# **AVIATION CAREERS SERIES**

# AIRLINE NON-FLYING CAREERS





U.S. Department of Transportation

**Federal Aviation Administration** 

Office of Public Affairs Aviation Education Program

# **Including:**

Flight Dispatcher Meteorologist Schedule Coordinator Station Manager or Agent Teletypist Reservations Sales Agent Ticket Agent

Ground Attendant

Skycap

Air Freight or Cargo Agent Passenger Service Agent

Sales Representative or Account Executive

District Sales Manager Ramp Service Personnel

Cabin Maintenance Mechanic

Food Service Employees

Ramp Planner

Auto Mechanic

Engineer

Instructors

Administrative Personnel Professional Personnel



# INTRODUCTION

Aviation has progressed a long way since the 120-foot flight by Orville Wright on December 17, 1903, at Kitty Hawk, North Carolina, and since the first U.S. airline began operating between Tampa and St. Petersburg, Florida, on January 1, 1914. Today supersonic aircraft fly routinely across the oceans, and more than two million people are employed in aviation, the aerospace and air transportation industries.

In response to its Congressional mandate, the Federal Aviation Administration, as part of its effort to plan for the future of air transportation, conducts an Aviation Education Program to inform students, teachers, and the public about the Nation's air transportation system.

Aviation offers many varied opportunities for exciting and rewarding careers. The purpose of this brochure, and others in the FAA Aviation Careers Series, is to provide information that will be useful in making career decisions. Publications in this series include:

- 1. Pilots & Flight Engineers
- 2. Flight Attendants
- 3. Airline Non-Flying Careers
- 4. Aircraft Manufacturing
- 5. Aviation Maintenance and Avionics
- 6. Airport Careers
- 7. Government Careers

There is also an overview brochure entitled "Your Career in Aviation: The Sky's the Limit," and a brochure entitled "Women in Aviation."

Free brochures may be obtained by sending a self-addressed mailing label with your request to: Superintendent of Documents, Retail Distribution Division, Consigned Branch, 8610 Cherry Lane, Laurel, MD 20707.

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# **Aviation Careers Series—Airline Non-Flying Careers**

#### GENERAL INFORMATION

The airline industry is a dynamic industry indeed. It has become the major provider of public transportation for Americans traveling between the nation's cities. In fact, scheduled airlines now account for 92 percent of public passenger intercity travel. Career opportunities with the airlines vary widely. For some jobs, a small amount of training is needed; for others, college degrees are required. In between these extremes are dozens of jobs calling for different types of education, skills, and personal characteristics. The working conditions, wages, opportunities for advancement, and requirements for entry are briefly described on the following pages. Information about airline pilots, flight engineers, flight attendants, and aviation mechanics is omitted since these positions are discussed in other brochures in the Aviation Careers Series.

Salaries, working conditions, and opportunities for advancement vary according to the size of the airline. The larger the airline, the greater the opportunities and the stiffer the competition. Scheduled airlines of the United States range in size from those with two stations and fewer than 50 employees to those with over 100 locations and more than 40,000 employees.

U.S. international airlines fly to foreign airports throughout the world; major domestic carriers span the continent, connecting large population centers. A number of these major airlines also fly over international waters to Alaska, Hawaii, and the Caribbean. In recent years the number of regional airlines with service to small communities has expanded. Then there are the all-cargo airlines, some of which provide overnight delivery of letters and packages.

In general, most airline jobs require a high school diploma. All workers, regardless of their jobs, receive on-the-job training. Some private technical schools offer courses in airline operations such as reservations, ticketing, teletyping, and flight attendant work. This training may give an applicant an advantage, but, the airlines have their own training procedures, so interested applicants should check with the airline of their choice to see what pre-employment training is required.

The airline industry updates its equipment and working methods periodically, which makes it necessary for personnel to be retrained from time to time. Few industries are so involved with employee training programs. The airline industry gives employees new skills at the company's expense and keeps them abreast of new equipment techniques. Whether the job is that of a pilot, mechanic, flight attendant, baggage handler, ticket sales agent, or a manager, periodic training is mandatory. These large training programs provide opportunities for employees to advance to jobs on training staffs.

Employees enjoy benefits such as paid vacation, sick leave, life insurance, dental insurance, group accident and sickness insurance, retirement income plans, credit union membership for savings and loan purposes, and free air travel or air travel at greatly reduced rates for employees and members of their families. In addition, they often receive large discounts for travel on international airlines and for hotel accommodations at holiday destinations. Employee suggestion programs with cash awards are another benefit.

Promotions are almost always made from within the company. Usually vacancies are filled by advancing the best-qualified workers from the ranks. Merit promotions are made periodically on the basis of the employees' work. Shift work is a characteristic of many jobs with the airlines; passengers and cargo travel all hours of the day and night, and passenger and air cargo services must be available. Dissatisfaction with shift work is the most common cause of job turnover, even though hourly wages are increased for workers on afternoon and evening shifts. Smoking on the job is prohibited for those who deal with the public or those who clean, fuel, or overhaul the aircraft.

All personnel who have direct contact with the public or who need special clothing for utility or sanitary reasons (cleaners, mechanics, and kitchen workers) must wear uniforms. Employees are usually required to purchase their own uniforms; this requirement reduces the amount of personal clothing for working hours that is needed.

Airline jobs are located in every city that airlines serve and even in a few they do not serve. Of course, the larger the city, the greater the variety of job opportunities. The largest concentrations of airline career opportunities are in New York, Chicago, St. Louis, Los Angeles, San Francisco, Miami, Detroit, Denver, Kansas City, Atlanta, Boston, Cleveland, Salt Lake City, Seattle, and Washington, D.C. An applicant may obtain career information by writing directly to the airline. Foreign airlines flying into the United States hire Americans to handle their passenger and air cargo business and to service their aircraft during stopovers. These employment opportunities should not be overlooked.

