Career and Technical Education

At the secondary level, CTE is delivered through comprehensive high schools, career and technology high schools that teach core academics in the context of specific career pathways, and CTE centers. At the postsecondary level, CTE is offered through public community colleges, apprenticeship programs, and private career colleges.\(^1\)

In FY 2015, 39% of secondary and 44% of postsecondary students enrolled in CTE were economically disadvantaged.\(^2\)

Career Clusters

Seven of the 16 career clusters in CTE lead to high-skill, high-wage, and high-demand STEM-related careers. These clusters include Agriculture, Architecture, Health, Information Technology, Manufacturing, STEM, and Transportation, Distribution, and Logistics and contain programs that prepare students for nontraditional careers.
Middle-Skill and STEM Jobs

The pipeline to middle-skill and STEM jobs loses young people at every level of the education system. Thus, the supply of sufficiently trained workers will not meet the demand of key industries.

Fast Facts

From 2014 to 2024…

- Computing jobs will grow by 14%.4
- Engineering jobs will grow by 8%.4
- Advanced manufacturing jobs will grow by 8%.4
- Of all job openings, 42% will require training at the middle skill-level.5

Yet…

- 19% of students who enter an associate’s degree program graduate.4
- 64% of students who enter a bachelor’s degree program graduate.4
- 38% of workers are trained to the middle-skill level.5

2016 AP Test Taking and Passing6

Students pursuing careers in STEM, particularly computer science and engineering, must become academically prepared early in their educational trajectory.7

![Bar chart showing AP test scores by gender and subject]

For Maryland, in 2016, college-bound female students earned an average math SAT score of 480, compared to 503 for male students.8

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Data Sources (retrieved April 2017)

1 https://www.acteonline.org/stateprofiles/
2 https://perkins.ed.gov/pims/DataExplorer/CTEParticipant
3 https://perkins.ed.gov/pims/DataExplorer/CTEConcentrator (race not available for clusters)
4 http://vitalsigns.changetheequation.org/
5 http://www.nationalskillscoalition.org/state-policy/fact-sheets
8 https://reports.collegeboard.org/sat-suite-program-results/class-of-2016-results/state-reports