

# Careers: Aviation Engineer - Safety

## **Overview:**

Air Safety Engineer is the job title given to a Safety Engineer working within the aerospace industry and with expertise in aircraft safety and aviation. Often Air Safety Engineers are involved with military engineering because of the overlap between the aviation and military sectors. It is recognized that the experience and skills of Air Safety Engineers are in many ways transferable with the skills of Safety Engineers from other related sectors.

Two different “Safety” engineering jobs will be looked at here. One is with the Federal Aviation Agency (FAA) and a second one with a private company. This will balance how safety is viewed in aviation as a whole.



## **Federal Government - FAA Aviation Safety Inspector GS-5/15**

### **Position Description**

Aviation safety inspectors develop, administer, and enforce regulations and standards concerning civil aviation safety, including (1) the airworthiness of aircraft and aircraft systems, (2) the competence of pilots, mechanics, and other airmen personnel, and (3) safety aspects of aviation facilities, equipment and procedures. These positions require knowledge and skill in the operation, maintenance or manufacture of aircraft and aircraft systems.

### **Typical Requirements and/or Experience**

Candidates must have had experience as described below. Education may be substituted for general experience.

**General experience:** General experience is that which has provided familiarity with aircraft operation or the aviation industry. The following are examples of qualifying general experience:

Pilot or crew member in civil or military aviation  
Civilian or military air traffic controller  
Aviation mechanic or repairperson  
Avionics or electronics technician  
Skilled machinist, assembly person, or inspector in production of aircraft, aircraft parts, or avionics equipment

**Substitution of Education:** For all positions in this series, successful completion of post-high school education in related fields such as engineering, aeronautics, or air transportation may be substituted for the required general experience. Education may be substituted at the rate of one academic year of full time study for nine months of general experience, up to the maximum of three years of general experience.

**Specialized Experience:** Specialized experience is that which has provided knowledge and skills for work in the specialty field-operations, airworthiness, or manufacturing. In addition, specialized experience must have provided a broad knowledge of the aviation industry, the general principles of aviation safety, and the Federal laws, regulations and policies regulating aviation. Examples of qualifying specialized experience are described under the appropriate specialty area.



**At Civil Air Patrol, the volunteer auxiliary of the U.S. Air Force, we're helping develop tomorrow's aerospace workforce.**

## **Education**

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A career as an Aviation Engineer – Safety  
Serco Inc., Washington D.C.

## **Introduction**

Serco Inc. is a leading provider of professional, technology and management services focused on the federal government. At Serco we are passionate about public service. For more than 40 years we have been delivering essential services that help governments operate more efficiently. We advise, design, integrate and deliver solutions. We are backed by the global experience of our \$5 billion parent company, Serco Group one of the world's leading service providers.

Serco is a government contractor with over 11,000 employees and over 40 years experience in North America providing aviation services. Serco is an internationally recognized Air Navigation Service Provider (ANSP) providing ATC and Weather Forecasting and Observation services around the globe, including en route and radar approach control and VFR Tower services. In addition we provide systems engineering, design, installation and maintenance of ATC equipment and NAVAIDs throughout US and Canada. We are seeking highly qualified and experienced professionals to expand our aviation services within North America, and our support of the FAA in its NextGen modernization effort in and around the Washington DC area.

## **Job Responsibilities:**

The Safety Engineer – Aviation, applies safety engineering principles to investigate, analyze, plan, design, develop, test, evaluate and implement CNS/ATM systems. Reviews and prepares safety engineering and technical analysis reports, change proposals, and other technical documentation. Applies safety engineering principles to perform functions such as system integration, configuration management, and quality assurance testing, analyzes designs, develops, tests, evaluates and implements functional requirements of CNS/ATM systems. Additional duties from a safety engineering perspective includes:

- Facilitating new systems and review safety data for completeness
- Reviewing NCPs
- Reviewing and contributing to the development of system policy documentation
- Reviews waivers for completeness
- Contributing to research papers

## **Required Experience**

Basic Qualifications and Experience:

- Bachelor's Degree in Science, Math, Engineering, advanced degree preferred.
- 10 + years of technical management experience in projects involving research, planning, integrating and implementation of complex systems and equipment.
- Preference given for solid foundation in research, data collection and analysis, safety engineering, ATC technologies, simulation and prototyping and development activities.

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**Links to Specific Airport Engineer Job Information click below:**

<http://www.avjobs.com/careers/detail.asp?RecID=43>

[http://en.wikipedia.org/wiki/Safety\\_engineering](http://en.wikipedia.org/wiki/Safety_engineering)

Safety Photos – [WOW- 2011\\_southern\\_region\\_pictures](#)

[Chap3\\_1200FAA Principals of System Safety](#)

**Links to more Information click below:**

<http://www.academy.jccbi.gov/catalog/international/contents%5C21018.html>

<http://www.academy.jccbi.gov/catalog/courseDetail.asp?CID=FAA21018>

<http://www.isope2009.org/169-working-as-an-air-safety-engineer.html>

[Met tower Power Point St. Cloud](#)



Courtesy: [Serco.com, FAA]