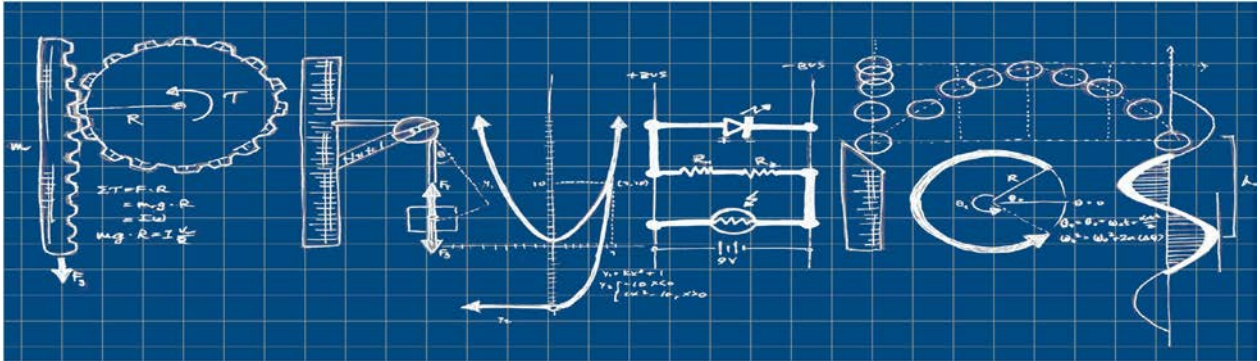


# Careers involving Physics



With a Bachelor of Science degree in Physics or Engineering Physics, students can pursue careers in research and development, science, engineering, education, medicine, law, business, and the military. Current students can take advantage of the many research and internship opportunities available to help prepare them for the career of their choice.

**Physics students are trained to analyse evidence and handle equations. This way of thinking can be applied to many job roles, giving them the option of working in a range of industries.**

One of the great benefits of studying physics is the employability and the wide range of potential career directions afterwards. They may pursue careers in science in academia or industry, seek work in a related area such as teaching physics or science communication, or take up jobs in business or finance. Many physics graduates go on to further study after finishing their undergraduate degrees.

This guide should help you think about the skills you have, the jobs they can be applied to, and the range of options available. You will also find out about employment rates for physics graduates, the areas of employment that attract them and the type of work they are likely to be doing six months after graduation.

Obvious careers for physicists that want to start working now include graduate schemes with research companies like DSTL or consultancies like Atkins. These employers generally use on the job training and recruit graduates on an annual basis.

Other jobs physics graduates go into include finance and IT. The creation of models or running of analysis are also big employers of physics graduates. Associated roles can include anything from risk analysis to weather forecasting.

One area where physics students are sadly lacking is teaching. There are scholarships and bursaries available to help with the cost of teacher training to encourage physics graduates to enter the profession.

With further qualifications or training, job roles open to physics graduates in science, business and other areas include the following:

- accountant
- commissioning editor
- computer scientist
- consultant
- environmental scientist
- ergonomist
- materials specialist
- medical physicist
- nanoscientist
- patent attorney
- patent examiner
- research scientist
- secondary school teacher
- technical author

Scientific research and development was by far the most popular career choice for students of natural sciences identified by a 2018 survey of more than 60,000 undergraduates carried out by Trendence UK, a partner of TARGETjobs' parent company GTI. Just under half (**48.5%**) of students of natural sciences, a group of degree subjects that includes physics, who participated in the survey said they were interested in this area. The most popular careers for students of natural sciences were as follows:

Career	Percentage
Scientific research and development	48.5% expressed an interest
Energy and utilities	26.5
Consumer goods manufacturing and marketing	26.0
Engineering, design and manufacture	16.0
Construction, civil engineering and surveying	13.5

There are many career opportunities available for budding physicists. Options include:

- aerospace engineering – researching and developing aircraft and spacecraft
- climate forecasting – working with the technology that predicts future weather events
- medical technology – designing and developing the medical devices and information technology that is used to diagnose, monitor and treat medical conditions

- robotics and artificial intelligence – designing and creating the machinery of the future
- scientific journalism
- teaching or lecturing.

