

# DATA POINT

U.S. DEPARTMENT OF EDUCATION  
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## Participation in High School Career and Technical Education and Postsecondary Enrollment

This Data Point uses data from the Educational Longitudinal Study of 2002 (ELS:2002) and its 2012 follow-up. ELS:2002 is a nationally representative study of over 15,000 public and private school students who were in the 10th grade in 2002. The ELS:2002 sample was supplemented in 2004 to provide a nationally representative sample of high school seniors, and high school transcripts were collected for this “freshened” sample. This Data Point examines ELS students who were 2004 public high school graduates.

Among the public high school graduating class of 2004, 89 percent of graduates enrolled in postsecondary education at some point in the 8 years after graduation (i.e., by 2012) (**figure 1**). This rate of postsecondary enrollment was higher for graduates who earned fewer career and technical education (CTE) credits in high school than for graduates who earned more CTE credits.<sup>1</sup> Among those earning fewer than 4 CTE credits, 91 percent enrolled by 2012, while among those earning 4 or more CTE credits, 83 percent enrolled (not shown in figures; see <https://nces.ed.gov/surveys/ctes/tables/h134.asp>).<sup>2</sup>

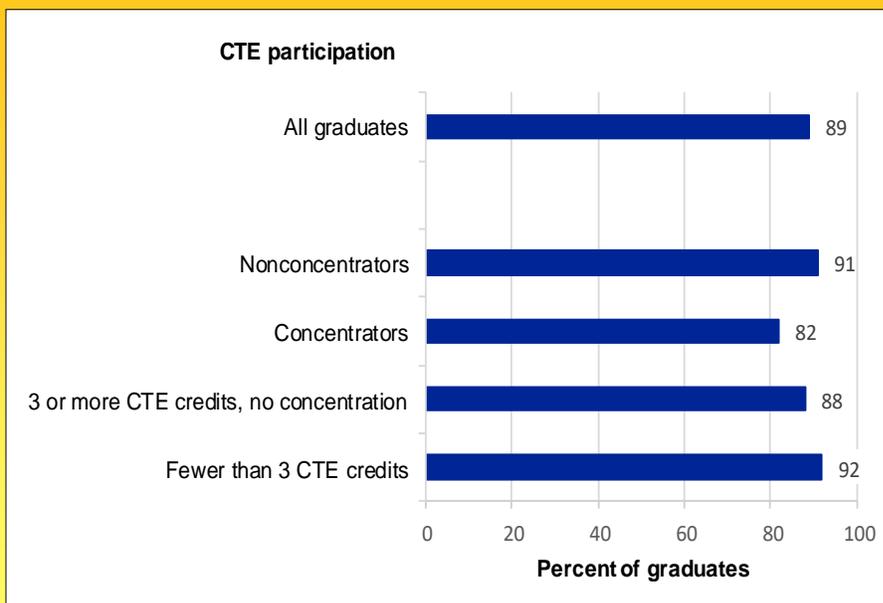
This Data Point looks at students’ postsecondary enrollment based on different measures of CTE coursetaking. First, students are classified based on whether they “concentrated” in CTE. A CTE concentrator is a student who earned at least 3 credits within one of the 12 occupational areas listed in figure 2. A nonconcentrator is a student who earned any number of CTE credits, but without earning at least 3 credits in a specific occupational area. CTE concentrators are different from nonconcentrators because they concentrate their CTE credits *and* they earn a relatively high number of CTE credits. To look at each of these coursetaking characteristics separately, nonconcentrators are divided into two groups: students who earned 3 or more CTE credits without concentrating their

credits, and students who earned fewer than 3 CTE credits.

**Postsecondary enrollment rates were lower for high school graduates who were CTE concentrators than for nonconcentrators.**

Overall, 82 percent of high school CTE concentrators enrolled in postsecondary education, compared to 91 percent of graduates who were not concentrators (**figure 1**). Comparing concentrators to the two groups of nonconcentrators shows that both the number of CTE credits earned and concentrating in