The airline industry is a young industry, and it attracts youth. Morale is generally high among employees, who seem to develop a high degree of loyalty to their company and to the airline industry. (There are exceptions. After buyouts and mergers, employees often feel that the incoming management has disregarded their needs.) Jobs with the airlines tend to carry an aura of prestige in the community, reflecting the vitality of technological progress and the romance and excitement associated with air travel and faraway places.

# FLIGHT DISPATCHER

# Nature of the Work

In cooperation with the pilot, the flight dispatcher furnishes a flight plan that enables the aircraft to arrive at its destination on schedule with the maximum payload and the least operating cost. The flight dispatcher considers enroute and destination weather, winds aloft, alternate destinations, fuel required, altitudes, and traffic flow. The dispatcher's signature, along with that of the pilot, releases the aircraft for flight. The dispatcher maintains a constant watch on all flights dispatched and is the go-between for the pilot and ground service personnel. He or she keeps all personnel concerned with the flight informed about its status. The dispatcher must be familiar with navigation facilities over airline routes and at airports as well as with the takeoff, cruising, and landing characteristics of all aircraft operated by the airline. The flight dispatcher also must ride periodically in the cockpit with the flight crew to observe flight routes, conditions, and airports.

# **Working Conditions**

Flight dispatchers work indoors at the airport in the airline operations office. They use computers, calculators, weather charts and information, and loading reports. A 40-hour week with shift work is normal.

Flight dispatchers frequently work under pressure, especially when flying weather is bad. They must make many rapid decisions concerning safety, flight regulations, and the economy of operations. These employees are surrounded by people, teletype machines, telephones, and intercom systems in a noisy, busy atmosphere. Those who work for a small airline, carry on the duties of a meteorologist and schedule coordinator.

## Wages

Salaries start around \$25,000 per year and increase, over a ten-year employment period, to about \$49,000.

## Opportunities for Advancement

Flight dispatchers can move into this position from jobs as dispatch clerks, junior flight dispatchers, radio operators, meteorologists, or station managers. Large airlines employ senior dispatchers who specialize in coordinating the finances of every flight. Promotion is from within. Experience as an airline dispatcher may be used in qualifying for a job as an air traffic controller with the Federal Aviation Administration or as an airport director.

### Requirements for the Job

Though a college degree with a major in air transportation or meteorology is useful preparation for work as a flight dispatcher, experience is equally important. Job applicants must have good vision, hearing, enunciation, and an FAA dispatcher's license. They must know thoroughly the Federal Aviation Regulations on airline operations and be competent in airline communications and meteorology.

# **METEOROLOGIST**

#### Nature of the Work

The meteorologist analyzes weather data and prepares weather reports for the flight dispatcher, pilots, and other airline personnel concerned with weather information. The meteorologist assists the flight dispatcher in preparing flight plans.

# Working Conditions

Working indoors at the airport in the airline operations office, the meteorologist uses weather facsimile ma-

chines, teletype machines, computer terminals, weather charts, and other meteorological data. Shift work is required, and the normal work week is 40 hours.

#### Wages

Airlines, depending upon their size, pay between \$28,000 and \$47,000 per year as a starting wage. For meteorologists employed by the Federal Government, those with a bachelors's degree but no experience receive starting salaries ranging from \$17,000 to \$22,000, depending on college performance. For master's degrees, starting wages range from \$21,000 to \$27,300 and Ph.Ds from \$25,700 to \$33,400.

## Opportunities for Advancement

A meteorologist with a large airline, may be promoted to chief meteorologist or take a position as an assistant flight dispatcher. The employee may also use this experience to become a meteorologist for the National Weather Service or for a private meteorology service.

# Requirements for the Job

A college degree with a major in meteorology is required. It is common to gain prior experience with military weather services or with the National Weather Service as a meteorological technician or meteorologist.

### SCHEDULE COORDINATOR

#### Nature of the Work

The schedule coordinator keeps track of the whereabouts of aircraft and crews; receives and relays reports of delays due to weather and mechanical problems; gives orders for substitution of aircraft when required, and handles the scheduling problems that arise when flights must be diverted to alternate airports. The schedule coordinator makes decisions affecting the seating arrangements of planes, turnarounds, estimated times of arrival, and unscheduled stops. He or she also determines aircraft availability, based on servicing and maintenance requirements. In scheduling crews, the schedule coordinator must consider many factors: sick calls, vacations, days off, flight hour limits, types of aircraft for which a crew is trained, and seniority bids or choices of flights selected by crew members.

#### **Working Conditions**

The airline operations office at the airport is a very busy place. The schedule coordinator is surrounded by banks of phones, teletype machines, computers, and charts. The pressure of the job can be intense. A 40-hour work week, with shift work, is normal.

## Wages

Annual wages range from \$14,400 to \$36,000, depending upon the size of the airline.

## Opportunities for Advancement

The schedule coordinator, after starting as a clerk with responsibilities in one or two areas, can advance to assistant schedule coordinator, senior schedule coordinator, and then chief of schedule control. He or she also may work up to a position in the dispatcher's office as general dispatch clerk or an operations planner.

### Requirements for the Job

A college degree with a major in air transport operations is useful preparation, but it is not mandatory.

### STATION MANAGER OR AGENT

(District Operations Manager)

#### Nature of the Work

The station manager or agent is responsible for all flight and ground operations such as aircraft handling, passenger services, and air cargo operations for the airline at a particular airport. At a small station, the manager may be required to sell tickets, make public announcements, check baggage, move portable stairs, prepare passenger and air cargo manifests, operate teletype machines and computer terminals, and perform other services.

#### **Working Conditions**

Usually the station manager works in an office at the airport, although sometimes he or she may work outdoors, depending upon the size of the airport and the staff. Shift work is required during a 40-hour week.

### Wages

Annual wages start at \$12,000 per year and increase to about \$31,000 after 10 years, depending upon the size of the airline.

