The Institute of Physics recently praised the high level of organisation and facilities in our undergraduate labs.

The first year of our programmes has been specially designed to provide a smooth transition into degree level study. Teaching includes small group, weekly tutorials and problem-solving classes. Our first-year modules help to develop problem-solving skills through micro-projects in which students design their own experiments from scratch. In the second, third and fourth years of our courses, we add career skills such as computing, scientific presentation and scientific writing.

Experience

We offer a range of opportunities to enhance your employment prospects, from SEPnet summer internships and the annual astronomy Tenerife trip, to year-long research placements at home and abroad or six-month placements in industry.

Support

When you arrive at Southampton you will be assigned a personal tutor who will oversee your progress and offer help and advice throughout your course. During the first year, your weekly tutorials will also provide an opportunity to discuss any issues or concerns that you may have. As you near the end of your studies, tutors will be happy to discuss career options or provide that all-important reference for your first job.

Facilities

Our students benefit from excellent research facilities and resources, including:

- two roof-top observatories equipped with high quality telescopes and CCD detectors
- dedicated computer suites
- state-of-the-art lecture theatres
- newly refurbished, purpose-built laboratories with the latest computer-controlled equipment
- a specialist photonics laboratory with research-grade laser equipment
- a dedicated physics reading room/library for independent study.

Entry requirements and key facts

Typical entry requirements: A levels - AAA, including A in Physics and A in Mathematics and/or Further Mathematics

IB: Minimum 36 points, including grade 6 in Higher Level Mathematics & grade 6 in Higher Level Physics

Intake: 120

Applicants per place (average): 7

Selection Process: UCAS application, with an invitation to visit the Department

Find out more

Tel: +44 (0)23 8059 2969

Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

MODULE DESCRIPTIONS

Year one modules

Motion and Relativity

After a look at Newtonian mechanics, this module introduces special relativity and its consequences, including time dilation, length contraction and $E=mc^2$.

Electricity and Magnetism

The interactions of electric charges through electric and magnetic fields provide an excellent example of a fundamental force at work. These interactions, holding atoms together and binding them into everyday matter, are controlled by simple and elegant laws, which are examined by this module.

Energy and Matter

The laws of thermodynamics provide a very powerful tool for understanding the properties of matter – from the phases of water to black holes. This module offers an introduction to energy and matter and the inexorable increase of entropy in the Universe.

Waves, Light and Quanta

Light is an invaluable probe for studying the Universe. This module covers classical light propagation and then explores how a break-down in the wave description of light led to the concept of photons and ultimately to the quantum mechanical revolution.

Supplementary Modules

A range of supporting modules introduces you to key mathematical tools and experimental methods in physics. These modules include ‘mini-projects’ that encourage you to think creatively in the lab. Weekly small group tutorials provide an opportunity to discuss course topics.

Options

Within Physics and Astronomy you can choose to study the essentials of astronomy, such as star and planet formation, learn basic photonics or be introduced to the nanoworld. You can also study aspects of chemistry, biology, oceanography, engineering, archaeology, philosophy or a foreign language by choosing options run elsewhere in the University.

Year two modules

Maxwell’s Electromagnetism

This module explores how electric and magnetic forces come together to reveal light as an electromagnetic wave.

Quantum Physics

Quantum theory – through uncertainty and probability waves – dominates the atomic realm. This module explores how quantum mechanics works, starting from Schrödinger’s equation.

Classical Mechanics

Planetary dynamics, the motion of systems of particles and the strange behaviour of gyroscopes.

Wave Physics

Wave physics underlies all physics, from the properties and mechanics of waves, the origins of the processes of refraction, dispersion and interference, to the quantum mechanics of the uncertainty principle.

Quantum Physics of Matter

What is the difference between a metal and a non-metal? Why do some materials transfer heat or electricity well, but others not? This module looks at this behaviour from the viewpoint of the quantum world of atoms.

Supplementary Modules

You will have the opportunity to build on first-year study and learn new mathematical techniques. Problem classes linked to the courses help you to develop problem-solving techniques.

Options

Opportunities include the study of the Universe on a galactic scale or a look into our use of energy resources on Earth. You can also broaden your interests and select modules run elsewhere or branch out into new areas, including the University’s Curriculum Innovation modules.

Year three modules

Atomic Physics

The quantum mechanics of electrons is the key to understanding atoms and molecules. Calculating the energy spectrum of hydrogen atoms from first principles is one of the major triumphs of physics and forms an important part of the module.

Crystalline Solids

Matter has some very exotic phases displaying a variety of magnetic or superconducting properties which we explore. We examine, for example, how lattice vibrations are quantised as particles called as phonons.

Nuclei and Particles

At the core of every atom are protons and neutrons which are bound together by the strong nuclear force. This module introduces models of the nucleus and examines the discovery of the many elementary particles in particle accelerators. This module looks at the search for a fundamental theory of matter at subnuclear scales.

Physics from Evidence II or Computer Techniques in Physics

The lab module provides hands-on lab experience to help you to develop a range of skills and techniques, while the computing module develops the use of computers for simulation and data analysis. Computation is often described as the third arm of science after theory and experiment.

MPhys Options

You can take a variety of options, from nuclear physics through to general relativity and computer modelling.

