

**EQUITABLE**  
**STUDENT PATHWAYS**

FEBRUARY 15 & 16  
AUSTIN, TEXAS



**2023 SYMPOSIUM**





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Wifi name: ESPSymposium  
Wifi password: ESP2023!



# WELCOME



**Rebecca Karoff, Ph.D.**

Associate Vice Chancellor  
for Academic Affairs

The University of Texas  
System

rkaroff@utsystem.edu

Welcome to the Equitable Student Pathways Symposium, convened to showcase and celebrate one of the UT System's signature student success initiatives and the main component of the UT System's *Data Agency, Action and Insight: Redesigning Student Pathways to Ensure Equity* grant, a two-year project generously funded by Lumina Foundation in Summer 2021.

The Equitable Student Pathways work is a synthesizing project, inherent in the grant design with its focus on cultivating data agency, expanding equity-mindedness, and redesigning curricula. It is process-heavy, data-rich, and equity-grounded in its exploration of curricular pathways and how to make them as student-centered as possible. It includes layers of leadership, speaks to the imperative for shared responsibility, and understands the power of a systems and System approach to address inequities that are persistent, historic, and entrenched.

There is so much good work taking place across UT System institutions, and the Equitable Student Pathways Project encapsulates that! Today and tomorrow, we are going to explore together its successes, challenges, and the essential ongoing work to replicate and scale its goals, impact, and outcomes. We will hear from three visionary keynote speakers; we will hear from and discuss with the leaders of the institutional projects the work they are doing; and we will hear from our students about how they experience our curricula and institutions.

At the same time, there is much more to be done and the Symposium is designed to do more than celebrate and showcase. The Equitable Student Pathways Project asks us to hold a mirror to ourselves, to examine how we position students for success, how we structure our institutions and majors to be truly inclusive, and how — at times — we need to dismantle those structures. Only then can we ensure we are applying an authentic equity lens that leads to action and to equitable pathways so that all our students are able to fulfill their educational goals and move into lives of meaningful work, civic engagement, and purpose.

Thank you for coming, and I look forward to diving in deeper with you into the work of the Equitable Student Pathways Project!

A handwritten signature in black ink that reads "Rebecca Karoff".

Rebecca Karoff, Ph.D.

Associate Vice Chancellor for Academic Affairs and Grant PI





**Debra Humphreys, Ph.D.**

Vice President for  
Strategic Engagement  
Lumina Foundation  
dhumphreys@  
luminafoundation.org

Dr. Debra Humphreys serves on the executive team of Lumina Foundation and oversees the Foundation's strategic communications work, as well as its efforts to increase the number of individuals attaining high-quality bachelor's degrees. She also provides direction and coordination for Lumina's substantive work, bringing together its commitments to equity and postsecondary educational quality. Humphreys, who began her tenure at Lumina Foundation in October 2016, brings a wealth of prior experience in higher education, communications, public policy, and faculty and curriculum development in undergraduate education.

Dr. Humphreys received a BA from Williams College and Ph.D. in English from Rutgers University. Prior to joining Lumina Foundation in October 2016, Humphreys served as the senior vice president for academic planning and public engagement at the Association of American Colleges and Universities — a position she assumed in early 2016 after serving for three years as VP of communications, policy, and public engagement, and 11 years as VP for communications and public affairs. Prior to 2001, she served as director of programs in the Office of Diversity, Equity and Global Initiatives at the American Association of Colleges and Universities (AAC&U) where she directed programs on diversity, equity, and women's issues in higher education.

In her work with higher education institutions, Humphreys has conducted academic leadership and faculty workshops on teaching and learning issues and especially on the process of general education reform and developing diversity courses and requirements. She also worked with state systems and policy leaders to bring greater focus on the quality of student learning to both institutional and regulatory processes and practices. She serves on the editorial advisory board of *Change Magazine* and on the Equity Advisory Council of Credential Engine. In addition to her expertise on higher education policy, academic planning, communications, general education and diversity in higher education, she has written, taught, and published on African American women's literature, immigrant women's literature, and women and American film history.



## KEYNOTE



**David Troutman, Ph.D.**

Deputy Commissioner for  
Academic Affairs

Texas Higher Education  
Coordinating Board

david.troutman@  
highered.texas.gov

Dr. David Troutman is the Deputy Commissioner for Academic Affairs at the Texas Higher Education Coordinating Board. He plays a critical role in advancing the goals of Building a Talent Strong Texas and the Governor's Tri-Agency Workforce Initiative. His portfolio includes College and Career Advising, Academic and Health Affairs, Student Success, Digital Learning, and Texas Insights Accelerator. Dr. Troutman has extensive experience in Texas higher education, having most recently served as Chief Data Officer and Associate Vice Chancellor for Institutional Research and Analysis at The University of Texas System. In this role, he led a team of research and policy analysts to transform data into timely and meaningful information supporting UT System initiatives and policy decisions across its 13 institutions. Troutman served as the co-PI with Rebecca Karoff on the UT System's Lumina Grant and is the architect of the Participatory Action Institutional Research (PAIR) change model at the heart of the Equitable Student Pathway Project. Troutman collaborates with federal and state agencies such as the U.S. Census Bureau, Texas Workforce Commission, and nonprofit foundations such as the Bill and Melinda Gates Foundation, Lumina Foundation, and Strada Education Network.



**Anne-Marie Núñez, Ph.D.**

Executive Director

Diana Natalicio Institute for  
Hispanic Student Success

The University of Texas  
at El Paso

[amnunez9@utep.edu](mailto:amnunez9@utep.edu)

Dr. Anne-Marie Núñez is the inaugural Executive Director of the Diana Natalicio Institute for Hispanic Student Success and Distinguished Centennial Professor at the University of Texas at El Paso. Dr. Núñez has studied Hispanic-Serving Institutions (HSIs) and Hispanic student success for two decades. Her work employs sociological approaches to explore how multiple social identities (e.g., racial, ethnic, class, linguistic) shape educational opportunities. Núñez has published several quantitative, longitudinal studies on the higher education experiences and trajectories of Latinx, first-generation, English learner, working class, and migrant students. Her book *Hispanic-Serving Institutions: Advancing Research and Transformative Practice* was the first book ever to focus on HSIs as organizations, and it won an International Latino Book Award. In 2021, she was identified in the Stanford Elsevier Scholar Index as ranking among the top 2% of scientists in the world. The American Educational Research Association (AERA) also recognized her as a 2022 AERA Fellow, an honor given to top scholars in educational research with sustained exceptional research contributions.

Dr. Núñez's work has generated knowledge about how HSIs can apply the concept of Hispanic "servingness" to promote culturally affirming experiences that foster positive outcomes for Hispanic students. Her most recent scholarship has applied the concept of Hispanic servingness to generate knowledge and models of how to create supportive environments for minoritized students in computer science, one of the least diverse science disciplines. As a National Academy of Sciences Committee member, Núñez co-authored and disseminated the 2019 report, *Minority Serving Institutions: America's Underutilized Resource for Strengthening the STEM Workforce*. She was recently recognized in the 2023 annual *Education Week* RHSU Edu-Scholar Public Influence rankings as among 200 of the most influential educational researchers in the nation shaping educational practice and public policy. She has served as faculty at two UT System HSI universities with R1 status — UTEP and UTSA.

## Day 1 – Wednesday, February 15

11:30 pm – 12:00 pm	<b>Registration</b>
12:00 pm – 1:30 pm	<b>Lunch and Welcome</b> <ul style="list-style-type: none"> <li>• JB Milliken, Chancellor, University of Texas System</li> <li>• Rebecca Karoff, Associate Vice Chancellor for Academic Affairs, University of Texas System</li> </ul>
12:45 pm – 1:30 pm	<b>Building Equitable Pathways to a Stronger Future: What is at Stake?</b> <ul style="list-style-type: none"> <li>• Debra Humphreys, Vice President for Strategic Engagement, Lumina Foundation</li> </ul>
1:30 pm – 1:45 pm	<b>Break</b>
1:45 pm – 2:45 pm	<b>Executive Sponsorship of Equitable Student Pathways</b> <ul style="list-style-type: none"> <li>• Archie Holmes (Moderator), Executive Vice Chancellor for Academic Affairs, University of Texas System</li> <li>• Amir Mirmiran, Provost and Executive Vice President for Academic Affairs, University of Texas at Tyler</li> <li>• Janna Arney, Executive Vice President and Provost, University of Texas Rio Grande Valley</li> <li>• Tamara Brown, Provost and Senior Vice President for Academic Affairs, University of Texas at Arlington</li> <li>• Kimberly Espy, Provost and Senior Vice President for Academic Affairs, University of Texas at San Antonio</li> </ul>
2:45 pm – 3:00 pm	<b>Break</b>
3:00 pm – 3:55 pm	<b>Equitable Student Pathways Projects at the Institutions – Panel One</b> <ul style="list-style-type: none"> <li>• Jasmine Haywood (Moderator), Strategy Director for Student Success, Lumina Foundation</li> <li>• Jessica Murphy, Dean of Undergraduate Education, University of Texas at Dallas</li> <li>• Colleen Swain, Associate Provost of Academic Success, University of Texas at Tyler</li> <li>• Julie Rivera, Director of Academic Reports and Curriculum, University of Texas at El Paso</li> <li>• Mark Appleford, Associate Vice Provost of Undergraduate Studies, University of Texas at San Antonio</li> </ul>
4:00 pm – 4:55 pm	<b>Equitable Student Pathways Projects at the Institutions – Panel Two</b> <ul style="list-style-type: none"> <li>• Alison Kadlec (Moderator), Founding Partner, Sova Solutions</li> <li>• Ashley Purgason, Associate Vice Provost for Student Success, University of Texas at Arlington</li> <li>• Jeff Freels, Director of Academic Policy and Research, University of Texas at Austin</li> <li>• Mike Frawley, Dean of Student Success, University of Texas Permian Basin</li> <li>• Jonikka Charlton, Associate Provost of Student Success and Dean of the University College, University of Texas Rio Grande Valley</li> </ul>
4:55 pm - 5:15 pm	<b>Break</b>
5:15 pm – 5:45 pm	<b>Data to Action: Closing Success Gaps in Texas</b> <ul style="list-style-type: none"> <li>• David Troutman, Deputy Commissioner for Academic Affairs, Texas Higher Education Coordinating Board</li> </ul>
6:00 pm – 7:30 pm	<b>Reception and Hors d’Oeuvres</b>



