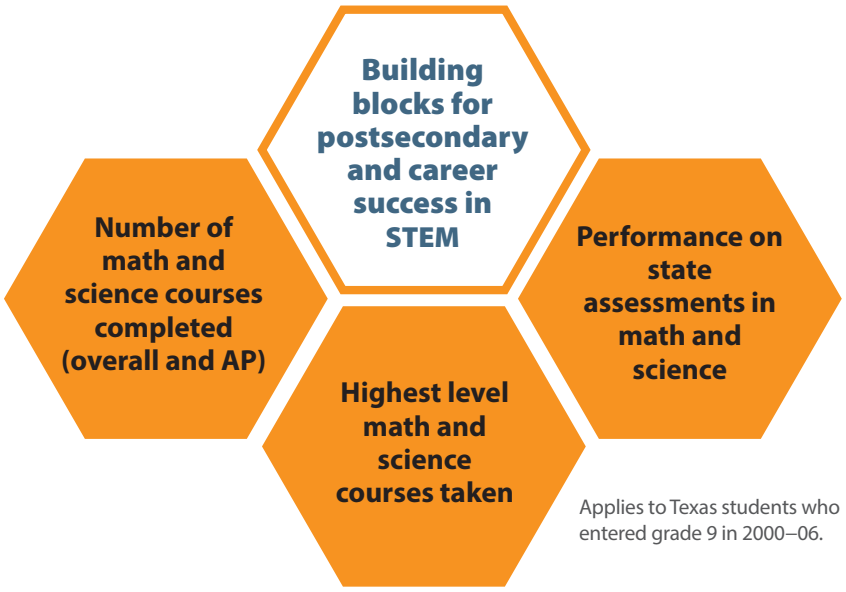
Trends in Texas Hispanic student enrollment and performance in science, technology, engineering, and mathematics (STEM)

Demand for STEM workers is **growing rapidly**, but Hispanic Texans remain **underrepresented** in high-paying STEM fields and among students earning postsecondary STEM degrees. The Regional Educational Laboratory (REL) Southwest, at the request of and in collaboration with our Texas Hispanic STEM Research Alliance,[1] examined Texas education data to understand these patterns in greater depth. The findings were published in 2017.

Texas students' math and science coursetaking and performance in high school predicted the likelihood of declaring a STEM major and earning a STEM degree.



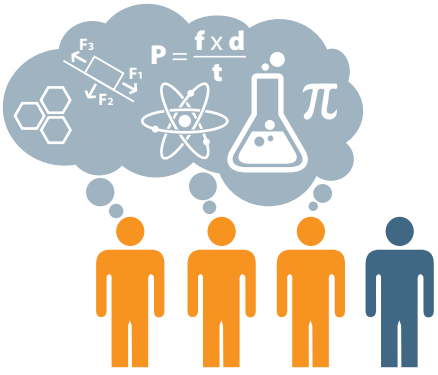
Applies to Texas students who entered grade 9 in 2000–06.

When students' high school math and science coursetaking and performance **were similar**, Hispanic and non-Hispanic White students had the **same likelihood** of achieving the following:

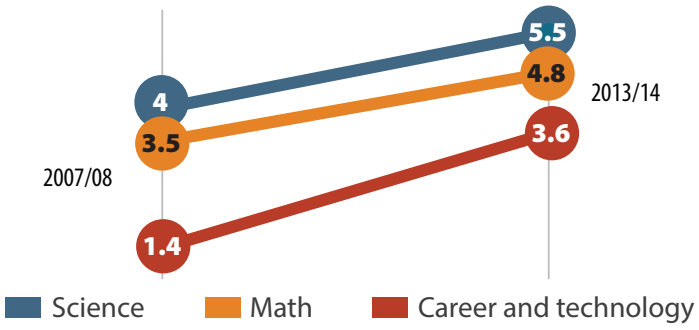
- Declaring STEM majors
- Persisting in STEM majors
- Earning STEM degrees

Most Texas high schools offered a number of advanced STEM courses, with average course offerings increasing during the period studied.

3 out of 4 Texas students attended high schools offering **19 or more**[2] advanced STEM courses.