BSc Project

This module is dedicated to a major experimental, theoretical or computer based project. Recent examples of student projects have included detecting lightning strikes from the electro-magnetic excitations in the atmosphere and modelling heavy ion collisions.

BSc Options

In the third year, you will have greater flexibility to choose options, from computer modelling, through to nuclear physics and stellar evolution. Alternatively, you may also select options run elsewhere in the University.

BSc Synoptic Physics

This module revisits the core curriculum of the BSc degree programme, encouraging understanding and synthesis of ideas from different modules. Problem solving in new environments is developed. You will finish your degree programme with a coherent understanding of the wide perspective of physics.

Year four modules (MPhys)

MPhys Project

A quarter of the final year is dedicated to a major project linked to one of our research groups. This project can be experimental, theoretical or computer based and you can choose from a wide variety of subjects. Recent examples range from laser trapping of nanoparticles, through to aurora studies and examinations of particle physics data.

Options

The fourth year of an MPhys degree is all about specialising. You can choose from a host of subjects, such as advanced quantum mechanics, particle physics, cosmology, liquid crystals, or space plasma physics.

MPhys Synoptic Physics

This module revisits the core curriculum of the MPhys degree programme, encouraging understanding and synthesis of ideas from different modules. Problem solving in new environments is developed. You will finish your degree programme with a coherent understanding of the wide perspective of physics.

Physics MPhys and BSc

F303/F300

Overview

The four-year MPhys is designed for students intending to become professional physicists. It offers a greater breadth and depth of study than the BSc with extra specialisation and the development of more key skills. As well as studying our core physics modules you can choose two options a year including the option modules from our specialist MPhys degree programmes.

Our three-year BSc course also provides a rigorous education in modern physics, however the third year curriculum differs substantially from that of the MPhys. There are opportunities in the final year to study specialist topics at an advanced level and to acquire key generic and scientific research skills.

Whichever programme you choose, you will gain a solid understanding and knowledge of the main areas of physics. You will also learn a range of generic skills, including problem solving, data analysis and team working, which are greatly valued by employers and are firmly embedded in our undergraduate teaching. We generally recommend that students enrol initially for the four year MPhys as there is flexibility to transfer between courses until the end of the second year if you wish to change to the BSc.

Our degree programmes provide excellent preparation for a range of careers, including scientific research, software engineering, law and financial consultancy as well as postgraduate study.

Compulsory Modules (MPhys)

Year one

PHYS1022	Electricity and Magnetism
PHYS1015	Motion and Relativity
PHYS1017	Physics Skills I
PHYS1013	Energy and Matter
PHYS1011	Waves, Light and Quanta
PHYS1019	Physics Skills II
MATH1006	Introduction to Mathematical Methods
MATH1007	Mathematical Methods for Scientists

Year two

PHYS2001	Electromagnetism
PHYS2003	Quantum Physics
PHYS2006	Classical Mechanics
PHYS2022	Physics from Evidence I
PHYS2023	Wave Physics
PHYS2024	Quantum Physics of Matter

Year three

PHYS3002	Nuclei and Particles
PHYS3004	Crystalline Solids
PHYS3007	Theories of Matter, Space and Time
PHYS3008	Atomic Physics
PHYS6009	Dissertation
PHYS6008	Physics from Evidence II

or

PHYS6017	Computer Techniques in Physics
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Year four

PHYS6006	Project (double module)
PHYS6015	Synoptic Physics

Compulsory Modules (BSc)

Year one

Same as MPhys Year 1

Year two

Same as MPhys Year 2

Year three

PHYS3002	Nuclei and Particles
PHYS3004	Crystalline Solids
PHYS3008	Atomic Physics
PHYS3017	Synoptic Physics
PHYS3018	Project

Find out more

Tel: +44 (0)23 8059 2969

Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

Physics with Astronomy MPhys

F3FM

Overview

In addition to studying the fundamental aspects of physics, your course includes: physics of the Solar System, stellar evolution, galaxies and cosmology. You will cover topics such as solar flares, white dwarfs, black holes and quasars. In the second year our top students have the opportunity to visit Tenerife, in Spain, for an intensive period of astronomical observation at the Izana Observatory. In your final year you may undertake a six-month project using the University Observatory.

The table shows additional modules that must be taken in addition to the MPhys Compulsory Modules:

Compulsory Modules (MPhys)

Year one

PHYS1005	Introduction to Astronomy and Space Science
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Year two

PHYS2013	Galaxies
----------	----------

Year three

PHYS3011	Photons in Astrophysics
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PHYS3010	Stellar Evolution
----------	-------------------

Year four

PHYS6004	Space Plasma Physics
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PHYS6005	Cosmology
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Find out more

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Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys



“As Academic President I have had a clear insight into how much the staff want the best for us. It is a great department with fantastic resources and friendly staff, providing wonderful opportunities within a great city. I have now managed to secure a job when I graduate with Buro Happold as a Graduate Sustainability Consultant.”

Imogen White

MPhys Physics

Fourth Year

“I got the chance to put my theory into practice using a lot of my research skills when I did my SEPnet internship. Before the placement I wasn't really sure what I wanted to do after I graduated and it helped me realise that I would like to work in defence or engineering.”