## Day 2 – Thursday, February 16

7:30 am – 8:20 am	<b>Breakfast</b>
8:20 am – 8:30 am	<b>Welcome and Agenda for the Day</b> <ul style="list-style-type: none"> <li>• Rebecca Karoff, Associate Vice Chancellor for Academic Affairs, University of Texas System</li> </ul>
8:30 am – 9:30 am	<b>Student Voices</b> <ul style="list-style-type: none"> <li>• Zainab Okolo (Moderator), Strategy Officer for Student Success, Lumina Foundation</li> <li>• Students from UT Arlington, UT Austin, and UT San Antonio</li> </ul>
9:30 am – 9:45 am	<b>Break</b>
9:45 am – 10:40 am	<b>Exploring the Boundaries of Curricular Redesign</b> <ul style="list-style-type: none"> <li>• Rebecca Karoff (Moderator), Associate Vice Chancellor for Academic Affairs, University of Texas System</li> <li>• Jason Boyle, Associate Professor and Department of Kinesiology Chair, University of Texas at El Paso</li> <li>• Javier Kypuros, Dean of the College of Engineering, University of Texas at Tyler</li> <li>• Marcela Ramirez, Associate Vice Provost of Teaching, Learning, &amp; Digital Transformation, University of Texas at San Antonio</li> <li>• Fred Zaidan, Senior Associate Dean of College of Sciences, University of Texas Rio Grande Valley</li> <li>• 15-Minute Table Exercise</li> </ul>
10:45 am – 11:40 am	<b>Cultivating Data Agency</b> <ul style="list-style-type: none"> <li>• Kasey Klepfer (Moderator), Senior Research and Policy Analyst, University of Texas System</li> <li>• Courtney Brecheen, Senior Associate Dean, University of Texas at Dallas</li> <li>• Emma Gelsinger, Senior Director of Academic and Health Affairs, Texas Higher Education Coordinating Board</li> <li>• Funda Karapinar-Reilly, Director of Analytics, University of Texas at Arlington</li> <li>• Steve Wilkerson, Associate Vice Provost and Chief Analytics Officer, University of Texas at San Antonio</li> <li>• 15-Minute Table Exercise</li> </ul>
11:45 am – 1:00 pm	<b>Lunch</b>
12:00 pm – 12:45 pm	<b>Infusing Equity-Centered Data Analytics Approaches with Hispanic-Servingness</b> <ul style="list-style-type: none"> <li>• Anne-Marie Núñez, Executive Director of the Diana Natalicio Institute for Hispanic Student Success, University of Texas at El Paso</li> </ul>
12:45 pm - 1:00 pm	<b>Closing Remarks</b> <ul style="list-style-type: none"> <li>• Rebecca Karoff, Associate Vice Chancellor for Academic Affairs, University of Texas System</li> </ul> <p>The event will continue for PAIR Cohort Phase 1 and 2 members.</p>
1:00 pm – 2:00 pm	<b>Breakout Session Phase 1 &amp; 2 PAIR Cohorts</b> <ul style="list-style-type: none"> <li>• Equitable Student Pathways Phase 2 PAIR Cohort Members</li> </ul>



## PROJECT GOALS

This project seeks to address equity gaps and improve the pass rates (grades of A, B, or C) in several high enrollment, introductory courses to ensure students can achieve success early and remain on path to timely degree completion. By addressing gateway courses with enrollments totaling more than 2,200 per semester and high drop and failure (DFW) rates, this project hopes to positively impact student retention and graduation rates, ensure that access remains a priority for our institution, and provide academic support resources for students sooner.



## TEAM MEMBERS

- » **Ashley Purgason (Team Lead)** – Associate Vice Provost for Student Success, Office of the Provost
- » **Minerva Cordero** – Interim Vice Provost for Faculty Affairs and Professor, College of Science
- » **Funda Karapinar-Reilly** – Director, University Analytics
- » **Lynn Peterson** – Senior Associate Dean for Academic Affairs and Professor, College of Engineering
- » **Laura Mydlarz** – Associate Dean for Academic Affairs and Professor, College of Science
- » **Amber Smallwood** – Assistant Vice Provost for Academic Planning and Policy, Office of the Provost
- » **Ram Venkataraman** – Department Chair and Professor, College of Business



## DATA DISCOVERY

- » **Enrollment and DFW rates** – identify equity gaps and select specific courses to focus on.
- » **Disaggregated admissions data** – incoming student demographics, admissions category (conditional vs. unconditional), test scores, HS GPA, etc.
- » **Civitas course data** – how a passing grade in a specific course impacts student progression.
- » **Disaggregated retention and graduation rates** – longer-term outcomes and equity gaps.
- » **Learning management system data** – tracking early student engagement in coursework.
- » **Civitas Inspire for Faculty** – tracking early student engagement in coursework.
- » **UT System Dashboards** – DFW rates and enrollment overviews.



## ACTION PLAN

Each cohort, as a deliverable of the Equitable Student Pathways project, developed an action plan to implement, track, and assess strategies developed through the PAIR cohort process. The following section provides a broad overview of these detailed strategies.

### Campus-Wide

- » Develop common language across campus around student success and equity.
- » Create a changed narrative across campus de-emphasizing DFW rates and emphasizing the resources and strategies needed to serve unique student populations earlier in courses.
- » Improve student success in accounting courses.
- » Engage new faculty and staff stakeholders not previously involved in this work.

### Faculty

- » Formalize mechanisms for faculty participation in this work. Engage additional faculty to explore courses not already identified by this project.
- » Enhance faculty engagement, especially pertaining to data usage and availability.
- » Democratize data of inequitable student outcomes provided to faculty.
- » Create a toolkit of best practices and resources for faculty and professional development opportunities.

# Enhancing the Equity Mindedness Conversation with Faculty of High Enrollment, High DFW Rate Courses



- » Formalize support from the Office of the Provost through the development of a fellows' program or other avenues of faculty participation, including resource allocation.
- » Increase faculty engagement and professional development opportunities related to adapting pedagogy to meet unique student needs and move away from one-size-fits-all instruction.

## Students

- » Tailor pedagogical approaches and experiences to students with varying and unique needs.
- » Provide students earlier access to a diverse menu of course supports that meet their unique needs, especially early in the course timeline.
- » Create more scaled opportunities for students to participate in successful programs like peer-led team learning.
- » Offer frequent and meaningful opportunities for students to provide feedback related to their experiences, perspectives, and needs to their instructors.



## LESSONS LEARNED

- » The vast amount of data available both internally and through UT System for this work was overwhelming at times. Members struggled to consume the data due to lack of time.
- » Greater faculty involvement in this project from those teaching the courses is extremely important.
- » Faculty need to be provided with consumable and readily accessible data related to students' equitable outcomes in courses.
- » Conversations centering around DFW rates are not as helpful as conversations about enhanced equity-mindedness.
- » There is a need for dedicated resources to support the action plan developed for this project. Faculty participants will require time and/or funding to contribute fully.
- » An emphasis was placed in the original proposal on retention and graduation rates. While these metrics are important and should continue to be shared, they are lagging indicators of any improved success we may see in the courses and do not directly measure any enhancements made there.
- » Overall, DFW rates in the courses are also important. However, disaggregating the DFW rates and longer-term metrics — like retention to empower faculty with more granular information about the equitable outcomes of the courses — will be a key action item moving forward.



## ACCOMPLISHMENTS TO DATE

- » Peer-Led Team Learning (PLTL) was rolled out at UTA in fall 2021 showing immediate improvements in outcomes in gateway courses.
- » We have identified students who are likely to face academic challenges in the admitted class of FTIC and have built out support services to help them succeed.
- » We have restructured some of the high DFW classes to have smaller breakout sessions to help students get personalized attention to help them succeed.



## NEXT STEPS

- » The development of data dashboards for faculty that can be accessed on demand.
- » The formalization of faculty mechanisms to participate in this work in collaboration with the Office of the Provost, including:
  - The creation of a toolkit for faculty of best practices and resources (i.e., peer-led team learning, The Center for Research on Teaching and Learning Excellence, etc.), developed by a faculty fellow.
  - Allocating an annual budget toward this work through the Division of Student Success.



## PROJECT GOALS

The initial focus of the ESP project was student success in undergraduate gateway courses. As the project progressed through the data discovery phase, we became more interested in second-year students as a population in need of additional research. UT Austin second-year students failed or withdrew from their courses at higher rates than students in other undergraduate enrollment classifications in every year and across the entire period of this study (2011-2021). Other research suggests that students experience unique challenges in the second year. Based on that, we determined that further research was necessary to explore challenges present among our second-year student population, which we hope will become the basis for recommendations for future enhancements to campus student support services.



## TEAM MEMBERS

- » **Jeff Freels (Team Lead)** – Director of Academic Policy and Research, Office of Strategic Academic Initiatives
- » **Kye Lee** – Associate Director, Data to Insights
- » **Heather Pleasants** – Assistant Director, Center for Teaching and Learning
- » **Hillary Procknow** – Assistant Dean, School of Undergraduate Studies
- » **Matthew Russell** – Faculty Development Specialist, Center for Teaching and Learning



## DATA DISCOVERY

- » **UT System dashboards** – second-year student DFW rates.
- » **Literature review** – second year and/or sophomore student success with particular attention to experiences of underrepresented students.
- » **Methodology review for future research** – learning analytics, surveys, and qualitative research methods.



## ACTION PLAN

During ESP Phase 1, our team determined that recommending second-year student interventions would be imprudent without further research on this unique student population. Therefore, our action plan outlined a mixed methods research study on the UT Austin second-year student experience in 2022-2023. The study was planned, and is being conducted, by personnel from Academic Affairs; Curriculum, Enrollment, and the School of Undergraduate Studies; Student Affairs; and Information Technology Services. We hope this project becomes a model of intra-institutional collaboration and innovative research methods in the enhancement of student success.

### Our strategies for this research study include:

- » Hire a graduate research assistant.
- » Investigate patterns of online student engagement in large courses with high percentages of second-year students.
- » Administer student survey on life contexts, course engagement, academic self-efficacy, and perceptions of campus belonging.
- » Conduct critical phenomenological qualitative research using a “students as partners” framework.



