

# Career and Technical Education Coursetaking in 2013, by Locale

This Data Point examines the career and technical education (CTE) coursetaking of high school students from different locales—city, suburb, town, and rural—using data from the High School Longitudinal Study of 2009 (HSLs:09). The HSLs:09 initially surveyed a national sample of more than 23,000 grade 9 students in 2009, with follow-up surveys in 2012 and 2013, and a high school transcript collection in 2013. The analysis in this report is based on 11,499 HSLs:09 ninth-graders who graduated from public high schools by 2013 and who had complete transcripts.

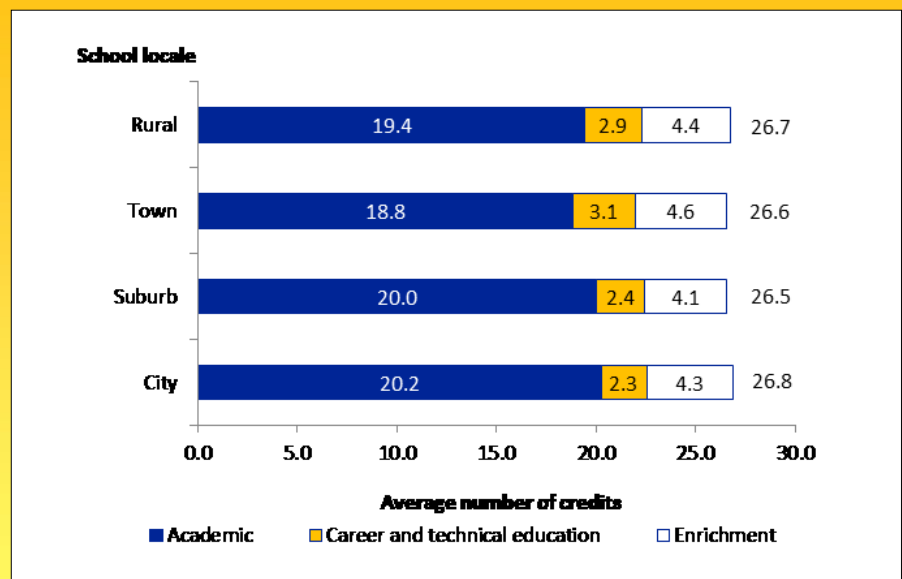
As of 2013, public high school graduates earned an average of 26.7 credits overall, with 19.8 credits in academic courses, 2.6 in CTE courses, and 4.3 in enrichment courses.<sup>1</sup> The average overall credits earned by graduates in city, suburban, town, and rural locales were all within 0.3 credits of each other (**figure 1**). However, graduates from rural areas and towns earned fewer academic credits and more CTE credits than their city and suburban counterparts.<sup>2</sup> Graduates in rural areas and towns earned an average of 19.4 and 18.8 academic credits, respectively, compared to 20.2 and 20.0 academic credits among graduates in cities and suburbs, respectively. In CTE, rural and town graduates earned an average of 2.9 and 3.1 credits, respectively, while city and suburban graduates earned 2.3 and 2.4 credits, respectively.

Another CTE participation measure is concentrated CTE coursetaking. A graduate is a CTE concentrator if the graduate earns at least a minimum number of credits in one of the 10 designated CTE subject fields (**figure 2**), such as at least 2 credits or at least 3 credits in health care. Current federal legislation defines concentrators using a 2-credit cutoff.<sup>3</sup> Using that definition, a similar pattern

was found: Relatively more graduates from rural areas and towns were 2-credit concentrators (43 and 45 percent, respectively), compared to graduates in suburbs and cities (34 and 35 percent, respectively).<sup>4</sup>

Looking at credits earned within each of the 10 recognized CTE areas, two areas—agriculture and natural resources, and construction—follow the overall pattern, with graduates from rural areas and towns earning more

**FIGURE 1. Average number of credits public high school graduates earned in each curricular area, by locale of grade 12 school: 2013**



NOTE: Locale is collapsed from a 12-category urban-centric school locale code. *Suburb* and *city* are locales in urbanized areas with a population of 50,000 or more; *rural* and *town* are locales outside of urbanized areas. Public high school graduates are defined as students who graduated from a public high school with an honors or standard diploma by August 31, 2013. The figure includes only graduates who had a complete grade 9–12 transcript, defined as one that recorded at least 16 Carnegie units (the equivalent of one credit, or one course taken every school day, one period per day, for a full school year), with a positive, nonzero number of units completed in English. See <http://nces.ed.gov/surveys/ctes/tables/H198.asp> for more precise estimates and standard errors.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSLs:09), Base-year, 2013 Update, and High School Transcript File.

# Career and Technical Education Coursetaking in 2013, by Locale

credits in these subjects than did graduates from cities and suburbs. Two other subjects showed variations across locales. First, graduates from towns earned more credits in engineering, design, and production than did graduates from cities and suburbs (0.43 versus 0.28 and 0.32 credits, respectively). Second, graduates from towns, rural areas, and cities earned more credits in health care than did graduates from suburban areas (0.21, 0.20, and 0.24 versus 0.11 credits, respectively).

In contrast, there was no clear pattern in credits earned across locales in the six CTE areas of business, finance, and marketing; communication and communication technologies; computer and information sciences; consumer services; mechanical repair and operation; and public services.<sup>5</sup>

## Endnotes

<sup>1</sup> Not in figures; see <https://nces.ed.gov/surveys/ctes/tables/h185.asp>. Retrieved August 2, 2019. Academic credits are credits in English, fine arts, foreign languages, mathematics, science, and social studies. CTE credits are credits in the 10 subject fields listed in figure 2. Enrichment credits are credits in all other subject fields, such as physical education and family and consumer sciences education. Transcript courses were coded into subject fields using the 2018 Secondary School Course Taxonomy; see <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019046>. Retrieved August 2, 2019.

