

CTE: THE KEY TO ECONOMIC DEVELOPMENT

Transportation, distribution and logistics:

Accounted for

\$1.3 trillion
in U.S. spending in 2012¹

Serves **7.4 million**
business establishments²

Moves more than
50 million tons
of goods daily³

What is the pathway to these fulfilling and essential careers?

Career and Technical Education!



Proud supporters of ACTE.



Association for Career and Technical Education
1410 King Street, Alexandria, VA 22314
Phone: 800-826-9972 // Fax: 703-683-7424
www.acteonline.org // Connecting Education and Careers

Transportation, Distribution and Logistics

The TDL sector:

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

What jobs are available in TDL?

More than 12 million U.S. jobs are projected by 2018 in transportation, distribution and logistics.⁴ Many jobs will open up due to retirements, while other jobs will come from higher consumer spending, resulting in greater delivery needs, as well as from demand for workers with specialized skills in this sector. Growth is expected to be robust for occupations that use technology to streamline transportation and distribution, including a 22 percent increase in logisticians by 2022.⁵ Solid growth is also predicted for air traffic controllers, cargo and freight agents, tractor-trailer truck drivers, ship operators and engineers, subway and streetcar operators, rail-track laying and maintenance equipment operators, and avionics technicians.⁶

Jobs in transportation, distribution and logistics can provide family-sustaining wages for those with a high school diploma as well as middle-skill workers with some postsecondary education, a certificate or an associate degree. Individuals with these qualifications can earn wages above the national average, in some cases well above.⁷ For instance, air traffic controllers averaged earnings of \$122,000 per year in 2012.⁸

By 2018, almost 40 percent of jobs in transportation, distribution and logistics will require at least some postsecondary education.⁹ Licenses and industry-recognized certifications are also an asset to many employees in this sector, such as National Institute for Automotive Service Excellence certifications in a variety of sub-fields.¹⁰ Occupations in transportation, distribution and logistics require academic, employability and technical skills in order to perform tasks such as inspecting, maintaining and repairing vehicles and transit routes; managing supply chains; coordinating traffic; and delivering goods. Here is a small sampling of jobs in this sector:

- avionics technicians
- signal and track switch repairers
- diesel engine specialists
- delivery services drivers
- airfield operations specialists
- transportation inspectors
- supply chain managers
- automotive technicians



Endnotes

1. U.S. Chamber of Commerce SelectUSA. (n.d.). *The Logistics and Transportation Industry in the United States*. Retrieved from <http://selectusa.commerce.gov/industry-snapshots/logistics-and-transportation-industry-united-states>.
2. U.S. Department of Transportation, Bureau of Transportation Statistics. (2014). *Transportation in the United States 2013*. Washington, DC: U.S. Department of Transportation.
3. Ibid.
4. Carnevale, A. P., Smith, N., Stone III, J. R., Kotamraju, P., Steuarnagel, B., & Green, K. A. (2011). *Career Clusters: Forecasting Demand for High School Through College Jobs*. Washington, DC: Georgetown University Center on Education and the Workforce.
5. U.S. Bureau of Labor Statistics. (2014). *Occupational Outlook Handbook, 2014-15 Edition*. Retrieved from <http://www.bls.gov/ooh/business-and-financial/logisticians.htm>.
6. Carnevale, A. P., Smith, N., Stone III, J. R., Kotamraju, P., Steuarnagel, B., & Green, K. A. (2011). *Career Clusters: Forecasting Demand for High School Through College Jobs*. Washington, DC: Georgetown University Center on Education and the Workforce.
7. Ibid.
8. U.S. Bureau of Labor Statistics. (2014). *Occupational Outlook Handbook, 2014-15 Edition*. Retrieved from <http://www.bls.gov/ooh/transportation-and-material-moving/air-traffic-controllers.htm>.
9. Carnevale, A. P., Smith, N., Stone III, J. R., Kotamraju, P., Steuarnagel, B., & Green, K. A. (2011). *Career Clusters: Forecasting Demand for High School Through College Jobs*. Washington, DC: Georgetown University Center on Education and the Workforce.
10. National Institute for Automotive Service Excellence. (n.d.). *ASE Certification Tests*. Retrieved from <https://www.ase.com/tests/ase-certification-tests.aspx>.
11. Association for Career and Technical Education. (n.d.). *Taking Business to School: UPS*. Alexandria, VA: ACTE.
12. SkillsUSA. (n.d.). *Contest Descriptions*. Retrieved from <http://www.skillsusa.org/compete/contests.shtml>.
13. Broward College. (n.d.). *Global Trade and Logistics*. Retrieved from <http://www.broward.edu/academics/programs/logistics/Pages/default.aspx>.
14. Arapahoe Community College. (2011). *Arapahoe Community College's Automotive Program is Named Best in the Nation for 2011*. Retrieved from <http://www.arapahoe.edu/news-story/2011/arapahoe-community-college%E2%80%99s-automotive-program-named-best-nation-2011>; additional information from ACC staff.
15. Ballard Maritime Academy. (n.d.). *Ballard Maritime Academy*. Retrieved from <http://ballardmaritimeacademy.wordpress.com>; Follansbee, J. (2012). "Sea Change: Seattle Needs Maritime Workers." *Seattle Business*, October 2012; additional information from BMA staff.