# The Second-Year Experience



## A successful implementation of this research study will include:

- » Completing the research project by summer 2023.
- » Presenting results and recommendations to institutional leadership that (1) suggest feasible enhancements to existing student success programs and (2) are authentically grounded in the UT Austin undergraduate experience.
- » Identifying meaningful early warning markers in learning management system data (Canvas at UT) for students at risk of DFW.
- » Enacting an equity framework throughout the span of the project.

## Impact

Through this action plan, we hope to lower DFW rates for second-year students, particularly in gateway courses in Chemistry, Biology, Government, English, and Psychology, that lead to positive downstream effects on four-year graduation rates. Furthermore, our prior research and UT Austin's previous experience in lowering the four-year graduation rate suggest that the biggest gains in pass and graduation rates would come from historically underserved populations.



## LESSONS LEARNED

- » We had heard of the "sophomore slump" before this project, but I think we were still somewhat surprised to find such clear evidence of it in the data.
- » Almost every second-year student enrolls in large courses in Chemistry, Biology, Government, English, and Psychology, most of which make moderate to heavy use of Canvas (our LMS), but our data infrastructure is not sufficiently advanced to permit robust analysis of data from Canvas.
- » Many universities around the U.S. have adopted "students in transition" programs that help students beyond the first year.
- » Prior research suggests that second-year students experience a decline in academic self-efficacy and diminishment in belonging that may challenge their success in year two.
- » Authentic student voices are too often missing from institutional research.



## ACCOMPLISHMENTS TO DATE

- » Enabled cross-institutional collaboration among units in nine offices across five divisions of the university.
- » Identified two valid Canvas early warning markers, with multiple other measures under investigation.
- » Submitted student survey for IRB approval, with administration planned in Spring 2023.
- » Put Students as Partners qualitative research in flight with a GRA and an undergraduate research assistant.



## NEXT STEPS

- » Assemble prototype of Canvas success dashboards.
- » Issue Second-Year Experience report to institutional leadership.
- » Collaborate with Curriculum, Enrollment, and the School of Undergraduate Studies to adapt existing student success programs to better serve second-year students.
- » Seek external funding to deepen and extend our impact.



# THE UNIVERSITY OF TEXAS AT DALLAS



## PROJECT GOALS

Better understand equitable outcomes in first semester math courses as demonstrated through the disaggregation of data information and comparison across time. Develop a process for UT Dallas to assist in identifying those math courses with inequitable outcomes for different student groups, a way to reach out to offer resources to these students to improve success, and a feedback loop to department heads and leadership to monitor progress on these goals. Develop a campus-wide change in perceptions regarding the relationship between math placement and outcomes with regard to math success.



## TEAM MEMBERS

- » Jessica C. Murphy (Team Lead) – Dean of Undergraduate Education
- » Swati Biswas – Professor and Associate Head of Mathematical Sciences, School of Natural Sciences and Mathematics
- » Courtney Brecheen – Senior Associate Dean, Office of Undergraduate Education
- » Vladimir Dragovic – Professor and Department Head of Mathematical Sciences, School of Natural Sciences and Mathematics
- » Laura Gelles – Postdoctoral Research Associate, Erik Jonsson School of Engineering and Computer Science
- » Jennifer McDowell – University Registrar, Office of the Registrar
- » Amy Walker – Associate Dean of Undergraduate Education, Erik Jonsson School of Engineering and Computer Science



## DATA DISCOVERY

- » Historical UTD data analysis reviews – Learn lessons from previous campus projects, reports, and data analysis.
- » UT System dashboards – DFW information by course combined with UTD supplied math placement data.
- » Assessment and Learning in Knowledge Spaces (ALEKS) placement test cutoffs – Used to determine the minimum score for first-semester math placement.
- » ALEKS topic area scores by student – Learning about areas of strength and areas for improvement in math learning of incoming classes.
- » Previously designed Retention Index scoring – Information about risk factors associated with historical retention at UTD merged with DFW and math placement data.



## ACTION PLAN

Each cohort, as a deliverable of the Equitable Student Pathways project, developed an action plan to implement strategies developed through the PAIR cohort process. The following section provides a broad overview of these detailed strategies.

- » Summer Intervention Course – Making a first step towards closing equity gaps in first semester MATH outcomes. Workshops' successes can be seen by improved outcomes in student participants' first math class compared to what might be predicted using the historical data.
- » Creation of University-wide working committee – To help support the continuation of the project and advocate for resources. The committee can additionally be used for projects beyond math in future years.
- » Communication about ALEKS to campus community – ALEKS is currently used only as a placement tool but does have learning features that could be better utilized. Faculty and staff should have a better understanding of the ALEKS scores that lead to placement. We want students to have more agency in their use of the ALEKS platform, seeing it as more than placement.

# Data Agency, Action, and Insight: Redesigning Student Pathways to Ensure Equity



- » Incorporate ALEKS data in institutional practices – Make more of what we know about students' areas of strength and areas for improvement from placement exam available to campus partners.
- » Engagement of MATH faculty – Enable data democratization to provide faculty more access to timely information on math placement topic areas and first semester course equity gaps.
- » Long term (fall and spring) small interventions – Targeting interventions to students with an ALEKS score of 80-85 or midterm grade of C or lower.
- » Annual review of 1st semester MATH equity data points – Using the working committee to perform an annual review of equitable student outcomes.
- » Development of comprehensive assessment plan – Work with the Office of Assessment to develop a comprehensive assessment plan for the project.



## LESSONS LEARNED

- » One of our important lessons learned is there is a need to address data perceptions in order to encourage data agency. Learning about some of the different ways we can understand what a dashboard says and who our students are was fruitful for discussion.
- » It is a challenge to know where students are, and this project's data exploration phase showed us ways that we can meet that challenge. Although many institutions use DFW rates to help them see larger trends, our cohort can see that these may not be the best way to determine where interventions are needed. The importance of multiple data sources in learning more about where to meet students cannot be overstated.
- » As with any project that does not rely only on one cohesive unit, there are unique challenges to projects that cross departments, units, and divisions. One of our lessons learned here is the importance of open and honest communication during collaboration.



## ACCOMPLISHMENTS TO DATE

- » Creation of summer workshops that provide students with targeted content to empower them for success in the first semester of math at UT Dallas.
- » Creation of committee to oversee project.
- » Increased sharing of data with faculty teaching first semester math courses.
- » Stakeholder discussions across campus.



## NEXT STEPS

- » Short-term summer workshop results will be analyzed based on finalized fall grades.
- » The working committee will facilitate data agency by looking at the information we have available about our course outcomes on an annual basis; bring together different initiatives on campus to see where potential collaborations might exist; and advocate for institutional or grant-funded resources to continue work on the project.
- » Collaborative workshops to be scheduled to empower faculty to make the most of the data shared.



## PROJECT GOALS

Focus is on reducing unused semester credit hours (SCH) and improving time to degree for students in Biological Sciences and Kinesiology programs. Majors in these fields, particularly those who are first generation, seem to take longer than others in their respective colleges to complete their degrees. For both programs we want to find out where the excess credit hours are coming from; to what extent they are different for students who transfer into UTEP or who transfer into a major from another program; and to what extent they are linked to retakes of required courses. This project is tightly aligned with our Title V Grant for preventing stop-outs and improving completion of Hispanic/LatinX students.



## TEAM MEMBERS

- » Toni Blum (Team Lead) – Vice Provost for Curriculum Effectiveness and Improvement, Academic Affairs
- » Julie Rivera – Director of Academic Reports and Curriculum, Academic Affairs
- » Jason Boyle – Chair, Department of Kinesiology
- » Joy Olimpo – Assistant Dean for Student Affairs, College of Health Sciences
- » Charles Spencer – Associate Professor of Biology and Undergraduate Program Director, Biology
- » Tina Garza – Associate Dean, College of Science



## DATA DISCOVERY

- » Curricular Analytics program data – Analyzes the complexity of degree programs by identifying complex pathways and “blocking courses.”
- » SCH to Degree data – University average is 144 SCH, well over the 120 required for most programs.
- » Unused hours for transfer and UTEP originating students – Review unused hours and build on that data.
- » UT System dashboards – Looking at student outcome differences based on Pell and enrollment status.
- » Major flows – Using UT System dashboards to view specialized major flow data showing students’ majors prior to entering these programs. Understanding retention of students in these majors from year one to two, and year one to graduation.
- » Course grades for prerequisite courses – Investigating math and chemistry prerequisites, as well as gateway courses in the major.



## ACTION PLAN

Each cohort, as a deliverable of the Equitable Student Pathways project, developed an action plan to implement strategies developed through the PAIR cohort process. The following section provides a broad overview of these detailed strategies.

### Kinesiology and Biology

- » Determine “gateway courses” that prevent progress in degree.
- » Decide if listed prerequisites are needed to succeed in the course.
  - Eliminate unnecessary prerequisites and the need for regular overrides.
- » Determine distribution of excess hours among different student populations.
  - Do equity gaps exist among students with excess credit hours (with particular attention to Pell and first-generation students)?
- » Evaluate graduation credit hours for transfer/ECHS vs. FTIC students.
- » Assess graduation credit hours prior to and after implementation of “Program of Study.”



# Reducing Equity Gaps in Completion for Complex Degrees: Redesigning Kinesiology and Biological Sciences for Increased Flexibility



## **Kinesiology**

- » Address curricular issues that result in delay in graduation.
- » Implement more flexible concentration options.
- » Address inflexibility of KIN coursework.

## **Biology**

Assess degree complexity in Curricular Analytics

- Identify “blocking courses.”
  - This has been completed, with courses identified. Alternate prerequisite routes have been found and will be implemented through prerequisite adjustments.
- » Analyze DFW rates for traditional “gateway courses” (evaluate number of retakes)
  - Determine association of DFW rates with number of course retakes.
- » Review program flow to determine excess hours brought into the degree when changing majors to Biological Sciences
  - Possibly enhance flexibility of the Biology degree to optimally use credits from other majors.



