

Aerospace Engineer

An aerospace engineer designs, builds, tests, and improves aircraft and spacecraft, including airplanes, rockets, satellites, missiles, and space exploration vehicles. They use science, math, and engineering to solve complex problems and develop technology that advances aviation and space exploration. Aerospace engineers work for government agencies like NASA, the military, and private companies such as SpaceX and Blue Origin. Some specialize in aircraft, while others focus on spacecraft, satellites, rockets, propulsion systems, robotics, or other space technologies.

School to Career Pathway

- Take high school courses in math, physics, and chemistry.
- Earn a bachelor's degree in aerospace engineering.
- Complete an internship to gain hands-on experience and build professional skills.

Durable Skills

As a aerospace engineer, you need:

- Strong problem-solving skills to identify challenges, think critically, and develop creative solutions for aircraft, spacecraft, and aerospace systems.
- Adaptability to keep up with new technologies, changing project requirements, and unexpected challenges.
- Collaboration skills to work effectively with engineers, scientists, manufacturers, and technicians on complex projects.
- Strong communication skills to clearly explain ideas, designs, and technical information.



Core Duties

Design Aircraft and Spacecraft

Create and refine designs for airplanes, helicopters, rockets, satellites, and spacecraft that meet safety and performance standards.

Test New Designs

Use simulations, prototypes, and real-world testing to ensure aircraft and spacecraft perform safely and reliably.

Improve Existing Technology

Develop innovations that make aircraft and spacecraft lighter, stronger, more efficient, and more sustainable.

Solve Engineering Problems

Identify design or manufacturing problems and develop solutions that improve safety, performance, and reliability.

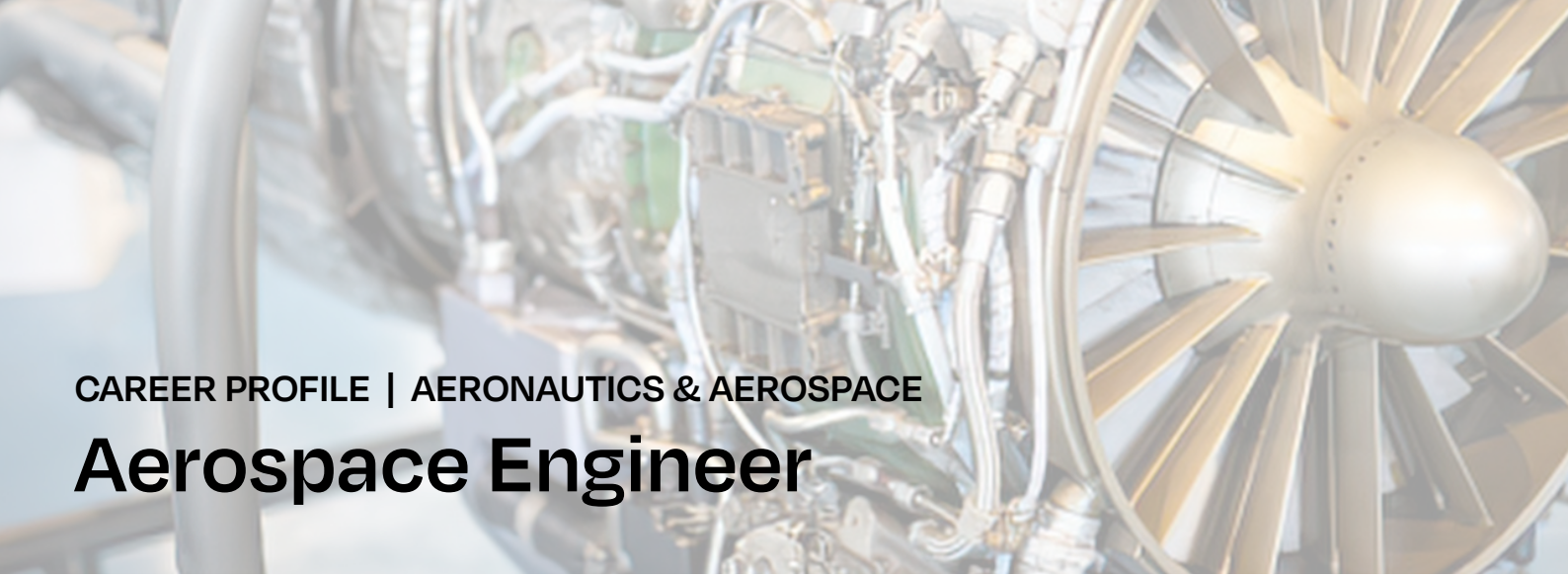
Work with Engineering Teams

Collaborate with engineers, technicians, scientists, and manufacturers to turn ideas into working aircraft and spacecraft.

Paycheck Peek

\$64.82 hourly, \$134,830 annually

*Note that annual wages vary by location (state, city, or work setting)



CAREER PROFILE | AERONAUTICS & AEROSPACE

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Could This Be Your Thing?

- Are you fascinated by rockets, satellites, airplanes, drones, or space exploration and enjoy learning how they work?
- Do you enjoy designing new things, improving on items already made, and finding solutions to problems?
- Are you careful and pay close attention to details to ensure things work properly?
- Do you like discussing problems with others to hear their ideas on how to solve a problem?

Explore Similar Career Pathways

- aerospace engineering and operations technologists and technicians
- avionics technician
- aircraft mechanics and service technicians

Dig Deeper Here

Find out more about all careers at: [US Bureau of Labor Statistics Student's Desk](#)

Find out more about STEM careers at: [Careers with STEM: Space](#)

Find out more about the careers above:

- [O*NET Online: Aerospace Engineering and Operations Technologists and Technician](#)
- [O*NET Online: Avionics Technicians](#)
- [O*NET Online: Aircraft Mechanics and Service Technicians](#)