#### **TELETYPIST**

# Nature of the Work

This employee sends and receives messages on teletype machines, relays the messages to the proper departments and to other stations on the airline's routes, and files them as required.

# Working Conditions

The teletypist works indoors at the airport in the airline operations office or in other offices where teletype machines are used. Shift work is required during a 40-hour work week.

### Wages

Wages are from \$12,600 to \$28,800 per year, depending upon the size of the airline.

# Opportunities for Advancement

A teletypist can advance to a supervisory position.

#### Requirements for the Job

A high school graduate is preferred. Training in teletype operations and procedures is desirable. The teletypist must be able to type at least 40 words per minute and must know the codes and symbols used in airline communications.

# RESERVATIONS SALES AGENT

# Nature of the Work

Each year millions of Americans travel by air. Their trips are made easier by professionally trained reservation sales agents. They handle telephone inquiries about flight schedules, fares, and connecting flights; reserve seats and cargo space for customers; operate computerized reservations equipment; and keep records of reservations. Agents must be able to recommend services that fit each customer's requirements, and they must be familiar with routes and schedules of other airlines.

# Working Conditions

Reservation agents usually work in large central offices answering customers' telephone inquiries and booking flights. Most agents have access to computer terminals and, by typing instructions on the keyboard, can quickly obtain the necessary information and make the reservation.

The transportation industry operates at all hours of the day and night, thus schedules are often irregular. Agents with the least seniority often work nights, weekends, and holidays. Although the work is not physically strenuous, some employees may feel stress, especially during busy periods of holiday travel or at times when the computer systems fail. If operations are interrupted or delayed due to inclement weather or mechanical problems, agents may serve as buffers between the airlines and their customers. Trying to pacify angry travelers also can create stress. The job, however, is interesting, and many challenges occur as the reservations sales agent works out the passenger's travel requirements.

# Wages

Some 54,000 reservations sales agents work for the airlines, with starting salaries at \$12,064 going up to \$38,600 for supervisors.

#### Opportunities for Advancement

A reservations sales agent may advance to training or supervisory positions. Supervisors monitor how other agents handle customers' inquiries. The handling of "executive accounts" and the accounts of firms with special "vacation packages" offered by the airline are jobs reserved for the more experienced and higher paid agents. The employee may transfer to a job of ticket agent. Reservations work is a principal route to a management position for the persistent worker since turnover, due to shift work, is high. Promotion opportunities are frequent.

### Requirements for the Job

Applicants must have graduated from high school and be at least 18 to 20 years of age, depending on the airline. One or two years of training in airline operations at schools offering such courses, or experience in public telephone contact work, is preferred. Airlines offer onthe-job training. Accuracy and speed on the job are

essential. A good telephone voice, proper English usage, and the ability to "project" oneself over the phone are necessary. Today experience with computers and computer programs specifically geared to reservations is often required. At least one year of prior experience in public relations work, preferably in sales, is needed. College may be considered as a substitute for prior work experience. Applicants must be willing to work shifts. Air cargo reservations agents may need some experience in shipping operations.

#### TICKET AGENT

#### Nature of the Work

The ticket agent answers inquiries about flight schedules and fares, verifies reservations by phone, figures fares, writes tickets, and handles payments. Other duties may include checking baggage, making boarding announcements, and assisting handicapped passengers when they board or depart the plane. Telephone and computer equipment are used.

### Working Conditions

The agent may work at an airport or at an airline ticket office downtown or in a hotel. Shift work is necessary, and most airlines require ticket agents to wear uniforms.

#### Wages

Wages range from \$1,500 to \$2,600 per month, plus additional pay for late shift work.

#### Opportunities for Advancement

A ticket agent may be promoted to passenger service agent, station agent, or chief of the ticket office. He or she also may become a ticketing instructor, or join the airline staff as a sales representative. Superior employees are often considered for junior management training.

### Requirements for the Job

The minimum age varies from 18 to 20 years, depending on the airline. Graduation from high school is a minimum requirement; however, two years of college or the equivalent experience in dealing with the public is preferred. Good grooming, respect for accuracy, a pleasant and courteous manner, and legible handwriting are

important. International airlines may require foreign language ability. On-the-job training is offered.

# **GROUND ATTENDANT**

#### Nature of the Work

The ground attendant assists passengers in the terminal with their questions about fares, lost baggage, missed connections, and other problems. Passengers who are ill or need a wheelchair are helped by the ground attendant. High public visibility characterizes the job.

#### **Working Conditions**

The work involves considerable standing and walking inside the air terminal. Shift work is required, and a uniform must be worn.

#### Wages

Wages range from \$1,500 to \$2,700 per month.

#### Opportunities for Advancement

A ground attendant may advance to trainer, supervisor, or chief of counter sales.

#### Requirements for the Job

The minimum age varies from 18 to 22, depending on the airline. Applicants must be high school graduates. Business experience or training in airline operations at schools offering such courses are sometimes required. On-the-job training is given. A ground attendant may be required to work at the ticket counter in the terminal. Therefore, foreign language ability is helpful at international airports.

#### SKYCAP

#### Nature of the Work

Skycaps help passengers with baggage and answers their questions about departures, arrivals, and terminal facilities. Skycaps assist passengers to and from taxis, buses, and cars, and they may check in baggage at the terminal entrance. At many air terminals, the skycaps are employed by the airport rather than by the airlines.

### Working Conditions

Skycaps work inside the air terminal and outdoors. They must wear a uniform. Shift work is required. Skycaps lift and carry heavy luggage, and they handle baggage hand-carts in the terminal.

## Wages

Wages range from \$1,100 to \$2,100 per month. Skycaps receive tips, which can be considerable if numerous passengers use the terminal and the skycap is helpful and outgoing.

# Opportunities for Advancement

Skycaps may advance to the position of supervisor of skycaps or to a sales representative.

# Requirements for the Job

A high school graduate is preferred. The minimum age is 18 to 21, depending on the airline. Applicants must like to help people and be physically strong. On-the-job training is available. One airline fills this job from the ranks of ramp servicepersons.

