LOVE PHYSICS?

Pass on the passion. Teach.
My early experience of science in school was not happy. I remember saying, “If this is science then I don’t want to do it.” It was all facts and no explanations.

Then, when I was about 15, a wonderful physics teacher joined and all my ‘whys’ met answers. It was exhilarating. I became a polymer scientist and went on to lead a university department of engineering as well as working to influence science policy nationally.

Thank you Mrs Nancy Edwards!

But I am not alone – Mrs Edwards must have led dozens of girls into physics and science careers. So she also taught me how important it is to support teachers because of the impact they will have on their students’ futures.

At the IOP, we want to ensure that all students have access to a high-quality physics education, and the opportunity to pursue physics further. As a physics teacher, you will help your students to discover their own passion for the subject, while developing their essential skills and confidence.

This booklet will take you through some of the rewards of the career, many of which are unique to being a physics teacher. It also explains the routes into teaching, ways to gain important school experience, and the funding options available to you.

If you have any questions, don’t hesitate to get in touch with us using the contact details on the back of this brochure.

With best wishes for the future,

Professor Dame Julia Higgins
President, Institute of Physics
Imagine a job where you are able to use your physics knowledge every day, in an inspiring and thought provoking way. Or one where you play a crucial role in shaping the next generation of physicists.

Teaching takes you back to where it all started – where you first discovered your passion for physics. We guarantee that you will make new discoveries and develop a deeper understanding of physics that you never thought possible, simply by expressing and communicating the subject in new ways.

Career opportunities

Once you are a qualified teacher, your career options remain varied. As a physics teacher you could move up to gain responsibility for the department, join the school management team, or focus on special needs or pastoral care.

There are also many opportunities beyond the classroom, from coaching a sports team to running an astronomy or STEM club.

Starting salaries

As a qualified teacher, you will start on the SNCT pay scale. Most teachers are placed on point 0 at £22,416 for their first year in teaching, although it is possible to start higher on the scale with appropriate prior experience.

After the probationary year, if you are successful in becoming a fully registered teacher, your salary will increase by one increment each year. In the first five years, Classroom teachers can earn between £26,895 and £35,763. If your position and level of experience change, you will move to a new scale. Head teachers can expect to earn up to £86,319 (teachinscotland.scot, October 2017).
Routes into teaching

Whether you are just starting out or you are looking for a new career, there is a teacher education course for you.

There are several options for teacher education. You can study full- or part-time and can start as an undergraduate or a postgraduate. The Scottish Government have also proposed new routes, including an accelerated route. To find out about the latest courses available, visit ucas.com. Alternatively, you can also visit the institutions websites:

University of Aberdeen abdn.ac.uk
University of Dundee dundee.ac.uk
University of Edinburgh ed.ac.uk
University of Glasgow gla.ac.uk
University of Stirling stir.ac.uk
University of Strathclyde strath.ac.uk
University of the West of Scotland uws.ac.uk

Undergraduate route

If you don’t yet have a degree, you can study for a combined – or concurrent – degree course. The BSc in Physics with Teaching Qualification degree includes study of physics and of education as well as some school experience.

How to apply
You should apply online through the Universities and Colleges Admissions Service (UCAS) at ucas.com. The closing date each year is mid-January, although late applications may be considered subject to vacancies.
Postgraduate

If you have a degree in physics, you can study for the one-year Professional Graduate Diploma in Education (PGDE) at a Scottish university. This is the most popular way of qualifying as a secondary teacher in Scotland. You may be able to study for the PGDE part-time, by distance-learning.

Studying for this diploma is divided equally between learning in university and in schools. University activities will include lectures and workshops, whilst school activities will include observation and analysis of teaching and learning. Working with teachers and pupils in this way will give you the opportunity to develop the teaching skills learned at university as well as to implement your own theories about teaching within a supportive and evaluative environment.

A degree from a UK university or an equivalent degree from outside the UK is a prerequisite of the PGDE. The degree should normally contain 80 SCQF credit points relevant to physics, with 40 of those credit points being at second year undergraduate level or above. You will also need Higher English or an equivalent qualification and a National Qualification in Maths at SCQF Level 5.

How to apply

Applications for all PGDE courses are submitted via the UCAS undergraduate application system (not UCAS Teacher Training). Applications submitted by mid-January each year are guaranteed to be considered. You might be able to apply after this deadline but you will need to check with the course provider first to see if they have any places left. An interview, usually by a member of the university staff and a physics teacher, is a required part of the application procedure.

To apply visit ucas.com.
Gaining school experience

Spending some time observing physics lessons before starting teacher education will help you be sure that a career in teaching is right for you. School experience can also support your application to teach and is a prerequisite for many course providers.

You can get in touch with schools directly to arrange your school experience placement. If you need help to arrange school experience, visit teachinscotland.scot/contact/

What happens after I complete my undergraduate or PGDE course?

To teach in a school in Scotland you will need to be registered with the General Teaching Council for Scotland (GTCS). You will be provisionally registered upon successful completion of your course. This will enable you to undertake a period of probation during which you will normally attain the Standard for Full Registration (SFR). Your probationary experience can take one of two forms: the Teacher Induction Scheme or the Flexible Route.

