Aviation Careers

Airport Management - Airport Operations

The Airport Duty Manager works for the Port of Seattle's Airport Operations Dept. The primary purpose of the Airport Duty Manager is to oversee airport operations, including the airfield and terminal. We work with Air Traffic Control, wildlife management folks who prevent bird strikes, the personnel that remove snow, and people who make sure the runways and taxiways are free of debris. Some of the knowledge, skills and abilities of this position include: Broad-based knowledge of airport and airline operations and safety management system (SMS), theory, systems, and design. Demonstrated interpersonal and problem solving skills, including the ability to resolve both technical and personnel issues. Demonstrated flexibility and adaptability, as well as the ability to function in a highly visible role and assume management control and respond appropriately to airport incidents. People who work in Airport management also have mathematical ability sufficient to perform computations related to weather, space allocation, and surface conditions. They have the ability to effectively communicate on the radio.   Education requirements/preferences include: Bachelor's degree, preferably in an aviation-related field, or three years' work experience in public, private, or military airport/flight operations. Experience in an airfield, terminal, or landside environment or as an airline manager, airline dispatcher, air traffic controller or similar position.

Air Traffic Control

There are three main levels of Air Traffic Control, enroute, approach and departure control, and the Tower controllers. All controllers go through training either at a college or at the Federal Aviation Administration's academy in Oklahoma City. They learn about operation radar and talking to aircraft on the radio. The training is intense as learning to fly and the successful controller must be able to memorize and recall many facts regarding the airspace they control. An Air Traffic Controller must have a two or four year degree preferably in an aviation program. They must learn all the rules and requirements aircraft have to operate in the airspace over the United States. They must coordinate with controllers from different areas and adjacent countries to the US. It I a technical and demanding job requiring controllers to work odd hours in a 24 hour, 7 day operation. After high school you could be a qualified controller in as little as four years.

Crew Scheduler/Planner

A Crew Scheduler is responsible for ensuring all flights are fully crewed and operate on time. Crew Schedulers must learn and understand various Federal Aviation Regulations, labor agreements, company policies and procedures and be able to convey this information to crewmembers at a moment's notice with 100% accuracy. Duties include but are not limited to the ability to work within several computer applications simultaneously while coordinating this information with crewmembers over the phone. When the daily operation doesn't go as planned, you are tasked with putting the schedule back together as best you can with the resources you have. If you are strong at Multi-tasking, paying attention to detail, communication skills (both written and verbal) and the ability to prioritize, you would do well as a Crew Scheduler. You must have the ability to work in a high stress environment sitting in front of a computer for long periods of time and be willing to work any time of day or night. Typing skills are also a must. Although a 2-year college degree is preferred, a High School education and 18 years of age is the minimum requirement.

Customer Service Agent

A customer service agent typically is the first person to meet and assist passengers arriving for a flight. They perform many functions including checking baggage, assigning seats, assisting the boarding of flights, and rebooking passengers if flights change. The most important skill of customer service is an engaging personality who cares for and wants to help people, in this case with their travel plans. This position requires advanced computer skills and training after high school in using the airline's computer reservation system.

Aircraft Dispatcher

An Aircraft Dispatcher is a Certificated Airman, like Pilots and Mechanics, that hold an FAA License for their area of responsibility. The Aircraft Dispatcher, shares responsibilities with the Pilot in Command, for the safe operation of the flight. That includes pre-flight planning, and monitoring the progress of the flight all the way to the destination. They advise the Pilot in Command of any conditions along the route of flight that may affect the safe operation of the flight. The Aircraft Dispatcher works in the airline equivalent of NASA's Mission Control. They work with many computer programs to assist them in preparing flight plans and monitoring the progress of flight. To become a Aircraft Dispatcher there are schools around the country that offer the education needed to obtain an Aircraft Dispatcher Certificate from the FAA. In the Seattle area, Green River Community College has an aviation program that includes dispatching along with pilot and air traffic control programs. Airline operation experience and/or piloting experience are good background, but not necessary. Along with the education required by the FAA, you must also be 23 years of age to qualify for the Aircraft Dispatch Certificate.

