

GUSTAVO PEREZ, Ph.D.

Department of Teaching, Leadership, and Culture
STEM Education

Texas A&M University

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➤ **CURRENT POSITION AND TITLE**

Clinical Assistant Professor of STEM Education

Professor of Teaching, Learning, and Culture (College of Education)

Jerry and Kay Cox Fellow

- STEM faculty in the department of Teaching, Learning and Culture within the College of Education and Human Development
- Assigned Courses: EDCI 724, EDCI 720, TEFB 273
- Program lead faculty for STEM teacher preparation program, student placements, and MOUs with partnering districts
- Co-chair of online graduate STEM degree program
- Teach junior and senior level methods courses related to STEM education
- Provide leadership and guidance for program development activities and student channel regional partnerships
- Engage in recruitment, supervision, and mentoring of students through graduation
- Contribute to Texas A&M diversity and inclusion goals and service to Texas A&M University and the professional community

➤ **EDUCATION**

2023 Ph.D. in Curriculum and Instruction
Concentration: STEM Education, Research, and Advocacy
Texas Tech University, Lubbock-TX

2010 Masters of Education, Secondary Education
The University of Texas Pan American, Edinburg-TX

1997 Bachelor's of Science in Industrial Engineering
Texas A&M University, Kingsville-TX

➤ **PROFESSIONAL CERTIFICATIONS**

Texas Educator Certification – Secondary Mathematics, 6 - 12

T-TESS Appraiser

Texas Education Agency STEM Application Reviewer

Quality Matters Certified - Online Instruction

Responsible Academic Conduct Certification, Texas Tech University

➤ **AREAS OF SPECIALIZATION IN K-12**

Science, Technology, Engineering, and Mathematics (STEM)

STEM Education policy and practice

Latinx STEM access and attainment

STEM Teacher Professional Development

Curriculum, Instruction, and Assessment

K12 Engineering, Computer Science, and Technology Integration

Project Based Learning & Design Thinking

Student Outreach, Motivation, and Cultural Capital

Industry and Higher Education Partnerships

Regional Community Impact and Economic Development

➤ **TEACHING APPOINTMENTS**

Clinical Assistant Professor

Texas A&M University, College Station-TX

June, 2023 - Current

Appointment: Instructional Assistant Professor

Texas A&M University, College Station-TX

Aug, 2022 - May, 2023

STEM Education Specialist

Region One Education Service Center, Edinburg-TX

2008 - 2022

- Developed a sustainable, nationally recognized professional development service model for the Region One STEM Center
- Earned multiple service awards during 14 year tenure including the 2020 Million Women Mentors award, the 2021 Smithsonian STEM Education award, and the 2021 National Alliance for Partnerships in Equity (NAPE) Award
- Project/contract manager for professional development services (average yearly revenue of \$400,000 - \$1,000,000)
- Project/contract manager of STEM outreach projects, conferences, and regional STEM events (average yearly revenue of \$150,000)
- Lead grant writer for TEA STEM EcosySTEM grants; budget, documentation, amendments, and compliance reporting
- 2021 Texas STEM Conference chair in partnership with the Texas STEM Coalition
- Chaired the annual South Texas STEM Summit with an annual recruitment of 300+ STEM educators and administrators
- Established local partnerships with local universities, colleges, and industry to promote K-12 STEM outreach programs
- Project lead/liaison for the Region One ESC STEM EcosySTEM network and the Texas Education Agency
- Lead organizer for region-wide STEM Leadership network meetings
- Project lead for multiple STEM community events in partnership with South Texas College and the Laredo Community College
- Served on strategic planning team for annual STEM services and products conception to delivery
- Performed webmaster and content editor functions for www.esc1.net/stem website
- Provided routine cross-divisional program updates/presentations to upper leadership including the Director of Instructional Technology, the Deputy Director for the Division of Technology, and the Region One Executive Director
- Provided direct, on-going, educator and administrator coaching and mentoring services with partnering districts
- Lead developer of online canvas courses for statewide network of ESC STEM leads and the Texas Education Agency

Middle School STEM Teacher

IDEA Public Schools, Edinburg-TX

2006 – 2008

- Taught an integrated course in Math, Science, and Technology
- Founded the Middle School Basketball Program and served as Coach
- Organized student project expo at the annual HESTEC Conference with the University of Texas Pan American
- Organized, chaired, and judged a regional science fair with College of Education and the University of Texas Pan American

