

## **Engineering their Career: The Academic and Professional Experiences of Latino Engineering Students who Enroll in an HSI with Dual Credits**

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Hispanics represent a growing population, and this demographic reality is especially notable in Texas, the location of this study, where Hispanics represent approximately 38 percent of the state's total population (Motel & Patten, 2013, p. 13). Indeed, the heightened enrollment of Hispanic students has led to the proliferation of HSIs and Emerging HSIs. Unfortunately, these demographic trends are not reflected in Latino student enrollment and graduation in science, technology, engineering, and mathematics (STEM) fields, particularly engineering (Crisp & Nora, 2012). Dual enrollment is a potential strategy for overcoming access and persistence barriers (Texas Higher Education Coordinating Board, 2015, Gomez, 2001) confronting Latino engineering students.

This research study uniquely examines the academic and social experiences of Latino students enrolled in engineering programs who enter a Hispanic Serving Institution (HSI) with dual credits. It also fills a gap in the literature through its longitudinal analysis of the long-term academic and professional experiences of these students in engineering programs. The guiding research questions for this study are: 1) How do Latino students who enroll with dual credits describe their first year in an engineering program?, 2) How does dual enrollment influence Latino student persistence in engineering?, 3) After graduation, how does dual enrollment influence Latino students' experiences as an engineering professional?, and 4) How does the HSI designation influence Latino engineering student success, if at all?

The findings from this longitudinal, qualitative study have implications for research, practice, and policy. First, it has potential implications for future research Latino students' college access and persistence. As the Latino population is increasingly represented in Texas' K-16 education, it is important to fully understanding the breadth and depth of their experiences as they access and persist in higher education. Next, state policymakers continue to advocate for dual credit programs as an opportunity to facilitate degree completion for Latinos as well as other traditionally under-represented communities. By shedding light on students' dual enrollment and transition experiences, this study can inform state dual credit policies. It can also highlight best practices for fostering college readiness among dual credit students in traditional high schools, early college high schools, and community colleges. Finally, the national agenda to increase degree completion, particularly in STEM fields, necessitates further research on under-represented student populations in engineering. This study will document the obstacles and opportunities students confront in an engineering program, while also investigating the influence, if any, of an HSI designation. The longitudinal nature of this study will offer insight into the professional realities Latino students face once they have persisted in an engineering program.

## References

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