Teacher Induction Scheme (TIS)

The Teacher Induction Scheme, which is administered by GTCS, is designed so that probationer teachers can attain the SFR within one school year. As a newly qualified teacher who has graduated from a Scottish university and has been assessed as a home student for fees, you will be guaranteed a teaching post with a Scottish local authority for a full school year, known as the Induction Year.

It offers a number of benefits, including:

- a maximum class contact time of 0.8 full-time equivalent (18 hours per week)
- dedicated time set aside for professional development
- an experienced teacher as your mentor for support throughout the induction year.

The scheme allows you to choose five Scottish local authorities where you would be willing to undertake your training year or to waive these preferences and be sent to train anywhere in Scotland for a reimbursement of £8,000.
Flexible Route

The Flexible Route is a way to complete probationary service for teachers who:
• have decided to opt out of, or who are ineligible for, the TIS
• cannot commit to a full-time post
• want to complete their probationary period somewhere other than a Scottish state school
• are registered in more than one subject and looking to gain full registration in their second subject.

Ways to complete your probationary period include:
• teaching on supply
• teaching in the Scottish independent sector
• completing probation outside Scotland.

The length of service that you will need to complete is dependent on your circumstances.

Funding options

Regardless of whether you take the undergraduate or postgraduate training route, eligible students will normally have their tuition fees paid by the Student Awards Agency for Scotland (SAAS). SAAS has allowance schemes for undergraduate and postgraduate students. You can find out more by visiting saas.gov.uk or by phoning 0300 555 0505.

Undergraduate Funding

Funding dependent on residency criteria is available for all undergraduate courses. For full details, visit the SAAS website at saas.gov.uk.
Postgraduate funding

No matter what your previous postgraduate or undergraduate study funding arrangements were, you will be entitled to further postgraduate funding, subject to residency criteria, if you study full-time. All students can apply to SAAS for a loan, bursary and living-cost grants. Living-cost grants include the Lone Parents’ Grants, and the Disabled Students’ Allowance. The exact amount you can get depends on your household income. For full details, visit the SAAS website at saas.gov.uk.

Additional financial incentives have been announced for eligible career changers to undertake initial teacher training in STEM shortage subjects. For more information visit gov.scot.

Other sources of financial aid

Universities have funds that they use to help students in financial difficulties. To find out more, get in touch with the Student Support or Student Services team at the university that you would like to go to. You should do this as early as possible because funds are limited and run out quickly.

If you have no other form of financial support, you may be able to apply for a Professional Career Development Loan through a bank. For more information, call 0800 100 900 or visit gov.uk/career-development-loans.
IOP support

We offer physics teaching support to all new science teachers in the UK and Ireland. We keep in touch during your first few years via email with links to teaching resources and articles relevant to your career stage; information about local physics teaching support via our expert networks; news about workshops and events to boost your teaching skills and other content we think will help you in the classroom and make you feel part of the physics teaching community. For more information visit iop.org/education/ltp

For more information about teaching physics in Scotland visit iopscotland.org/education or email gordon.doig@iop.org.
Useful links

For more information about becoming a physics teacher in Scotland, visit these useful websites.

Apply for teacher training via the undergraduate UCAS application system
ucas.com

Guidance about secondary teaching from the General Teaching Council for Scotland
gtcs.org.uk/secondary-teaching.aspx

In2Teaching – a guidance site established by the General Teaching Council for Scotland
in2teaching.org.uk/students

Teach in Scotland – information about secondary teaching in Scotland
teachinscotland.scot

Search for publications about teaching in Scotland
scotland.gov.uk/publications
Teaching physics is doing physics

We know teaching is one of the most rewarding careers you could pursue, but don’t just take our word for it! Take a look at what some newly qualified teachers have to say about life in the classroom.

**Lara’s story**

“I decided to go into teaching during my final year of studying physics at university and I have never looked back. I cannot imagine any other career where each day is filled with such variety, fun and a sense of pride and accomplishment. The smallest victory, from finding the best way to explain a concept or simply capturing their interest can make your day or week. A great lesson can make you feel on top of the world and a pupil saying ‘thank you’ can feel like winning a gold medal.

If you love to engage others by explaining how physics has changed and improved our world, then there is no better way to spend your days. You can inspire young people with the simplest of demonstrations or class experiment; we allow the next generation to see the world with open eyes and you can never tell when lightning will strike and you will see that light-bulb moment as a new physicist or engineer is born.”

**Andy’s story**

“It takes a lot of hard work and effort to be a teacher. However, I could not think of anything else I would rather do; getting to know young people and helping them to progress and understand is definitely the most rewarding experience you can have. The fact that I get to teach about the vastness of the universe all the way down to the strange world of the microscopic particles just makes the experience all the more worthwhile.”
Still have unanswered questions about physics teacher training? Get in touch.

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This information is correct at the time of print and applies to Scotland. For teaching advice for England, Northern Ireland and Wales, refer to the National College for Teaching and Leadership, General Teaching Council for Northern Ireland or the General Teaching Council for Wales.

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