Information

The Department holds open evenings and afternoons to allow prospective students to visit. Enquire about our applicant lunches.

Contact the Department at:
Tel: 0141-548 3132 (Departmental Office)
Tel: 0141-548 3378 (Direct Line)
Fax: 0141-552 2891
E-mail: **study@phys.strath.ac.uk**

Dept. of Physics, SUPA
University of Strathclyde
107 Rottenrow
Glasgow G4 0NG

http://phys.strath.ac.uk

http://phys.strath.ac.uk

Physics at Strathclyde

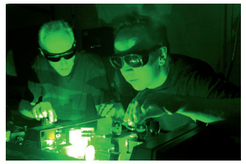
A degree of opportunity

University of Strathclyde Glasgow

department of physics at the university of strathclyde

Why study physics at Strathclyde?

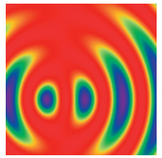
Physics is a vibrant subject of major importance to the economies of Scotland and the United Kingdom. Many technological industries can trace their roots back to a physics related idea or concept. Physics graduates work in a huge variety of industries because the transferable skills developed during a physics degree are those that are highly sought after by employers. The employment opportunities available to a physics graduate are huge – you can work in research, applying your knowledge to understanding the smallest parts of atoms or the vast expanse of a galaxy, or you can find employment in areas as diverse as the computer games industry and the financial markets. Examples of where Strathclyde Physics graduates have found employment can be found at http://phys.strath.ac.uk/public/alumni/.



The degree courses that we offer are: MPhys, MPhys with specialisation, BSc Physics, BSc Physics with Teaching (in conjunction with the Faculty of Education), and BSc Mathematics and Physics (in conjunction with the Department of Mathematics).

The degree structure – Q&A

MPhys or BSc Physics? The MPhys degree is an integrated masters degree taught over five years and designed to provide you with greater breadth and depth than the BSc Honours degree, which is four years long. The MPhys is most appropriate for you if you wish to pursue a career as a professional physicist. The curricula of the MPhys and the BSc degrees are identical for the first two years to ensure that students develop a sound understanding of the fundamentals of physics.



What will I study? You will take compulsory classes in the following topics: mechanics, electromagnetism, quantum physics, solid-state physics, thermal physics, waves & optics, and experimental physics. You will also have compulsory classes in the language of physics: mathematics.

Do I have any choice in what I study? Yes, together with the compulsory classes, you may also choose from a wide range of elective classes featuring for example accountancy, astronomy, bioscience, computer science, and forensic science.

Will I get any research experience? Yes, in Year 4, all students on the BSc Physics and MPhys degrees select a compulsory research project. This is supervised by one of the academic staff and is undertaken in their research laboratories.

What other skills will I learn? Throughout your degree, you will develop the communication, analytical, numerical, practical, and team working skills that are necessary to work in an industrial, business, or academic setting and are sought after by employers.

Can I transfer between courses? Yes, transfer between all degrees is possible up until the end of Year 2.

The courses in detail

BSc Physics – UCAS Code F300

This is a comprehensive degree providing students with a thorough grounding in the fundamentals of physics. During the final year of the course, students can select optional classes from a range of diverse topics from theoretical physics through plasma physics to photonics.

MPhys – UCAS Code F303

This is a broad-based degree with an emphasis on modern physical principles. The final two years of this course differ from those of the BSc Physics degree in that students encounter classes on subjects that are necessary to produce a graduate physicist capable of working in a research environment in either industry or academia. As with the BSc degree, students can choose optional classes in Year 4 and then extend the depth of coverage of these subjects through Year 5.

Within the MPhys degree structure, there is the opportunity for students to tailor their classes in the final two years to a give specialisation in a particular subject area. This is done by choosing selected classes relating to a certain area of expertise offered by the department and pursuing a final-year project in that area. Students who are interested in following such a path enter the university initially as MPhys students and make their choice of specialisation at the beginning of Year 4.

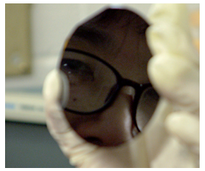
The Physics Department is highly ranked at 12th place, from 45 universities, in the 2009 Independent's University Guide.

A recent survey of 10,000 students carried out for The Times Higher Educational Supplement revealed that Strathclyde is first for course quality, employment prospects and being an affordable place to study. Out of 116 universities, Strathclyde is 14th in the friendliness leagues!

BSc Physics with Teaching – UCAS Code F3XC

This degree is offered in conjunction with the Faculty of Education and is a qualification that is designed to prepare graduates to be teachers of physics in secondary schools. This degree not only covers the same core syllabus of the BSc Physics degree but also allows students the time to acquire the educational theory and classroom practice necessary for registration with the General Teaching Council for Scotland.

All the courses are accredited by the Institute of Physics, the body that represents the physics profession.



