

CTE: THE KEY TO ECONOMIC DEVELOPMENT

Transportation, distribution and logistics:

Account for **9.4%** of U.S. GDP¹

Employ **14.8 million** people²

Move **51 million** tons of goods daily³

What is the pathway to these fulfilling and essential careers?

Career and Technical Education!



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Association for Career and Technical Education
1410 King Street, Alexandria, VA 22314
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Transportation, Distribution and Logistics

The transportation, distribution and logistics (TDL) sector:

- moves people and products around the nation and the world
- is the foundation of the U.S. consumer economy
- includes air, freight rail, maritime, truck and public transport; maintenance of vehicles, public highways, rail systems, bridges, seaports and airports; postal, sightseeing and courier services; warehousing; and logistics and supply chain management

What jobs are available in TDL?

Transportation, warehousing and related sectors have long been critical to helping businesses operate, maintaining the supply chain and delivering products to consumers. The COVID-19 pandemic only highlighted the importance of these sectors, which employ nearly 15 million people—9.8% of the labor force.⁴ While TDL providers are increasingly exploring new technologies such as machine learning and drones to speed delivery and improve the supply chain, many occupations are still in demand: More than 1 million jobs will be created within transportation and material moving this decade.⁵ The fastest-growing occupations through 2028 include flight attendants, recreational vehicle service technicians and motorcycle mechanics. Despite developments in autonomous or self-driving vehicles, demand will be particularly strong through 2028 for jobs driving and operating vehicles: These occupations are expected to grow by 19.5%.⁶ Opportunities are also expanding in clean vehicle markets.⁷

Jobs in TDL can provide family-sustaining wages for those with a high school diploma as well as middle-skill workers with credentials below the bachelor's degree level. Individuals with these qualifications can earn above the U.S. median annual wage in occupations such as flight attendants, heavy and tractor-trailer truck drivers, and maritime positions like ship engineers and operators.⁸ For instance, transportation, storage and distribution managers earn more than \$96,000, on average, while aircraft technicians make almost \$67,000 and diesel service technicians earn about \$50,000 per year.⁹

Careers in this sector increasingly require at least some postsecondary education. Licenses and industry-recognized certifications are also an asset to many employees, including National Institute for Automotive Service Excellence certifications; credentials offered by automotive manufacturers such as Ford, Toyota and others; credentials offered through the U.S. Department of Transportation's Transportation Safety Institute; commercial driver's licenses; and Federal Aviation Administration licenses and certificates. Education and credentials prepare individuals in TDL occupations with technical, academic and employability skills in order to perform tasks such as inspecting, maintaining and repairing vehicles and transit routes; managing supply chains; and delivering goods. Here is a small sampling of jobs in this sector:

- subway train operators
- transportation inspectors
- logistics technicians
- water transportation operators
- automotive technicians
- signal and track switch repairers
- warehouse managers
- air traffic controllers



Endnotes

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How does CTE prepare the TDL workforce?

Career and technical education prepares high school, postsecondary and adult students for careers in TDL through:

- the National Career Clusters® Framework—including Career Clusters and pathways in TDL, STEM and manufacturing—which outlines course progressions that help students explore career options and prepare for college and career success
- CTE courses in automotive, diesel, small engine, marine and heavy equipment mechanics; hybrid engines; heavy equipment operation; aviation; warehouse operations; automotive body repair and refinishing; distribution; and more, all integrated with rigorous academics
- work-based learning experiences, like the Supply Chain Logistics program, a collaboration between Gilbert A. Dater High School, Cincinnati State Technical and Community College and industry partners, in which students can participate in an internship at DHL¹⁰
- career and technical student organization experiences, such as SkillsUSA competitions in automobile, aviation, diesel, marine and motorcycle service technology and Technology Student Association events in transportation modeling and dragster design¹¹
- opportunities to earn stackable, short-term credentials, such as the Career Studies Certificate in Automotive Diagnostics and Repair available at Southwest Virginia Community College, which prepares learners for entry-level automotive diagnostic and repair technician positions¹²

What are promising programs in TDL?

The **School of Aviation** at Irving High School in Irving, Texas, combines rigorous academic coursework with high-quality work-based learning experiences for students pursuing a career in aviation. Learners receive a broad introduction to aviation, then in their junior year choose between an aviation science, an aviation technology or a drone engineering pathway.¹³ The program has more than 77 industry partners who help ensure curriculum is up to date with the latest industry trends and create work-based learning experiences for students. In addition, a partnership with Spartan Community College allows students to earn college credits for a seamless transition between secondary and postsecondary education. Students can also earn industry-recognized credentials related to workplace safety and Federal Aviation Administration certifications to become licensed to fly drones. Irving's aviation program was awarded a 2019 Excellence in Action Award from Advance CTE.¹⁴

The Diesel Equipment Technology program at Copiah Lincoln's Wesson Campus, part of the **Copiah Lincoln Community College District**, is a two-year program that prepares students for a career in inspecting and repairing a variety of industrial equipment. Learners take part in hands-on experiences along with academic coursework in inspection, repair and maintenance of engines, power trains and hydraulic systems, among other topics. Key to the program's success is collaboration with local business and industry partners such as Empire Trucking, Puckett Machinery, Waters International Trucks Inc. and Walmart Trucking. These employer partners help to ensure that individuals are career ready through internships and scholarships as well as employment opportunities after graduation. Students in the Diesel Equipment Technology program are excelling with a 100% student completion rate and a 98% job placement rate. This program won a National Career Pathways Network Career Pathways Partnership Excellence Award in 2019.¹⁵