

Artist





Artists produce art such as images of planets, technology, or other concepts for use within the company and the media. This could be for press releases or company websites and materials. They also work to inspire interest in space within the public by producing artist's renditions of objects in space.

Routes

By having a portfolio of previous work and experience.

Example UK employers

European Space Agency

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Astrobiologist





One of the main questions in space exploration is whether there is life in space. Astrobiologists try to determine what is required for life, where these conditions may be found in space and what the signs of life we could detect may be. They will design experiments on Earth to simulate conditions we may expect in space.

Routes

An undergraduate degree in a subject such as biology, chemistry, astronomy, geology or physics with a masters or PhD specialising in astrobiology.

Example UK employers Imperial College London

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Astrophysicist





Astrophysicists study objects in the universe including galaxies and stars. They want to understand the history of them, what they are made of, how they formed and their main features to identify other similar objects. They may use telescopes on Earth or satellites in space to analyse these objects.

Routes

A degree in physics specialising in astrophysics, going on to achieve a doctorate.

Example UK employers

Imperial College London

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Business Development



Business development build a relationship with other organisations such as the government or space agencies. They make sure the company receives grants and investments so that they can develop new technology and prepare for more missions. They must go to events and network with other people to make sure that they know about new opportunities.

Routes

Management

Can have any degree. Technical understanding is needed, but can be gained through experience.

Example UK employers

Surrey Satellite Technology

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Communications





Communications keep contact with other companies on behalf of the whole company. They also talk to the media with press conferences, events and writing statements and press releases. It is important that the company has a positive public image and reputation. They also make sure that communication between departments in the company goes smoothly.

Routes

A degree in journalism or public relations may be desirable, but relevant skills can be shown otherwise.

Example UK employers AstroAgency

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Cost Estimator

Business



Cost estimators think about all the costs involved in a project before it starts. This is especially useful if the company is looking for a contract, for example from the government, and needs to prove that their costs have been considered in an initial project proposal so that they know it is possible.

Routes

May require a degree in finance, accounting or business, but degrees that give mathematical skills are relevant.

Example UK employers

Lockheed Martin

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Data Scientist

Computing



Data scientists take data and put it into a useful format for others in the company. This might involve adding layers to maps to give a view of changes over an area or looking at space imagery and combining it with other relevant data. They are important for many operations across a company.

Routes

A degree in a STEM subject with experience in data processing.

Example UK employers

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I COULD WORK IN... Earth Observation





Farth observation use satellites with cameras and other instruments to observe how the Earth and its atmosphere change over time. They make predictions about future changes. This could involve monitoring deforestation or changing ocean temperatures. They may also help to monitor remote areas after natural disasters to see where help is needed most

Routes

An academic background in geography and a masters degree in earth observation are required. Must also have evidence of strong computational skills.

Example UK employers Rezated

Imperial College London



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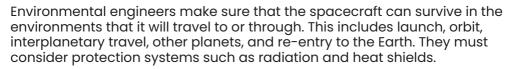
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Environmental Engineer





Routes

Engineering

A degree in science or engineering and sometimes a postgraduate qualification. There are also apprenticeships instead of degrees.

Example UK employers Thales Alenia Space

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Finance



Finance teams are responsible for paying invoices, ordering in materials and parts and making deals with suppliers. They must keep track of the company's incoming and outgoing money to make sure they are not making a loss and that the current financial situation is sustainable. This could be money from government grants or from commercial customers who want to use the company's services.

Routes

Business

May require a degree in finance, accounting or business, but degrees that give mathematical skills are relevant.

Example UK employers OneWeb

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Flight Software





Flight software engineers make programs that control everything once the spacecraft is out of Earth's atmosphere, such as cameras or solar panels. This includes making scientific measurements, ways for astronauts to control the spacecraft and ways for the spacecraft to dock with other spacecraft such as a space station.

Routes

A STEM degree is usually required. Examples of your own coding projects will be very useful.

Example UK employers

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I COULD BE A... **Flight Surgeon**





Flight surgeons are responsible for the overall health of astronauts on missions to space. They are checking in especially through the most intense parts of the mission, launch and landing, when astronauts experience high q-forces. They also make sure that the astronauts have exercise routines to keep their strength and overall physical good health on longer missions, such as on the International Space Station.

Routes

A medical degree, further training and experience working as a doctor. Many will study for postgraduate qualifications in aerospace medicine specifically.

Example UK employers European Space Agency

Imperial College London



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Ground Software





Ground software engineers work on making programs that operate the spacecraft and organise how it will send and receive information to and from Earth. This includes software used for launch preparations, such as fuel loading, the launch tower and automatic abort systems in case the computer on the spacecraft detects something wrong by itself.