High School Math Teacher

Mid Valley Academy, McAllen-TX

2004 – 2006

- Served as Math Chair in 2005-2006 in alternative school setting
- Delivered a recursive 9 week accelerated curriculum (Algebra I, Algebra II, Geometry, and Math Models)
- Increased state assessment performance from 7% to acceptable ratings
- Lead grant writer for Technology Innovation grant of \$10,000 for SMARTboards in every classroom

Summer School Math Instructor

St. Edward's University, Austin-TX

1998 – 1999

- Served as math instructor for upward bound summer program serving 120 migrant students
- Provided mentorship, college readiness counseling, and academic support
- Facilitated fundraising events, and assisted in community outreach and celebrations.

➤ **TEACHING COURSEWORK**

Fall 2023 - Texas A&M University, College Station-TX

- EDCI 720 - Engineering Design for School Teaching and Learning
- TEFB 273 - Introduction to Culture, Community, Society and Schools (Field-based)

Spring 2023 - Texas A&M University, College Station-TX

- EDCI 724 - Science/Mathematics in Engineering - Physics Concentration

➤ **RESEARCH INTERESTS**

STEM Education policy and practice, STEM access and attainment for underserved populations, K12 STEM program development, STEM education teacher preparation programs, K12 STEM professional development, STEM outreach

➤ **DISSERTATION**

Title: *Pláticas with Mexican American Engineering Teachers in High School: Counterstorytelling of Students, Educators, and Professionals in the STEM Pipeline*- a qualitative analysis of the determinant factors influencing STEM persistence among Mexican American STEM professionals; a systematic review of the attainment factors, cultural capital, and lived experiences of first generation Mexican American engineers and their paths towards STEM careers. Defended: March 27, 2023.

Dissertation Committee: Dr. Jeong-Hee Kim (chair), Dr. Jerry Dwyer, Dr. Sungwon Shin, Dr. Joy Esquiedo

➤ **RESEARCH PROJECTS IN-REVIEW**

Kipp, A. (PI), Garcia, L., Perez, G. (In-progress, 2023). Title: Hydroponics E-PLC Science Activity. IRB2023-0184M received 03-22-2023. Reference Number 155274 Division of Research, Texas A&M University.

➤ **PUBLICATIONS**

Perez, G. (2023). *Pláticas with Mexican American Engineering Teachers in High School: Counterstorytelling of Students, Educators, and Professionals in the STEM Pipeline* (Doctoral Dissertation. Texas Tech University).

Perez, G. (2013). *Inspiring Teachers to Teach Wind Energy*. TechDirections, Special STEM Issue, 18-21.

Perez, G. and Gavankar, P. (1996). Surface Estimation of Machined Parts. Ronald E. McNair National Conference Proceedings, Michigan State University.

➤ **KEYNOTES & INVITED PRESENTATIONS**

Perez, G. (June 14, 2023) - Title: *Finding the STEAM Teacher in You*. Keynote speaker for educator STEAM EXPO hosted by the Region 15 Education Service Center, San Angelo, TX. Beth Lehman, beth.lehmann@esc15.net

Perez, G. (November, 2022) - Title: *Finding Your Path*. Keynote speaker for the 2022 Texas Business Professionals of America (BPA, Area2, Region 4) Fall Leadership Conference hosted at Sharyland High School, 11-12-2022. Linda Moncivais, 956.460.8705.

Perez, G. (May, 2017). Keynote speaker for Migrant Parent Conference, Region One ESC Migrant Education Program. www.esc1.net/mep

Perez, G. (May, 2010) - Commencement speaker for the 2010 Rocksprings High School Graduation Class hosted in Rocksprings, TX

Perez, G. (May, 2009) - Title: *Pathway to Success*. Keynote speaker for the 2009 Texas A&I Alumni Scholars Reception hosted in Kingsville, TX

➤ **COMMITTEES, ADVISORY APPOINTMENTS**

2023- RGVSA - Rio Grande Valley Science Association, Member

2023 - Texas Education Agency - 2023 CTE TEKS Secondary Course: Principles of Technology & Scientific Research/Design, Reviewer

2023- Texas A&M University, Online M.Ed. in Curriculum and Instruction with an emphasis in STEM Education, Program Co-Chair

2023 - Texas A&M University - Inaugural Community Engagement Advisory Committee, Member

2020 - Texas Education Agency - TEA Executive STEM Committee, STEM Champion

2022 - McAllen faculty professional learning community (PLC), founder and Co-Chair