#### AIR FREIGHT OR CARGO AGENT

## Nature of the Work

The air freight agent receives air freight shipments, supervises loading and unloading, and keeps records. He or she handles contacts with air freight forwarders and customers.

# Working Conditions

The work is done indoors in an office adjacent to the air freight terminal. Telephones, computers, and hand calculators are used. Shift work is required.

#### Wages

Wages generally run from \$1,250 to \$2,600 per month, but some agents earn considerably more.

# Opportunities for Advancement

An airfreight or cargo agent may advance to the position of ramp service planner or supervisor of air freight handlers. He or she also may join the air freight sales staff or air cargo management staff.

# Requirements for the Job

A high school graduate with experience in shipping operations is preferred. Applicants must like to work with records and be detail-oriented. Physical strength is also required.

## PASSENGER SERVICE AGENT

#### Nature of the Work

The passenger service agent responds to abnormal conditions—passengers needing special assistance, oversold flights, missed connections, heavy passenger concentrations—to expedite loading or unloading of passengers. He or she may also perform the duties of ticket agent and supervise the ticket office.

### **Working Conditions**

The passenger service agent wears a uniform and works at the air terminal. Shift work is required. A wide variety of challenges characterizes this job.

#### Wages

The salary ranges from \$1,500 to \$2,600 per month.

#### Opportunities for Advancement

Qualified, dedicated workers can advance to various managerial positions. The job of a passenger service agent is excellent training for subsequent work in sales, customer service, and flight operations departments.

#### Requirements for the Job

High school graduation is a minimum requirement. A thorough knowledge of flight schedules and ground services is necessary. On-the-job training is normally provided. If employed by an international airline, the passenger service agent may need to know a foreign language. Experience as a ticket or reservations agent is helpful.

# SALES REPRESENTATIVE OR ACCOUNT EXECUTIVE

# Nature of the Work

Sales representatives or account executives explain to prospective customers the advantages of their company's service for travel and shipment of cargo. They also maintain contact with travel agencies, businesses, and educational institutions, as well as with other airlines to increase interline sales. Sometimes they make hotel reservations for customers. A knowledge of flight and fare schedules is essential.

### **Working Conditions**

Sales representatives work business hours and wear business attire.

### Wages

Salary ranges from \$15,000 to \$33,000 per year.

#### Opportunities for Advancement

Sales representatives may advance to the position of district sales manager.

#### Requirements for the Job

A college degree with courses in air transport management is desired. Applicants must be aggressive, yet personable. They must show initiative and be willing to relocate. The ability to speak persuasively and convincingly is necessary. International airlines may require foreign language ability. Courses in psychology, public speaking, and salesmanship are helpful. On-the-job training is provided. NOTE: Some airlines hire college students for training in sales promotion during the summer vacation. On their return to college, the students become campus representatives for the airline, contacting other students and faculty members to acquaint them with the airline's special service and holiday opportunities. These part-time jobs often lead to full-time employment in sales positions after the students graduate from college.

### DISTRICT SALES MANAGER

### Nature of the Work

The district sales manager is in charge of the ticket and reservations sales offices in the area. He or she makes many contacts with people to promote air traffic and sales of airline seats and cargo space. The sales manager directs the activities of other sales personnel.

# **Working Conditions**

The district sales manager works in a downtown office during regular business hours. To promote the airline, he or she also must attend many meetings and social affairs "after hours."

#### Wages

The salary ranges from \$23,000 to \$50,000 per year.

### Opportunities for Advancement

The district sales manager may advance to a larger district with a corresponding increase in responsibilities and salary. He or she might work up to a top job as "Vice President-Sales."

# Requirements for the Job

This is not an entry-level job. Vacancies are almost always filled by employees who move through the ranks.

#### RAMP SERVICE PERSONNEL

(Cabin Service, Exterior of the Aircraft, Baggage and Air Cargo Handler, Aircraft Fueler, Driver)

### Wages

Wages range from \$7.00 to \$15.00 per hour, with extra pay for late afternoon and night shifts.

# Opportunities for Advancement

Depending on the ramp size of the airline and agreements with the employees' unions, ramp servicepersons

may become leaders and supervisors of the crews in their own work areas. From the lowest paying jobs, such as cleaners of the cabin and exterior of the aircraft, diligent employees can work their way up to higher paying jobs, such as baggage handlers, drivers, and aircraft fuelers. With experience at a variety of ramp service jobs, workers with administrative abilities may be promoted to ramp planner.

# Requirements for the Job

A high school diploma is normally required and the minimum age is 18 to 21, depending on the airline. Ramp servicepersons who drive trucks, buses, fork trucks, towing tractors, and similar equipment must have a driver's license. A chauffeur's license may also be required.

Good physical health and strength are necessary for baggage and air cargo handlers. On-the-job training is given when new equipment is put into service or when better methods of accomplishing a job are developed.

# **Cabin Service**

# Nature of the Work

The cabin serviceperson cleans the airplane and cockpit between flights. He or she vacuums the floor, picks up trash, washes lavatories and buffets, replaces headrests and pillow covers, folds blankets, refills seat packets, refills drinking water supply, and cleans the cockpit windows.

# Working Conditions

This employee uses cleaning equipment and must work at a fast pace and in cramped area with a team of workers. The job often must be completed within 10 or 15 minutes allowed before the plane loads passengers. There is shift work, and uniforms must be worn.

# **Exterior of Aircraft**

# Nature of the Work

This ramp serviceperson washes, polishes, touches up paint, and de-ices the exterior of the aircraft. Chemicals are used to prevent corrosion of surfaces.

# Working Conditions

Ramp servicepersons sponges, brushes, mops, and hoses to clean the outside of planes. They must stand on scaffolding or ride special lift equipment to reach high places. Although usually in a hangar, they sometimes work outdoors. The heaviest work schedules are at night, when most aircraft are not in service. Shift work is required, and work is done frequently under pressure of time. Uniforms must be worn.

