# **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, and mobile equipment and facility maintenance. This career cluster indudes a diverse spectrum of occupations, ranging from automotive mechanic, avionics technician, automotive entrepreneur, pilots to logistics planning professionals.

# Statewide Program of Study: Aviation Maintenance

The Aviation Maintenance program of study focuses on occupational and educational opportunities associated with maintenance and repair of airframe structures, systems, and components of an aircraft. This program of study includes exploration of aircraft maintenance procedures, air navigational aids, air traffic controls, and communication equipment to ensure compliance with federal safety regulations.

	Secondary Courses for High School Credit Level 1 • Introduction to Aircraft Technology				
	Level 2				
	Level 3	•	Aircraft Airframe Technology		
	Level 4	•	Extended Practicum in Transportation Systems Extended Career Prep for Programs of Study		

# **Aligned Advanced Academic Courses**

**Dual Credit** Dual credit offerings will vary by Local Education Agency.

Students who earn credit for all of the college courses within this program of study will be eligible to graduate from Southwest Texas College with a Level I Certificate in Aircraft General Maintenance.

# Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul> <li>Shadow an aviation maintenance technician at an airport to learn about aircraft inspection and maintenance</li> <li>Participate in an aircraft maintenance apprenticeshipat an airline or a defense technology company</li> </ul>
Expanded Learning	<ul> <li>Participate in TechForce</li> <li>Participate in SkillsUSA</li> <li>Explore associations such as Aircraft Mechanics</li></ul>
Opportunities	Association and Women in Aviation

# **Aligned Industry-Based Certification**





# **Example Postsecondary Opportunities**

#### Apprenticeships

Aircraft Mechanic Apprentice

#### Associate Degrees

- Avionics Maintenance Technology
- Aeronautics/Aviation/Aerospace Science and Technology

#### **Bachelor's Degrees**

- Aircraft Powerplant Technology
- Airframe Mechanics and Aircraft Maintenance **Technology**

#### Master's, Doctoral, and Professional Degrees

- Aerospace, Aeronautical, and Astronautical/Space Engineering
- Industrial Technology

#### Additional Stackable IBCs/Licensures

Certificated Aviation Maintenance Technician



# Example Aligned Occupations

Aerospace Engineering and **Operations Technicians** 

Median Wage: \$48,204 Annual Openings: 192 10-Year Growth: 21%

Aircraft Mechanics and Service Technicians Median Wage: \$67,683 Annual Openings:1,636 10-Year Growth: 16%

**Avionics Technicians** Median Wage: \$72,461 Annual Openings: 255 10-Year Growth: 16%



For more information visit: https://tea.texas.gov/academics/college-career-and-military-

prep/career-and-technical-education/programs-of-studyadditional-resources

COURSE INFORMATION							
COURSE NAME	COURSE NUMBER AND CREDITS	PREREQUISITES (PREQ) COREQUISITES (CREQ)	GRADE				
Introduction to Aircraft Technology	8727 (1 credit)	admission criteria in the student handbook	10				
Aircraft Airframe Technology Dual Credit	8724D1 & 8724D2 (2 credits)	Intro to Aircraft & SWTX requirements	11				
Ext. Practicum in Transportation Systems Dual Credit	8729D1 & 8729D2 (3 credits)	Aircraft Airframe Technology Dual Credit & SWTC reqs.	12				

# **COURSE DESCRIPTIONS**

### Introduction to Aircraft Technology:

This course is designed to teach the theory of operation of aircraft airframes, power plants, and avionics systems and associated maintenance and repair practices. Aircraft services include knowledge of the function, diagnosis, and service of the electrical, electronic, hydraulic, pneumatic, airframe, mechanical, and power plant components of aircraft. Safety regulations will be explored through OSHA.

### Aircraft Airframe Technology Dual Credit:

College Credits: AERM 1203, 1210, & 1315

This course is designed to teach basic theory of operation of aircraft, its power plants (engines), airframe (structure), and avionic system (instrumentation) along with associated maintenance and repair practices to keep these systems working. Student will understand the theory of how they all work to keep aircraft flying.

**Extended Practicum in Transportation Systems Dual Credit:** College Credits: AERM 1314, 1205, & 1291; ITSC 1301 Laughlin Air Force Base becomes the classroom for this course, providing hands-on training on T-1, T-6, and T-38 aircraft. Students learn about removing, replacing, and installing components of different systems that make an aircraft fly. They are trained on servicing fuel and oil in the engines and hydraulic systems of the aircraft and learn the proper use of manuals and publications to maintain aircraft.

Courses in yellow are Level 3 or 4 courses.



San Felipe Del Rio CISD does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Coordinator of Title IX, 315 Griner St., Del Rio, TX 78840, 830-778-4073, sandra.hernandez@sfdr-cisd.org