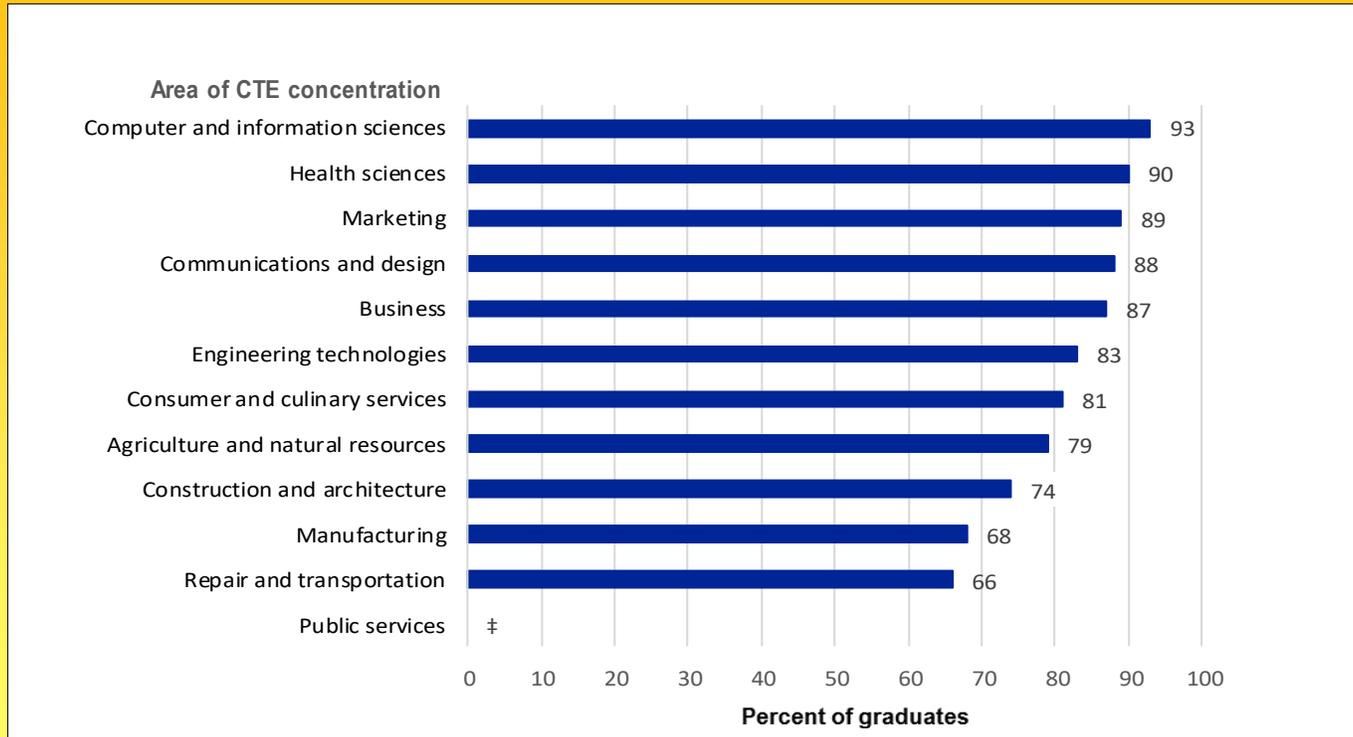
**FIGURE 1. Percentage of 2004 public high school graduates who enrolled in postsecondary education as of 2012, by career and technical education (CTE) participation in high school: 2012**



NOTE: CTE includes the 12 occupational subject areas listed in figure 2. Concentrators are students who earned at least 3 credits in any one of the occupational areas in figure 2; nonconcentrators did not earn at least 3 credits in one occupational area. Standard errors for estimates can be found at <https://nces.ed.gov/surveys/ctes/tables/H134.asp>. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, Educational Longitudinal Study of 2002 (ELS:2002/12), Third Follow-Up Restricted-Use Data File.

To learn more about ELS:2002, visit <https://nces.ed.gov/surveys/els2002>. For questions about content or to view this report online, go to <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018043>.

**FIGURE 2. Percentage of 2004 public high school graduates who enrolled in postsecondary education as of 2012, by area of career and technical education (CTE) concentration: 2012**



‡ Reporting standards not met. Too few cases to report.

NOTE: CTE includes the 12 occupational subject areas listed in the figure. Concentrators are students who earned at least 3 credits in any one of the occupational areas listed in the figure. Standard errors for estimates can be found at <https://nces.ed.gov/surveys/ctes/tables/H134.asp>.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12), Third Follow-Up Restricted-Use Data File.

CTE were associated with lower postsecondary enrollment rates. Enrollment rates were highest (92 percent) for graduates who earned fewer than 3 CTE credits, lower (88 percent) for those who earned at least 3 CTE credits with no concentration, and lowest (82 percent) for concentrators.

### Postsecondary enrollment rates also varied among graduates who concentrated in different occupational areas.

Among the 11 occupational areas for which enrollment rates could be calculated, postsecondary enrollment rates ranged from 66 percent for graduates who concentrated in *repair and transportation* to 93 percent for

graduates who concentrated in *computer and information sciences* (figure 2). Graduates who concentrated in three areas—*computer and information sciences*, *health sciences*, and *marketing*—enrolled in postsecondary education at rates that were not measurably different from nonconcentrators, and were higher than for concentrators in general.<sup>3</sup>

### Endnotes

<sup>1</sup> A credit is equivalent to one course that meets for one period per day for one school year.

<sup>2</sup> Hudson and Boivin (2016) and Dalton (2015) also use the ELS:2002 data to look at the postsecondary outcomes of 2004 high school graduates. Readers should note that the content of CTE courses, and students' CTE

coursetaking patterns, could have changed since 2004.

<sup>3</sup> These three concentration areas include (as of 2004) some 20 percent of all CTE concentrators. (Not shown in figures; the more precise estimate is 19.6, with a standard error of 1.66 percent.)

### References

Dalton, B. (2015). *Eight-Year Postsecondary Outcomes of Career and Technical Education Students From the High School Class of 2004*. U.S. Department of Education. Washington, DC: Office of Career, Technical, and Adult Education. Retrieved November 9, 2017, from [http://ctecenter.ed.gov/research/ps\\_outcomes](http://ctecenter.ed.gov/research/ps_outcomes).

Hudson, L., and Boivin, S. (2016). *Career and Technical Education Coursetaking and Postsecondary Enrollment and Attainment: High School Classes of 1992 and 2004* (NCES 2016-109). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

This National Center for Education Statistics (NCES) Data Point presents information on education topics of current interest. It was authored by Lisa Hudson of NCES. Estimates based on samples are subject to sampling variability, and apparent differences may not be statistically significant. All

stated differences are statistically significant at the .05 level. In the design, conduct, and data processing of NCES surveys, efforts are made to minimize effects of nonsampling errors, such as item nonresponse, measurement error, data processing error, or other systematic error.