Aerospace Engineers

As Engineers with the airlines, we are responsible for the operation and maintenance of the aircraft in a number of areas. Each airline operates their aircraft differently. Some takeoff and land up to 10 times a day and others only twice a day but fly longer flights. The aircraft manufacturer provides instructions on how to fly and fix the aircraft. Engineers modify these instructions to suit our type of flying so we can change parts before they break and fly so we save as much fuel as we can. We also provide instructions for modifying aircraft, fixing dents, moving seats around, adding wireless capabilities, painting and applying stickers to aircraft. To do all of these things we have to spend a lot of time talking to the mechanics, pilots, and other groups as well as Boeing engineers. Engineers have to earn a Bachelor of Science degree in Engineering and have to be able to problem solve, and communicate effectively, both directly with people and in writing technical documents. Some of the most common Engineering degrees in aviation are: Aerospace, Electrical, and Mechanical.

Flight Path Designer

A flight path designer designs instrument flight procedures that are programmed into the aircraft's flight management computer system and published for pilots. These paths allow a pilot to navigate the aircraft to safely depart or land at a major airport. Typical training for this position involves earning a bachelor's degree in engineering, geography or aviation technology, in addition to a bachelor's degree a flight path designer needs experience and additional training in computer drafting and cartography. A pilot's license and experience flying instrument procedures is also very useful. Flight path designers also go to reoccurring training to learn new and ever changing procedure design criteria as developed by ICAO (PANS-OPS criteria) and the FAA (TERPS criteria).

Flight Attendant

Alaska Airlines Flight Attendants are responsible for customer safety and service onboard all of our flights. Training takes place in Seattle over a period of six weeks and includes extensive instruction on emergency evacuations, use of evacuation slides/life rafts, firefighting, survival at sea and in the tundra, first aid, CPR, ditching/emergency landing procedures, decompression emergencies, Crew Resource Management, security, inflight service and much, much more. A high school education is required, and some college education and/or a customer service background are preferable. Applicants must be at least 21 years of age, able to swim, hold a valid U.S. passport and have the ability to travel in and out of the United States. An Alaska Airlines Flight Attendant must be flexible to work varied schedules including evenings, weekends, holidays and overnight in various cities on our system for up to five days. Additionally, a candidate must possess the adaptability to perform a variety of duties working with people, perform effectively under stress, and have an uncompromising dedication to safety, all while being friendly, approachable and warm.

Fight Safety Officer

A Flight Safety officer helps the airline develop procedures and practices that prevent accidents and injuries. When our airline has an incident or an accident, they respond and are one of a group of people that starts the investigation and figures out what happened, why it happened, and how we can fix it so it doesn't happen again. Most, but not all airline safety folks are first pilots. There are many administrative positions within the safety organization that don not require a pilot's license. Typically a person working in safety obtain a Undergraduate degree from an accredited University (aviation specialization is helpful). Masters Degree in Aviation Safety preferred but not required. Some of the additional formal schools may include various Accident/Incident Investigation Courses.

Flight Operations Instructor

As a Flight Operations Instructor you would be responsible for researching and developing regulatory compliant training courseware for Alaska Airlines' pilots. Some of the courses you could expect to develop would include 737 aircraft systems, hazardous materials, security, crew resource management and emergency equipment procedures. The Flight Operations Instructor is also responsible for teaching some of the instructor led materials. To be successful in this position you should have basic knowledge and understanding of ATC procedures, FARs, the AIM and meteorology. You should possess a general knowledge of Crew Resource Management (CRM) concepts as well as commercial aircraft systems. You should be familiar with theories of learning and teaching methods. You must also be comfortable speaking to large groups of people. Computer skills utilizing word processing, PowerPoint and graphics software are beneficial. This position usually requires a pilot certificate.

Finance and Marketing
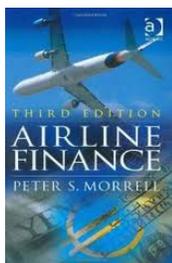
Many aviation careers involve technical and non-technical positions that work behind the scenes to insure airplanes operate, passengers arrive and depart, and people know about an airline's business. Financial planners and accounting people work to do everything from buying aircraft, supplies, and maintenance equipment; to ensuring the flow of money from passengers to the company is easy and fast. Marketing works to make sure that passengers know about the airline, where the airline flies and what a particular airline does best. Hundreds of positions exist in this area requiring no additional training after high school up to four year and advanced degrees from a university.

