

General Election 2019 – Unlocking the future potential of physics

Physics is fundamental to the health, wealth, security and advancement of society. Physics creates problem solvers and the innovators of the future, and has a vital role to play in helping make the UK fit for a new industrial era of science, technology and engineering.

Decisions taken today will shape society for decades to come. The next government must pursue policies to support and grow the UK's physics community. This will ensure the UK remains a world leader in science and innovation and can realise the associated benefits in terms of economic growth, skilled jobs and improved quality of life.

The IOP calls on the next government to commit to the following six priorities to help secure a prosperous and productive future:



Increased investment in research and development

Despite being a world-leading and highly productive research nation, the UK spends less on R&D than most of its competitors, investing 1.7% of GDP in 2016 compared to 2.7% in the United States and 2.9% in Germany. The next government must implement a clear strategy to increase R&D investment to at least 2.4% of GDP by 2027 and 3% in the longer term.



A strong partnership with European researchers and innovators

The UK participates in around 13,000 projects in pan-European research programmes, and 18% of research grant funding to UK physics departments comes from EU sources. Our ability to easily collaborate with European colleagues is fundamental to the success of the UK physics community and the next government must make every effort to secure full access to European research programmes.



Specialist teachers for every pupil

1 in 6 secondary schools in the UK does not have a specialist physics teacher. Increased investment in teacher recruitment and retention is needed to ensure every secondary school pupil has a specialist physics teacher and receives a high-quality learning experience in the classroom.

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Physics education that reflects society

The next government must focus efforts on improving diversity in physics education to ensure the workforce better reflects society and overcome the growing shortage of STEM-skilled workers.



World-class further and technical education

The UK has a shortage of technical skills and ranks 16th out of 20 OECD countries for the proportion of people with technical qualifications. These are essential to high-tech industries and innovation in the UK. The next government should increase investment in and reform further and technical education to put them on an equal footing with academic education.



An immigration system that attracts talent

45% of academics in UK physics departments come from overseas, and 44% of engineering, science and hi-tech firms report difficulties in finding experienced recruits with the right STEM skills. An open, simple and fair immigration system that allows the UK to attract the right talent is essential to the future success of the UK.