The University of Texas at Austin
Charles A. Dana Center
College of Natural Sciences

TEXAS SUCCESS CENTER

Supporting Implementation of the College Prep Mathematics Course:
Improving College Readiness for Texas Students

Project Background

The Charles A. Dana Center at The University of Texas at Austin is facilitating collaboration among Texas school districts and institutions of higher education to implement a college prep mathematics course that will prepare high school students for success in multiple mathematics pathways now available on higher education campuses.

As part of this project, we will evaluate student experiences and outcomes from the college prep mathematics course to drive continuous improvement of course implementation practices.

We seek to create an effective, replicable model of implementation that dramatically increases the number of students who are ready for all entry-level college mathematics courses upon graduation from high school. We are working in collaboration with colleges participating in the Dana Center Mathematics Pathways work, the Texas Success Center, and various local organizations to expand participation in this effort.

College Prep Mathematics

Since 2012, Texas community colleges have been adopting mathematics pathways as their normative practice and working to articulate those pathways with their regional four-year institutions of higher education.

Now, efforts are also underway to articulate these pathways with the Texas school districts that feed into the community colleges, because many students transitioning from high school to higher education discover that though they earned a high school diploma, they are not deemed ready for college-level courses.

A key resource for improving the transition from high school to higher education is the College Prep Mathematics Course. Intended for twelfth-graders who are not yet college-ready in English or mathematics, this rigorous course is designed to prepare them for entry-level college courses in these content areas. Effective implementation of the College Prep Mathematics Course can dramatically increase the number of Texas students who graduate from high school ready for college-level mathematics.

The Texas Success Center's *HB 5 College Preparatory Math Content Framework*[1] provides a comprehensive list of student learning objectives aligned to multiple mathematics pathways in higher education. It describes key mathematics content that students need to know to be successful in any entry-level college mathematics course, such as Contemporary Mathematics, Statistical Reasoning, or College Algebra.

The Dana Center has developed a *Transition to College Mathematics* course aligned to the *Framework*, along with professional development services for teachers of this course.

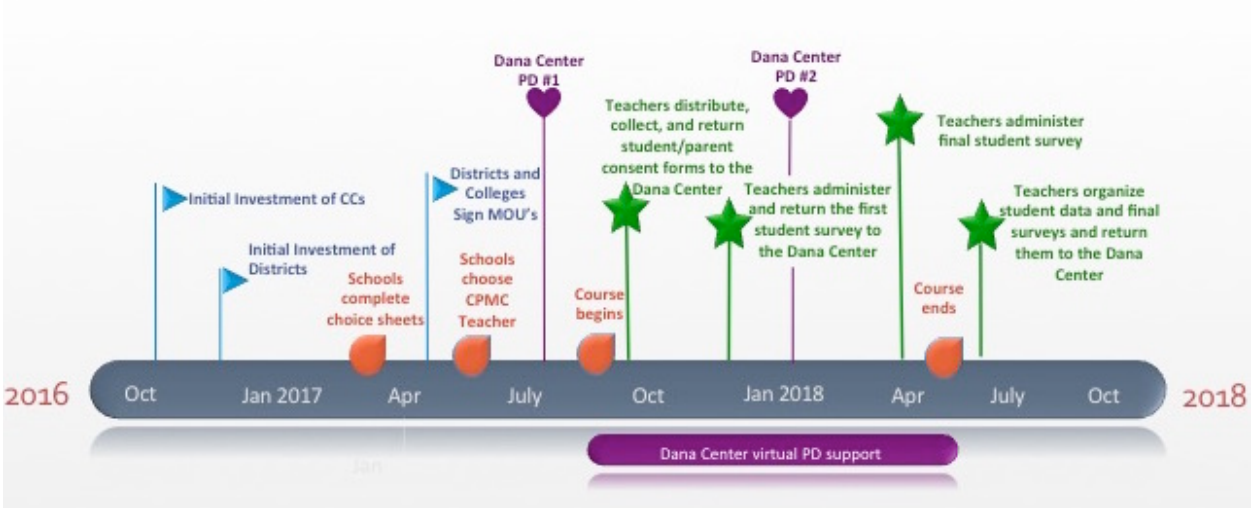
Participating in This Project's Research Plan

We invite school districts and institutions of higher education to offer a College Prep Mathematics Course aligned to the Texas Success Center's *Framework*, using the Dana Center's curriculum materials or alternate materials that align with the *Framework*'s vision. Participating institutions will also be part of an evaluation that will look at course implementation and student outcomes.