Amy Ennion
MPhys Physics
Fourth Year



Physics with Space Science MPhys

F3FX

Overview

In addition to core physics modules, the Physics with Space Science degree includes a diverse range of topics in remote sensing and space engineering. Remote sensing of the Earth from satellite-borne instruments is particularly important in studies of global warming and environmental protection.

In the second year our top students have the opportunity to visit La Laguna University in Tenerife, Spain, for a design study of a scientific spacecraft.

The table shows additional modules that must be taken in addition to the MPhys Compulsory Modules:

Compulsory Modules (MPhys)

Year one

PHYS1005	Introduction to Astronomy and Space Science
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Year two

PHYS2012	European Dimension in Space
SESA2001	Astronautics II

Year three

SESA3010	Spacecraft Systems and Design (year long)
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Year four

PHYS6004	Space Plasma Physics
----------	----------------------

Find out more

Tel: +44 (0)23 8059 2969

Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

Physics with Photonics MPhys

F369

Overview

The ongoing extraordinary growth in telecommunications has been made possible through the development of photonic systems, in which information is conveyed by light. The application of optical techniques looks set to increase and the emerging photonics industry has a shortage of qualified people to employ. This degree is taught by staff from Physics and Astronomy in collaboration with the University's Optoelectronics Research Centre and forms an excellent foundation for a career in photonics.

The table shows additional modules that must be taken in addition to the MPhys Compulsory Modules:

Compulsory Modules (MPhys)

Year one

PHYS1004	Introduction to Photonics
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Year two

PHYS2009	Practical Photonics
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Year three

PHYS3003	Light and Matter
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PHYS6009	Dissertation on Laser Science
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Year four

PHYS6006	Project on Photonics
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PHYS6012	Coherent Light, Coherent Matter
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PHYS6024	Lasers
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Find out more

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“My main teaching role is leading the third year experimental laboratories – an optional course where students get to do a series of real research projects such as making their own high temperature superconductors, building a laser, or determining the mass of cluster galaxies.”

Professor David Smith

Admissions Tutor and Third Year Lab Director

“Southampton is a great environment to explore any interests. I pursue my love of racing through the University’s Motor Club and I am involved with outreach using the University’s mobile planetarium. In my role as Outreach Officer for Physoc, I help organise school visits, science festivals and University events, hoping to inspire the next generation of students.”

Jo Barzycki
MPhys Physics
Second Year



Physics with Mathematics MPhys

F3GC

Overview

Mathematics is the fundamental language of physics and this degree allows students to explore this area in more detail in conjunction with the excellent School of Mathematics. Students can choose to study a wide range of subjects, including general relativity, topology, number theory or the mathematics of finance. Theoretical physics courses and projects are also available and these are taught by international experts in the Theoretical Particle Physics Group.

The table shows additional modules that must be taken in addition to the MPhys Compulsory Modules:

Compulsory Modules (MPhys)

Year one

MATH1048 Linear Algebra I

MATH1049 Linear Algebra II

Year two

MATH2038 Partial Differential Equations

MATH2045 Vector Calculus and Complex Analysis

Year three

MATH3006 Relativity, Black Holes and Cosmology

MATH3018 Numerical Methods

Year four

MATH6097 Advanced Differential Equations

MATH6107 Gravitational Waves or

MATH6139 Advanced General Relativity

Find out more

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Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

Physics with Nanotechnology MPhys

F390

Overview

Nanotechnology and Nanoscience involve the study of matter and machines down to scales of a billionth of a metre. These are highly inter-disciplinary fields and so you will learn, in addition to the core studies of a physics degree, fundamental aspects of how physics, photonics, electronics, chemistry, and biochemistry relate to Nanotechnology.

Much of your project work will be based in our new NanoFabrication Centre.

The table shows additional modules that must be taken in addition to the MPhys Compulsory Modules:

Compulsory Modules (MPhys)

Year one

PHYS1004 Introduction to Photonics

PHYS1026 Introduction to the Nanoworld

Year two

PHYS2009 Practical Photonics

BIOL1010 Molecular Basis of Life

Year three

PHYS3003 Light and Matter

PHYS6009 Dissertation in Nanotechnology

Year four

PHYS6014 Nanoscience: Technology and Advanced Materials

Find out more

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www.southampton.ac.uk/phys

“I believe the reputation of the University contributed to me gaining an interview at IBM, which ultimately led to my employment.”

Andrew Naylor

MPhys Physics
Graduate



FLAGSHIP PROGRAMMES

Year of research abroad or in Southampton

Our MPhys degrees include the exciting possibility of spending your final year working on a prolonged research project either here in Southampton or abroad. These flagship programmes are intended for our top first-class students who wish to go on to study for a PhD and aim to provide those students with skills and experience that put them ahead of their peers.

MPhys students have the option to move into these programmes once they have arrived in Southampton and established themselves as first-class students – they move into the programme at the end of the second year. Their courses are then carefully coordinated to fast-track them in three years to the frontier of knowledge in the subject area they are interested in. The final year can then be spent tackling cutting-edge research problems.

Students interested in the year-in-research programmes should apply for the MPhys Physics programme F303 (particle physics or experimental physics research years) or MPhys Physics with Astronomy F3FM (astronomy research year). Places on these programmes are limited and candidates will have the opportunity to compete for positions in year two of study.