## **LESSONS LEARNED**

- » Some of the equity gaps were more nuanced than imagined. The data on graduates showed more excess SCH for Pell-eligible students. However, UT System retention data revealed that students who do NOT receive Pell are more likely to drop out of the university altogether (thus, their data are not included in the graduates).
- » Isolating unused SCH to those generated institutionally (not transfer) showed many were the result of students changing majors.
  - This highlighted a potential need to create new pathways or evaluate existing pathways among programs, in order to reduce excess hours.
- » There are practices in both programs that are different from the existing degree/course requirements. Some very simple changes in aligning those practices with the degree plans should create some early gains.
- » We need a great deal more data discovery, especially for the Biological Sciences degrees, in order to implement curricular changes.



## **ACCOMPLISHMENTS TO DATE**

- » The Biology department identified alternate prerequisite routes through prerequisite adjustments.
  - Multiple prerequisite reductions processed and are effective in fall 2023.
- » The Kinesiology department reviewed the curriculum and submitted a request for complete redesign of the degree plan.
  - The changes, which will allow more flexibility and choice for all Kinesiology students, were approved and are effective in fall 2023.



## **NEXT STEPS**

- » Evaluation of the curriculum is an integral part of multiple grants and projects at UTEP. Our institution has already dedicated funding to support a technical review of all undergraduate programs that will build on the curriculum evaluation projects. This review has been completed.
- » Work with our Center for Institutional Effectiveness, Research, and Planning to deploy data tools that will assist chairs and directors to monitor student progress and identify barriers.
- » UTEP has invested considerable time and funding in the recently implemented holistic advising model, which has been deployed across all colleges. This will allow us to have a consistent method for tracking student progress and identifying barriers that may indicate patterns needing structural change.



# THE UNIVERSITY OF TEXAS PERMIAN BASIN



## PROJECT GOALS

UT Permian Basin (UTPB) is looking to close gaps in retention and graduation with non-traditional student populations in high-demand fields for the Permian Basin region. There are significant shortages in the number of teachers and engineers in this area, and working on improvements for these areas will help UTPB meet the first two pillars of the University's strategic plan, Student Success and Serving the Region. Two of our most significant equity gaps are in male teachers (particularly African American and Hispanic male teachers) and female engineers. The goal of this program would be a complete review of our curricular pathways to find ways to close equity gaps by identifying roadblock classes and working to alleviate these obstacles while also working to identify and support students who are considering these programs. Early in the PAIR group process, the project team decided to focus exclusively on engineering in this first phase to achieve key goals in accordance with the PAIR timeline.



## TEAM MEMBERS

- » **Michael Frawley (Team Lead)** – Dean of Student Success
- » **PJ Woolston** – (formerly) Vice President of Enrollment Management
- » **Iris Fierro** – Director of UTPB Success Center
- » **Rajalingam Dakshinamurthy** – Associate Vice President for Research and Dean of Graduate Studies
- » **Harishchandra Aryal** – Assistant Professor, Mechanical Engineering Nuclear Track
- » **Larry Daniel** – Dean of the College of Education



## DATA DISCOVERY

- » **UT System dashboards** – Program data and success rates by course.
- » **DFW rates** – Data on outcomes by courses.
- » **Math progression** – Identifying students' math progressions when they enter programs of study and comparing them to DFW rates.



## ACTION PLAN

Each cohort, as a deliverable of the Equitable Student Pathways project, developed an action plan to implement strategies developed through the PAIR cohort process. The following section provides a broad overview of these detailed strategies.

- » **Complete Texas Success Initiative (TSI) maps and review current maps.** This will help us identify places in the curriculum that put our target populations at a disadvantage.
- » **Provide 8-week courses in Algebra, Pre-calculus, and Calculus I with linked progression.** We want to increase flexibility for students early in the program and increase the chance of success through successful completion of a format that works better for them.
- » **Implement a targeted admissions outreach to prospective students, especially women and African American students, interested in Engineering.** We will produce specific outreach to prospective students focused on Engineering content instead of generic university promotional materials. We hope this new approach will be more meaningful and effective for students already interested in a specific program.

# Closing Retention and Graduation Equity Gaps for Students in High-Demand Fields in the Permian Basin Region



- » **Start a departmental student ambassador program.** We want to connect prospective new students and struggling continuing students with currently successful students in the programs of interest. Students who can see others similar to themselves succeeding in the program will have both a role model and a new support network.
- » **Facilitate Summer Bridge/onboarding for Calculus readiness.** We hope the Summer Bridge program will help students who are not as academically prepared be ready for college-level coursework. Ideally, we want to partner with other institutions (UT Dallas, UT San Antonio) on this program.
- » **Administer student surveys to understand their experiences (qualitative data) better.** Frank and open-ended comments from students will give us the feedback we need to adjust our instruction, procedures, and sequences, in response to actual student experiences.
- » **Convene student focus groups to understand their experiences (live qualitative data) better.** Live responses from students give us even more candid feedback so we can adjust our instruction, procedures, and sequences, in response to actual student experiences.
- » **Introduce Engineering to high school students.** We would like to partner with UT Austin on “Engineer Your World” and “Intro to Engineering” courses for high school students. We hope this will build the pipeline of high school students who are interested in Engineering and UTPB, specifically.



## LESSONS LEARNED

- » The Equitable Student Pathways process allowed us the time and space as an institution to really understand the data behind our perceptions.
- » We brought together a diverse group to study these problems, and we had admissions, student success, and the academic departments working together to find ways to clear barriers, especially around class progression and learning loss.
- » The data made it possible for us to see differences in a small number of students, allowing us to put interventions in place as we increase numbers in programs through the admissions process.



## ACCOMPLISHMENTS TO DATE

- » Student Ambassador Program has commenced, and the first cohort of ambassadors has started work.
- » New degree maps have been created to separate high DFWI classes.
- » The recruiter for the College of Engineering is performing targeted outreach to specific groups.
- » Summer Bridge is being developed in an online format for Calculus to reach as many students as possible.
- » Surveys have gone out, and the first round of data is being reviewed.
- » Introduction to Engineering for High School students ran for the first time in fall 2022.



## NEXT STEPS

- » Review DFWI data over summer to see effectiveness of changes.
- » Review applications and admissions to see if outreach is working.
- » Expand use of surveys, especially exit surveying, for students who leave the program.
- » Expand math readiness.



# THE UNIVERSITY OF TEXAS RIO GRANDE VALLEY



## PROJECT GOALS

Our overall aim centers on creating a smoother and more equitable pathway for students in Nursing and Kinesiology majors by removing some of the barriers that delay progress to program admissions and degree completion. Specifically, we aim to improve pass rate outcomes in Anatomy & Physiology I and II, courses with historically high DFW rates, which are also critical to success in those majors. The project will leverage several of UTRGV's existing professional development programs, including Conexión and SALT as a means to deepen data agency and equity-mindedness in the selected majors and courses.



## TEAM MEMBERS

- » **Jonikka Charlton (Team Lead)** – Associate Provost of Student Success and Dean of the University College
- » **Susan Brown** – Assistant Vice President, Strategic Analysis & Institutional Reporting
- » **Alyssa Cavazos** – Associate Professor of Rhetoric & Composition, Writing & Language Studies, and Director of the Center for Teaching Excellence
- » **Colin Charlton** – Professor of Rhetoric & Composition and Chair, Writing & Language Studies
- » **Marlene Galvan** – Director, Writing Center
- » **Tim Sears** – Associate Professor of Practice, Biology
- » **Fred Zaidan** – Professor of Biology and Senior Associate Dean, College of Sciences



## DATA DISCOVERY

- » **Internal UTRGV Dashboard on course grade distribution** – Access to data about high volume and high DFW rate courses (disaggregation by modality, campus, instructor, first generation status, and prior college credit status).
- » **Retention of students by number of DFWs within first term** – Data on the impact of failing even one course in the first term.
- » **Qualitative Surveys** – From 2021-2022 participants in Conexión (a UTRGV professional teaching development program) participated in a survey which provides data on faculty awareness of student challenges, individual DFW rates, and course-wide DFW rates.



## ACTION PLAN

Each cohort, as a deliverable of the Equitable Student Pathways project, developed an action plan to implement strategies developed through the PAIR cohort process. The following section provides a broad overview of these strategies.

- » **Develop a heuristic/replicable framework** for leading equitable student pathway initiatives.
- » **Design and deliver a discipline-specific Conexión professional development academy** for the various instructors of Anatomy & Physiology I and II.
- » **Explore capacity building for faculty, chairs, and Student Success staff** (including advising staff), with foci on data literacy, leading change, and student success as a shared responsibility.
- » **Develop design for conducting equity-minded qualitative focus groups and subsequent individual interviews** on students' undergraduate learning experiences in Anatomy & Physiology I and II.
- » **Incorporate student voices on teaching experiences** via our Students as Learners & Teachers (SaLT) program



# Equitable Pathways, Student Success, and Faculty Professional Development



initiative, as well as target student focus groups for those who have taken Anatomy & Physiology I and II courses).

- » **Request reflections from faculty members on feedback received by Student Teaching Consultants**, as well as example(s) of how teaching documents were revised/informed by feedback.
- » **Redesign courses for Anatomy & Physiology I and II.** Include a re-examination of topics that should be taught in both courses (to confirm horizontal alignment among the various instructors and vertical alignment from Anatomy & Physiology I to Anatomy & Physiology II) and practices that promote awareness of implicit biases in teaching, learning, and assessment.
- » Work with IT to develop a method for faculty to access their own data through the dashboards.



## LESSONS LEARNED

- » Guiding faculty in their journeys to become more equity-minded is challenging work that takes a long-term commitment.
- » Many faculty are unaware of student success data, and, thus, are not attuned to how their individual practices influence student success at the level of their own courses and at a broader institutional level.
- » We need to build the capacity of faculty and staff to lead this work. The same is true for chairs.
- » It is very challenging to design and deliver tools that make student success data accessible at the level of practice.
- » In order to make sustainable progress on reversing low pass rates, there must be a genuine commitment from all levels of leadership (provost down to chairs) to hold each other and faculty accountable for student success in impacted courses.