Aircraft Load Planner
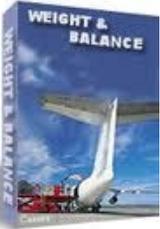
A Load Planner receives information from Customer Service Agents and Ramp loading personal regarding the number of passengers, baggage, and cargo; then calculates the total weight of the aircraft. This weight must be in prescribed balance as designed by the manufacture and the Federal Aviation Administration. They perform these calculations for the crew and then send the information electronically to the Airline Captain prior to the airplane's departure. I began in this work by first becoming a Customer Service Agent assisting passengers at check-in. About two years after I started, I transitioned into the Operations department to work Weight and Balance on our aircraft where I have been since. When I began in Juneau, I performed the Load Planning at the local airport. There, I learned more about the winds and weather that have made Alaska stand out in the industry with our RNP approaches. I was able to transfer to Seattle and worked at SeaTac. Working in an airline opens opportunities for movement and promotion. I now also train other Load Planners. This position requires a High School education.

Pilot & Flight Officer

To become a commercial pilot you will undergo technical training in flying aircraft usually beginning in light general aviation aircraft. Once the basic skills are developed, the professional pilot may progress to larger and more advanced aircraft. Flight Officers man aircraft requiring a crew and advanced licenses issued by the Federal Government. Because this career requires the demonstration of skill, continuing education, and the ability to learn advanced concepts, most employers require the commercial pilot to obtain a four year college degree. An alternate path for commercial pilots is to begin in military aviation. After the initial commitment to the military for the training, pilots can seek positions with airlines as flight officers. Pilots must take "checkrides" in some cases multiple times a year to demonstrate they continue to have the skill required to operate aircraft. In addition, the government mandates medical standards for pilots and they must undergo physical exams each year to remain qualified to fly. The cost of obtaining the required licenses to start flying commercially can run as high as $65,000. This would be in addition to obtaining a Bachelor's Degree from a University.

Mechanic/Technician

Aircraft Technicians are responsible for doing the maintenance on Alaska's Fleet. Aircraft Technicians' work consists of all phases repair and maintenance of aircraft. From Scheduled Engine programs like Boroscopes to check the engines status (health) to the dismantling, repairing, assembly, and erection of machinery and mechanical devices and may also include exchange and replacement of electronics or electrical components. Technicians entering the classification of Aircraft Technician shall process: a valid A & P license (Airframe & Powerplant). The certificate is received from an accredited civilian or military program with a minimum of 60 semester hours. We use the Aircraft Maintenance Manuals to guide us with hands on servicing of oil and hydraulic levels, replacing, repairing structures, servicing tires, accomplishing safety tests, testing functions of flight components, repairing dents in the aircraft skin, following Engineering instructions on repairs to return aircraft to a safe and operable status. Technicians troubleshoot and fix aircraft that may experience performance problems, especially those that the pilot writes up in the aircraft logbook. Technicians can also get tasked with running Engines and Taxing Aircraft (way cool)! Technicians have the responsibility of working with many airline employees, pilots, flight attendants, engineers, and many others. Sometimes shop technicians will work only on specific aircraft parts, overhauling them, repairing them to a serviceable or airworthy state. Alaska Airlines Technicians stay current with training on all of the latest and greatest technology advancements that are put on our aircraft. Aircraft Techs really do make the airplane "go!"

Ramp Operations

Ramp personnel work on the ramp around the parked airline aircraft. They load baggage and cargo and operate the equipment that push and tow the aircraft into position to start engines and taxi for takeoff. They guide aircraft into parking spots and insure that the area is safe for the aircraft to park. Ramp personnel are also the people that assist passengers with disabilities onto and off the aircraft and stow their personal equipment in the cargo area.

Simulator Operations

Advanced full motion simulators are used to reduce the cost of training airline crews for line operations. These new full visual and motion simulators require a staff of technicians to operate and maintain the equipment. People who work in this area have training from technical school in electronic equipment repair and some have advanced degrees in computer science and electrical engineering. In addition they must have experience working with aircraft instruments and systems. Many time the people working here have been line technicians on aircraft prior to moving into this work.

Military Aviation Careers:

All careers described above and many more may be found in the military. There are two primary career paths within the military services of the US. High School graduates may enlist in the military and receive technical training in any number of specialties from Air Traffic Control, Computer Science, and maintenance of advanced aircraft systems. The second career path is to become an Officer by attending a four year degree program and being commissioned first as a Second lieutenant. As an officer you may become a pilot or pursue engineering careers. Officers participate in all the technical careers within the military and are designated to manage and lead the operations.