

**TEACHING AND LEARNING EXAMPLE:**

## THE BRIDGE-TO-MATH DOCTORATE PROGRAM



**Institution:**

The University of  
Texas at Arlington

**Location:**

Arlington, Texas

**Year Started:**

2016

**Program Point  
of Contact:**

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**PURPOSE**

The Bridge-to-Math Doctorate program was established to strengthen the pathway to PhD degrees in mathematics for Latino, and all, students who remain underrepresented in the field. Through a funded, one-year bridge experience, the program addresses barriers to doctoral education by strengthening students' mathematical preparation and equipping them to enter and succeed in PhD programs.

As a part of a Hispanic-Serving Institution, the program places a particular focus on expanding opportunities for Latino students, who comprise 40% of Texas's population but earn only 6% of mathematics PhDs nationwide. Through intentional recruitment, strategic mentoring practices, professional development, and cultivating a strong sense of belonging, the program works to close this representation gap, strengthening students' pathways to doctoral education in mathematics and developing the critical and analytical skills needed for advanced study and careers in mathematics. Through a culture rooted in familismo, students build meaningful connections that contribute to persistence, degree attainment, and long-term professional success.

### WHAT STUDENTS SAID ABOUT THIS YEAR'S EXAMPLE

*"The UTA Bridge program offers a more flexible course plan to strengthen my foundation in analysis and linear algebra. With a strong mathematical foundation, I was able to move smoothly through my doctoral program."* - Bridge program participant

*"One thing that impressed me is the support of the professors and other graduate students advocating for the success of students as they matriculate through the Bridge program."* - Bridge program participant



## PRACTICES

The Bridge-to-Math Doctorate program strengthens the pathway for Latino, and all, students into mathematics PhD programs through a one-year, funded bridge model that provides an intentional transition to doctoral study. Well-sequenced coursework prepares students for qualifying exams in linear algebra and analysis, and program experiences create opportunities for collaboration and the design of their own creative activities in the content.

The program mentoring network extends beyond the bridge year, bringing together mathematics faculty and former participants as peer mentors, creating a community, and building belonging. Peer mentors help students navigate graduate coursework and doctoral expectations while providing guidance on professional opportunities in academia and the mathematics industry. The program partners closely with UTA's HSI Initiatives to connect students with culturally relevant resources and support. Collectively, this design connects academic instruction, mentoring, and professional development as students progress from the Bridge program into doctoral education and careers.

## IMPACT

The Bridge-to-Math Doctorate program demonstrates strong outcomes in preparing Latino and all students for doctoral study in mathematics. From 2022–2025, the program served eight scholars, increasing Latino representation from 33% to 67% at its peak. All students successfully transitioned into PhD programs with full financial assistantships. Math PhD graduates in this program earn a median first-year salary of \$97,669 and secure employment within one year.

**Access and Representation:** The program serves a significantly more diverse student population compared to institutional benchmarks at UTA, with 57% of students identifying as Latino compared to 9% of UTA PhD students, and 29% Latino women compared to 5% of UTA PhD students.

**Retention and Completion:** Within the 2022–2025 cohorts, 67% of students were retained, exceeding other UTA PhD programs (57%). The program achieved a 44% five-year graduation rate, compared to 38% across other College of Science programs. Among the 2016–2017 through 2020–2021 cohorts, 16 students graduated within five years, including nine Latino students (56%).

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