Proud supporters of ACTE.



Association for Career and Technical Education
1410 King Street, Alexandria, VA 22314
Phone: 800-826-9972 // Fax: 703-683-7424
www.acteonline.org // Connecting Education and Careers

How does CTE prepare the TDL workforce?

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

- the national Career Clusters Framework—including Career Clusters and pathways in transportation, distribution and logistics; STEM; and business management and administration—which outlines course progressions that help students explore career options and prepare for college and career success
- CTE courses in automotive mechanics, heavy equipment operation, aviation, warehouse operations, motorsports technology and more, all integrated with rigorous academics
- work-based learning experiences, such as internships and apprenticeships like UPS's School-to-Work program in Kentucky¹¹
- career and technical student organization enrichment experiences, such as SkillsUSA competitions in automotive, motorcycle, aviation and marine technology¹²
- opportunities to earn stackable, industry-recognized credentials, such as the Logistic Specialist Technical Certificate from Broward College in Florida, leading to the Global Trade and Logistics Associate of Science degree and the Bachelor of Applied Science in Supply Chain Management¹³

What are promising programs in TDL?

Leaders at Colorado's Arapahoe Community College (ACC) Automotive Technology program, recognized as the 2011 *Tomorrow's Technician* School of the Year, have worked extensively with an industry advisory committee to develop an up-to-date, relevant program that incorporates general education, formal automotive training classes and hands-on learning with state-of-the-art automobiles and tools, leading to a certificate or an Associate of Applied Science degree. In addition, the college offers manufacturer-specific automotive programs with Honda, GM, Nissan and Chrysler and is accredited by the National Automotive Technicians Education Foundation. Dr. Jill Biden, a community college educator and wife of Vice President Joe Biden, has recognized ACC for its automotive apprenticeship program, in which students, while learning professional skills in automotive technology at ACC, are also employed as apprentices, working in the field. It is this commitment to putting students to work in a high-demand, high-paying career, while helping them maintain low student loan debt, which has garnered national attention. ACC also hosts one of a select number of Department of Energy Hybrid Training programs offered across the country.¹⁴

Ballard Maritime Academy, one of five career academies at Ballard High School in Seattle, integrates technical and academic content around a maritime theme, developing skilled employees to support the large maritime industry in the northwestern United States, including more than 250,000 maritime-related jobs in the Puget Sound. Students gain skills and explore careers in recreational boating, commercial fishing, shipyards and vessel construction, boat design, maritime law, cruise ships, oceanography and the merchant marine or service academies. Classroom learning is supplemented by laboratory experiences, field trips and a yearly adventure trip. Students also put their skills to the test in a paid internship between their junior and senior years. The Academy is a collaboration between Ballard High School, the Youth Maritime Training Association, local maritime industries and marine-related educational institutions.¹⁵

This sector sheet will be the focus of one of ACTE's Microdocs! To learn more, visit www.acteonline.org/microdocs