



Transportation, Distribution & Logistics

The Transportation, Distribution, and Logistics career cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes transportation infrastructure planning and management, logistics services, and mobile equipment and facility maintenance. This career cluster includes occupations ranging from automotive mechanic, avionics technician, and automotive entrepreneur to pilots and logistics planning professionals.

Program of Study: **Diesel, Heavy Equipment Maintenance, and Commercial Drivers (Dual Credit Program)**

The Diesel, Heavy Equipment Maintenance, and Commercial Drivers program of study focuses on occupational and educational opportunities associated with the function, operations, diagnosis, and service of diesel and heavy equipment systems. This program of study includes driving, inspecting, diagnosing, and repairing off-highway and on-highway vehicles and equipment.

Courses

9th Grade	Principles of Transportation Systems
10th Grade	Automotive Basics Entrepreneurship I
11th Grade	Diesel Equipment Technology I @ San Jacinto College
12th Grade	Diesel Equipment Technology II @ San Jacinto College

Students must maintain a 2.5 GPA or higher to qualify for dual credit.

Work-Based Learning/Expanded Learning Opportunities

Work-Based Learning Activities	- Shadow a diesel mechanic at a transportation company and learn to inspect and repair diesel equipment - Intern at a transportation company, working closely with an industrial mechanic to diagnose issues with heavy equipment
Expanded Learning Opportunities	SkillsUSA

Example Postsecondary Opportunities

Apprenticeships

- Diesel Mechanic Apprentice

Associate Degrees

- Diesel Mechanics Technology
- Medium/Heavy Vehicle and Truck Technology

Bachelor's Degrees

- Electrical and Power Transmission Technology
- Construction/Heavy Equipment/Earthmoving Equipment Operation

Additional Stackable IBCs/License

- Electronic Diesel Engine Diagnosis Specialist Certification (L2)

Example Aligned Occupations

Heavy and Tractor-Trailer Truck Drivers

Median Wage: \$50,174
Annual Openings: 30,182
10-Year Growth: 22%

Mobile Heavy Equipment Mechanics

Median Wage: \$60,005
Annual Openings: 2,315
10-Year Growth: 31%

First-Line Supervisors of Mechanics, Installers, and Repairers

Median Wage: \$70,554
Annual Openings: 6,556
10-Year Growth: 19%



Diesel, Heavy Equipment Maintenance, and Commercial Drivers

Course Information

Level 1

Principles of Transportation Systems

13039250

Grade: 9-12

Credit: 1

In Principles of Transportation Systems, students will gain knowledge and skills in the safe application, design, production, and assessment of products, services, and systems. This knowledge includes the history, laws and regulations, and common practices used in the transportation industry. Students should apply knowledge and skills in the application, design, and production of technology as it relates to the transportation industries. This course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings.

Level 2

Automotive Basics

13039550

Grade: 10-12

Credit: 1

Automotive Basics includes knowledge of the basic automotive systems and the theory and principles of the components that make up each system and how to service these systems. Automotive Basics includes applicable safety and environmental rules and regulations. In Automotive Basics, students will gain knowledge and skills in the repair, maintenance, and servicing of vehicle systems. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach safety, tool identification, proper tool use, and employability.

Diesel Equipment Technology I @ San Jacinto College

13040150

Grade: 11-12

Credit: 2

Prerequisite: Principles of Transportation Systems and meet the San Jacinto College entrance requirements

Diesel Equipment Technology I includes knowledge of the function and maintenance of diesel systems. Rapid advances in diesel technology have created new career opportunities and demands in the transportation industry. This course provides the knowledge, skills, and technologies required for employment in transportation systems.

Entrepreneurship I

13011101

Grade: 10-12

Credit: 1

In Entrepreneurship I, students will gain the knowledge and skills needed to become an entrepreneur in a free enterprise system. Students will learn the key concepts necessary to begin and operate a business. The primary focus of the course is to help students identify the types and selection criteria of business structures, understand the components of a business plan, determine feasibility of an idea using research, and develop and present a business concept. In addition, students will understand the basics of management, accounting, finance, marketing, risk, and product development.

Level 3

Diesel Equipment Technology II @ San Jacinto College

13040160

Grade: 11-12

Credit: 2

Prerequisite: Diesel Equipment Technology I and meet the San Jacinto College entrance requirements

Diesel Equipment Technology II includes knowledge of the function, diagnosis, and service of diesel equipment systems. Rapid advances in diesel technology have created new career opportunities and demands in the transportation industry. This course provides the advanced knowledge, skills, and technologies required for employment in transportation systems.