So, What's Next?

Here are just a few of the exciting things that you can do as an engineer:

Smart Materials

Create a wing that thinks! Aerospace companies are exploring smart materials that can alter their properties to create highly efficient "changeable" wing structures.

Advanced Propulsion

Keep the planet green! Engineers are designing hybrid jet fuel-electric systems, pulse detonation engines, and other advanced concepts to a plane's carbon footprint while increasing power.

Supersonic Commercial Transport

Solve supersonic flight! Soon passengers will fly from New York to Hong Kong in 2 hours! Engineers are working hard to reduce the noise and cost of high-speed flight, including hypersonic global travel.

Commercial Space Industry

Join the new race to space! As an aerospace engineer, you will work in the newest transportation sector, commercial space, developing new vehicles and systems for human space flight, tourism, and research.

Unmanned Aerial Vehicles

Fly from your desk! Engineers are developing Unmanned Aerial Vehicles (UAV) for border security, science research, law enforcement, and firefighting. UAV's will fly for months at a time improving cell phone reception, monitoring weather and mapping global changes. In addition, engineers are experimenting with autonomous vehicles, which will be able to take off, fly, and land with no human input.

Your Future Begins Today!

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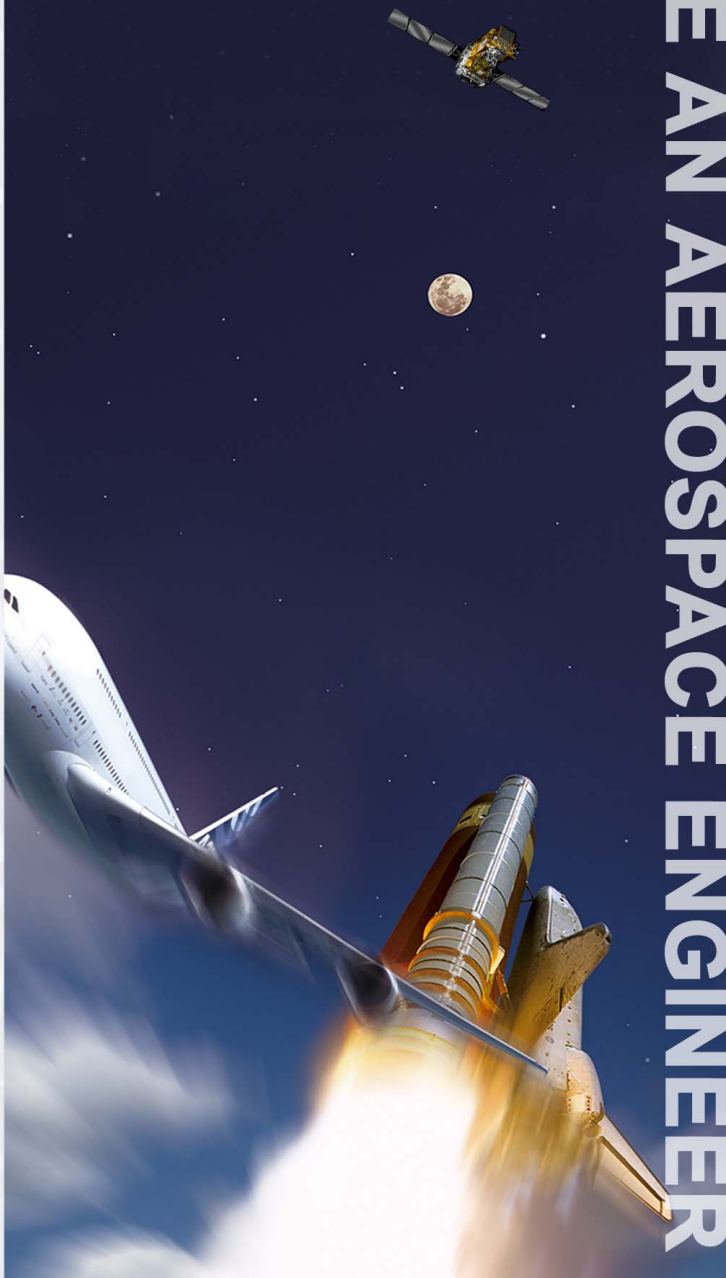


BECOME AN AEROSPACE ENGINEER

What do engineers have to do with aviation?

