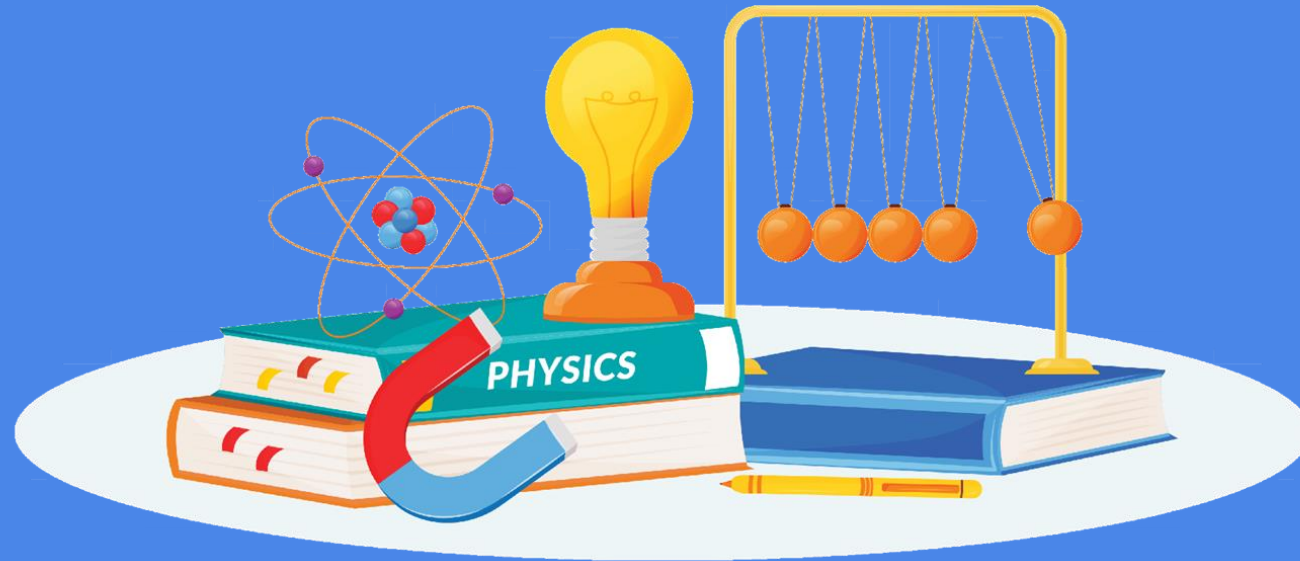


Super-Curricular Guide: Physics



What Does UCAS Say...?

Entry Requirements:

A levels – To get on to a physics related degree, you will usually require at least two A levels including physics and maths.

Entry requirements in general range from BCC to AAA, with the universities and colleges most commonly asking for ABB.

In addition to the different A level requirements above, you will also need five GCSEs (A-C) including science, English, and maths.