Routes

A STEM degree is usually required. Examples of your own coding projects will be very useful.

Example UK employers Spaceport Cornwall

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Human Resources





Human resources are responsible for people, contracts, making sure employees are happy and dealing with any issues they bring up. This helps to keep a good working environment and to make sure that the company's work output is the best it can be. This also involves planning training for employees to keep up to date with the latest methods and technology.

Routes

Any degree can be useful, although experience in a STEM environment is desirable for a space company. There may be some vocational courses.

Example UK employers Telespazio

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Innovation Manager



Innovation managers oversee the company strategy for creating new product ideas and see where they would fit into the market. They write proposals to win contracts to develop ideas further and communicate with teams to see if the ideas are possible. It is important to make sure that the ideas for products do what the customer needs and that there is enough money for the development.

Routes

Management

Can have any degree. Technical understanding is necessary. At D-Orbit, somebody in this role has a MBA.

Example UK employers D-Orbit

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Museum Curator

Education



Museum curators oversee collections of artefacts for museum exhibits. This involves acquiring, storing, and caring for artefacts, choosing themes and designs, and conducting tours and workshops for the public. They will also take on research projects and attend meetings and events to promote their exhibits.

Routes

A masters degree in history, archaeology or museum studies is normally expected, but for space specifically a STEM background is generally required.

Example UK employers

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Planetary Geologist



Geologists are responsible for identifying where minerals are found and assessing the quantity and quality of them. They suggest areas that should be surveyed, for example by rovers on Mars, and prepare reports from this. These surveys can tell us about the history and evolution of planets.

Routes

Scientific

A degree in geology, normally with further study at a postgraduate level.

Example UK employers Imperial College London Learn more

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I COULD BE A... **Policy Maker**

Law & Policy



Policy makers create laws to govern how space is used to keep it safe and sustainable. They give advice and guidance to the government and public companies. International relations are important for this so that countries can collaborate on missions. They also must be able to use the correct language to communicate technical concepts to people who do not work in STFM

Routes

Requires a background in STEM, policy or business. Many have experience in local or national government positions.

Example UK employers

London Institute of Space Policy and Law

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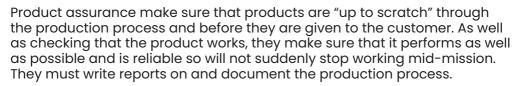






Product Assurance





Routes

Sales

A technical degree is required. Many of the required skills are gained from lab-based activities.

Example UK employers QinteQ

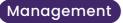
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Project Manager





Project managers organise all the activities and people for a project to make sure that it is completed on time and within the budget. They must notice problems and come up with solutions to them. They also must make sure that everyone knows how to work safely and what the next steps in the project are.

Routes

A technology or engineering background is useful, but not required. Relevant experience working on projects and examples of leadership skills will be needed. Some project managers may have an MBA.

Example UK employers AWE

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Risk Management





Risk management considers all risks involved in the production process or mission and works with teams to minimise any impacts of these risks. They must plan, design, and implement a process to manage risks such as going over budget, risk to the company overall and the risk of not finishing the project in time. They must communicate these risks to others.

Routes

Technical knowledge either through a degree or previous experience. A bachelors degree is usually required.

Example UK employers Clyde Space

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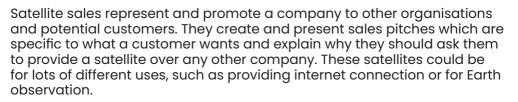
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I COULD WORK IN... **Satellite Sales**





Routes

Sales

A technology or engineering background is useful, but not required. Experience in marketing or business is useful. There are many ex-engineers in this role.

Example UK employers Smiths Group

Imperial College London



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Science Communicator



Science communicators aim to increase access and public awareness of the space sector. This can include outreach events such as exhibitions, or media such as videos and informative booklets. Many science communicators work on this alongside a job in research or similar. They will often visit schools and run workshops aimed at different age groups.

Routes

Education

There are postgraduate courses in science communication, but these aren't required. Many science communicators work alongside another position in, for example, research.

Example UK employers Freelance

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Space Command





The space command is a branch of the RAF in the UK but works together with all branches of the military. They work to monitor space and protect the UK's interest and prevent disruption to civilian, commercial and defence activity. This also involves working together internationally to keep space safe.

Routes

Through joining the RAF, Navy or Army and receiving extra relevant training.

Example UK employers UK Space Command

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Space Journalist





Space journalists aim to inform the public about a wide range of space exploration and technology development. This popularises space science and makes people realise why space matters. They will often travel across the world to rocket launches, crew capsule recovery and press conferences to cover events as they happen to inform and inspire people.

Routes

A degree in journalism or a subject with a strong written component.