“The field trip to Tenerife and CERN visit were highlights of my course. Tenerife was an incredible experience as we worked alongside Spanish students at La Laguna University to design a gamma ray telescope mission. We also visited the Teide Observatory to join the Southampton Astronomers for a night of stargazing.”

Christine McCullough

MPhys Physics with Space Science
Fourth Year

*Chris Frohmaier and Christine McCullough
in the University's rooftop observatories*

Physics with Astronomy (with a year abroad) MPhys

Overview

Astronomy students on this degree relocate for their final year to Boston in the United States to work at the world renowned Harvard-Smithsonian Center for Astrophysics. Examples of recent projects are 'Model-Independent Mass Determinations of Galaxy Clusters' and 'Methods to Improve Near Earth Asteroid Discovery'.

Compulsory Modules

Year one

PHYS1015	Motion and Relativity
PHYS1017	Physics Skills I
PHYS1022	Electricity and Magnetism
MATH1006	Introduction to Mathematical Methods
PHYS1005	Introduction to Astronomy and Space Science
PHYS1011	Waves, Light and Quanta
PHYS1013	Energy and Matter
PHYS1019	Physics Skills II
MATH1007	Mathematical Methods for Physical Science

Year two

PHYS2006	Classical Mechanics
PHYS2013	Galaxies
PHYS2022	Physics from Evidence I
PHYS2023	Wave Physics
PHYS2001	Electromagnetism
PHYS2003	Quantum Physics
PHYS2011	Design and Observation in Astronomy
PHYS2024	Quantum Physics of Matter

Year three

PHYS3004	Crystalline Solids
PHYS3008	Atomic Physics
PHYS3011	Photons in Astrophysics
PHYS6005	Cosmology
PHYS3002	Nuclei and Particles
PHYS3007	Theories of Matter, Space and Time
PHYS3010	Stellar Evolution
PHYS6017	Computer Techniques in Physics

Year four

PHYS6013	Astrophysics Research Project
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Find out more

Tel: +44 (0)23 8059 2969

Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

Physics with Particle Physics (with a year abroad) MPhys

Overview

Our particle physics students relocate to CERN in Geneva, Switzerland to work with one of the major experiments at the Large Hadron Collider – the world’s highest energy particle collider, where the Higgs discovery was made in 2012. A recent example project was ‘Search for a light CP-odd Higgs boson with a di-muon final state at ATLAS’.

Compulsory Modules

Year one

PHYS1015	Motion and Relativity
PHYS1017	Physics Skills I
PHYS1022	Electricity and Magnetism
MATH1006	Introduction to Mathematical Methods
PHYS1011	Waves, Light and Quanta
PHYS1013	Energy and Matter
PHYS1019	Physics Skills II
MATH1007	Mathematical Methods for Physical Science

Year two

PHYS2006	Classical Mechanics
PHYS2022	Physics from Evidence I
PHYS2023	Wave Physics
PHYS2001	Electromagnetism
PHYS2003	Quantum Physics
PHYS2024	Quantum Physics of Matter

Year three

PHYS3004	Crystalline Solids
PHYS3008	Atomic Physics
PHYS6003	Advanced Quantum Physics
PHYS3002	Nuclei and Particles
PHYS3007	Theories of Matter, Space and Time
PHYS6011	Particle Physics
PHYS6017	Computer Techniques in Physics

Year four

PHYS6016	Particle Physics Research Project
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Find out more

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www.southampton.ac.uk/physics



“Working at CERN has been extremely exciting. Aside from the opportunity to contribute to the experiments and learn a great deal, I’d have to say that the most rewarding and entertaining part of being here is attending talks from leading experts in all areas of physics. After I complete my Masters in Mathematics at Cambridge next year, I aim to continue onto a PhD in particle physics.”

Ali Farzaneh Far

MPhys Particle Physics (with a year abroad)

Fourth Year

Physics (with a Year of Experimental Research) MPhys

Overview

Our materials physicists have the opportunity to use our world-class laboratories here in Southampton. The final year of research can be spent working on any of the areas of expertise of our Quantum, Light and Matter research group, from photonics to nanotechnology to the quantum properties of matter. An example of recent work was 'The Nanotechnology of an Ultra Efficient Photo-Voltaic Cell'.

Compulsory Modules

Year one

PHYS1015	Motion and Relativity
PHYS1017	Physics Skills I
PHYS1022	Electricity and Magnetism
MATH1006	Introduction to Mathematical Methods
PHYS1011	Waves, Light and Quanta
PHYS1013	Energy and Matter
PHYS1019	Physics Skills II
MATH1007	Mathematical Methods for Physical Science

Year two

PHYS2006	Classical Mechanics
PHYS2022	Physics from Evidence I
PHYS2023	Wave Physics
PHYS2001	Electromagnetism
PHYS2003	Quantum Physics
PHYS2024	Quantum Physics of Matter

Year three

PHYS3004	Crystalline Solids
PHYS3008	Atomic Physics
PHYS6003	Advanced Quantum Physics
PHYS3002	Nuclei and Particles
PHYS3007	Theories of Matter, Space and Time

Year four

PHYS 6018	Quantum, Light and Matter Physics Research Project
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Optional Modules

Year one

Two options. Recommended to be chosen from:

PHYS1004	Introduction to Photonics or
MATH1048	Linear Algebra I
PHYS1026	Introduction to the Nanoworld
MATH1049	Linear Algebra II