The intent of this research is to elicit and analyze overall trends (the identities of individual students will be kept confidential). The University of Texas at Austin's Institutional Review Board reviews and approves all such research activities. To improve implementation of the college prep mathematics course, the Dana Center will gather evidence by:

- Conducting surveys with teachers before and after their participation in the professional development—and student surveys before and after student participation in the course.
- Collecting and analyzing student outcomes data and correlating factors, including mathematics course history, student performance in the college prep mathematics course, and student success in entry-level college mathematics courses.

Collaborator Commitments



[1] Available at http://www.tacc.org/uploads/tinymce/texas%20success%20center/resource-collegeprepcourses/collegepreparatorycourse-math_framework_final.pdf

Commitments from the Dana Center

Participating school districts will receive multiple benefits from this collaboration with the Dana Center, including:

- Use of Dana Center course instructional materials and suite of supporting resources. Districts do not have to use these materials to participate, but the materials are available for those who want them.
- Teacher professional development through a summer workshop, monthly coaching calls, and a mid-year workshop.
- A network of district and higher education colleagues implementing the Dana Center—or another, comparable–college prep course.
- Overview of findings from the overall project evaluation.

Commitments from Districts

Engagement from the following leadership and staff members for optimal implementation:

- **Superintendent or designee:** Sign the MOU with the Dana Center and college partner
- **District curriculum and math directors**: Serve as point person for the Dana Center and the college partner, keep principals informed about key components of campus implementation of the course, support teachers in teaching the course and collecting and sharing data according to the MOU and district policies
- **High school principals:** Ensure that eligible students have access to the course and that the teacher who attends summer professional development stays as the course teacher for the entire school year.
- **Teachers of the college prep mathematics course:** Attend all associated professional development opportunities, distribute and return student/parent consent forms and student surveys, teach the course with fidelity to the vision laid out in the Texas Success Center *Framework*.

To ensure that this work is successfully implemented, school districts must commit to the following:

- Implement the college prep mathematics course district-wide.
- Allow teachers to participate in professional development for this course during the summer and in the middle of the school year.
- Provide Dana Center evaluators with student information and achievement data for participating students, including which mathematics courses they took previously, student attendance in the college prep mathematics course, and whether students successfully completed the course.
- Distribute and return student/parent consent forms and student surveys.
- Contribute to reporting and evaluation activities, as needed.

Commitments from Community Colleges

Engagement from the following staff for optimal implementation:

- **President or designee:** Approve and sign the MOU with the Dana Center and with district partner(s)
- **Mathematics department chair or designee:** Champions the collaboration with the Dana Center and regional districts and colleges, convenes district curriculum and/or

math directors to invest them in joining the regional implementation efforts, helps with writing or approving the final exam for the course aligned to the Texas Success Center *Framework*.

- **Administrator charged with collaborating with K12 districts for the college prep mathematics course:** Champions the collaboration with the Dana Center and regional districts and colleges, convenes district curriculum and/or math directors to invest them in joining the regional implementation efforts.

To ensure that this work is successfully implemented, community colleges must commit to the following:

- Work with the Dana Center to support district implementation of the course.
- Provide Dana Center evaluators with student information and achievement data for students from participating districts who took the college prep mathematics course, including which first mathematics course they chose to take in college and whether they were successful, their attendance in the course, and whether they are full-time or part-time students.
- Contribute to reporting and research activities, as needed.

Contact the following Dana Center staff for more information about how to participate.

District and college main point of contact: Lindsay Fitzpatrick, K12 Policy Specialist, Lindsay.fitzpatrick@austin.utexas.edu

Content expert: Kathi Cook, Manager, Online Course Programs, klcook@austin.utexas.edu