

MASSACHUSETTS

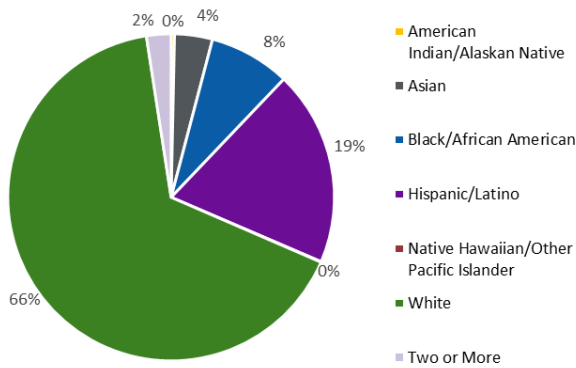
Career Technical Education (CTE) Profile



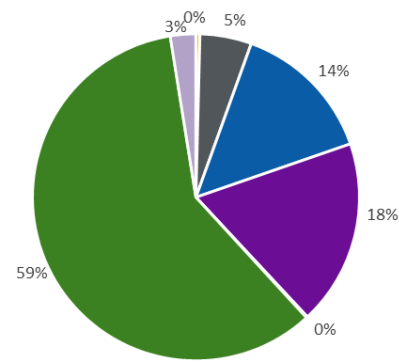
Career and Technical Education

Secondary CTE is delivered through comprehensive high schools, regional vocational-technical high schools, regional academic schools, county agricultural schools, independent vocational and agricultural schools, and educational collaboratives. At the postsecondary level, Massachusetts Community Colleges offer open access to high-quality, affordable academic programs, including associate's degree and certificate programs.¹

Secondary CTE Participants, FY 2015²



Postsecondary CTE Participants, FY 2015²

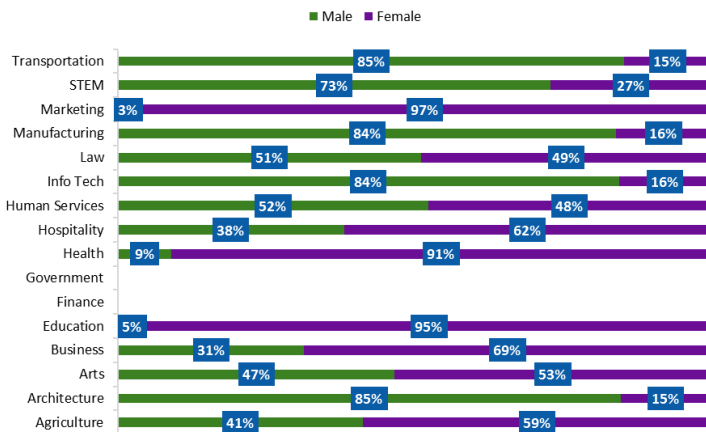


In FY 2015, **29%** of secondary and **55%** of postsecondary students enrolled in CTE were economically disadvantaged.²

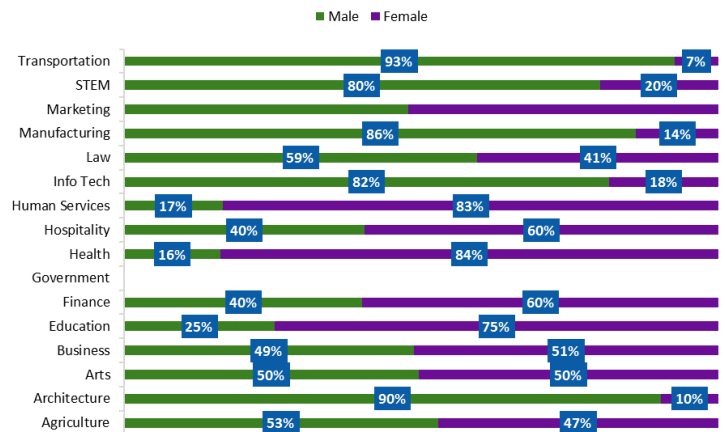
Career Clusters

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.

Secondary Enrollment, FY 2015³



Postsecondary Enrollment, FY 2015³



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...

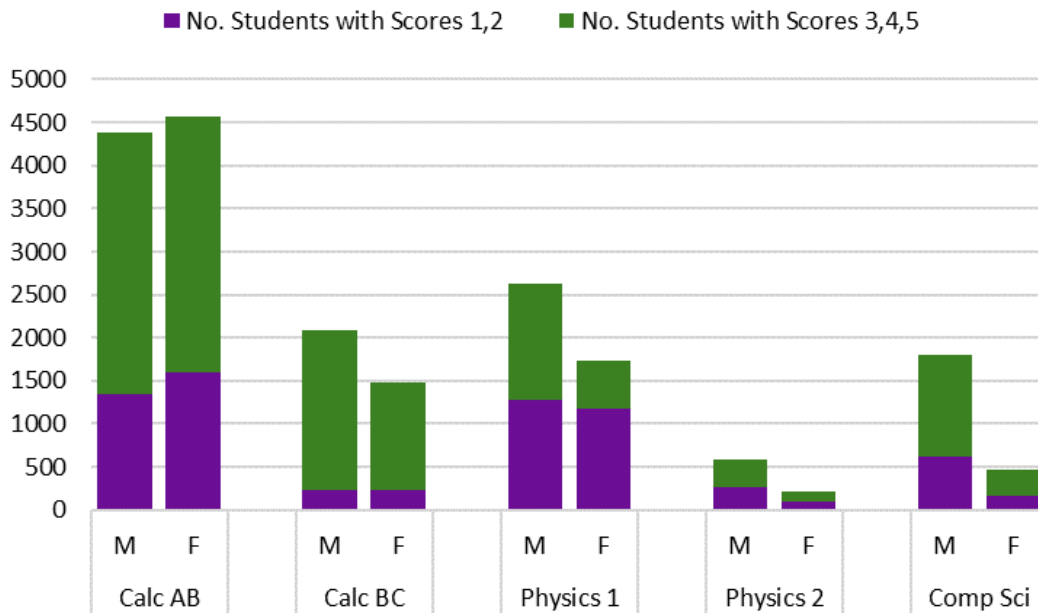
- Computing jobs will grow by **22%**.⁴
- Engineering jobs will grow by **12%**.⁴
- Advanced manufacturing jobs will grow by **14%**.⁴
- Of all job openings, **41%** will require training at the middle skill-level.⁵

Yet...

- **18%** of students who enter an associate's degree program graduate.⁴
- **70%** of students who enter a bachelor's degree program graduate.⁴
- **35%** 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



For Massachusetts, in 2016, college-bound female students earned an average math SAT score of **515**, compared to **546** for male students.⁸

State CTE Contact

Marnie Jain, MA Department of Elementary and Secondary Education, 75 Pleasant St., Malden, MA 02148, (781) 338-3908, mjain@doe.mass.edu

Data Sources (retrieved April 2017)

¹ <https://www.actonline.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>

⁶ <https://research.collegeboard.org/programs/ap/data/participation/ap-2016>

⁷ <http://ieeexplore.ieee.org/document/1264690/>

⁸ <https://reports.collegeboard.org/sat-suite-program-results/class-of-2016-results/state-reports>