Year two

Two options. Recommended to be chosen from:

MATH2015	Mathematical Methods for Scientists
PHYS2009	Practical Photonics

Year three

Three options. Recommended to be chosen from:

PHYS6024	Lasers
PHYS6012	Coherent Light, Coherent Matter
PHYS3003	Light and Matter
PHYS6017	Computer Techniques in Physics
PHYS3009	Applied Nuclear Physics
PHYS6014	Nanoscience: Technology and Advanced Materials

Find out more

Tel: +44 (0)23 8059 2969

Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

Physics (with Industrial Placement) MPhys

Overview

For students interested in making strong links with industry we have created a new degree programme. Selected top-performing students will enter the programme at the end of year two from our MPhys programmes. The Industrial Placement will be in a local company such as Merck and will last for six months. The placement period occurs over the summer between the third and fourth year and continues through the first semester of year four.

Students interested in this programme should apply for MPhys Physics F303. Places are limited and candidates will have the opportunity to compete for positions during year two of study.

Compulsory Modules

This programme follows the MPhys Physics programme throughout, except for the summer between years 3 and 4 and semester one of year 4, which are spent in industry.

Physics (with Foundation Year) MPhys and BSc

Overview

This four- or five-year degree is designed for students who have not studied A level (or equivalent) in mathematics or physics.

This Foundation Year is suitable for UK, EU and international students. It is also suitable for mature students returning to study who may not have the appropriate background for direct entry to a physics degree programme.

The first year of the course consists primarily of basic physics and mathematics, with much of the teaching taking place in small groups.

Progression from the Foundation Year to your chosen degree programme is automatic, with no need to reapply, providing you have taken the relevant pathway modules and passed them at the required standard.

The remaining three or four years are based around the same structure as the BSc or MPhys degrees.

Find out more

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Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

Mathematical Physics MMath

Overview

The departments of Mathematics and Physics and Astronomy have set up the Southampton Theory, Astronomy and Gravitation (STAG) Research Centre to link our large, world-class research groups in theoretical particle physics, theoretical astronomy, classical gravity and string theory. This four-year degree is being created by STAG and will explore mathematical physics in detail, combining core modules from our physics and mathematics degrees. You will emerge with a strong understanding of the forces of nature, quantum theory and general relativity. You may specialise in particle physics, astronomy, condensed matter theory or the formal elements of mathematical physics. The course includes a final year project that may be taken across any of these strands.

The degree will be taught jointly by Mathematics and Physics, with students registered in Mathematics. The degree is awaiting final approval by the University so interested students should at this stage apply for MPhys Physics with Mathematics F3GC. We will contact you about switching to the new programme when we invite you to a visit day during the application process.

Compulsory Modules

Year one

PHYS1011	Waves, Light and Quanta
PHYS1013	Energy and Matter
PHYS1015	Motion and Relativity
PHYS1017	Physics Skills I
PHYS1019	Physics Skills II
PHYS1022	Electricity and Magnetism
MATH1048	Linear Algebra I
MATH1049	Linear Algebra II
MATH1056	Calculus (double module)

Year two

PHYS2001	Electromagnetism
PHYS2003	Quantum Physics
PHYS2006	Classical Mechanics
PHYS2023	Wave Physics
PHYS2024	Quantum Physics of Matter
MATH1052	Differential Equations
MATH2038	Partial Differential Equations
MATH2045	Vector Calculus & Complex Variable

Year three

PHYS3008	Atomic Physics
MATH3032	Communicating and Researching Mathematics

Year four

PHYS6006	Project (double module)
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Optional Modules

The third and fourth years allow many options. Some examples are:

Year three

PHYS3002	Nuclei & Particles
PHYS3003	Light and Matter
PHYS3011	Stellar Evolution
MATH2003	Group Theory
MATH3006	General Relativity, Black Holes & Cosmology
MATH3048	Integral Transforms

Year four

PHYS6003	Advanced Quantum Physics
PHYS6005	Cosmology
PHYS6011	Particle Physics
MATH6109	Differential Geometry
MATH6139	Advanced General Relativity
MATH6149	Modelling with Differential Equations

Find out more

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Email: fpse-ugapply@southampton.ac.uk

www.southampton.ac.uk/phys

OPTIONAL MODULES

These are some commonly chosen optional modules.

For full details of our options please go to: www.southampton.ac.uk/phys

Physics Options

PHYS1005 Introduction to Astronomy and Space Science

PHYS1004 Introduction to Photonics

PHYS1026 Introduction to the Nanoworld

SESA3010 Spacecraft Systems and Design

MATH1048 Linear Algebra I

MATH1049 Linear Algebra II

PHYS2013 Galaxies

PHYS2009 Practical Photonics

SESA2001 Astronautics

PHYS2007 Medical Physics

PHYS2015 Introduction to Energy and the Environment

PHYS3011 Photons in Astrophysics

PHYS3010 Stellar Evolution

PHYS3003 Light and Matter

MATH3006 Relativity, Black Holes and Cosmology

MATH3018 Numerical Methods

PHYS3009 Applied Nuclear Physics

SOES3016 Oceanography from Space

PHYS3019 Communicating and teaching
(undergraduate ambassadors scheme)

