Astronaut

Astronauts are trained to fly, or be crew members of, spacecraft.

Skills You'll need:

- excellent scientific or flight skills
- excellent physical and psychological strength to live in confined spaces for long periods
- the ability to stay calm during an emergency
- determination
- adaptability and good judgement

Related career profiles

You may also be interested in:

- RAF officer
- Biologist
- Physicist

Your day-to-day tasks may include:

You'll maintain the spacecraft and make sure you can live safely on board. You'll also carry out scientific experiments and research.

cleaning and testing air filters

cleaning and maintaining water systems packaging and disposing of waste

replacing worn or broken parts on the spacecraft

installing or repairing scientific equipment

setting up, carrying out and monitoring experiments

taking samples, like blood, from astronauts to assess their health

communicating with Earth by satellite to transfer data and send reports

You may do Extra Vehicular Activity (EVA) or 'spacewalks' to repair the spacecraft or complete research experiments.

You'll also spend around 2.5 hours a day exercising.

UK Prospects

Science, research, engineering and technology professionals (SOC2)

UK growth: +9.1% from 2017 to 2027, creating 159,466 jobs

East Midlands growth: +10.7% from 2017 to 2027, creating 12,438 jobs

These university subjects are related to this career:

Electronic and electrical engineering

General engineering

Physics

UK Entry Requirements

Opportunities to become an astronaut are very limited and competition for places is very strong.

You'll usually need to be aged 27 to 37 and able to speak English fluently. It would also help if you could speak a second language, like basic Russian.

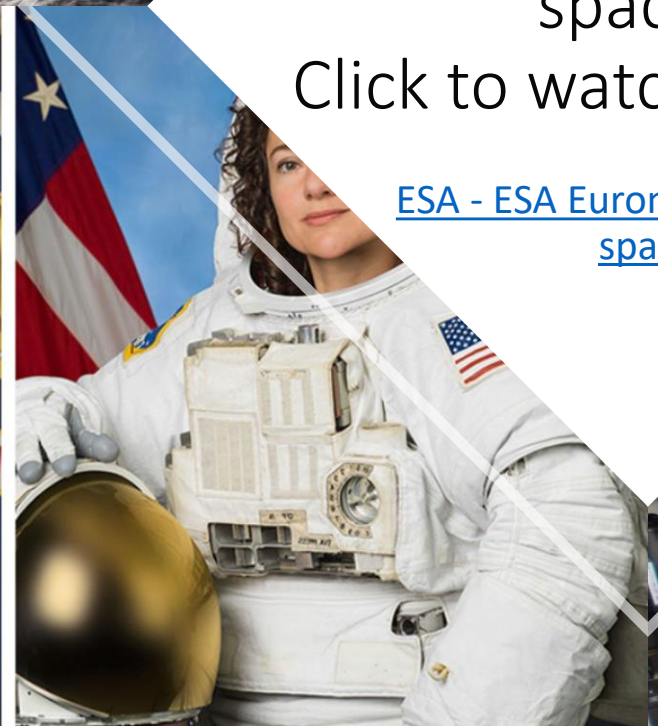
You'll also need to be a pilot with at least 1,000 hours of flying experience in a high performance aircraft like a fighter jet, or have a PhD in a subject like biology, chemistry, engineering, information technology, mathematics, or physics. With either of these routes, you'll usually need 3 years' experience.

With aircraft pilot experience or a PhD you could apply to become an astronaut in the European Astronaut Corps.

To become an astronaut with NASA, you'll need to have US citizenship or US dual-citizenship.

Living and working in space…
Click to watch the video

[ESA - ESA Euronews: Living in space]



Studying Physics at University

Let's hear from this first year student studying physics at Imperial College London.

https://cdn.unifrog.org/video/2p2r9o0q8d/480.mp4

The Hope space station on it's way to Mars!

What qualifications do you need to study physics at university?

- **Level 2 (e.g. GCSEs)**
  Most universities will want you to have achieved at least five GCSEs, with a minimum of Grade 4 in English and Maths. For this degree programme, universities may particularly favour applicants with a strong grade in Physics. It may also be worth considering taking Double or Triple Award Science. As specific entry requirements vary for each degree programme, be sure to check with your chosen universities.
- **Level 3 (e.g. A-Levels, BTECs, IB, GPA, AP)**
  Many universities will expect you to study a further Science in addition to Physics at this level, with Maths also being required. Expected grades vary between A*A*A-BBB, depending on the institution. For the actual entry requirement grades and tariffs, check the degree pages on the website. Also look for details of which subjects are accepted for the degree you may wish to study.