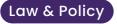
Example UK employers BBC

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Space Lawyer





Space lawyers work with clients, the courts, and other legal professionals. They may help to write new laws, argue specific cases in a court or look at how existing laws impact space missions. Clients may ask for advice and guidance on specific topics, legal support in a case or for help with contracts. Space law will become more important in the future, for example, to protect space and other planets from human contamination.

Routes

An undergraduate degree in law with a masters or PhD specialising in aerospace law.

Example UK employers Alden Legal

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I COULD BE A... **Space Nutritionist** Health



Space nutritionists plan the food that will be sent on missions with astronauts. This involves making sure they get enough of each food group but also giving them a choice of food. This is now far from the days of pureed food in a tube – astronauts are sent all sorts of meals and snacks, but they must be packaged in the correct way to survive the journey and to not damage any parts of a spacecraft, such as by making crumbs that can float away.

Routes

Most have a degree or masters in nutrition. There are also associated training courses to keep up to date.

Example UK employers

European Space Agency

Imperial College London



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Space Operations Nurse



Space operations nurses are usually contracted to aid flight surgeons with upcoming missions. They help with astronaut recovery operations as well as research before and in flight. They must follow strict plans to ensure that astronaut health is a priority when returning from the harsh conditions of launch and being in space, especially due to the g-forces experienced.

Routes

Health

Must be a registered nurse, usually through a degree and then additional qualifications.

Example UK employers

UK Space Agency

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I COULD BE A... Space Psychologist Health



Space psychologists check in with the mental health of astronauts and investigate the effects of the high-stress environment of space missions on astronauts. They are also involved in astronaut selection and training. Another part of the job is checking on the astronauts' families and colleagues during a mission. This job will become especially important for future long-duration missions to the Moon and beyond.

Routes

An undergraduate degree in psychology with a masters specialising in a relevant field of psychology. Many have research or industry experience.

Example UK employers European Space Agency

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Sales



Space travel agents organise and sell trips to space for non-career astronauts. This involves working for commercial space companies and advertising why people should choose their company. They also discuss with possible clients about different kinds of trips to space, such as shortduration sub-orbital flights, longer orbital trips, or zero-gravity flights within Earth's atmosphere.

Routes

A vocational qualification in tourism or an apprenticeship with experience in the travel industry and an understanding of the space industry.

Example UK employers Virgin Galactic

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Structural/Mechanical Engineer



Structural and mechanical engineers design the structure of spacecraft and components for them. They must use CAD design and model analysis to make sure that the spacecraft launches successfully and does its job safely. For example, they might have to look at how new parts added to the spacecraft change how it behaves to make sure that it is safe.

Routes

Engineering

A degree in science or engineering and sometimes a postgraduate qualification. There are also apprenticeships instead of degrees.

Example UK employers Lockheed Martin

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Supply Chain



Supply chain works out materials required for projects and makes sure that they arrive in the right places at the right times. This involves making sure the right amount arrives, the final product ends up being delivered to the right place at the right time and that the product is stored safely.

Routes

Business

There are relevant degrees and apprenticeships in logistics and supply chain management. It is also possible to work and gain equivalent experience.

Example UK employers

Printec Circuit Laboratories

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Systems Engineer



Systems engineers manage building whole spacecraft or instruments. They must make sure that the system does everything a customer asked for but keeps within energy, mass, and power limits. They see the big picture of the project all the way from first designs to the final product.

Routes

Engineering

A degree in science or engineering and sometimes a postgraduate qualification. There are also apprenticeships instead of degrees.

Example UK employers BAE Systems

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Teaching Fellow

Education



A teaching fellow delivers lectures and smaller group teaching as well as planning out teaching materials in a university. They also research teaching methods and integrate them into teaching at the university. Students should be inspired to study further by this teaching in a wide range of areas. In space, this involves planets in the solar system, the outer universe, and space near Earth or the Sun.

Routes

A PhD in a related area is required, and many complete post-doctorate and other fellowship positions.

Example UK employers Imperial College London

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Technical Recruiter



Technical recruiters make sure that people with the correct talents for the company are recruited. They keep in mind ongoing projects and how the business is being presented. This involves organising specific recruitment programmes. They must identify candidates that have the correct skills for the roles that need to be filled.

Routes

Business

A background in STEM is necessary, whether this is a degree or previous experience. Knowledge of how technical teams work is needed.

Example UK employers Orbex

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Weather Data Analyst



Weather data analysts look at processing different types of data such as air temperature, wind speed and direction to improve weather forecasting. This data can come from satellites, weather balloons or ground stations. This is important for launch and re-entry of spacecraft to make sure that astronauts, the mission, and the public below are all safe.

Routes

Scientific

A degree in STEM is required.

Example UK employers Met Office

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