# Baggage and Air Cargo Handler

# Nature of the Work

The baggage and air cargo handler loads and unloads baggage, air mail, air express, and air cargo shipments. He or she drives baggage tractors and operates conveyors, fork lifts, fork trucks, and other baggage and air-freight-handling equipment. Machinery also is used to sort and route baggage and air cargo to and from various flights.

# Working Conditions

This ramp serviceperson works outdoors on noisy, crowded ramps in all kinds of weather. He or she must do considerable lifting and moving of baggage, mail sacks, and air express shipments and pushing and positioning of air cargo. Shift work is required, and a uniform must be worn.

# Aircraft Fueler

# Nature of the Work

The aircraft fueler operates the fueling equipment. Using a fuel hose and pumps, he or she fills the fuel truck with aviation fuel and drives it to the aircraft.

# Working Conditions

The aircraft fueler works outdoors in all kinds of weather with potentially hazardous aviation gasoline and kerosene. Shift work is required, and a uniform must be worn. To reach the fuel tank openings, the aircraft fueler may need to climb up and walk along the wings of the aircraft. Strict safety rules must be observed.

#### **Driver**

This job category includes drivers of food trucks, mobile stairs, employees' buses, messenger cars, conveyors, cleaning equipment, aircraft air conditioning and power carts, and other equipment.

# Nature of the Work

These employees drive equipment to the aircraft and operate machinery used to load and off-load food containers, galley units, and other kinds of equipment. They attach and detach ground air conditioning and power carts, move stairs, or drive employee buses between airline facilities at the airport. They are usually on a regular work schedule.

# Working Conditions

Drivers wear uniforms and work shifts. They spend their time outdoors on noisy ramps in all weather conditions. They must use extreme care in positioning equipment near aircraft.

## CABIN MAINTENANCE MECHANIC

#### Nature of the Work

The position of cabin maintenance mechanic is not to be confused with the position of airframe and powerplant mechanic. The cabin maintenance mechanic cleans and paints interiors of aircraft during periodic major overhauls; removes and installs carpets, seats, curtains, and bulkheads; and reupholsters seats. He or she overhauls and cleans electrical equipment in cabins, such as lights, buffets, and coffee makers.

#### **Working Conditions**

In hangar shops, the cabin maintenance mechanic stitches upholstery and curtains on sewing machines. He or she also uses other tools associated with upholstery, rug laying, installation of seats, electrical maintenance of cabin service equipment, and sheet metal work. Work must be completed on schedule. Shift work is necessary, and uniforms may be required.

#### Wages

Wages range from \$10.00 to \$17.00 per hour.

### Opportunities for Advancement

The employee may advance to leader, assistant supervisor of cabin maintenance, and then to supervisor.

# Requirements for the Job

A high school diploma is required. Technical or vocational school training in the various mechanical skills is usually required. A worker may specialize in one kind of job.

# **FOOD SERVICE EMPLOYEES**

(Cooks, Bakers, Pantry, Dining Service, and Kitchen Helpers)

# Nature of the Work

Food service employees follow set recipes to prepare and cook food. They also arrange silverware and dishes on serving trays and put food items in serving dishes. They place the food in either hot or refrigerated containers for pickup and delivery to the aircraft. Food service employees also receive and clean soiled dishes.

# Working Conditions

They work in a flight kitchen at the airport. Work must be completed according to flight schedules. The kitchen is a busy, noisy place. Shift work is required, and uniforms must be worn.

#### Wages

Wages range from \$6.00 to \$9.00 per hour, plus extra pay for late afternoon and night shifts.

#### Opportunities for Advancement

A food service employee may advance to the position of pantry worker, steward chef, supervisor, chief chef, assistant buyer, or commissary chief.

#### Requirements for the Job

High school graduation is desired. The minimum age requirement is 18 to 20, depending on the airline. All workers must have health certificates. A respect for cleanliness and good housekeeping procedures is mandatory. Chefs and cooks must have previous experience

in food preparation, on-the-job training is given for all other kitchen workers. Food service employees must be willing to work shifts.

#### RAMP PLANNER

### Nature of the Work

Ramp planners keep track of arriving aircraft and dispatch service units—cleaners, fuelers, baggage handlers, food service trucks, etc. They must know flight schedules.

# Working Conditions

These employees work indoors at the airport, using charts, telephones, teletype machines, and computer terminals. Shift work is necessary. They work as a team with other planners.

# Wages

Wages range from \$18,000 to \$31,200 per year.

# Opportunities for Advancement

Workers may advance to junior positions on the flight operations management staff or on the administrative staff of an airport director.

# Requirements for the Job

A high school diploma is required and the minimum age is 20 to 25, depending on the airline. The position of ramp planner is not an entry-level job; experience as a ramp serviceperson is usually necessary.

#### AUTO MECHANIC

#### Nature of the Work

The auto mechanic services and repairs ground service equipment, such as portable stairs, fuel and food trucks, towing tractors, and employee buses.

## Working Conditions

Repairs are made indoors in a garage or outdoors on the ramp. The duties are those usually associated with an auto mechanic. The normal work week is 40 hours.

#### Wages

The annual salary range is from \$18,000 at the entry level to \$45,000 for supervisors and those with high seniority.

# **ENGINEER**

# Nature of the Work

The engineer works closely with aircraft manufacturers during the development of new models of airliners. His or her job is to make sure the requirements of the airline are met as to performance, aircraft accessories, cabin plan, interior decorations, extra equipment, etc. The engineer also designs improvements to aircraft and to methods of servicing and overhauling them.

# Working Conditions

Most of the work is performed indoors in an office, but sometimes the engineer must visit hangars and maintenance shops for consultations and inspections. Frequent travel to aircraft manufacturing plants may be necessary. Or the engineer may be required to live in the area where the aircraft are being constructed; upon completion of the planes, they would then move to the airline headquarters.