Growth in average number of advanced STEM courses offered in Texas high schools, 2007/08–2013/14 school years

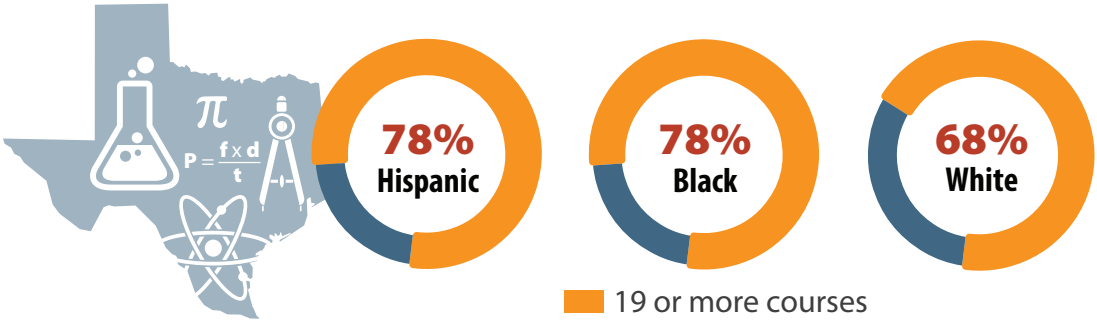


[1] The Texas Hispanic STEM Research Alliance includes members who represent state and local education agencies, regional education service centers, universities, and the American STEM Alliance.

[2] Schools were divided into quintiles based on the total number of high-level STEM courses offered. Schools with 19 or more of such courses are in the fourth and fifth quintiles.

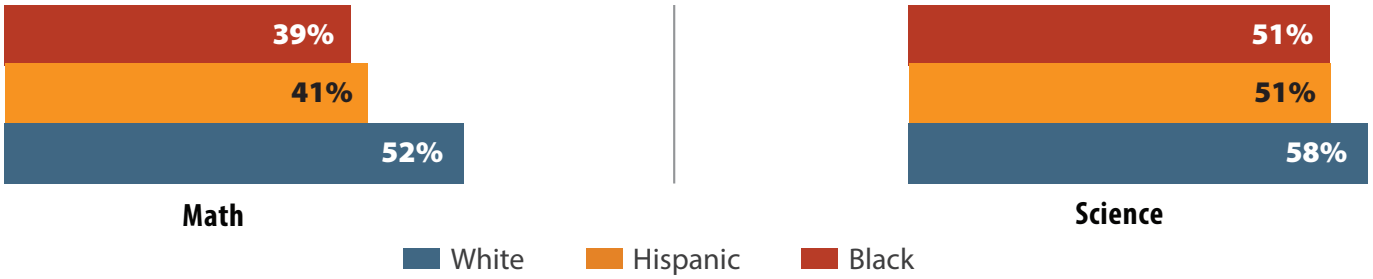
Overall, Hispanic high school students had equal if not greater access to advanced STEM courses than their non-Hispanic White peers.

Proportion of Texas students who attended high schools offering 19 or more advanced STEM courses, 2013/14

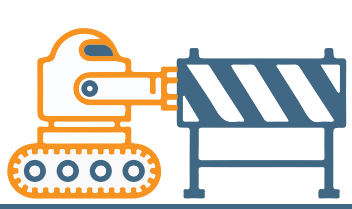


Despite this access, Hispanic students completed fewer advanced STEM courses than non-Hispanic White students, even among students demonstrating high math ability.

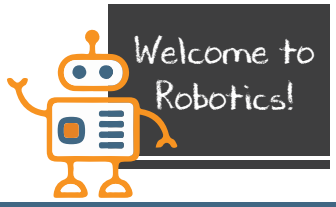
Proportion of Texas students with high math ability who completed three or more advanced math or science courses, 2013/14



To address this gap, explore ways to encourage Hispanic student enrollment in advanced STEM courses and ways to support students once enrolled.



Identify barriers



Encourage enrollment

Support after enrolled

Icons Courtesy of Noun Project

Read the reports:

- https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4485
- https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4494

Sources: Borman, T., Margolin, J., Garland, M., Rapaport, A., Park, S. J., & LiCalsi, C. (2017). *Associations between predictive indicators and postsecondary science, technology, engineering, and math success among Hispanic students in Texas* (REL 2018–279) and Garland, M., & Rapaport, A. (2018). *Advanced course offerings and completion in science, technology, engineering, and math in Texas public high schools* (REL 2018–276). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from http://ies.ed.gov/ncee/edlabs.

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