## ACCOMPLISHMENTS TO DATE

- » Piloted Peer-Led Team Learning (PLTL) in Anatomy & Physiology.
- » Created a project-specific version of our pass rate dashboard, filterable by known equity gaps.
- » Presented to deans & chairs meeting about Student Success Division restructuring to support equity-focused Faculty-Student Success Working Groups.
- » Created a data workshop for the Women's Faculty Network.
- » Created and delivered a day-long workshop focused on building equity-centered data literacy for 140+ Student Success Division staff at their annual development day.
- » Applied for (and received) a THECB Accelerating Student Success Planning Grant and an Implementation Grant to expand the work begun in this project to ENGL 1301 and College Algebra.
- » Created and delivered a data workshop for UTRGV chairs.
- » UTRGV's Academy for Distinguished Teachers is charged with developing a plan to lead a campus-wide conversation about how to better evaluate teaching in performance evaluations.



## NEXT STEPS

- » We are using what we've learned in the ESP process to develop a model/framework for engaging Faculty-Student Success working groups to better understand and address the impact of high enrollment, high DFW courses on retention and degree completion.
- » We would like to expand our work beyond Anatomy & Physiology to other key gateway courses for other majors.
- » Anatomy & Physiology faculty will participate in a discipline specific Conexión workshop series, culminating in course redesign.



# THE UNIVERSITY OF TEXAS AT SAN ANTONIO



## PROJECT GOALS

The aim of this project is to reduce the time-to-degree for URM students in three sustainable environment majors (Civil Engineering, Construction Science and Management, and Environmental Science) and increase the number and percent of female graduates. This project also aims to unite three programs for an interdisciplinary approach to holistically evaluate student success. The framework created and implemented in this project is expected to be used at scale for all programs at UTSA. The project evolved from the Equity Advocacy Initiative — Enabling Clear Pathways to Degree Completion Task Force — and is aligned with UTSA's goal to strategically expand transdisciplinary education and research with these programs.



## TEAM MEMBERS

- » **Mark Appleford (Team Lead)** – Associate Vice Provost of Undergraduate Studies
- » **Ibukun Awolusi** – Assistant Professor, Civil Engineering and Construction Management
- » **Amy Buechler-Steubing** – Senior Director of Student Success Strategic Planning and Administration & Director of Student Success Initiatives
- » **Terri Matiella** – Professor of Instruction, Assistant Dean for Remote Instruction, Integrative Biology, College of Sciences
- » **Katie Meersman** – Director of Strategic Initiatives, Academic Success and University College
- » **Arturo Montoya** – Associate Professor, Associate Dean, Civil Engineering and Construction Management, College of Engineering and Integrated Design
- » **Marcela Ramirez** – Associate Vice Provost for Teaching, Learning & Digital Transformation, Academic Innovation and Digital Learning
- » **Steve Wilkerson** – Associate Vice Provost and Chief Analytics Officer, Institutional Research and Analysis



## DATA DISCOVERY

- » **Civitas Learning: Illume Courses** – Allowed the team to access disaggregated data of student persistence directly in a program of study by cohort.
- » **Civitas Learning: Inspire** – Allowed us to filter for specific student populations and question our data assumptions.
- » **Office of Institutional Research (OIR) dashboards** – Time-to-degree, degrees awarded, SCH earned and attempted, course modality success, and student exit survey results. All disaggregated by URM, Gender, and full/part-time status.
- » **SeekUT earnings and future workforce data** – Identify baseline in graduate 1-, 5-, and 10-year earnings data.
- » **BurningGlass: Labor insights** – Identify baseline in graduate 1-, 5-, and 10-year employer data.



## ACTION PLAN

Each cohort, as a deliverable of the Equitable Student Pathways project, developed an action plan to implement strategies developed through the PAIR cohort process. The following section provides a broad overview of these detailed strategies.

- » **Create a tiered-core approach and LMS integrated messaging system for how core outcomes are linked to a program of study.** Core classes operate in isolation at UTSA; most core classes are not taken in a consistent timeline or link with major-class objectives.
- » **Connect core objectives with career readiness and link core classwork to experiential connections.** Equity analysis demonstrated URM students are less likely to have utilized curricular opportunities for experiential and workforce readiness marketable skills.
- » **Create an annual Campus Climate survey.** There is an absence of holistic campus-wide student climate assessment other than graduating student survey. Design and implement a framework to capture student feedback (survey, focus groups) at critical milestones throughout the program(s). We want to factor in nuance for special populations like transfer students.

# Reduce the Time-to-Degree for Underrepresented Minority (URM) Students Within Sustainable Environment Majors at UTSA



- » **Select courses from Environmental Science, Construction Science Management, and Civil Engineering majors to undergo formal Academic Innovation course transformation to create inclusive learning environments.** Team leads identified specific courses with high URM differences in persistence that may need inclusive practices incorporation.
- » **Develop equity scorecard to identify, address, and monitor gaps in engagement with critical support services and programs.** Create co-curricular engagement dashboard. Awareness of gaps is key to developing a plan to address them.
- » **Develop and test faculty alert prototype (alerts/referrals to College Student Success Centers, Student Success, etc.).** Enable proactive outreach and connection to resources. Address gaps in bridging what happens in class with interventions and support across the institution.
- » **Increase students' progression through the course of study of Environmental Science, Construction Science Management, and Civil Engineering majors.** Streamline the admission processes, and increase admissions, enrollment, and graduation of URM and female students.



## LESSONS LEARNED

- » The PAIR project highlighted the value of the institutional research infrastructure and recent expansion in its mission to bring real-time (leading rather than lagging indicators) data access to the program directors, department chairs, and college administrators of our three identified programs. **As part of the project several of our dashboards and infrastructure are now adding selectable fields to disaggregate student success data by race/ethnicity, gender, financial aid status, and residence to improve the equity lens approach.**
- » Beyond the original project goals, the PAIR project uncovered a variety of unexpected obstacles and barriers that will be added to our long-term goals. **Several of the core classes that are taken in the program of study before a student has been exposed to major-specific classes emerged with high DFW rates.**
- » A significant finding from the project in terms of the original analysis of URM and gender differences in degrees awarded was the impact of UTSA's onboarding to final major pathways. **An analysis of early student stop-out data demonstrated the need to connect programs with their admissions pipeline.**



## ACCOMPLISHMENTS TO DATE

- » Identified specific courses (two in each major; Environmental Science, Civil Engineering and Construction Science and Management) with the highest correlation to student persistence gaps from an equity review. Ranked these courses for course transformation support with Academic Innovation.
- » Created a first draft institutional level equity scorecard for department, college and institutional annual review of student degree progress.
- » Built a co-curricular support evaluation of programs and started an LMS module to integrate into key major courses with Career and Engaged Learning.
- » Initiated a multi-year, University-level, Core-redesign to build real-time SLO indicators into core assessment.
- » Started initial stakeholder analysis to build an equity student quick-view module into our LMS to inform faculty instructional practices and use of inclusive pedagogy.
- » Initiated project to develop co-curricular engagement dashboard prototype.
- » Started a redesign of student experience survey for qualitative data supplement from equity perspective.



## NEXT STEPS

- » The PAIR project model framework will be embedded into several new projects starting in fall 2022. The units of Academic Affairs, Student Success, and Academic Innovation are working to deploy this strategy to college and department action plans of all units in 2022–2023. The approach will be leveraged in our Core Curriculum Refresh, Curricular Analytics, and LMS upgrade projects, all in anticipation of our next Catalog revision in 2024. UTSA has transitioned to Ellucian workflow for future projects, and this template will be used as part of the strategic equity assessment of programs.



# THE UNIVERSITY OF TEXAS AT TYLER



## PROJECT GOALS

The University of Texas at Tyler's mission statement begins by naming our commitment to student success by serving the educational and public interest of East Texas and beyond. We seek to decrease the percentage of STEM students earning DFWs in their mathematics courses on the first attempt. These courses are typically significant blocking and delay factors for our STEM students (38.6% of our undergraduate population) in completing their respective degrees. We will begin our efforts by examining our engineering degrees. These include Chemical, Civil, Electrical, and Mechanical Engineering, as well as Construction Management.



## TEAM MEMBERS

- » **Colleen Swain (Team Lead)** – Associate Provost, Academic Success
- » **Carlos Alveraz** – Assessment Coordinator, College of Engineering
- » **Regan Beckham** – Associate Professor of Mathematics
- » **Jessica Collins** – TSI Coordinator, Enrollment Services
- » **Javier Kypuros** – Dean, College of Engineering
- » **Lauralee Meyer** – Director of Academic Support, Academic Success
- » **Ken Wink** – Associate Dean, College of Arts and Sciences



## DATA DISCOVERY

- » **TSI Math Basics and Math Requisite Pathways** – Used to work on determining how our students are deemed “Calculus ready.”
- » **Math and Science Courses Supported by Academic Success** – To determine how engineering students were using SI and Tutoring for the mathematics courses before the start of the pandemic.
- » **Graduation Rate by Grade Earned and Predictive Cutoff** – These data provided us insight into the influence of grades in Calculus I (MATH 2413), Calculus II (MATH 2414), and University Physics (PHYS 2325).
- » **Passing Grades by COE Majors** – These data provided us insight into the grade distribution between the FTIC and transfer students in Calculus I, Calculus II, and University Physics.
- » **Calculus I Analysis** – This initial analysis enabled us to determine whether there were statistical differences in the grades earned by gender and race.
- » **UT Tyler PAIR Project Report and Summary** – These data gave us insight into the association among grades and sub-major (type of engineering program), gender, race, or semester.
- » **First Math Attempt** – Engineering majors' grades on first attempt in mathematics courses.
- » **Engineering Curricular Analytics Data** – To determine gateway courses, as well as insight into the most central courses of the program.



## ACTION PLAN

Each cohort, as a deliverable of the Equitable Student Pathways project, developed an action plan to implement strategies developed through the PAIR cohort process. The following section provides a broad overview of these detailed strategies.

- » **Realign historical 3000-level mathematics courses to align with Texas** – Some transfer students are required to repeat courses that might have an ACGM equivalent.
- » **Continue to analyze the latest comprehensive UT Tyler data pull** – Students from various marginalized groups with non-credit earning grades can be identified. This will enable us to target appropriate students with specific resources.