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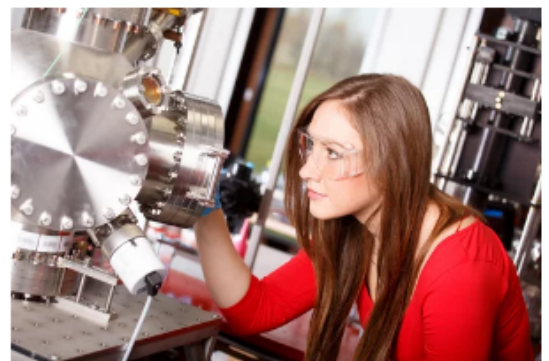
## Typical careers in physics

Whether you want to explore space, time, matter or the many other intriguing elements of the physical world, a physics degree can do wonders for your career path. While many physics graduates go on to work within research roles, these are spread across many different industries – including education, automotive and aerospace industries, defense, the public sector, healthcare, energy, materials, technology, computing and IT.

See below for some answers to the question '*what can you do with a physics degree? ...*

### Research scientist careers

Although it is possible to enter into scientific research as a trainee or technician with a good undergraduate degree, those looking to pursue long-term careers in research should consider further study, as senior research roles are often reserved for those with at least a master's degree. As well as the MSc, MPhys and PhD qualifications, leading researchers can also gain the title of 'Chartered Physicist' (CPhys) from the Institute of Physics (IOP).



The main reason to study physics at graduate level is to help you gain more in-depth, specialized knowledge, to prepare you to work effectively in a specific field. Potential areas of specialization include astrophysics, particle physics, biotechnology, nanotechnology, meteorology, condensed matter theory, quantum dynamics, applied physics, plasma physics, aerospace dynamics, atomic and laser physics, atmospheric, oceanic and planetary physics and climate science.

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### Physics careers in space and astronomy

Everyone wants to be an astronaut when they're young, but if you study physics you may actually have a chance! Of course, roles within the space sector are limited and highly competitive, and most do not include any direct involvement in space travel. For administrative and trainee roles in this sector, an undergraduate degree may be sufficient, but for higher-level and more specialized roles, you'll almost certainly need at least a master's degree.



As well as research institutes, within both the public and private sectors, other organizations offering roles related to space and astronomy include museums and planetariums. Many professional astronomers can also be found conducting research and teaching within universities and colleges, or research labs and observatories with affiliations to academic institutions.

### Physics careers in healthcare

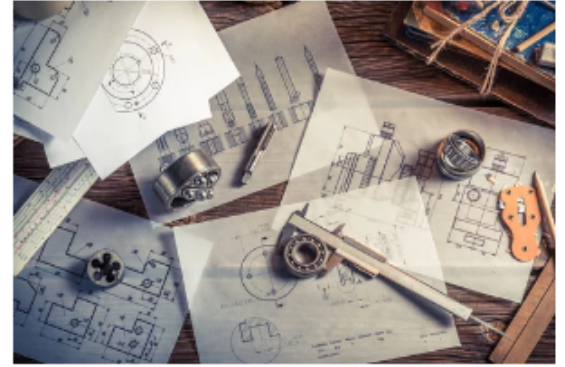
Although it may not be the first industry you think of, physics careers in the healthcare sector are numerous. Medical physics overlaps significantly with biomedical engineering, and physicists work alongside biomedical engineers to create, review and maintain medical technologies and equipment. Although cardiology and neurology are areas reserved for those with an additional medical degree, physicists are regularly employed within areas such as radiology, radiation oncology and nuclear medicine, in order to test and approve the latest technologies and equipment. As well as testing, responsibilities in this area include research, design and quality assurance.



Research-based roles in this field are available within medical technology companies, healthcare providers, research centers and academic institutions. Knowledge of accelerator physics, radiation detection and materials science is valuable for many of these roles, and a master's degree in a relevant specialization (e.g. medical physics) will also give you a leg up into the industry.

## Physics careers in engineering

The engineering sector provides many **careers in physics**, particularly within manufacturing and technology-based roles. Physics graduates are often tasked with improving and developing products and manufacturing processes, and benefit from a large range of potential employers spanning multiple industries such as medicine, energy, renewable energy, transport, defense, space exploration and telecommunications. Find out more about engineering careers and specializations with our guides, [here](#).



## Physics careers in energy

Whether we're talking about renewable or non-renewable energy, there are plenty of careers in physics within the energy sector. Alongside the rise of renewable energy, oil and gas companies remain big players in the energy market, and are major employers for physics graduates. One area of focus is on extracting fossil fuel reserves in the most efficient way possible, using knowledge of the Earth's characteristics and the newest technologies. With the prospect of fossil fuels running out, energy companies are also branching out into renewable alternatives such as wind and solar energy, and are investing heavily in research and development in this area, offering much career potential. Your role here could be to collaborate with other scientists and engineers to develop efficient and functional energy systems which harness the Earth's energy.