PHYS6003 Advanced Quantum Physics

PHYS6004 Space Plasma Physics

PHYS6012 Coherent Light, Coherent Matter

PHYS6024 Lasers

PHYS6011 Particle Physics

PHYS6005 Cosmology

PHYS6014 Nanoscience

MATH6107 Gravitational Waves

Additional Options

Examples of additional options across the University

Philosophy

PHIL1005 Ethics

Music

MUS11009 Introduction to World Music

Archaeology

ARCH1029 Introduction to Archaeology

English

ENGL1004 Poetic Language

ENGL1080 Literary Transformations

Geography

GEOG1001 Global and Local Environmental Change

History

HIST1080 History and Historians

Languages

FREN1001 Modern French Culture

Management

MANG1003 Introduction to Management

Environmental Sciences

SOES1008 Earth & Ocean Systems

Biology

BIOL1003 Ecology

APPLYING AND FUNDING

We realise that going to university is a significant investment, so we'll ensure you have all the information you need to make an informed decision.

General entry requirements

To apply for undergraduate study you must satisfy our general entry requirements and any specific requirements of your chosen programme. Typical entry requirements for applicants with GCE A-levels can be found online.

How to apply

Apply online at www.ucas.com the website for the Universities and Colleges Admissions Service (UCAS). Our UCAS code name is SOTON and our number is S27. All students should apply between 1 September 2015 and 15 January 2016. If you are an international student from outside the UK or EU, we may consider your application up until 30 June 2016. However, we cannot guarantee there will be vacancies on our courses after the January deadline. Further information may be found in our Admissions Policy at www.southampton.ac.uk/admissions-policy

Tuition fees and funding

The University will set fees for 2016/17 when the government establishes limits for tuition fees. For 2015/16, the University set the tuition fee for UK students at £9,000 and we offer a large number of generous fee waivers and bursaries for eligible students.

For UK students from lower income families, these financial packages will be based on household income supplied to us by the Student Loans Company.

Your tuition fee may cover compulsory course costs, such as field trips and laboratory clothing; however a contribution may be necessary towards certain elements. Please check with the Admissions team for more details.

Visit our website for the latest information on tuition fees before you submit your UCAS form for entry in the 2016/17 academic year. Students who have applied for a deferred place in 2015/16 will be eligible for the 2016/17 tuition fees and support.

If you are a UK student you can apply for loans to help pay for both fees and maintenance. For more details, visit www.southampton.ac.uk/fees

Channel Islands/ Isle of Man student fees

Fees are set by the islands' governments and UK universities are notified of the levels in the spring prior to the academic session in which students commence their programme of study.

International student fees for 2016

Tuition fees for all Physics and Astronomy programmes (including Foundation Year) will be £18,010 per year. For more details, visit: www.southampton.ac.uk/fees

Fixed fees

International students commencing their programme of study in 2016, will pay the same fixed fee for each year of their programme.

Scholarships and bursaries

We offer a variety of scholarships and progression awards to the most talented students across our subject areas. For full eligibility criteria and up-to-date information, visit www.southampton.ac.uk/phys

We also offer a generous range of bursaries designed to help UK undergraduate students in the most financial need. For more details and up-to-date information, visit www.southampton.ac.uk/bursaries

 **Find out more**

www.southampton.ac.uk/fees

T: +44 (0)23 8059 4732

E: admissions@southampton.ac.uk

INTERNATIONAL STUDENTS

Join us and students from more than 135 different countries at Southampton.

Living and studying in a different country has its own unique challenges. We make student entry straightforward, offer attractive scholarships to eligible applicants, help you settle into your new life and advise you on all aspects of living in the UK.

Our network of services and advisors ensure that your studies and life at Southampton is as productive and stress-free as possible.

International Office

Staff from our International Office attend educational exhibitions around the world as well as making numerous visits overseas and to colleges in the UK. If you are unable to visit us in Southampton, make sure you book an appointment to meet us at one of the exhibitions or join us on a virtual open day.

You will find a quick introduction to the University on our website, which is available in other languages. You can also view web pages dedicated to 50 specific countries.

To join us on a virtual open day, visit www.southampton.ac.uk/virtualopen day

Welcome Programme

In September each year, we arrange Welcome Programme, which helps you settle into life here. The week includes general events to introduce you to our facilities, subject-specific events to begin your academic induction and a range of social and cultural activities.

During the week, you will meet other undergraduate students and explore the University and the city, so that you know where to worship, relax and shop. You will also meet current international students who will be able to give you good advice.

Meet and Greet

The Meet and Greet Service from London Heathrow Airport is provided free of charge and is designed to get you to the University in time for the Welcome Programme. You can register for both the Service and the Welcome Programme from July on our website.

Visas

Before you join us, find out about the UK's immigration procedures. Do this well in advance of your arrival in the UK. Our website provides information on student visas, police registration, working in the UK and has links to other useful websites.

For more information, visit www.southampton.ac.uk/visa

International scholarships

We offer a number of subject-specific scholarships and bursaries to international students. These are based on international merit and vary depending on the subject.

English language requirements

If English is not your first language, you will need to demonstrate that you have reached a satisfactory standard in an approved English language test. For the majority of our courses we require an IELTS level of 6.5 or equivalent, achieved in the past two years. If you need to improve your English language skills, you can apply to our pre-session English language courses. For more information on general English Language requirements please visit our website.