### Wages

The average starting salary is approximately \$25,000.

## Opportunities for Advancement

An engineer may be advanced to a job supervising junior engineers or to a top position as vice president for engineering or maintenance.

#### Requirements for the Job

A college degree with a major in an engineering field related to air transportation is required. Previous experience and a graduate degree are desirable.

## **INSTRUCTORS**

(Ground School Instructor, Flight Attendant Instructor, Flight Simulator/Duplicator Operator)

#### Nature of the Work

An important factor in maintaining the airlines' excellent safety record is their training effort. Several thousand people are employed to maintain the proficiency of flight crews and ground personnel engaged in direct contact with the airplane, powerplants, and flight techniques. Instructors direct the pre-service and in-service training programs of the airline. For example, they make certain that the pilots keep up their instrument flying proficiency. The use of flight simulators and other ground training devices is supervised by an instructor. Educators are also employed as curriculum and program developers. Technical support is provided by craftworkers who develop training aids for use by the instructors in the airlines' classrooms.

## Wages

Salaries range from \$1,000 to \$3,000 per month, depending upon the tasks performed.

#### Opportunities for Advancement

Instructors may advance to executive positions in the training department.

#### Requirements for the Job

Instructors can qualify, in some instances, on the basis of two years of airline employment, plus supervised teaching experience in a specialty. Those who instruct by means of a ground training device are required to understand how to maintain and repair that device. Familiarity and experience with electronic equipment are helpful.

# ADMINISTRATIVE PERSONNEL

In addition to the jobs already described in this brochure, the airlines employ thousands of receptionists, typists, secretaries, stenographers, mail and file clerks, and computer personnel, as well as people in managerial positions such as training, public relations, publications, finance, personnel, and other kinds of work asso-

ciated with business and industry. The salaries are generally above the average paid by industry and business.

#### PROFESSIONAL PERSONNEL

Professional job opportunities within the airlines today break down into the following categories: architects, aeronautical research scientists, engineers, drafters, doctors, nurses, lawyers, and instructors. Many of these jobs require intensive education and specialized training. The salaries are among the highest paid to airline employees. The personal qualifications are the same as those for professionals in other fields. Excepting drafters, instructors, and nurses, professional personnel should be college graduates with postgraduate training and experience, each in a field of specialization. Drafters usually can substitute four years of work experience for formal training at the college level. Nurses must be registered.

# **OUTLOOK FOR THE FUTURE**

The deregulation of the airline industry, which began in the mid-1970s, greatly changed the way the airlines operated. Existing airlines exercised their new found freedom by expanding some routes and discarding others. Many new airlines, mostly regionals, appeared on the scene. All of the carriers could raise or lower their fares at will—a privilege they had not enjoyed in the past—resulting in promotional fares and other marketing activities that induced many more people to fly.

The overall result has been an expansion of the airline industry and a surge in hiring in most job categories. However, there is a down side: the industry has become less stable. Some airlines have merged, and others have gone out of business entirely, causing a dislocation of employees.

All things considered, the outlook for the airline industry is good. Scheduled airlines now account for 92 percent of the public passenger travel between the nation's cities and more than 95 percent of the travel between the United States and points overseas. Continued growth of the airline business is likely. The economic health of the airlines, however, is directly related to the economic strength of the country as a whole, as well as to outside influences such as the cost of fuel.

# An Airline Station Manager Talks About His Job

Gary King is the Cincinnati Station Manager for Comair, Inc., one of the Delta Connection regional airlines. He supervises the 300 people who staff the Comair station at Greater Cincinnati International Airport.

"My career started with TWA here in Cincinnati. You might say at the bottom. I started as a ramp agent. During my tenure with TWA, I had exposure to ramp positions, fueling aircraft and handling air cargo. I received several promotions and eventually was transferred to Chicago's O'Hare International Airport, where I was put in charge of the air freight department. We had something like 280 people in that area at the time, but international economic conditions caused a downturn in the air freight business; it went into a demise, you might say, and so did all the positions. I was furloughed."

"So I put my job search into gear. I answered an ad in the Chicago Tribune. Comair was seeking a manager ironically, for me—for the Cincinnati area. I was pretty familiar with the airport and with many of the airport managers and administration offices, and had a pretty good background. I interviewed for the position and was hired."

"Basically, the station manager's job is administrative. I deal with station operations—the passenger aspects, ground service, equipment, and fueling—all facets of running the station."

"A typical day has one constant in it: the flight schedule is consistent. However, different situations occur every day. Different people fly, different personalities interact and must be contended with. Basically, I look at our operating statistics from the previous day, go through a lot of budgetary items, authorize bills, have numerous meetings to discuss operational concerns."

"Some of the characteristics that I possess, and that I think a person has to have for success at this type of job, relate to motivation and to self-management. A person has to be goal-oriented. That's Number One. Secondly, a person has to know how to manage his or her time effectively in order to complete an eight- or ten- or twelve-hour day. The person also has to have an open

mind, not be a presuming type of individual, nor a kneejerk reactor, but one who can analyze, evaluate, and implement."

"The only dislikes I have about this job are those things I don't have the ability to control, such as weather and the delays and mechanical problems that force cancellations of flights. Other than that, the day is challenging enough, and it keeps me motivated."

"With regard to future goals—and I am a goal-oriented individual—I like challenge. If there's a challenge, I'll more than likely be the first person to volunteer. So, for any promotional opportunities that arise that look beneficial, I'll put my name in the hat."

"In terms of a desirable background for the airline industry, I think I was accepted at TWA in the first place for my people skills: handling customers and employees. That was the catalyst for my success, and that's what you have to have for getting into the airline industry. Having a caring attitude, listening to individuals, looking at people on an individual basis.—these things are essential."

"I do feel that some college background is important to someone who wants to do what I have done. I have studied business administration. The more administrative background you have, the more business-oriented curricula you have in your resume', the better."

