

Careers in Astronomy and Astrophysics

Your guide to science, space and supporting roles

Liverpool & Merseyside | Entry routes to postgraduate study | SEND-friendly options may be available

◆ Why Choose a Career in Astronomy and Astrophysics?

- Explore planets, stars, galaxies, black holes and how the universe began
- Work with telescope images, satellite data, computer models and AI tools
- Join research, engineering, software, education or science communication teams
- Build transferable skills in maths, coding, analysis and problem-solving
- Contribute to international projects and new discoveries
- Start through practical support roles as well as academic study



Astronomer analysing telescope images at an observatory

◆ Skills and Personal Qualities

- Curiosity about space, physics and how things work
- Confidence with numbers, patterns, graphs and evidence
- Patience and accuracy when checking data or equipment
- Problem-solving and willingness to learn from mistakes
- Computing skills - coding becomes increasingly important
- Teamwork and clear communication with different audiences

◆ Useful School Subjects

- Mathematics - algebra, graphs, statistics and modelling
- Physics - forces, energy, light, waves and electricity
- Computer Science - coding, simulation and handling large data sets
- Chemistry - materials, spectra and the composition of planets and stars
- English - reports, presentations and explaining complex ideas clearly



◆ Local Study Routes and Qualifications

Astronomers usually need a degree plus postgraduate study. Technician and support routes can begin through college, an apprenticeship or work experience. Check current entry requirements.

Merseyside and Nearby Routes

- Foundation or Level 2 Applied Science or Engineering - a route to rebuild GCSE skills and progress
- Level 3 Applied Science, Engineering or T Level Science - practical preparation for technician work or higher study
- A levels - Mathematics and Physics are normally essential for an astronomy or astrophysics degree
- University of Liverpool and LJMU - Physics with Astronomy BSc and Astrophysics MPhys routes

Specialist Pathways

- Access to HE Science - an option for adults returning to education
- Engineering and electronics - routes into instruments, satellites and telescope systems
- Computing and data - routes into coding, image processing and scientific data support

SEND-Friendly and Supported Provision

- Supported study, reasonable adjustments and transition support may be available - discuss your needs early with each provider

◆ Apprenticeships and Technical Training

- Laboratory Technician - Level 3
- Aerospace Engineering Technician - Level 3
- Data Technician - Level 3
- Technician Scientist - Level 5
- Space Engineering Technician - Level 4; new starts are paused as of October 2026, so check current status
- Search live vacancies at www.findapprenticeship.service.gov.uk; supported internships may suit some students with an EHCP

◆ Roles, Experience and Progression

Astronomy depends on a wide team. Entry and supporting roles can build experience in science, data, engineering, public engagement and observatory operations.

Role	Where You Work	Typical Starting Route
Observatory or outreach volunteer	Astronomy groups, events, visitor centres	Interest in astronomy; training provided
Museum visitor assistant	Museums, planetariums, science centres	General education; customer service helps
Science laboratory assistant	Schools, colleges, universities	GCSEs or Level 2 science; employer training
Data technician	Research, technology and public services	Level 3 course or apprenticeship
Laboratory technician	Universities, research and industry	Level 3 science or apprenticeship
Aerospace engineering technician	Aerospace, satellite and engineering firms	Level 3 engineering or apprenticeship
Telescope or instrument technician	Observatories, universities, manufacturers	Level 3-5 engineering, electronics or science
Science communicator	Museums, media, outreach and charities	Experience plus science or communication study
Astronomer or astrophysicist	Universities, observatories and research institutes	Relevant degree; usually MSc or PhD

UK salary examples: museum attendant £23,000-£31,000; laboratory technician £24,000-£31,000; aerospace engineering technician £27,000-£50,000; astronomer £31,000-£65,000.

Experience and Activities

- Join a local astronomy society, public observing event or citizen-science project
- Practise Python, spreadsheets, image processing and presenting findings
- Ask about work experience in a school lab, university, museum, engineering or technology setting

◆ Next Steps and Contact Information

- Compare entry requirements before choosing GCSEs, A levels, T Levels or college courses
- Attend university and college open days and ask about learning support
- Search apprenticeships and build evidence of maths, coding, practical and communication skills

TAGS Careers	www.tags.careers - local careers information and resources
Study Routes	www.liverpool.ac.uk www.ljmu.ac.uk Search local college websites for Applied Science and Engineering
Explore Roles	nationalcareers.service.gov.uk/job-profiles/astronomer www.spacecareers.uk
Apprenticeships	www.findapprenticeship.service.gov.uk skillsengland.education.gov.uk/apprenticeships