 Find out more
www.southampton.ac.uk/international

T: +44 (0)23 8059 9699

E: global@southampton.ac.uk

TRAVEL DETAILS

Southampton has excellent transport links with the rest of the UK and internationally, by road, rail, sea and air.

By road

Our Southampton and Winchester campuses are well connected to the national road network. The M3 links Southampton and Winchester directly to London. For Southampton campuses, exit the M3 at junction 14 and follow signs for Southampton (A33). Follow the A33 into Bassett Avenue and follow signs to University campuses.

For Winchester School of Art, exit the M3 at junction nine or 10 and follow signs to the campus.

The M27 is one of the major road links along the south coast of England and passes Southampton to the north. For the University, leave the M27 at junction five (Southampton Airport) and follow signs to University campuses.

Satellite navigation

When travelling by car, please use the following postcodes in satellite navigation devices:

For Southampton Highfield Campus, use **SO17 1BJ**

For Avenue Campus, use **SO17 1BF**

For the National Oceanography Centre Southampton, use **SO14 3ZH**

For Southampton General Hospital, use **SO16 6YD**

For Winchester School of Art, use **SO23 8DL**

By air

Southampton Airport is about 20 minutes from the Southampton campuses by bus or taxi. There is a full UK domestic service, as well as flights to mainland Europe, including Schiphol Amsterdam, and the Channel Islands. If you are arriving in the UK via London Gatwick or London Heathrow airports, you can reach Southampton by road, bus, coach and rail.

By bus

We run the award-winning unilink bus service that connects our Southampton campuses with all the major transport links in the city. You can buy tickets at the unilink office or you can buy tickets on the bus.

Downloadable for iPhone, the SotonBus App allows you to view bus and route information from all major bus operators in the Southampton area. With GPS positioning, you can find your nearest bus stop, plan routes and save frequently used bus stops for easy access.

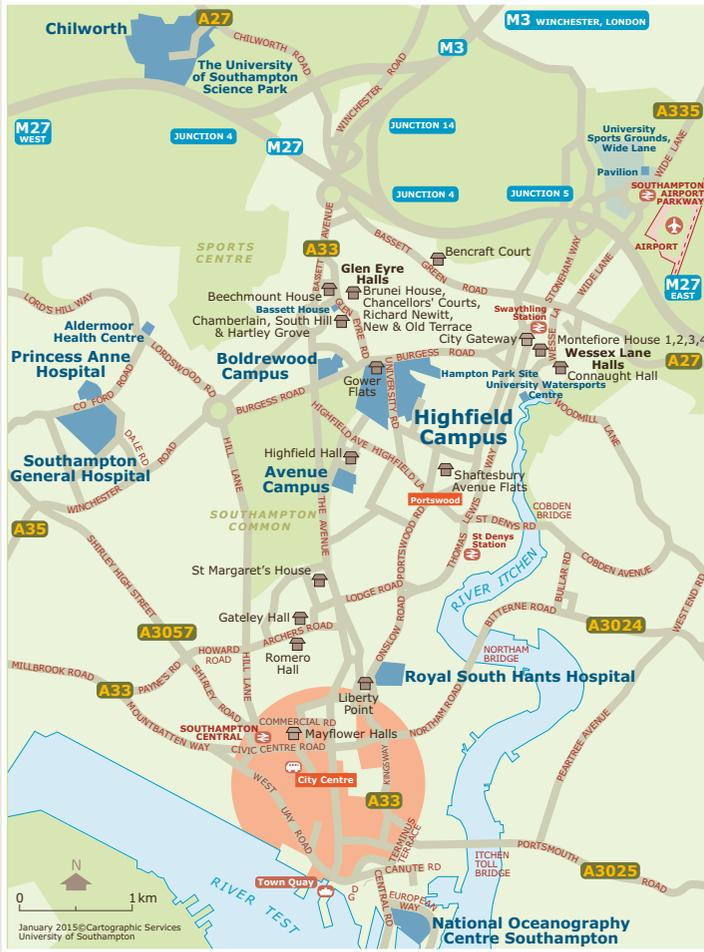
By coach

National Express runs the Service SH032 to London Victoria Coach Station via Heathrow through Highfield Campus. For timetable information, visit www.nationalexpress.com

By rail

Southampton and Winchester are well served by mainline railway stations – Southampton Central, Southampton Airport Parkway and Winchester. Fast trains from London and Bournemouth/Weymouth stop at all three stations, and the typical journey times to London Waterloo from Southampton Central and Winchester are an hour and 20 minutes and an hour, respectively. Winchester School of Art is a 15 minute walk from Winchester train station. The unilink frequent bus service (U1), connects into the Southampton Airport Parkway and Southampton Central train services, via the University.

HOW TO FIND US



CAMPUS INFORMATION

-  University buildings
-  Halls of residence

TRANSPORT INFORMATION

-  Airport
-  Ferry terminal
-  Railway station
-  Coach station

 Find out more

www.southampton.ac.uk/campuses

TERMS & CONDITIONS

The University's Charter, Statutes, Regulations and Policies are set out in the University Calendar and can be accessed online at www.calendar.soton.ac.uk

Terms of use

This brochure does not constitute an offer or invitation by the University of Southampton to study at Southampton. This brochure provides an overview of the University and life at Southampton, along with information about all the undergraduate programmes available at the time of publication. It is provided for information purposes only. Relevant weblinks are shown throughout the brochure. Please also consult the programme information online for further details or for any changes that have appeared since first publication of the brochure.