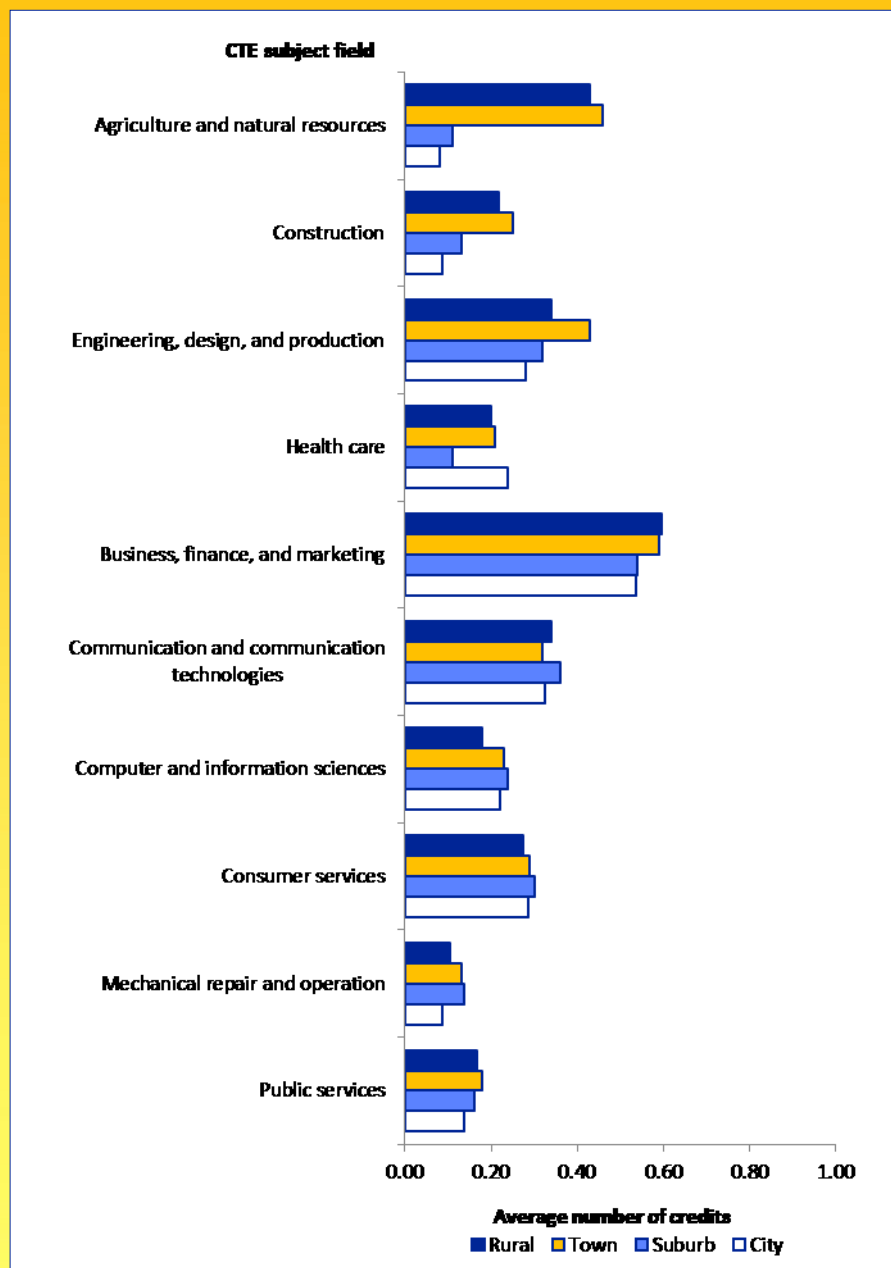
<sup>2</sup> For enrichment courses, graduates from towns earned more credits than graduates from suburban areas (4.6 versus 4.1 credits, respectively).

<sup>3</sup> Strengthening Career and Technical Education for the 21st Century Act, P.L. 115–224, Section 7(12). <https://www.congress.gov/bill/115th-congress/house-bill/2353>. Retrieved August 2, 2019.

<sup>4</sup> Not in figures; see <https://nces.ed.gov/surveys/ctes/tables/h203.asp>. Retrieved August 2, 2019. The difference between graduates from towns and cities was marginally significant, with a *t*-value of 1.96.

<sup>5</sup> Statistics on the percentage of concentrators were too unreliable to report by subject field within each locale.

**FIGURE 2. Average number of credits public high school graduates earned in each career and technical education (CTE) subject field, by locale of grade 12 school: 2013**



NOTE: Locale is collapsed from a 12-category urban-centric school locale code. *Suburb* and *city* are locales in urbanized areas with a population of 50,000 or more; *rural* and *town* are locales outside of urbanized areas. Public high school graduates are defined as students who graduated from a public high school with an honors or standard diploma by August 31, 2013. The figure includes only graduates who had a complete grade 9–12 transcript, defined as one that recorded at least 16 Carnegie units (the equivalent of one credit, or one course taken every school day, one period per day, for a full school year), with a positive, nonzero number of units completed in English. See <http://nces.ed.gov/surveys/ctes/tables/H198.asp> for estimates and standard errors.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Longitudinal Study of 2009 (HLS:09), Base-year, 2013 Update, and High School Transcript File.

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, with

no adjustments for multiple comparisons. 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.