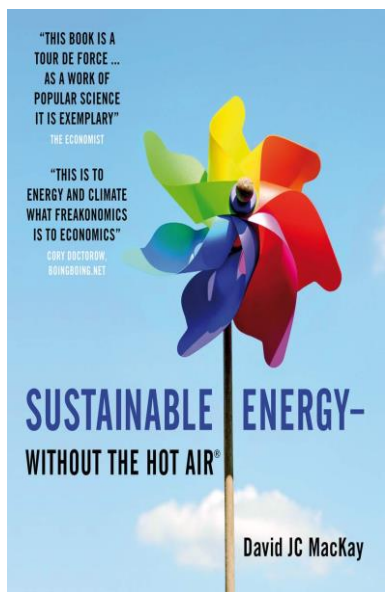
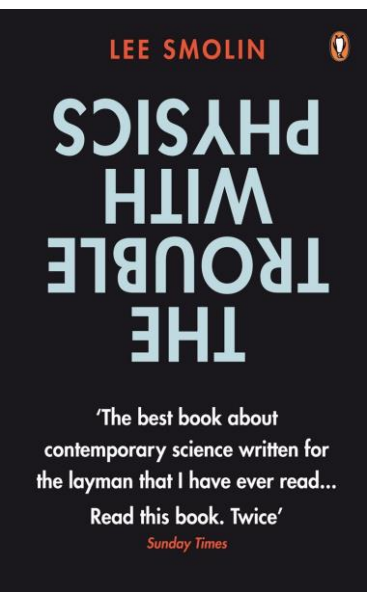
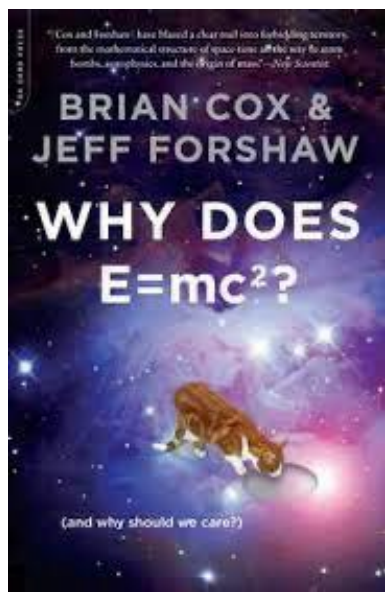
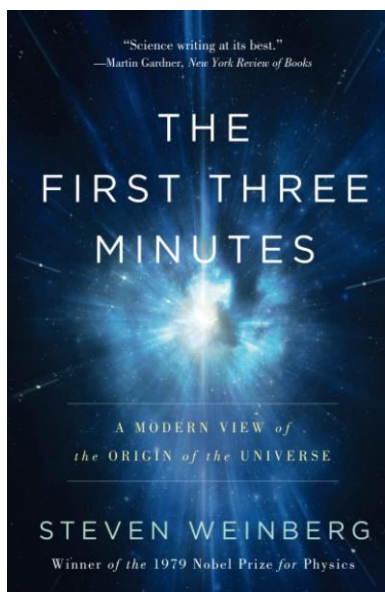
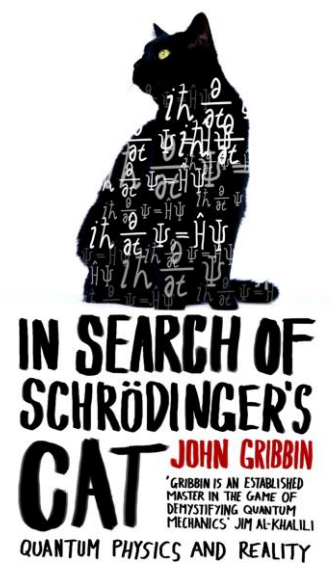
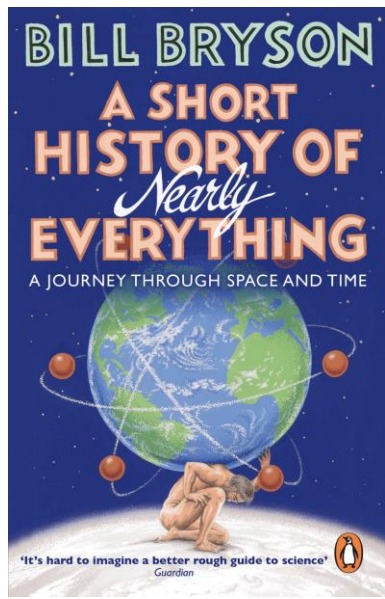
A few course providers may use additional methods to support selection, for example, you may be asked to complete an online test to assess your numerical skills and how you apply your knowledge to chemical problems.

A number of universities offer four year undergraduate or integrated masters degrees in physics (MPhys /MSci). The course content is likely to be the same for the first two years of a BSc at the same university and then beyond will have a broader range of taught units and a larger piece of research.





Read!





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OBJECTS AND STORIES

Explore our collection beyond the museum floor and find out the fascinating histories behind even the smallest objects.

Objects and Stories aims to give you better access to this world-class Museum through our ever-expanding digital resources. Search for over 325,000 objects and archives in [Collection Online](#), take a look at our curator's highlights below, and discover unique and compelling stories—from objects that have changed our world to the intriguing personal histories that lie behind them.

