

# Aviation & Aerospace Education in Colorado

## Preparing the Next Generation of Aviation Professionals in Colorado

Colorado’s aviation industry has a diverse range of companies that all require a technically educated and skilled workforce. In the past decade, there has been a growing shortage of experienced aviation professionals and there is a need now more than ever for pilots, air traffic controllers, aircraft mechanics, and aviation managers to fill the ranks of the aviation industry across the country. Luckily, there is an increasing number of aviation education programs in Colorado that provide premier training and education to students and prospective aviation professionals. Thirty-six airports in Colorado reported having flight instruction or education programs in addition to multiple education facilities not based at airports. These programs range from private individuals providing initial flight training to accredited four-year universities. The following highlight the programs that are on the leading edge of aviation education in Colorado.

### Metropolitan State University of Denver – Downtown Denver

The Metropolitan State University of Denver (MSU) Department of Aviation and Aerospace Science is one of the nation’s most prestigious aviation education programs. MSU Denver Aviation has approximately 650 enrolled students that can choose from eight unique degrees in aviation science, aviation and aerospace management, aerospace systems engineering technology, and aerospace physics. MSU operates the Aeronautics and Aerospace Systems Laboratories, which provide students simulation technology to learn the fundamentals of flight training, air traffic control, satellite engineering, aerospace operations and unmanned aerial systems (UAS). MSU Denver Aviation has a partnership with Colorado Northwestern Community College (CNCC) that allows students to receive Part 141 flight training while earning an associate’s degree through CNCC then automatically transfer to MSU to complete a bachelor’s degree. Professional development is one of MSU Denver’s primary goals and it maintains strong relationships with seven airlines, three international aerospace contractors, multiple professional organizations, Denver International Airport, and the CDOT Division Of Aeronautics.

### Colorado SKIES Academy - Centennial Airport/Wings Over the Rockies-Exploration of Flight Center

Aviation education is not limited to collegiate activities in Colorado, as Colorado SKIES Academy (CSA) is leading the way as the only aerospace-focused primary education program in the state. CSA is a Cherry Creek School District charter middle school that began operation in fall 2019 and is located on the grounds of Wings Over the Rockies - Exploration of Flight at Centennial Airport (APA). In its first year of operation, the program had 118 students and initiated construction of a 27,000 square-foot, state-of-the-art facility that will enable the school to increase enrollment to 375. CSA uses a project-based learning curriculum, in which students learn about real-world scenarios through the lens of multiple academic disciplines. Students also have the opportunity to explore the aerospace industry through a variety of activities at airports and aerospace facilities. CSA believes that this unique program will empower students to pursue advanced careers in aerospace and aviation.

### U.S. Air Force Academy – Colorado Springs

The U.S. Air Force Academy is one of only four military academies in the U.S. Located in Colorado Springs, the USAFA is critical to the nation’s defense.

- USAF Airfield began powered flight in 1974
- 2,500 cadets a year in 306th Flight Training Group
- 42% of graduates enter flight training
- Location for new U.S. Space Force
- Over 1100 cadets for Class of 2023
- Graduated 42 NASA astronauts



Photo courtesy of MSU Denver



Photos courtesy of Colorado SKIES academy

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### Aims Community College – Northern Colorado Regional Airport/Downtown Greeley

Since 1967, Aims Community College has provided high-quality, low-cost education to students at four campuses across northern Colorado. One of the most unique academic programs is the Aims Aviation Department, which has over 100 students enrolled in three degree programs. Students can pursue their education and training to become a general aviation pilot, professional pilot, or an air traffic controller. Additionally, Aims Aviation offers an Unmanned Aircraft Systems academic certificate that prepares students for the FAA unmanned aerial vehicle operator exam. In Fall 2020, Aims Aviation is expected to have approximately 120 students enrolled comprising 80 student pilots and 40 air traffic control students.

Aims Community College is one of two collegiate programs in Colorado that offer FAA-approved structured flight training (Part 141) and is the only one that offers multi-engine flight training. In 2019, the college opened the Aims Flight Training Center at Northern Colorado Regional Airport (FNL). This state-of-the-art facility provides students the ability to receive one-on-one flight training in a fleet of 10 aircraft. Ground instruction at Aims occurs on the school's campus in Greeley.

Aims leads the way for collegiate programs in Colorado in terms of training technology available for students. Aims has five highly-advanced flight simulators that are available for training in a controlled environment at a fraction of the cost of actual flight time. Additionally, Aims is one of only 30 schools in the country and one of two in Colorado that are designated by the FAA as an Air Traffic-Collegiate Training Initiative (AT-CTI) program. This designation allows eligible graduates to apply to the FAA with a specific and small hiring applicant pool, and if hired, can bypass the first five weeks of training at the FAA Training Academy. The Aviation Department at Aims also operates a panoramic air traffic control tower simulator on campus, the only one of its kind in Colorado. The new simulator is similar to those used by the FAA Training Academy, allowing students to practice in real-world scenarios.

The growth and modernization of Aims Aviation allows its students to succeed by training in first-class relevant technology. The resources that Aims Community College provide has allowed students pursuing degrees in aviation and air traffic control to be more successful and contribute to the aviation industry soon after graduation. With the construction of the new Aims Flight Training Center, an increased aircraft fleet, and new state-of-the-art simulation, the Aviation program has the capability to expand, enabling the school to continue to meet the needs of Colorado's aviation industry for years to come.

### L3 Doss Aviation – Pueblo Memorial Airport

For many aspiring U.S. Air Force pilots, L3 Doss Aviation is the starting point of their journey to earning their wings. L3 Doss Aviation is a specialized, government-contracted flight school that is headquartered in Colorado Springs and provides initial flight training for nearly every Air Force aviation candidate. L3 Doss maintains a fleet of Diamond DA-20 aircraft at its state-of-the-art training facility on the grounds of Pueblo Memorial Airport (PUB). Upon completion of the highly structured, fast-paced training program, candidates receive the equivalent of a private pilot's certificate and are eligible to pursue Specialized Undergraduate Pilot Training. Since opening in 2006, L3 Doss Aviation has graduated more than 17,000 Air Force and Air Force Reserve Pilots.

### Summary

As the aviation industry grows, the need for a qualified and experienced workforce will continue to increase. The education programs discussed above illustrate the diverse range of knowledge, skills, and abilities that are needed by aviation companies. These are just a few examples of how educational institutions in the state are preparing the next generation of professionals who will ensure that Colorado remains on the forefront of aviation and aerospace technology.



*Photos courtesy of Aims Community College*



*Photo courtesy of L3 Doss Aviation*