# Moving Through the Mathematics Pipeline: Engineers Pave the Way for STEM Majors



- » **Conduct Intrusive Intervention(s) for Calculus I and Pre-Calculus** – Our data indicate that students earning a grade of C in Pre-Calculus and Calculus I are more likely to fail the subsequent course.
- » **Conduct Intrusive Intervention(s) in the Engineering Program** – Our data indicate that students earning a grade of C in Pre-Calculus and Calculus I will need significant additional support in order to have the required foundational knowledge needed in subsequent engineering courses.
- » **Engage Faculty** – Engaging faculty in the process, including evaluating data, will help them understand systemic hurdles and identify opportunities while minimizing misconceptions or diminishing negative attitudes regarding students' potential for success. We want faculty to establish a sustainable, comprehensive, data-informed, just-in-time approach that will facilitate learning, enhance student preparedness, and increase student retention.
- » **Form Focus Groups of Mathematics and College of Engineering Faculty** – Currently, we do not have data from all stakeholders, and it is critical to hear the insights and concerns of the mathematics faculty.
- » **Form Focus Groups of Engineering Students** – The voice of students is currently absent from our dataset. We need to capture this critical information.



## LESSONS LEARNED

- » Our work to address the challenges in the mathematics tunnel must be comprehensive and explore ways to support students, even when they have the academic credit for the course but not the content mastery.
- » Academic Student Success Resources, specifically tutoring and supplemental instruction, are not being used by engineering students.
- » FTIC and transfer students have different experiences in the engineering curriculum due to where they come into the formal engineering program.
- » Our latest data pull provides strong evidence that engineering students need to earn a grade of A or B in Calculus I to be successful in subsequent mathematics and engineering courses.



## ACCOMPLISHMENTS TO DATE

- » Reclassification of Multivariate Calculus (Calculus III) from 3000 level to 2000 level.
- » The College of Engineering is using Student Success funds to support engineering students enrolled in Calculus I, II, or III.
- » The College of Engineering is working to establish zero-credit recitations leveraging interactive software and graduate teaching assistants as coaches. The recitations will be linked to respective Calculus courses and to engineering courses students commonly co-enroll in. The recitations will include applications that highlight the use of Calculus concepts and methods in subsequent courses for which the respective Calculus is a prerequisite.
- » Continued conversations by the Department of Mathematics on the data for mastering content in current and subsequent courses.
- » Explored curricular products that can help support students with mathematics and physics content in courses with high centrality within the major.



## NEXT STEPS

- » Launch Engineering Student Focus Groups that include students who changed their major out of engineering to determine the impact of the mathematics tunnel.
- » Continue to examine the effectiveness of different curricular products to address content gaps.





**Mark R. Appleford, Ph.D.**

Associate Dean of Undergraduate Programs College of Engineering  
The University of Texas at San Antonio  
mark.appleford@utsa.edu

Dr. Mark Appleford serves as Associate Dean of Undergraduate Programs at the University of Texas at San Antonio's Klesse College of Engineering and Integrated Design. He is also an Associate Professor in the Department of Biomedical Engineering at UT San Antonio (UTSA), focusing on research in tissue-biomaterial interactions, cellular and tissue engineering, and biocompatibility. Appleford and his UTSA colleagues are recipients of a \$3 million National Science Foundation (NSF) Grant titled HSI Institutional Transformation Project: STEM Undergraduate Education through a Hispanic Student Success Framework.

Dr. Appleford holds a B.S. and M.S. from California Polytechnic State University, San Luis Obispo, and a Ph.D. from the University of Tennessee Health Science Center College of Medicine.



**Janna Arney, Ph.D.**

Executive Vice President and Provost  
The University of Texas Rio Grande Valley  
janna.arney@utrgv.edu

Dr. Janna Arney serves as the Executive Vice President and Provost at The University of Texas Rio Grande Valley (UTRGV). She earned her Ph.D. from The Ohio State University and held faculty appointments at Bowling Green University and California State University Northridge before joining The University of Texas at Brownsville and Texas Southmost College (UTB/TSC). A native of Brownsville, Texas, Dr. Arney returned to the Rio Grande Valley in 2002 as an assistant professor in the School of Business. She began her administrative career with the university in 2006 where she served as Associate Provost for Faculty and Academic Affairs. In this role, she co-chaired the transition team coordinating the separation of the UTB/TSC partnership. In 2014, Arney joined the newly-created university, later named The University of Texas Rio Grande Valley.



**Jason B. Boyle, Ph.D.**

Associate Professor, Kinesiology, and Chair, Department of Kinesiology  
The University of Texas at El Paso  
jbboyle@utep.edu

Dr. Jason Boyle is an Associate Professor and currently serves as the Chair of the Department of Kinesiology at The University of Texas at El Paso (UTEP). Dr. Boyle joined UTEP in 2014 after completing his Ph.D., with an emphasis in Motor Neuroscience, from Texas A&M University. Boyle's current research interests are in perception-to-action issues in pediatric special populations. Dr. Boyle is passionate about teaching, and he greatly enjoys seeing the UTEP Kinesiology students achieve their lofty goals.



**Courtney Brecheen**

Senior Associate Dean, Office of Undergraduate Education  
The University of Texas at Dallas  
courtneyb@utdallas.edu

Dr. Courtney Brecheen is a leader in leveraging data to enhance the student experience, address inequities, and strategically develop and scale programming. Since 2010, Dr. Brecheen has served in leadership roles in the Office of Undergraduate Education (OUE) at The University of Texas at Dallas (UTD) and is currently Senior Associate Dean of Undergraduate Education. Examples of high-impact programs developed under her direction in OUE include the University's on-campus food pantry (the first in Texas), minoritized student success programs, peer mentor programs, undergraduate research initiatives, and first-generation student programming. Most recently, Brecheen created and leads OUE's Student Success Data team, which identifies actionable data to improve academic outcomes and belonging and to inform inclusive teaching practices at UTD. Brecheen is a fierce advocate for data literacy and student success. She serves on various internal and external groups to lend expertise and facilitate collaborations to mobilize stakeholders toward creative problem-solving. She is the Executive Sponsor of the LGBTQ+ Employee Resource Group at UTD (QuTD) and regularly volunteers to support the LGBTQ+ community outside of work. Brecheen has won two awards for impact and commitment to diversity — the UTD Staff Diversity Award and the Women Leading in Diversity Award.



**Tamara L. Brown, Ph.D.**

Provost and Senior Vice President Academic Affairs  
The University of Texas at Arlington  
tamara.brown@uta.edu

Dr. Tamara Brown joined the University of Texas at Arlington (UTA) as Provost and Senior Vice President for Academic Affairs August 1, 2022. Dr. Brown leads the 10 colleges/schools at UTA, as well as several other units, including the Division of Student Success, Student Affairs, Enrollment Management, Global Educational Outreach, libraries, and others. Dr. Brown is committed to promoting and achieving academic excellence at one of the most diverse campus populations in the nation. As Provost at UTA, Dr. Brown is committed to ensuring academic excellence and student success, and to fulfilling UTA's goal of becoming one of the most inclusive and impactful research universities in the country.

Prior to joining UTA, Dr. Brown served as executive dean of the College of Liberal Arts and Social Sciences at the University of North Texas (UNT), where she was responsible for the largest college on campus, consisting of 9,000 students and more than 22 academic departments and programs. Previous to UNT, she was a dean and professor at Prairie View A&M University's College of Juvenile Justice and Psychology, executive director of its Texas Juvenile Crime Prevention Center, and interim dean of graduate studies. Brown earned her doctorate and master's degrees in clinical psychology from the University of Illinois, a bachelor's degree in psychology from Longwood College, and a master's of divinity from Asbury Theological Seminary.



**Jonikka Charlton, Ph.D.**

Associate Provost of Student Success and Dean of the University College  
The University of Texas Rio Grande Valley  
Jonikka.charlton@utrgv.edu

Dr. Jonikka Charlton's portfolio includes a wide range of units, including ones devoted to tutoring, advising and graduation initiatives, career services, experiential learning, first-year experience/transitional programming, and excellence in teaching and learning. With more than two decades of experience as a faculty member and administrator, Charlton is particularly invested in cross-unit collaborations that help foster a shared sense of responsibility for student success initiatives. She is currently focused on learning more about and strengthening a student's sense of academic belonging, studying the role of mid-level leadership in institutional transformation, and developing frameworks and professional development to build faculty and staff capacity to engage in equity-minded student success work.



**Kimberly Andrews Espy, Ph.D.**

Provost and Senior Vice President for Academic Affairs  
The University of Texas at San Antonio  
kimberly.espy@utsa.edu

Dr. Kimberly Andrews Espy has more than two decades of higher education experience, and has a national reputation for advancing institutional, academic and student success; promoting faculty research and development; and strengthening university-community partnerships and engagement.

As UTSA's chief academic officer, Dr. Espy oversees eight academic colleges; the transdisciplinary School of Data Science; the collaborative University of Texas School of Public Health San Antonio (with UT Health San Antonio); and the academic support divisions and cross-cutting support teams.

A translational clinical neuroscientist and investigator, Espy has earned more than \$22 million in funding to study how young children control their attention to promote learning, academic and health outcomes, and how these skills diverge due to medical, environmental, or social factors. She has authored more than 100 refereed journal articles, given numerous presentations nationally and internationally, and chaired an NIH study section.

Espy earned her bachelor's degree in psychology at Rice University and her master's and doctoral degrees in psychology and clinical neuropsychology, respectively, at the University of Houston. Additionally, she completed a clinical/pediatric psychology internship at the University of Louisville School of Medicine/Bingham Child Guidance Center and a post-doctoral fellowship at the University of Arizona College of Medicine. A licensed clinical psychologist, Espy is an elected Fellow of the American Association for the Advancement of Science, as well as of the American Psychological Association.





**Michael Sean Frawley, Ph.D.**

Dean of Student Success  
The University of Texas Permian Basin  
michael.frawley@utpb.edu

Dr. Michael Sean Frawley was born and raised in Erie, Pennsylvania. Dr. Frawley earned a Bachelor of Arts in History from Pennsylvania State University — the Behrend College in 2000 and a second Bachelor of Arts in Political Science from the same institution in 2001. Frawley received his Master of Arts in Social Science at Edinboro University of Pennsylvania in 2007 and earned his Doctor of Philosophy from Louisiana State University in August 2014. Frawley is the Dean of Student Success and Associate Professor of History at UT Permian Basin. He is also the book review editor for the Louisiana Historical Association’s publication *Louisiana History* and is currently working on finishing his next book on the Texas Prison System during Reconstruction.



