



# WHAT DO AEROSPACE ENGINEERS DO - AEROSPACE ENGINEERING SCOPE

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One of the most challenging engineering field these days is aerospace engineering. Aerospace Engineers are supposed to take part in the development, and they bring innovations in the discipline of aviation and air defense system. They evaluate and examine whether the designed products meet the engineering principle and how much safe it is. Manufacturing of Aircraft, space crafts, passenger airplanes, missiles come under the scope of aerospace engineering. This is a brief about what do aerospace engineers do.

The first ever attempt to make an aircraft system and to fly with the aid of it was done by an engineer of his time known as [Abbas ibn Firnas](#) born in 810 AD.

Though his experiment was not so much lucky but we can't ignore his role in the field of aerospace. About nine centuries later Manned flight was first accomplished in 1783, in a hot-air balloon created by the French brothers Joseph-Michel and Jacques-Étienne Montgolfier. In 1799, Sir George Cayley brought a breakthrough by incorporating wings and tail and a propulsion system. There are some other names to be mentioned in this field till Wright brothers, the fathers of modern manned flight, in start of 19th century made their first successful flight.

### **What do aerospace engineers do**

- Aerospace engineers are supposed to do following tasks
- Design, manufacture and then test air crafts and aerospace products.
- Determine the feasibility and safety of projects
- Evaluate the project to check whether it meets customer requirements, engineering principles, environmental conditions.
- Ensure the quality standards, reliability of products
- Check and solve the issue in malfunctioning and defected products
- Recommend improvement in testing techniques

Aerospace Engineers are specialized in area such as what do aerospace engineers do

- aerodynamic fluid flow;
- structural design;
- guidance and navigation,
- control systems;
- instrumentation and communication;
- robotics;
- propulsion and combustion.

### **Aerospace engineering can be divided into two broad sub fields**

Aeronautical Engineering

Astronautical engineering

**Aeronautical engineers** work with aircraft that work in earth atmosphere such as aeroplanes, helicopters, jet planes and should have strong grips on

- thermodynamics
- heat transfer and mechanism
- aircraft structure
- flight mechanism
- Precautions to avoid any accidents
- Stability and control system of products

**Astronomical engineers** works on projects related to space, and aircraft that operate outside of the earth's atmosphere such as rockets, satellites and shuttles, etc

They must know about

- Spacecraft Design
- Introduction to Astronautics
- Fundamentals of Jet Propulsion
- Spacecraft Dynamics
- Orbital Mechanics
- Air Pressure and Vacuum Pressure

### **Aerospace Engineer Salary**

Aerospace Engineers earns an average of \$80K per year, which mostly depend upon the company for which they are working, their experience, and educational background. Aerospace Engineer Salary are among the top 95% of all carriers in United States.

<b>Aerospace Engineer Salary by Seniority</b>	<b>Per Hour</b>	<b>Per years</b>
Top End Aerospace Engineer Salary	\$76.30	\$158,700
Senior Aerospace Engineer Salary	\$64.16	\$133,460
Experienced Aerospace Engineer Salary	\$51.84	\$107,830
Junior Aerospace Engineer Salary	\$40.41	\$84,040
Starting Aerospace Engineer Salary	\$32.62	\$67,850

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