<https://www.sciencemuseum.org.uk/objects-and-stories>

<https://quantumfrontiers.com/>

Quantum Frontiers

A blog by the Institute for Quantum Information and Matter @ Caltech

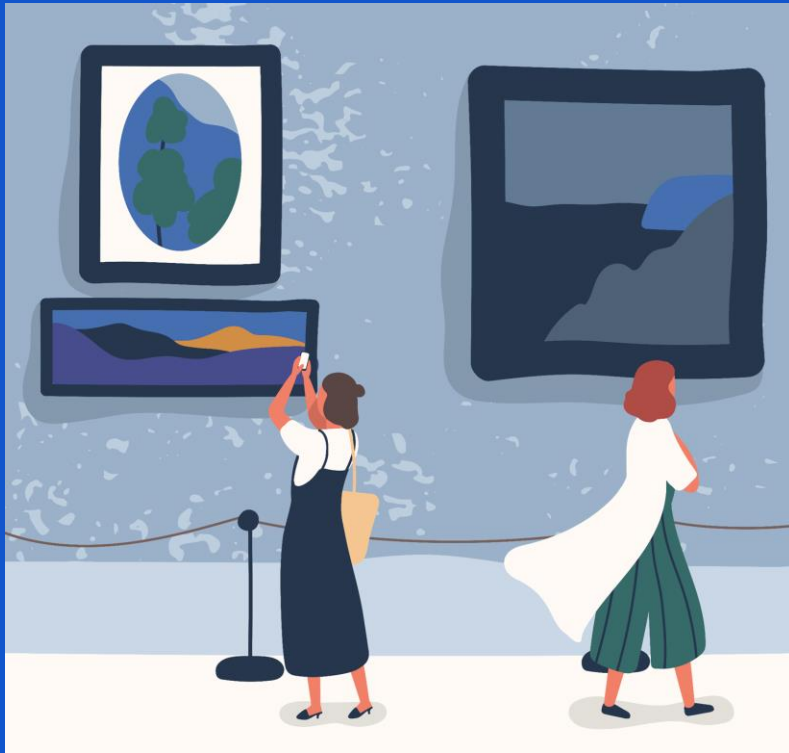
Explore the wonder, beauty and potential of nanoscience through short articles and creative DIY activities.

WARNING: *Funsiz Physics is not responsible for any minds that are blown.*

<https://funsizphysics.com/>



<https://www.aps.org/programs/outreach/physiciststogo.cfm>



Visit!

<https://www.sciencemuseum.org.uk/home>

SCIENCE MUSEUM

Royal Observatory



(National Maritime Museum) / National Maritime Museum

We are all in London, but some of us are looking at the stars – particularly those of us who frequent the Royal Observatory at Greenwich. In and around Sir Christopher Wren's original building, you can get up close and personal with the rest of the gallery through interactive exhibits, talks and courses all about astronomy. Take in a tour of the universe at a Planetarium show, and hop through space and time as you stand on the Greenwich Meridian Line, upon which all time zones revolve.

Check out local universities for public Physics lectures!

<https://london.sciencegallery.com/>

SCIENCE GALLERY



Watch!



Raymond Adkins
How do airplanes stay in the air?
 Posted Feb 2023



Fabio Pacucci
The Boltzmann brain paradox
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The search for the invisible matter that shapes the universe
 Posted Jul 2022



James Tanton
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 Posted Feb 2022



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How do jetpacks work? And why don't we all have them?
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 Posted Dec 2021

<https://www.ted.com/talks?sort=newest&topics%5B%5D=physics>

<https://www.discovrdowning.com/resources/scishow/>

SCISHOW

Resource type: Video
 Suitable for: Students
 Subject Area: Anthropology, Biology, Chemistry, Computing, Earth Science, Environmental Science, Health Science, Mathematics, Physics, Veterinary Medicine

<https://thecrashcourse.com/topic/physics/>

PHYSICS

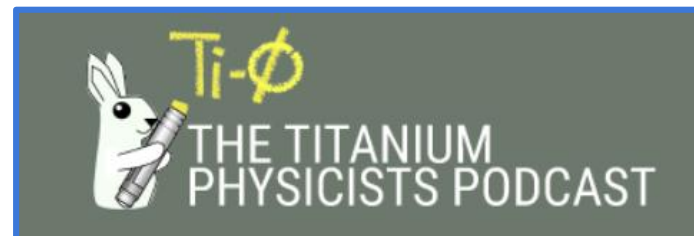
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|---|---|---|---|
| ASTROPHYSICS & COSMOLOGY 46 Astrophysics and Cosmology: Crash Course Physics #46 | INTRO: NUCLEAR PHYSICS 45 Nuclear Physics: Crash Course Physics #45 | QUANTUM MECHANICS PART 2 44 Quantum Mechanics - Part 2: Crash Course Physics #44 | QUANTUM MECHANICS PART 1 43 Quantum Mechanics - Part 1: Crash Course Physics #43 |
| SPECIAL RELATIVITY 42 Special Relativity: Crash Course Physics #42 | OPTICAL INSTRUMENTS 41 Optical Instruments: Crash Course Physics #41 | SPECTRA, INTERFERENCE AND POLARIZATION 40 Spectra Interference: Crash Course Physics #40 | LIGHT IS WAVES 39 Light Is Waves: Crash Course Physics #39 |
| GEOMETRIC OPTICS 38 Geometric Optics: Crash Course Physics #38 | MAXWELL'S EQUATIONS 37 Maxwell's Equations: Crash Course Physics #37 | AC CIRCUITS 36 AC Circuits: Crash Course Physics #36 | HOW POWER GETS TO YOUR HOME 35 How Power Gets to Your Home: Crash Course Physics #35 |