"People should also remember that the airline industry has been pretty much painted with a facade where only the front line people—such as ticket agents, travel agents—have been identified in the public mind. But there are many other areas, such as finance and marketing. An airline is run just like any other business, and possessing a background in marketing or finance is an advantage. All airlines are searching for good individuals in many areas. So even though the front line people, such as pilots and flight attendants, may seem to be the most visible to the public, there are other jobs in the industry requiring other backgrounds."

"To conduct a successful job search, people should be persistent. Having the educational background is a plus, obviously, but it's a competitive world here, and persistence tells an employer that this person is going to be good for their operation."

# **Aviation Education Officers**

#### FAA Headquarters

Phillip S. Woodruff, APA-100 Director of Aviation Education

Aviation Education Officers Ms. Valerie Collins Ms. Mary Jo Byberg Ms. Josie M. Clark Ms. Latisha A. Ferguson 800 Independence Avenue, SW Office of Public Affairs Aviation Education Program Washington, DC 20591 (202) 267-3471

#### **Aeronautical Center**

Mr. Robert Hoppers, AAC-5 Room 356, Headquarters Building P.O. Box 25082 Oklahoma City, OK 73125 (405) 680-7500

#### **Technical Center**

Ms. Michele Pareene, ACM-100 Human Resource Management Division Atlantic City International Airport Atlantic City, NJ 08405 (609) 484-6681

## Alaskan Region

Ms. Mary Lou Wojtalik, AAL-5B 222 West 7th Avenue, Box 14 Anchorage, AK 99513-7587 (907) 271-5293 STATE: Alaska

#### Central Region

Ms. Patrice Shalda, ACE-5 601 East 12th Street Federal Building, Room 1501 Kansas City, MO 64106 (816) 426-5449 STATES: Iowa, Kansas, Missouri, and Nebraska

#### Eastern Region

Mr. Charles Pagnini, AEA-15C
JFK International Airport
Federal Building
Jamaica, NY 11430
(718) 553-1056
STATES: Delaware, District of
Columbia, Maryland, New Jersey,
New York, Pennsylvania, Virginia, and
West Virginia

#### Great Lakes Region

Mr. Lee Carlson, AGL-5A
O'Hare Lake Office Center
2300 East Devon Avenue
Des Plaines, IL 60018
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STATES: Illinois, Indiana, Michigan,
Minnesota, North Dakota, Ohio, South
Dakota, and Wisconsin

#### New England Region

Ms. Shelia Bauer, ANE-8
12 New England Executive Park
Burlington, MA 01803
(617) 273-7064
STATES: Connecticut, Maine, New
Hampshire, Rhode Island, Vermont, and
Massachusetts

#### Northwest Mountain Region

Ms. Shelly McGillivary, ANM-5E 1601 Lind Avenue, SW Renton, WA 98055 (206) 227-2804 STATES: Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming

#### Southern Region

Ms. Kathleen Bergen, ASO-5 PO Box 20636 Atlanta, GA 30320 (404) 763-7201 STATES: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the Virgin Islands

#### Southwest Region

Ms. Debra Myers, ASW-5 4400 Blue Mound Road Ft. Worth, TX 76193-0005 (817) 624-5804 STATES: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas

#### Western-Pacific Region

Mr. Hank Verbais, AWP-5 PO Box 92007 Worldway Postal Center Los Angeles, CA 90009 (213) 297-1431 STATES: Arizona, California, Nevada, and Hawaii

# **Aviation Education Resource Centers**

#### Alabama

Alabama Aviation Technical College Ms. Megan Johnson, Director Learning Resource Center PO Box 1209 Ozark, AL 36361 (205) 774-5113

University of North Alabama Ms. Michele R. Walker Programming Coordinator UNA Box 5145 Florence, AL 35632-0001 (205) 760-4623

University Aviation Association Mr. Gary W. Kiteley Executive Director 3410 Skyway Drive Opelika, AL 36801 (205) 844-2434

#### Alaska

University of Alaska Fairbanks Mr. Dennis Stephens Collection Development Officer Elmer E. Rasmuson Library Fairbanks, AK 99775-1680 (907) 474-6695

#### Arizona

Embry-Riddle Aeronautical University Ms. Karen Hudson Educational Programs Coordinator 3200 N. Willow Creek Road Prescott, AZ 86301 (602) 771–6673

#### California

National University
Mr. Ernest Wendt
Chair, Department of Applied Sciences
4141 Camino Del Rio South
San Diego, CA 92108
(619) 563-7122

San Jose State University
Dr. H. Gene Little
Chairman, Department of Aviation
1 Washington Square
San Jose, CA 95192-0081
(408) 924-6580

Museum of Flying Mr. Harvey Ferer 2772 Donald Douglas Loop North Santa Monica, CA 90405 (310) 392-8822

#### Colorado

U.S. Space Foundation Dr. Jerry Brown Educational Director 1525 Vapor Trail Colorado Springs, CO 80916 (719) 550-1000

Metropolitan State College of Denver Mr. Jonathan R. Burke Assistant Professor Aerospace Science Department Campus Box 30, P.O. Box 173362 Denver, CO 80217–3362 (303) 556–2923

#### Connecticut

Connecticut Department of Transportation Bureau of Aeronautics Ms. Tambri Graville 24 Wolcott Hill Road PO Drawer A Wethersfield, CT 06109 (203) 566-4417

#### Delaware

Delaware Teachers Center Ms. Stephanie Wright 3401 Green Street Claymont, DE 19703 (302) 792–3806

#### Florida

Embry-Riddle Aeronautical University Ms. Patricia Fleener-Ryan AvEd Teacher Resource Center Daytona Beach, FL 32114 (904) 239-6499

