



Commercial Pilots

SOC Code 53-2012 • Projected Growth (2020) 0 %

Description

What Commercial Pilots Do

Airline and commercial pilots fly and navigate airplanes or helicopters. Airline pilots fly for airlines that transport people and cargo on a fixed schedule. Commercial pilots fly aircraft for other reasons, such as charter flights, rescue operations, firefighting, aerial photography, and crop dusting.

Duties

- Follow a checklist of preflight checks on engines, hydraulics, and other systems
- Ensure that all cargo has been loaded and that the aircraft weight is properly balanced
- Check fuel, weather conditions, and flight schedules
- Contact the control tower for takeoff and arrival instructions
- Start engines, operate controls, and steer aircraft along planned routes
- Monitor engines, fuel consumption, and other aircraft systems during flight
- Navigate the aircraft, using cockpit instruments
- Ensure a smooth takeoff and landing

Training Opportunities Linked to Those Jobs

[\(Degree Types and Colleges/Universities\)](#)

How to Become a Commercial Pilot

Many pilots learn to fly in the military, but a growing number now earn an associate's or bachelor's degree from a civilian flying school. All pilots who are paid to transport passengers or cargo must have a commercial pilot's license and an instrument rating. To qualify for a commercial pilot's license, applicants must be at least 18 years old and have at least 250 hours of flight experience.

Education and Training

Military veterans have always been an important source of experienced pilots because of the extensive training and flight time that the military provides. However, an increasing number of people are becoming pilots by attending flight school or taking lessons from a [Federal Aviation Administration](#) (FAA) certified instructor. The FAA certifies hundreds of civilian flight schools, including some colleges and universities that offer pilot training as part of an aviation degree.

In addition, most airline companies require at least 2 years of college and prefer to hire college graduates. In fact, most pilots today have a bachelor's degree. Because the number of college-educated applicants continues to increase, many employers are making a college degree an entry-level requirement. Preferred courses for airline pilots include English, math, physics, and aeronautical engineering.

Because pilots must be able to make quick decisions and react appropriately under pressure, airline companies will often reject applicants who do not pass psychological and aptitude tests.

Once hired by an airline, new pilots undergo additional company training that usually includes 6-8 weeks of ground school and 25 hours of additional flight time. After they finish this training, airline pilots must keep their certification by attending training once or twice a year.

Licenses

Commercial pilot's license. All pilots who are paid to transport passengers or cargo must have a commercial pilot's license. To qualify for this license, applicants must be at least 18 years old and have at least 250 hours of flight experience.

Applicants must also pass a strict physical exam to make sure that they are in good health, must have vision that is correctable to 20/20, and must have no physical handicaps that could impair their performance.

In addition, they must pass a written test that includes questions about safety procedures, navigation techniques, and FAA regulations.

Finally, they must demonstrate their flying ability to an FAA-designated examiner.

Instrument rating. To fly during periods of low visibility, pilots must be rated to fly by instruments. They may qualify for this rating by having at least 40 hours of instrument flight experience. Pilots also must pass a written exam and show an examiner their ability to fly by instruments.

Airline certifications. Currently, airline captains must have an airline transport pilot certificate. In 2013, new regulations will require first officers to have this certificate as well. Applicants must be at least 23 years old, have a minimum of 1,500 hours of flight time, and pass written and flight exams. Furthermore, airline pilots usually maintain one or more advanced ratings, depending on the requirements of their particular aircraft.

All licenses are valid as long as a pilot can pass periodic physical, eye, and flight examinations.

Advancement

Many civilian pilots start as flight instructors, building up their flight hours while they earn money teaching. As they become more experienced, these instructors can move into jobs as commercial pilots.

Commercial pilots may begin their careers flying charter planes, helicopters, or crop dusters. These positions typically require less experience than airline jobs require. Some commercial pilots may advance to flying corporate planes.

In nonairline jobs, a first officer may advance to captain and, in large companies, to chief pilot or director of aviation. However, many pilots use their commercial experience as a steppingstone to becoming an airline pilot.

Airline pilots may begin as flight engineers or first officers for regional airline companies. Newly hired pilots at regional airline companies typically have about 2,000 hours of flight experience.

Over time, experience gained at these jobs may lead to higher paying jobs with major airline companies. Newly hired pilots at major airline companies typically have about 4,000 hours of flight experience.

For airline pilots, advancement depends on a system of seniority outlined in union contracts. Typically, after 1 to 5 years, flight engineers may advance to first officer and, after 5 to 15 years, to captain.

Important Qualities

Communication skills. Pilots must speak clearly when conveying information to air traffic controllers. They must also listen carefully for instructions.

Depth perception. Pilots must be able to see clearly and judge the distance between objects.

Detail oriented. Pilots must watch many systems at the same time. Even small changes can have significant effects, so they must constantly pay close attention to many details.

Monitoring skills. Pilots must regularly watch over gauges and dials to make sure that all systems are in working order.

Problem-solving skills. Pilots must be able to identify complex problems and figure out appropriate solutions. When a plane encounters turbulence, for example, pilots assess the weather conditions, select a calmer airspace, and request a route change from air traffic control.

Quick reaction time. Because warning signals can appear with no notice, pilots must be able to respond quickly to any impending danger.

Teamwork. Pilots work closely with air traffic controllers and flight dispatchers. As a result, they need to be able to coordinate actions on the basis of the feedback they receive.

