Aviation Flight Program of Study

Business and Industry Endorsement

The **Aviation Flight** regional program of study introduces CTE learners to the occupations and education opportunities related to understanding the principles and science of flight, aviation engineering, air navigational aids, air traffic controls, and communications equipment to ensure conformance with federal safety regulations.

To complete the Program of Study, students must earn four credits in the Program of Study and one of the credits must be an Advanced Level course.

Postsecondary Options, Occupations and Additional Learning Opportunities

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Part 107 Remote Drone Pilot	Commercial Pilots	Airline Pilots, Copilots, and Flight Engineers		

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineering and Operations Technicians	$60,757	114	9%
Airline Pilots, Copilots, and Flight Engineers	$165,130	1,150	9%
Commercial Pilots	$86,310	548	9%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Participate in SkillsUSA Explore virtual aviation websites	Apprenticeships, Internships, Part-time or summer employment

Courses in the **AVIATION FLIGHT** Program of Study

To complete the Program of Study, students must earn four credits in the Program of Study and one of the credits must be an Advanced Level course.

Entry-Level Courses	*Advanced Courses*
❑ Introduction to Aerospace & Aviation	❑ Aerospace Engineering
❑ Introduction to Unmanned Aerial Vehicle (UAV) Flight	❑ Aviation Ground School
	❑ Practicum in Transportation Systems

Introduction to Aerospace & Aviation Course #: 07229860
Recommended Grade Placement: 9-10 1 Credit

The Introduction to Aerospace and Aviation course will provide the foundation for advanced exploration in the areas of professional pilot, aerospace engineering, and unmanned aircraft systems. Students will learn about the history of aviation, from Leonardo da Vinci's ideas about flight to the Wright brothers and the space race. Along the way students will learn about the innovations and technological developments that have made today's aviation and aerospace industries possible. The course includes engineering practices, the design process, aircraft structure, space vehicles past and present, and a look toward future space exploration.

Introduction to Unmanned Aerial Vehicle (UAV) Flight Course #: 07229850
Recommended Grade Placement: 9-11 1 Credit

The Introduction to Unmanned Aerial Vehicle (UAV) Flight course is designed to prepare students for entry-level employment or continuing education in piloting UAV operations. Principles of UAV is designed to instruct students in UAV flight navigation, industry laws and regulations, and safety regulations. Students are also exposed to mission planning procedures, environmental factors, and human factors involved in the UAV industry.

Aerospace Engineering (AE) - Project Lead The Way Course #: 07228210

Recommended Grade Placement: 11-12 1 Credit

Aerospace Engineering engages students in engineering design problems related to aerospace information systems, astronautics, rocketry, propulsion, the physics of space science, space life sciences, the biology of space science, principles of aeronautics, structures and materials, and systems engineering. Using 3-D design software, students work in teams utilizing hands-on activities, projects and problems and are exposed to various situations encountered by aerospace engineers. This course is designed for 11th or 12th grade students. PLTW courses may count for college credit and will receive additional weight using the Dual Credit scale for the weighted GPA.

Aviation Ground School Course #: 07229870

Recommended Grade Placement: 11-12 1 Credit

This course is designed to extend student interests in all aspects of aviation while preparing students to take the formal ground requisite exam for the Federal Aviation Administration (FAA) FAA Airman Knowledge Test which is required to obtain a private pilot's license. The rigor of the course challenges students with complex aeronautical, engineering, weather, management and judgement concepts. Rules, regulations, obligations, and commitments to discipline and focus are foundational throughout the course. The ability to grasp flight without actually flying a real aircraft extends well beyond the classroom as students learn navigation, weather science, attention to detail (mathematical fuel and load planning), health and mental well-being related to flight planning and piloting aircraft.

Practicum in Transportation Systems Course #: 07229835

Recommended Grade Placement: 11-12 2 Credits

The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Aviation Flight program of study. Students shall be awarded two credits for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.