Entry requirements

1st year entry

The Higher entry qualifications are:

BSc Physics – either BBB including physics and mathematics or BBCC including physics and mathematics at B.

BSc Physics with Teaching – either BBB including physics and mathematics or BBCC including physics and mathematics at B. In addition, all applicants must have at least a C in higher English.

MPhys – either AABB or ABBBC including physics and mathematics at B.

2nd year entry and recognition of prior learning

We recognise that many applicants are now taking Advanced Highers in their sixth year at school. Exemptions from certain first-year classes are possible if you achieve a grade B or better in Advanced Higher Physics. Direct entry to the second year of the MPhys degree will be offered if you satisfy the following criteria: either **Advanced Higher ABB including Physics and Mathematics** plus **one other Higher at B** or **Advanced Higher AB in Physics and Mathematics** plus **two other Highers at AB**.

For A-levels and other qualifications, please contact us.

Teaching and assessment – Q&A

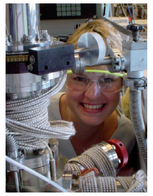
How will I be taught? The modular nature of the classes open up a range of teaching and assessment practices. Our teaching is based on lectures, tutorials, workshops, laboratory experiments, and research projects, which aim to develop confident and motivated independent learners who can tackle a diverse range of problems.

How will I be assessed? Depending on the nature of the individual classes taken each year, assessment is by formal examination, continuous assessment or a combination of both. In the first two years of the course, students can gain the credits for a class through suitable performance in workshop tutorials and lecture class tests without having to sit the exam.

Can I study abroad?

Yes, we have close links with several European and North American universities and you have the opportunity to spend Year 3 studying under the Socrates/Erasmus scheme or the International Student Exchange Programme.

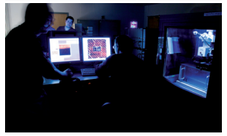
Scholarships



Recognising the increased financial pressures on students, the department introduced the physics scholarship scheme. These scholarships are allocated on the basis of academic achievement to students entering degree courses in the department. All new entrants are considered for the awards. In addition, we offer an Institute of Physics bursary scheme aimed at attracting students who might not otherwise do physics. To find out about the bursaries, please contact the department.

After that, what are my career options?

The design of our degrees is such that our graduates are prepared for a wide variety of stimulating and interesting careers. Our in-house career-mentoring programme helps you to find the best career for you. Students who have graduated from our department can be found working anywhere from research and development to production and management in every field of science, engineering, and industry. Former students have found employment as medical physicists, environmental physicists, as petroleum engineers, merchant bankers, and patent officers, as well as research scientists.



nanotech

lasers hotter than the sun

space exploration

3D molecular movies

quantum teleportation

PHYSICS AND YOUR CAREER

Physics gets you exciting jobs

Our graduates have become **venture capitalists**, entrepreneurs, RAF officers, operations managers, medical physicists, senior engineers, team leaders, *professors*, ***company directors***, politicians, **systems engineers**, international treasury analysts, senior directors, ***patent examiners***, advanced software engineers, executive vice presidents, teachers, education adviser, **spacecraft project managers**, defence scientists, (executive) vice presidents, ***Oscar winner***, product managers, chairmen, **senior risk manager**, bankers, business development managers, ***pop star***, and more.

Find out more at: **http://phys.strath.ac.uk/public/alumni/**

Some quotes from our alumni

"I enjoy what I do immensely. Physicists fill a niche in the NHS and the research and problem skills acquired from my first degree at Strathclyde are invaluable in this environment" – Shelley Waugh (2004), medical physicist

"I have been to sea in boats, learned to SCUBA dive in the ocean, and have dropped instruments from planes" – Jim O'Donnell (1979), Professor of Marine Sciences, University of Connecticut

"Physics is a great basis in that it's an academically respectable topic with which to demonstrate your intellectual credentials." – Tom Black (1981), CEO Detica group

"I worked on the telecommunications system for the Channel Tunnel Rail link." – Colin Wallace (1991), Systems Engineer, Ciena

"Although I never went on to explicitly have a career in Physics, I have used lots of skills that I learned at Strathclyde to take my career to places that I would have struggled to reach otherwise" – John Dunn (1992), IT Line Manager for Hewlett Packard

"If there is any advice that I could give a young person who wants to be a scientist or engineer it is this: Do it, we need you!" – Neil Cameron (1990), Senior Engineer, Mitsui Babcock

"The summer placement [...] gave me a very useful insight into the world of manufacturing and the business side of things" – Marie Claire (2001), Production Team Leader, Coherent Scotland

"...being trained as physicist enables me to think in a way about the data that biologists, quite frankly, just can't do" – Margaret O'Hara (1990), PhD student

"...it taught me to experiment and challenge results throughout my career – and what other subject is there that equips you so much to understand how it all ticks?" – Denis Taylor (1975), Director of Trade and Investment at Scottish Development International (SDI)