The information contained in the brochure, welcome guides or on our websites, is subject to change and may be updated by the University from time to time to reflect intellectual advances in the subject, changing requirements of professional bodies and changes in academic staff members' interests and expertise. Changes may also occur as a result of monitoring and review by the University, external agencies or regulators.

1. Change or discontinuance of programmes

The University of Southampton will use all reasonable efforts to deliver advertised programmes and other services and facilities in accordance with the descriptions set out in the brochure, student handbooks, welcome guides and website. It will provide students with the tuition and learning support and other services and facilities so described with reasonable care and skill.

We undertake a continuous review of our programmes, services and facilities to ensure quality enhancement. We are also largely funded through public and charitable means and are required to manage these funds in an efficient and cost-effective way for the benefit of the whole of the University community.

We therefore, reserve the right where necessary:

- to alter the timetable, location, number of classes, content or method of delivery of programmes of study and/or examination processes, provided such alterations are reasonable;
- to make reasonable variations to the content and syllabus of programmes of study (including in relation to placements);
- to suspend or discontinue programmes of study (for example, because a key member of staff is unwell or leaves the University);
- to make changes to our Statutes, Ordinances, Regulations, policies and procedures which we reasonably consider necessary (for example, in the light of changes in the law or the requirements of the University's regulators). Such changes if significant will normally come into force at the beginning of the following academic year or, if fundamental to the programme, will normally come into force with effect from the next cohort of students;
- to close programmes of study or to combine or merge them with others (for example, because too

few students apply to join the programme for it to be viable).

If the University closes, discontinues or combines a programme of study or otherwise changes a programme of study significantly (the "Change"), the University will inform applicants (or students where relevant) affected by the Change at the earliest possible opportunity.

- If the Change comes into force before the University has made an offer of a place or **before** an applicant has accepted an **offer** of a place, an applicant will be entitled to withdraw his or her application, without any liability to the University, by informing the University in writing within a reasonable time of being notified of the Change.
- If the Change comes into force **after** an **offer** has been accepted but prior to the student **enrolling**, the student may either:
 - withdraw from the University and be given an appropriate refund of tuition fees and deposits, or
 - transfer to another available programme (if any) as may be offered by the University for which the student is qualified.

If in these circumstances the student wishes to withdraw from the University and to apply for a programme at a different university, the University shall use its reasonable endeavours to assist the student.

c. If the Change comes into force **after** a student has **enrolled**, the University will use reasonable endeavours to teach the programme out but cannot guarantee to do so. If the University cannot teach out a programme of study, it will use its reasonable endeavours to facilitate the transfer of a student to an equivalent programme for which the student is qualified and which has places available within the University or at a different university.

2. Changes to services or facilities

The University will make available to students such learning support and other services and facilities as it considers appropriate, but may vary what it provides from time to time (for example, the University may consider it desirable to change the way it provides library or IT support).

3. Financial or other losses

The University will not be held liable for any direct or indirect financial or other losses or damage arising from such closures, discontinuations, changes to or mergers of any programme of study, service or facility.

Upon acceptance by an applicant of an offer of a place at the University, the relationship between the applicant and the University becomes contractual. When the contract is formed between the student and the University it will last for the relevant academic year only unless the student withdraws from the programme or the programme is terminated. Please note: the right of a student to withdraw from a programme of study under the provisions set out in paragraph 1(b) above following a Change, are in addition to any statutory rights of

cancellation that may exist under the Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013. In entering into that contract, the terms of the contract will not be enforceable by any person not a party to that contract under the Contracts (Rights of Third Parties) Act 1999.

Force majeure

The University will not be held liable for any loss, damage or expense resulting from any delay, variation or failure in the provision of programmes of study, services or facilities arising from circumstances beyond the University's reasonable control, including (but not limited to) war or threat of war, riot, civil strife, terrorist activity, industrial dispute, natural or nuclear disaster, adverse weather conditions, interruption in power supplies or other services for any reason, fire, boycott and telecommunications failure.

In the event that such circumstances beyond the reasonable control of the University arise, it will use all reasonable endeavours to minimise disruption as far as it is practical to do so provided that such endeavours do not undermine the University's Quality Assurance requirements.

Admissions Policy and Complaints

The University will assess applications in line with its then current Admissions Policy. The Admissions Policy, current at the time of publication, is published online and is available at www.southampton.ac.uk. The Admissions Policy is reviewed at least annually.

Applicants may raise complaints related to admissions under the University's Regulations Governing Complaints from Applicants, which can be found in the Calendar at www.calendar.soton.ac.uk

Further information about, or clarification of, these procedures is available from Admissions Team, Student and Academic Administration, University of Southampton, Southampton SO17 1BJ, email: admissions@soton.ac.uk.

Data Protection

During the application procedure, the University will be provided with personal information relating to the applicant. An applicant's personal data will be held and processed by the University in accordance with the requirements of the Data Protection Act 1998.

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A copy of this brochure and the University's current information for students with disabilities and specific learning difficulties can be made available, on request, in alternative formats, such as electronic, large print, Braille or audio, and, in some cases, other languages.

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