Florida Institute of Technology Dr. Ballard M. Barker Head, Department of Aviation Studies The School of Aeronautics 150 West University Boulevard Melbourne, FL 32901-6988 (407) 768-8000, Ext. 8120 Florida Memorial College Mr. Anthony J. Sharp, Director Division of Airway Science 15800 Northwest 42 Avenue Miami, FL 33054 (305) 623-1440

#### Georgia

Conyers Middle School Ms. Viki Dennard Assistant Principal 335 Sigman Road Conyers, Georgia 30207–3699 (404) 483-3371

#### Hawaii

Mid-Pacific Institute Dr. Phillip R. Brieske Aviation/Space Science 2445 Kaala Street Honolulu, HI 96822 (808) 973-5000

#### Idaho

Idaho State Bureau of Aeronautics Mr. John Maakestad Safety/Information Officer Chief Pilot 3483 Rickenbacker Street Boise, Idaho 83705-5018 (208) 334-8775

#### Illinois

Parks College of St. Louis University Dr. Peggy Baty Assistant Vice President and Dean 500 Falling Springs Road Cahokia, IL 62206 (618) 337-7500

Southern Illinois University Dr. Elaine Vitello College of Technical Careers Room 222 Carbondale, IL 62901 (618) 453-8821

State of Illinois Division of Aeronautics Mr. Richard M. Ware One Langhorne Bond Drive Capital Airport Springfield, IL 62707-8415 (217) 785-8516

#### Kansas

Kansas State University-Salina Ms. Karlene Propst Tullis Library 2408 Scanlan Avenue Salina, KS 67401 (913) 825-0275

#### Louisiana

Louisiana State University Dr. Marlon Abbas Director of the Trans. Systems Group Louisiana Trans. Resource Center 4101 Gourrier Avenue Baton Rouge, LA 70808 (504) 767-9127

#### Maine

Kennebec Valley Technical College Ms. Sue Doner 92 Western Avenue Fairfield, ME 04937-0020 (207) 453-9762

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Penobscot Nation Tribal Administration Mr. Mark Sanborn Assistant Director Vocational Training and Education 6 River Road, Community Building Indian Island, ME 04468 (207) 827–7776

#### Massachusetts

Bridgewater State College Mr. Bill Annesley Management. Science & Aviation Science Dept. Bridgewater, MA 02325 (508) 697-1395

North Shore Community College Dr. Robert Finklestein Beverly, MA 01915 (508) 922-6722 Museum of Science Ms. Carolyn Kirdahy Lyman Library Science Park Boston, MA 02114-1099 (617) 589-0266

Westfield State College Ms. Maureen McCartney Director of Career Services Ely Campus Center Western Avenue Westfield, MA 01086 (413) 568-3311 ext. 206

Massachusetts Aeronautics Comm. Transportation Library Dr. Toby Penstlen 10 Park Plaza Boston, MA 02116–3966 (617) 973–8000

#### Michigan

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Ms. Karen Conrad, Interim Director
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#### Minnesota

Minnesota Dept. of Transportation Office of Aeronautics Mr. Gordon Hoff Director of Aviation Educ. Relations 644 Bayfield Street St. Paul, MN 55107-1008 (612) 297-7652

Vermilion Communication College Mr. Julius Salinas 1900 E. Camp Street Ely, MN 55731 (218) 365-7200

#### Nebraska

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Nebraska Department of Aeronautics Mr. Val J. Hruska Aviation Specialist PO Box 82088 Lincoln, NE 68501-2088 (402) 471-2371

#### New Hampshire

New Hampshire Dept. of Transportation Division of Aeronautics Mr. Ronald Wanner 65 Airport Road Concord Municipal Airport Concord, NH 03301-5298 (603) 271-2551

#### New Mexico

University of New Mexico Mr. Richard S. Sanchez University College Room 11 Albuquerque, NM 87131–1456 (505) 277–3861

#### New York

Dowling College Dr. Albert E. Donor Provost, Executive Vice President Oakdale, Long Island, NY 11769-1999 (516) 244-3200

#### North Dakota

University of North Dakota Mr. Charles L. Robertson Assistant Professor Department of Aviation Box 8216, University Station Grand Forks, ND 58202-8216 (707) 777-2791

#### Oklahoma

University of Oklahoma Dr. Lee Morris, Director Education and Aviation/Aerospace 1700 Asp Avenue Norman, OK 73037-0001 (405) 325-1964

#### Rhode Island

Warwick Public Schools Mr. Anthony Gagliardi Warwick Career and Tech School 574 Centerville Road Warwick, RI 02889 (401) 737-3300

#### Tennessee

Middle Tennessee State University Dr. Wallace R. Maples Chairman, Aerospace Department East Main Street PO Box 67 MTSU Murfreesboro, TN 37132 (615) 898-2788

#### Texas

Texas Southern University Dr. I. Richmond Nettey Director of Airway Science Program 3100 Cleburne Avenue Houston, TX 77004 (713) 639-1847 Texas State Technical Institute Campus Library Aerospace Technologies 3801 Campus Drive Waco, Texas 76705 (817) 867–4838

#### Vermont

St. Johnsbury Academy Mr. John Barney Vocational Director St. Johnsbury, VT 05816 (802) 748-8171

#### Virginia

Virginia Aviation Museum Ms. Betty P. Wilson 5701 Huntsman Road Sandston, VA 23150-1946 (804) 786-1364

#### Washington

Museum of Flight Mr. Gregory Moyce Education Program Manager 9404 East Marginal Way South Seattle, WA 98108 (206) 764-5700

#### West Virginia

Salem-Teikyo University Dr. Ronald Ohl, President 223 West Main Street Salem, WV 26426 (304) 782-5234

#### Wisconsin

Experimental Aircraft Association Mr. Chuck Larsen EAA Aviation Center 3000 Poberezny Road Oshkosh, WI 54903-3065 (414) 426-4800

Department of Transportation Bureau of Aeronautics Mr. Duane Esse 4802 Sheboygan Avenue PO Box 7914 Madison, WI 53707-7914 (608) 266-3351

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