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PODCASTS

Department of Physics

<https://podcasts.ox.ac.uk/units/department-physics>

<https://www.libraeducation.co.uk/science-essay-prizes>



Essay Prizes for Science

PETERHOUSE COLLEGE, CAMBRIDGE, KELVIN SCIENCE PRIZE

Open to all students in year 12 or equivalent, regardless of nationality or school country. Essays must be between 2,000 and 4,000 words including footnotes and appendices.

[LEARN MORE](#)

THE OXFORD SCIENTIST WRITING COMPETITION

Designed for budding Science writers in the UK about to enter into year 11, year 12 or year 13, this prize entails writing a 700 word article on a stated theme. Winners have their work published in The Oxford Science magazine along with other prizes.

[LEARN MORE](#)

ST HILDA'S SCIENCE POETRY PRIZE

Open to students aged between 11 and 18 years, entrants are asked to write a poem on a subject using their scientific knowledge. The winning poem will be performed at St Hilda's College, Oxford University.

[LEARN MORE](#)

THE QUEEN'S COMMONWEALTH ESSAY COMPETITION

The competition is open to all citizens and residents of the Commonwealth aged 18 and under, to consider how they can work to use cultural, technological and environmental connections for positive change across the Commonwealth.

[LEARN MORE](#)

THE WESTON-SMITH PHYSICAL SCIENCES PRIZE (GIRLS ONLY)

Open to all girls currently in Year 12 (Lower Sixth) at a UK school. Submissions should comply with the following: 4-6 A4 sides maximum including all figures, diagrams, tables and bibliography, with a maximum of 2500 words.

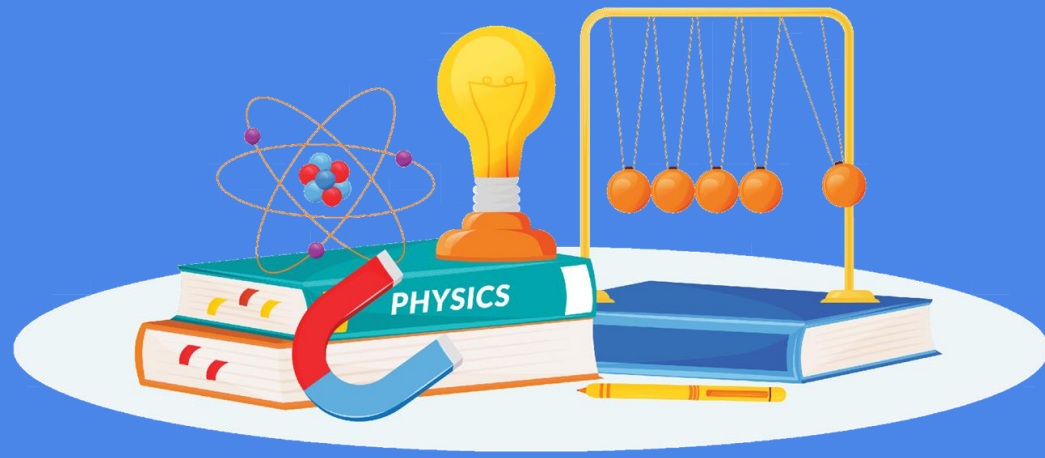
[LEARN MORE](#)

<https://www.iop.org/physics-community/special-interest-groups/environmental-physics-group/annual-essay-competition#gref>

Compete!

Environmental Physics Group annual essay competition

Our annual essay competition recognises excellence in communicating the significance, value and rewards of engaging with environmental physics.



Experience!

<https://www.iop.org/physics-community/resources-public-engagement/volunteer#gref>

The IOP is a great place to volunteer! Our opportunities inspire a diverse range of people to give their time, expertise and energy. Our volunteers are at the heart of every area of our work and a vital part of the physics community.

Inspire the next generation into STEM careers by volunteering one hour of your time per week

<https://www.theaccessproject.org.uk/stem-volunteers-needed>

Keep a Super-Curricular Activities Record for Personal Statement and Interviews

- What did you do?
- What was interesting, significant and relevant?
- How was your perception or view of the subject matter changed?
- What did you agree or disagree with and why?
- What further questions were raised?
- What could you do to explore these questions further?
- What skills or understanding were developed?

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