**Jeffrey “Jeff” Freels, Ph.D.**

Director of Academic Policy and Research  
The University of Texas at Austin  
jeff.freels@austin.utexas.edu

As Director of Academic Policy and Research at UT Austin, Dr. Jeff Freels works in federal and state policy, assessment and analytics, and digital learning. Freels has a Ph.D. in Higher Education from George Mason University and was a community college history professor for 10 years before joining UT Austin. He serves on the Texas Higher Education Coordinating Board’s Learning Technology Advisory Committee, the Austin Community College North Region Advisory Board, and multiple Leander ISD committees. Everywhere, he aims to leverage technology, data, and empathy for enhanced and equitable student, faculty, and staff outcomes.



**Emma Gelsinger, Ph.D.**

Senior Director, Academic and Health Affairs Texas Higher Education  
Coordinating Board  
emma.gelsinger@highered.texas.gov

Dr. Emma Gelsinger currently serves as Senior Director of Academic and Health Affairs at the Texas Higher Education Coordinating Board (THECB) where she leads policy implementation projects and supports a variety of strategic initiatives. She has worked in higher education since 2013, grounding her work in advancing equity and increasing access to higher education through effective policy, planning, and data. Prior to the THECB, Emma served as Research & Policy Analyst at the University of Texas System Office of Academic Affairs, collaborating with its eight academic institutions in the areas of academic planning and policy, program review, student success, and educator preparation. She also previously served as Data Consistency & Policy Analyst at the University of Maine System, and as Research & Planning Associate at the University of Southern Maine. She earned her Ph.D. in Public Policy from the University of Southern Maine in 2020, focusing on educational policy and leadership.



**Jasmine Haywood, Ph.D.**

Strategy Director, Lumina Foundation  
jhaywood@luminafoundation.org

Dr. Jasmine Haywood is Strategy Director at Lumina Foundation. In this role, she leads a portfolio of work that supports the creation of a system in which student success and credential attainment are scaled up significantly, particularly at four-year institutions.

Before joining Lumina, Dr. Haywood was a faculty member of the Department of Educational Leadership at Indiana State University (ISU). Prior to joining ISU, she was the managing editor for the *International Journal of Qualitative Studies in Education* and a research assistant at the Indiana University–Purdue University Indianapolis (IUPUI) Center for Urban and Multicultural Education. She began her career as an admissions counselor at Rensselaer Polytechnic Institute (RPI) in Troy, New York.

Haywood has published peer-reviewed scholarship in the areas of minoritized students and faculty in higher education. She holds master's and doctoral degrees in higher education and student affairs from Indiana University Bloomington.



**Archie L. Holmes Jr., Ph.D.**

Executive Vice Chancellor for Academic Affairs  
The University of Texas System  
aholmes@utsystem.edu

Dr. Archie Holmes joined The University of Texas System as Executive Vice Chancellor for Academic Affairs in October 2020. He provides oversight and guidance for the eight UT System academic institutions that annually enroll more than 220,000 students, produce nearly 59,000 graduates, and have an aggregate annual operating budget of more than \$6.7 billion.

Prior to joining UT System, Dr. Holmes was the Vice Provost for Academic Affairs at the University of Virginia and was a faculty member at both the University of Virginia and the University of Texas at Austin. As Vice Provost for Academic Affairs at UVA, Holmes served as chief advisor to and representative of the executive vice president and provost in academic matters related to the curriculum and general health and welfare of the academic units. Over his career, Holmes has co-authored more than 110 referred technical articles, presented at 70 conferences, and has received numerous awards for his teaching and advising activities.

Dr. Holmes graduated from Round Rock High School in 1986 and received his bachelor's degree and Ph.D., both in electrical engineering, from the University of Texas at Austin and the University of California at Santa Barbara, respectively.





**Alison Kadlec, Ph.D.**

Founding Partner, Sova Solutions  
alison.kadlec@sova.org

Dr. Alison Kadlec is a Senior Partner at the mission-driven consultancy Sova. Over the last 20 years, Alison has worked deeply with systems and institutions in more than half the states in the U.S. to help leaders at every level strengthen the will and skill required for genuinely student-focused reform of policy and practice at scale. Alison also leads work with state policymakers and regional coalitions to improve the quality of policy design and implementation planning. From coordinating statewide work to providing one-on-one executive coaching, Alison works at multiple levels to help people strengthen their resolve and capacity to lead real student-focused change. Before co-founding Sova, Alison was a Senior Vice President at Public Agenda where she led higher education and workforce projects focused on elevating student voice, improving faculty engagement in guided pathways, and helping institutions collaborate across boundaries on student-focused innovation. Alison began her career as a visiting professor in a variety of four-year university settings in Minnesota and New York, and she credits most of her skills to the years she spent bartending to fund her education and supplement her adjunct salary. Alison is the author of a book about the enduring relevance of John Dewey and has published in a variety of settings — inside and outside higher education — on topics ranging from public deliberation to the public purposes of play. She holds a Ph.D. in political science from the University of Minnesota and BAs from Michigan State University in Political Theory, Constitutional Democracy, and English Literature. She lives and works on Anishinabek land in Northwest Michigan, where she's learning about life from her family, her community, and nature.



**Funda Karapinar-Reilly**

Director of Analytics, University Analytics Department  
The University of Texas at Arlington  
funda@uta.edu

Funda Karapinar-Reilly, the Director of Analytics for the University Analytics department at the University of Texas at Arlington, has 17 years of data analytics and reporting experience. She received her M.Sc. in Computer Science from UT Arlington (UTA) in 2017.

Karapinar-Reilly manages a diverse team of data engineers, data analysts, and data scientists, whose expertise ranges from ETL and database modeling to statistics, machine learning, and natural language processing, all of which are regularly employed to provide data and analytical services to the UTA campus. She and her team have worked to provide automated, self-service reports, dashboards, and analyses to important stakeholders around campus, as well as more customized and bespoke analyses when needed. She has worked extensively on data management, data governance, and change management within the university. Her work spans most of campus, often including stakeholders and decision makers from multiple departments and campus administration.

Karapinar-Reilly has led analytical work for numerous critical internal projects at UTA, including studies of faculty salaries, student retention and graduation, and achievement rates for Hispanic/Latino students across different instructional modalities. Additionally, she has been directly involved in many high-profile external projects such as the Lumina Grant, Multiple Measures Assessment, Transfer Credit Transferability, and Curricular Analysis projects.



**Rebecca Karoff, Ph.D.**

Associate Vice Chancellor for Academic Affairs  
The University of Texas System  
rkaroff@utsystem.edu

Dr. Rebecca Karoff leads systemwide student success initiatives at The University of Texas System as Associate Vice Chancellor for Academic Affairs. Her work addresses the student success continuum, PK-20 and into the workforce, and recognizes the remarkable responsibility and opportunity of the University of Texas System to achieve more equitable access and outcomes for the state's increasingly diverse students. She leads a number of system-institutional collaborative initiatives, including the *Equitable Student Pathways Project* funded by Lumina Foundation, *Accelerating Latino Student Success through Hispanic Servicingness*, and the UT System's momentum-building strategy on Open Educational Resources (OER). Through a partnership with ACUE and as liaison to the UT System Academy of Distinguished Teachers, she works to engage faculty in embracing their roles in student success. She is a co-author of the NASH Equity Action Framework, a tool designed for university systems to assess their progress toward equity, and she chairs the Equity Work Group of DOERS3, the Driving OER Sustainability for Student Success Collaborative, helping to lead the Hewlett Foundation-funded project to implement the *Equity Through OER Rubric*.



**Kasey Klepfer**

Senior Research and Policy Analyst,  
Office of Institutional Research and Analysis  
The University of Texas System  
kklepfer@utsystem.edu

Kasey Klepfer serves in the Office of Institutional Research and Analysis (OIRA), helping to transform traditional institutional research (IR) data into timely and meaningful information. Klepfer has more than a decade of experience in higher education, specializing in college readiness, student success, financial aid policy, and student financial wellness (including food and housing insecurity). In a previous role at Trellis Company — a nonprofit corporation focused on helping people leverage the power of post-secondary education and learning to improve their quality of life and the communities in which they live — Klepfer led the design and implementation of the nationwide Student Financial Wellness Survey. He earned a BA in History and Government from the University of Texas at Austin and a Master of Public Affairs from the LBJ School of Public Affairs. He is dedicated to increasing the educational opportunities and attainment of traditionally underserved populations through data-driven policies.



**Javier Kypuros, Ph.D.**

Dean of the College of Engineering  
The University of Texas at Tyler  
jkypuros@uttyler.edu

Dr. Javier Kypuros is the current Dean of the College of Engineering at the University of Texas at Tyler (UT Tyler). He has served for more than two decades at various institutions within the University of Texas System, including UT El Paso, UT Rio Grande Valley (formerly UT Pan American), and UT Tyler, as a professor of mechanical engineering, a leader, and an administrator. Nationally, he serves on the Executive Board of the American Society of Engineering Education (ASEE); the Engineering Deans Council (EDC); and on the Academic Advisory Council (AAC) of the Accreditation Board for Engineering and Technology (ABET), which accredits engineering, computer science, technology, and applied science programs. Kypuros has been actively engaged in diversity, equity, and inclusion (DEI) efforts at UT Tyler through the President's Justice, Equity, Diversity, and Inclusion (JEDI) Council and nationally through efforts of the ASEE Diversity Recognition Program and the ABET AAC, both of which focus on elevating DEI throughout STEM higher education. He has spent much of his career focused on practices and initiatives that promote the success and contributions of underrepresented populations in engineering higher education. He is a former UT System Regents' Outstanding Teaching Awards program recipient and author of the textbook *System Dynamics and Control with Bond Graph Modeling*.