Local Employers

| | | | |
|-------------------------------------|--------------|--|-------------|
| Brownsville Air Ctr | Brownsville | Lone Star Contract Air Cargo | Los Fresnos |
| Carr's Delivery | Harlingen | Russell Plantation | San Benito |
| Eaton Holdings | Laguna Vista | Ups Supply Chain Solutions | Brownsville |

Career Options

(Specific Job Types)

- Pilot
- Captain
- First Officer
- Line Pilot
- Charter Pilot
- Check Airman
- Flight Operations Director
- Helicopter Pilot
- Commercial Helicopter Pilot
- EMS Helicopter Pilot

Salary Ranges

Wages for **Commercial Pilots**

| Location | Pay Period | 2012 | | | | |
|-------------------------------|------------|----------|----------|----------|-----------|-----------|
| | | 10% | 25% | Median | 75% | 90% |
| United States | Hourly | — | — | — | — | — |
| | Yearly | \$38,500 | \$53,100 | \$73,300 | \$96,800 | \$135,000 |
| Texas | Hourly | — | — | — | — | — |
| | Yearly | \$47,800 | \$63,400 | \$81,900 | \$107,800 | \$151,000 |
| Brownsville-Harlingen, TX MSA | Hourly | — | — | — | — | — |
| | Yearly | \$30,600 | \$39,200 | \$55,700 | \$70,600 | \$116,000 |

Professional Associations linked to the Careers

For more information about pilots, visit

- [Federal Aviation Administration](#)
- [Air Line Pilots Association, International](#)
- [Coalition of Airline Pilots Associations](#)
- [Helicopter Association International](#)

For additional career information about pilots, see the *Occupational Outlook Quarterly* article "[Sky-high careers: jobs related to airlines.](#)"

For more information about job opportunities, contact an airline company personnel manager, browse the classified section of aviation trade magazines, or contact companies that operate aircraft at local airports.

Sources

The information provided in this document was collected from the following sources:

- Occupational Outlook Handbook (<http://www.bls.gov/ooh/>)
- O*NET OnLine (<http://www.onetonline.org/>)
- Texas CARES (<http://www.texascaresonline.com/>)
- CareerOneStop (<http://www.careeronestop.org/>)



Course Overview: Focuses on careers in the planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water, and related professional and technical support services.

Commercial Pilots

Career Goal (O*NET Code): (53-2012) - Airline and commercial pilots fly and navigate airplanes or helicopters. Airline pilots fly for airlines that transport people and cargo on a fixed schedule. Commercial pilots fly aircraft for other reasons, such as charter flights, rescue operations, firefighting, aerial photography, and crop dusting.

Student Name: _____

Grade: _____

School: _____

SUGGESTED COURSEWORK

EXTENDED LEARNING EXPERIENCES

| Middle School | 8th | HS Courses: | Exploring Careers | | | Curricular Experiences: Business Professionals of America Future Business Leaders of America SkillsUSA Technology Student Association | Extracurricular Experiences: Language Immersion Programs School Newspaper Student Government UIL Academic Competitions Yearbook | |
|---|------|--|---|--|---|--|---|--|
| High School | 9th | Core Courses*: | English I Algebra I or Geometry Biology | World Geography Foreign Language I Physical Education | Fine Arts | | | Career Learning Experiences: Career Preparation Internship Job Shadowing |
| | | Career-Related Electives: | Principles of Transportation, Distribution and Logistics | | | | | |
| | 10th | Core Courses: | English II Geometry or Algebra II Chemistry | World History Foreign Language II Elective | Elective | | | |
| | | Career-Related Electives: | Energy, Power and Transportation Systems or Aircraft Technology | | | | | |
| | 11th | Core Courses: | English III Algebra II Physics/Principles of Technology | United States History Foreign Language III** Professional Communications or Speech | | | | |
| | | Career-Related Electives: | Transportation Systems Management or Logistics, Planning and Management Systems or Advanced Aircraft Technology | | | | | |
| | 12th | Core Courses: | English IV AP Calculus 4th Science | Government/Economics Fine Arts Elective | | | | |
| | | Career-Related Electives: | Advanced Aircraft Technology or Advanced Electronics or Practicum in Transportation, Distribution and Logistics | | | | | |
| How to Become a Commercial Pilot Many pilots learn to fly in the military, but a growing number now earn an associate's or bachelor's degree from a civilian flying school. All pilots who are paid to transport passengers or cargo must have a commercial pilot's license and an instrument rating. To qualify for a commercial pilot's license, applicants must be at least 18 years old and have at least 250 hours of flight experience. | | | | Career Options: | | Professional Associations: Federal Aviation Administration Air Line Pilots Association, International Coalition of Airline Pilots Associations Helicopter Association International | | |
| Postsecondary | | Texas Southmost College | South Texas College | Texas State Technical College | <ul style="list-style-type: none"> • Pilot • First Officer • Line Pilot • Flight Operations Director • Commercial Helicopter Pilot • Captain • Charter Pilot • Check Airman • Helicopter Pilot • EMS Helicopter Pilot | | | |
| | | | | | | | | |
| | | University of Texas at Brownsville | University of Texas - Pan American | | | | | |
| | | | | | | | | |

*Students must meet local & state graduation requirements. ** Required coursework for Distinguished Graduation Plan (In addition to other measures). *** Based on campus availability. Students may select other elective courses for personal enrichment purposes.

This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2012. All plans meet high school graduation requirements as well as college entrance requirements.