Design, invent, and innovate technology, structures, and processes, and find practical solutions to aviation needs.

Civil

Design and construction of runway terminals and their infrastructure, such as roads, buildings, etc.

Electrical

Design electronic systems, such as electrical circuits, telecommunications, generators, and motors.

Software

Design applications to make aircraft and air travel faster, more affordable, and/or easier to maintain.

Chemical

Work with raw materials processing to convert them into aircraft parts, fuel types used in aircraft, flammable or explosive compounds, or properties related to aircraft under pressure.

Electronic

Work with electronic circuits, concerning electromagnetic or acoustical wave energy for purposes such as communication, measurement, and navigation.

Aerospace

Design of aircraft, satellites, and space vehicles.

Mechanical

Design of integral aircraft systems, such as power and energy systems, aerospace products, etc.

What are the characteristics that make a good engineer?

Creative
Good time management
Work well with others
Balanced life style

What course should I take in high school?

Algebra I	Statistics	Biology
Algebra II	Calculus	Chemistry
Adv. Algebra	Trigonometry	Physics
Physical Science	CAD I/II	Geometry

Employment Outlook Statistics

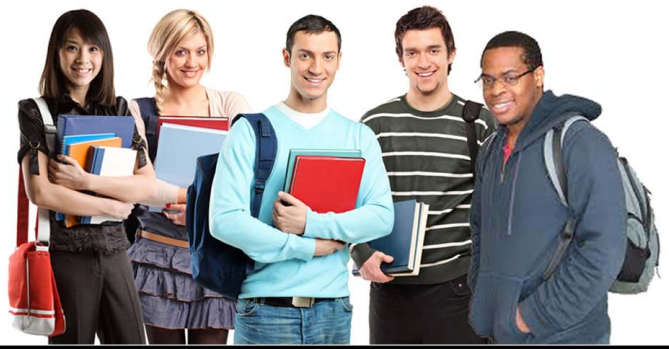
According to the Bureau of Labor Statistics (BLS), aerospace engineers can anticipate a 10% job growth rate between 2008 and 2018.

In 2009, engineers held about 2.4 million jobs.

The median pay for an aerospace engineer is $45.00 per hour.

Engineer unemployment for the next 5 years is 1%.

Get involved at your school today!



Engineering Projects and Organization for Students

Real World Design Challenge (RWDC)

This challenge is an annual competition that provides high school students, grades 9-12, the opportunity to work on a real world engineering challenge in a team environment.
http://www.realworlddesignchallenge.org/

Build A Plane (BAP)

This is a nonprofit organization dedicated to promoting aviation and aerospace by giving young people the opportunity to build real airplanes. Aircraft construction and restoration is not only exciting, but also provides a real-world application for learning science, technology, engineering, and math (STEM).
http://www.buildaplane.org

American Institute of Aeronautics and Astronautics (AIAA)

The institute addresses the needs of engineers, scientists, and allied professionals who conceive, design, develop, test, construct, and operate air and space vehicles, and their associated subsystems, as well as the educators who train the professionals, researchers who continuously renew the technology, managers who lead their efforts, and innovators who bring forth new concepts.
http://www.aiaa.org

Attend an Aviation Career Education (ACE) Academy This Summer!

ACE Academies are summer educational programs for middle and high school students and last from one day to one week. They are co-sponsored by FAA along with many other organizations. The focus is on aviation career exploration with emphasis on opportunities for women and minorities. Students experience instruction in aviation history, the physics of flight, and field trips to aviation sites and hands-on activities. Find an ACE Academy in your area.
http://www.faa.gov/education/student_resources/ace_camps

What Does Industry Say?

"We need engineers," Spirit AeroSystems CEO Jeff Turner said.
"We want them to fill those jobs without going to resources outside the United States."