**Amir Mirmiran, Ph.D.**

Provost and Executive Vice President, Academic Affairs,  
Lindsey Chair Professor of Civil Engineering  
The University of Texas at Tyler  
amirmiran@uttyler.edu

Dr. Amir Mirmiran is the Provost and Executive Vice President for Academic Affairs, and Lindsey Chair Professor of Civil Engineering at The University of Texas at Tyler. He received an M.S. and Ph.D. in Civil Engineering from the University of Maryland. Dr. Mirmiran has held faculty positions at the University of Central Florida, the University of Cincinnati, North Carolina State University, and Florida International University. During Mirmiran's academic career, he served as Faculty Senator, Graduate Program Director, Lab Director, Center Director, Chair, Dean, and Vice President for Research Foundation. A National Science Foundation (NSF) Early Career awardee, Mirmiran has always had a passion for teaching and research. He is also committed to student success, growing the research enterprise, faculty shared governance, and innovation and entrepreneurship in academia.





**James B. “J.B.” Milliken**

Chancellor of The University of Texas System  
chancellor@utsystem.edu

The University of Texas System’s Chancellor J.B. Milliken holds the Lee Hage, and Joseph D. Jamail Regents Chair in Higher Education Leadership. Milliken is a national leader in public higher education with more than 30 years of experience. As chancellor, Milliken oversees one of the largest public university systems in the United States with 13 health and academic institutions, including six medical schools and five Carnegie R1 research universities. UT institutions enroll more than 240,000 students and employ more than 100,000 health care professionals, researchers, faculty, and support staff. With more than \$3.5 billion in research expenditures, the UT System is first in Texas and second in the U.S. for research expenditures among public institutions.

At UT, Chancellor Milliken has led efforts to meet the needs of a growing and diversifying state and nation, including a commitment to growing training, education, and research programs in fields of economic and national security importance, like cybersecurity and advanced manufacturing.

As a sought-after voice in public higher education leadership, Milliken is a member of the national Taskforce on Higher Education and Opportunity, the board of the American Council on Education, the executive committee of the Council on Competitiveness, and the CEO Council of the Texas Economic Development Corporation.

Prior to joining the UT System, Milliken served as chancellor of The City University of New York (CUNY). He also served as senior vice president of the 16-campus University of North Carolina.



**Jessica C. Murphy, Ph.D.**

Dean of Undergraduate Education  
The University of Texas at Dallas  
jessica.c.murphy@utdallas.edu

Dr. Jessica C. Murphy is the Dean of Undergraduate Education, as well as an Associate Professor of Literature at UT Dallas. Her research focuses on the literature and culture of early modern England from 1500-1700. Dr. Murphy’s commitment to teaching excellence earned her the Regents’ Outstanding Teaching Award in 2013 and membership in the UT System Academy of Distinguished Teachers in 2020. Murphy’s portfolio includes academic support services, minoritized student success programs, mentor programs, pre-professional advising, student success data analysis, and responsibility for undergraduate policies. Murphy is a chief student success officer charged with representing student success internally as a shared responsibility, externally through work with UT System and national organizations, as well as seeking funding opportunities for initiatives that improve outcomes for undergraduate students at UT Dallas. Murphy secured over a million dollars in grants to expand collaborative student success work. As an equity-driven leader, she provokes change through innovations in teaching, management of student support services, and policy review. Under Murphy’s tenure, programs in the Office of Undergraduate Education, which serve thousands of students, are credited with reducing equity gaps and facilitating the timely graduation of students through policy changes.



**Zainab Okolo, Ed.D.**

Strategy Officer for Student Success  
Lumina Foundation  
zokolo@luminafoundation.org

Dr. Zainab Okolo is a higher education policy and mental health expert, advocate and educator, focused on helping students overcome barriers so they can learn, earn, and lead fulfilling lives. She holds a bachelor's degree in family and consumer sciences from the University of Maryland, a master's in marriage and family therapy and counseling from Syracuse University, and a doctorate in higher education administration from George Washington University.

Currently a Strategist at Lumina Foundation, Dr. Okolo works to significantly improve student success and increase credential attainment by incorporating holistic student services, including mental health. Her portfolio of work focuses on the urgent needs of people of color, adult learners, student parents, and other marginalized student populations striving to succeed at learning beyond high school despite systemic barriers. In her previous roles, Okolo served as a policy/research associate on HCM Strategists' postsecondary team, where she worked on policy issues aimed at making higher education more accessible, affordable, and relevant. She also held various student service posts and conducted research at the University of Maryland, the American Council on Education, and the Institute for Higher Education Policy.

As a clinically trained and licensed mental health professional, Dr. Okolo has supported individuals, families, and institutions in adopting strategies to overcome various mental health challenges. As demonstrated by her experience and expertise, Okolo remains a strong advocate for increased and equitable access to high quality mental health services and resources for all students.



**Ashley Purgason, Ph.D.**

Associate Vice Provost for Student Success  
The University of Texas at Arlington  
purgason@uta.edu

As Associate Vice Provost for Student Success, Dr. Ashley Purgason leads the Division of Student Success at the University of Texas at Arlington (UTA), a unit of professional staff in a variety of activities — from registration to advising to graduation — designed to meet student academic and belonging needs. Under her leadership, the Division of Student Success has focused on implementing the Graduation Help Desk and other retention and completion programs, peer-led team learning, the Terry Scholars program, academic coaching, and participation in the APLU Powered by Publics project, among other initiatives. Purgason is a toxicologist by training and received her Ph.D. from the University of Texas Medical Branch at Galveston. She received undergraduate and master's degrees from UTA, and is also a former member of the UTA Women's basketball team. Her research includes work on the UT System Louis Stokes Alliance for Minority Participation: A Senior Model Alliance Focused on Student Success," sponsored by the University of Texas at El Paso (2012-17).





**Marcela Ramirez**

Associate Vice Provost for Teaching, Learning & Digital Transformation  
The University of Texas at San Antonio  
marcela.ramirez@utsa.edu

Marcela Ramirez serves as the Associate Vice Provost for Teaching, Learning & Digital Transformation within Academic Innovation at The University of Texas at San Antonio (UTSA). She led a recent reorganization, bringing together Teaching and Learning and Digital Learning into one unit that focuses on extraordinary support for faculty teaching in all modalities, resulting in transformative and distinctive learning experiences for UTSA students. Ramirez is also responsible for online course development for online programs and institutional initiatives. She also manages the multifaceted stages of planning, development, delivery, implementation, and evaluation of digital learning integrations and solutions for e-learning.

Ramirez holds a BBA degree in Computer Information Systems and Human Resources and an MBA in Management from The University of Texas at El Paso (UTEP).



**Julie Rivera, Ph.D.**

Director of Academic Reports and Curriculum  
The University of Texas at El Paso  
jarivera6@utep.edu

Dr. Julie Rivera has a Ph.D. in Rhetoric and Composition. She has been with the University of Texas at El Paso (UTEP) for seven years as the Director of Academic Reports and Curriculum. Her responsibilities include the facilitation and review of proposals for all levels of degrees and certificate programs. Dr. Rivera works with faculty to develop new programs and make changes to existing programs, as well as with deans to manage administrative changes. She also serves as a consultant for all university curriculum changes. Rivera is the primary liaison with UT System's Academic Affairs and the Texas Higher Education Coordinating Board (THECB). Additionally, she works with UTEP's Center for Institutional Evaluation, Research, and Planning to ensure the accuracy of reports submitted to the THECB as related to responsibilities assigned to her office.



**Colleen Swain, Ph.D.**

Associate Provost for Academic Success, Dean of Undergraduate Studies  
The University of Texas at Tyler  
cswain@uttyler.edu

Dr. Colleen Swain proudly serves as an educator determined to improve the human condition. Over the past 36 years, Dr. Swain's roles in education include public school teacher, university advisor, and faculty member with administrative duties at the University of North Texas, the University of Florida, and the University of Texas at Tyler. She earned a B.S. in Education from Baylor University, an M.S. in Computer Education & Cognitive Systems from the University of North Texas, and a Ph.D. in Training and Development & Andragogy with an emphasis in Educational Research from the University of North Texas. Swain is honored to serve as UT Tyler's Associate Provost for Academic Success and Dean of Undergraduate Studies. She is excited to partner with her colleagues across UT System as they collaboratively advance the Equity/Excellence Imperative through Equitable Student Pathways work.



**Steve Wilkerson, Ph.D.**

Associate Vice Provost and Chief Analytics Officer  
The University of Texas at San Antonio  
steve.wilkerson@utsa.edu

Dr. Steve Wilkerson has a wide range of experience throughout his 30-year higher education career, including academic advising, learning assistance, strategic planning, assessment, and institutional research. Dr. Wilkerson earned his doctorate in Educational Administration – Higher Education from Texas A&M University and baccalaureate and master’s degrees in biology from the University of Texas at San Antonio. As a first-generation college student, Wilkerson’s primary research interest is student success. He serves as the Chief Analytics Officer for The University of Texas at San Antonio. His teaching interests include program evaluation, survey methodology, research design, and administration.



**Frederic “Fred” Zaidan, Ph.D.**

Senior Associate Dean for Academic Affairs and Student Success in the College of Sciences, Professor of Biology  
The University of Texas Rio Grande Valley  
frederic.zaidan@utrgv.edu

Dr. Fred Zaidan is currently the Senior Associate Dean for Academic Affairs and Student Success in the College of Sciences and a Professor of Biology at the University of Texas Rio Grande Valley (UTRGV). Before joining the Dean’s Office as an Associate Dean in June 2018, he served as biology chair for 5.5 years. Dr. Zaidan received his bachelor’s degree in Ecology and Evolutionary Biology from Princeton University, a master’s degree in Biology from the University of Mississippi, and his Ph.D. in Biological Sciences from the University of Arkansas. He received postdoctoral training at the University of Florida before joining a legacy institution in fall 2003. As a physiological ecologist, Zaidan seeks to understand how environment affects the inner workings of an organism (mostly snakes in his case) and how this feeds back into determining where the organism can live and when it can be active.

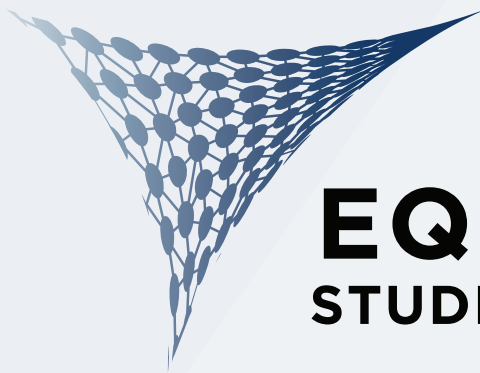


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