

# Aeronautics & Aviation Science

The study of aeronautics and aviation science combines flight training with academic studies. There are over 100 schools in the U.S. that offer aviation and aeronautic degrees with almost half offering financial aid to international students. Although aeronautics is often studied in combination with aviation science, students can combine other areas of study with aeronautics. Specializations and subfields in aviation science include aviation management, air traffic control, aviation law, air transportation, and flight mechanics.

**Undergraduate:** Students pursuing an undergraduate degree can receive a Bachelor of Science (B.S.) in Aeronautics and Aviation Science or a B.S. in Air Transport, Commercial Aviation, Flight Education, or Aviation Systems Management, depending on the specific university. Students in this major prepare for exams given by the Federal Aviation Administration (FAA). Depending on the institution, students can complete the first two years of this four-year bachelor's degree at a community college, often with the option of earning both a private pilot license and commercial pilot license at the end of those two years.

**Graduate:** Students pursuing a graduate program in Aeronautics and Aviation Science earn a Master of Science (M.S.). Degree titles vary by institution and academic program. Graduate students usually choose among a variety of degree concentrations in the field of Aeronautics and Aviation Science, such as Aviation Education Technology, Aviation Management, Aviation/Aerospace Operations, Safety Systems, Human Factors in Aviation Systems, and Space Studies.

## Occupations in Aeronautics & Aviation Science:

With a degree in Aeronautics and Aviation Science, professional opportunities include airline commercial pilot, corporate pilot, professional flight crew member, air traffic controller, airline executive, natural resources pilot, aircraft dispatcher, law enforcement pilot, flight instructor or aerial applicator.

## Choosing an Aeronautics & Aviation Science Program:

If you are considering continuing your education in this field, you should become familiar with academic trends and employment options. The airline industry is closely tied to the economy and the strength of the economy defines job growth or decline. Utilize current literature and consider the school's on campus resources, like availability of aircraft simulators, for student training.

In the U.S., all pilots that transport passengers or cargo must have a commercial pilot's license with an instrument rating issued by the FAA, which requires a minimum of 250 hours of flight experience. For commercial airlines you must have an airline transport pilot's license, which requires a minimum of 1,500 flight hours, obtain night, instrument, and multiengine ratings, and complete FAA written and flight examinations.

EducationUSA Centers provide advising services and a diverse collection of materials to assist students searching for schools and financial aid programs. To find the nearest EducationUSA Advising Center, visit [www.educationusa.info/centers.php](http://www.educationusa.info/centers.php).





**Associations and organizations affiliated with this study:**

- Federal Aviation Administration, [www.faa.gov](http://www.faa.gov)
- The American Association of Airport Executives, [www.aaae.org](http://www.aaae.org)
- National Business Aviation Association, [www.nbaa.org](http://www.nbaa.org)
- National Coalition for Aviation Education, [www.aviationeducation.org](http://www.aviationeducation.org)
- Aviation Accreditation Board International, [www.aabi.aero](http://www.aabi.aero)
- Women in Aviation International, [www.wai.org](http://www.wai.org)
- University Aviation Association, [www.uaa.aero](http://www.uaa.aero)

**Scholarly Journals Related to the Study of Aeronautics & Aviation Science:** Aviation Week and Space Technology, Aeronautical Journal, Flying, Flight Global, Flight International, Combustion Science and Technology, Institute for Operations Research and the Management Sciences.

**Undergraduate Program Search Print and Online Resources:**

- College Board [www.collegeboard.com](http://www.collegeboard.com)
- Search for schools with the College Board's online, "College Matchmaker."
- Read about specific majors and careers using the "Major and Career Profiles" search [www.collegeboard.com/csearch/majors\\_careers/profiles/](http://www.collegeboard.com/csearch/majors_careers/profiles/)

**Graduate Program Search Print and Online Resources:**

- Peterson's [www.petersons.com](http://www.petersons.com)
- Peterson's Graduate Programs in Engineering & Applied Sciences. Book 5.
- Collegiate Aviation Guide. University Aviation Association. 1999.

**Find Scholarships to Study Aeronautics & Aviation Science:**

- EducationUSA Financial Aid links [www.educationusa.info/pages/students/finance.php](http://www.educationusa.info/pages/students/finance.php)
- Funding U.S. Study, [www.fundingusstudy.org](http://www.fundingusstudy.org)
- Peterson's Scholarship Directory, [www.petersons.com](http://www.petersons.com)
- University Aviation Association, [www.uaa.aero](http://www.uaa.aero)
- The Fulbright Program, <http://fulbright.state.gov/>
- Contact each school for a list of on-campus scholarship opportunities.

**If you are interested in pursuing higher education in the U.S. and would like further guidance please contact your local EducationUSA Advising Center**