

# Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

## Aviation Regional Program of Study



The Aviation 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.

### Secondary Courses for High School Credit

#### Level 1

- Introduction to Aerospace and Aviation

#### Level 2

- Introduction to Aircraft Technology

#### Level 3

- Aviation Ground School
- Aviation Scientific Research and Design

#### Level 4

- Practicum in Aviation

### Industry-Based Certifications

- FAA Part 107 Remote Drone Pilot

#### Introduction to Aerospace and Aviation (1)

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 Aircraft Technology (1)

Aircraft Technology is designed to teach the theory of operation of aircraft airframes, powerplants, and associated maintenance and repair practices. Maintenance and repair practices include knowledge of the function, diagnosis, and service of general curriculum subjects, airframe structures, airframe systems and components, powerplant theory and maintenance, and powerplant systems and components of aircraft. Industry recognized professional licensures, certifications, and registrations are available for students who meet the requirements set forth by the accrediting organization.

#### Aviation Ground School (1)

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.

#### Aviation Scientific Research and Design (1)

The course has the components of any rigorous scientific or engineering program of study with a focus on aviation including the identification of a problem, investigation design, data collection, data analysis, formulation, and presentation of the conclusions. All of these components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high-wage jobs and/or continue their education.

#### Practicum in Aviation + (2)

Practicum in Aviation is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience such as internships, mentorships, independent study, or laboratories. The Practicum can be either school lab based or worked based.



Occupations	Median Wage	Annual Openings	% Growth
Aircraft Mechanics and Technicians	\$58,698	1,469	9%
Avionics Technicians	\$59,114	170	9%