2022 - High Impact Practices (HIP) seed grant applications at the Higher Education Center, McAllen, Reviewer

2022 - Faculty Association at McAllen (FAM), Co-founder

2022 - Texas A&M Communities of Practice (CoPs) - Teacher Certification, Clinical Experiences, Partnerships

2022 - Texas A&M University, M.Ed. in Curriculum and Instruction, summer 2023 applications reviewer

➤ **SERVICE**

2023, Summer - Student/Parent Recruitment Events

- 06-26-2023: Participated in inaugural SEHD NSC in McAllen
- Coordinated SEHD graduate program for online TAMU STEM Master's program
- Coordinated SEHD undergrad program development and strategic planning for McAllen campus

2023, Fall - Student/Parent Recruitment Events

- Coordinated multiple on-campus social events to recruit ~30 admitted students with interest in attending McAllen program
- Collaborated in the review and production of bilingual marketing materials in collaboration with the Division of Marketing & Communications - SEHD to promote the McAllen educators programs
- Volunteered as facilitator for "Aggie Ring Day" celebrations at McAllen.

2022, Spring - Student/Parent Recruitment Events:

- Transfer Student Recruitment Events - South Texas College, SEHD - TLAC, Regional, - participated in recruitment events in collaboration with the TAMU Prospective Student Center
- McAllen ISD - Memorial HS, SEHD - TLAC, Regional, - participated in formal and informal recruitment efforts such as career days, tailgates, parent nights, college nights, etc.

- TACRAO Week, SEHD - TLAC, Regional
- PSJA ISD, SEHD - TLAC, Regional
- Edcouch-Elsa ISD, SEHD - TLAC, Regional
- Edinburg CISD, SEHD - TLAC, Regional
- Harlingen CISD, SEHD - TLAC, Regional
- Brownsville ISD, SEHD - TLAC, Regional
- Region One GEARUP, SEHD - TLAC, Regional
- Mercedes ISD, SEHD - TLAC, Regional
- Rio Grande City ISD, SEHD - TLAC, Regional
- Sharyland ISD, SEHD - TLAC, Regional
- Horizon Montessori ISD, SEHD - TLAC, Regional

➤ **PROFESSIONAL DEVELOPMENT DELIVERED (2008 – Present)**

- 2023-06, Session: *The Power of Synergy*, City of Mission Leadership Series Workshop, Rancho Guadalupe, Edinburg-TX
- 2023-06, Session: *Interpersonal Skills, Awareness and Practice*, City of Mission Leadership Series Workshop, Rancho Guadalupe, Edinburg-TX
- 2023-06, Session: *STEAM Education for All* - Resources for K12. STEAMExpo 2023 Agents of Change. Region 15 Education Service Center, San Angelo-TX. <https://apps.esc1.net/ProfessionalDevelopment/esc15/Registration/Workshop/198993>
- 2022-01 Session: *Become a K-12 STEM Educator*, Howdy Week, McAllen, Co-Presenter, 50 participants
- 2022-01, Session: *What is Mentorship?*, Middle School STEM Camp - McAllen ISD, McAllen, TX, Co-Presenter
- 2022-01, *Hybrid Teaching & Best Practices for All*, regional teacher instructional staff development, Edinburg, TX, Presenter
- (Prior to Fall 2022) 450+ professional development institutes reaching approximately 12,000 educators and administrators. K12 project awards and grants: \$2.5 million

Select Topics:

STEM Education in K12 General Sessions
 STEM Literacy in Early Education
 STEM Career Pathways and Skills
 Applied Robotics in STEM Education
 Engineering Design Process and Principles
 Computational Thinking and Computer Science
 Integrative Physics with STEM Probeware
 Integrative Chemistry with STEM Probeware
 Project Based Learning Educator Academies
 Technology Integration Webinars
 Capstone Projects Program Series
 Forensics in Science and Math Academy
 STEM Industry Educator Excursions
 Integrating ELL and STEM Literacy Sessions

➤ **STEM OUTREACH ACTIVITIES**

- RGV FIRST Robotics
 - Judge, First Tech Challenge (FTC) South Texas Regional Championship, 02-23-2023, McAllen High School. 40 teams.
- PSJA Engineering Institute (Spring, 2023)
 - Presenter, Pharr-San Juan-Alamo (PSJA) Engineering Institute, 350 students grades 8-12. 11-04-2022.
- (Prior to 2022)
 Teacher mentorship and coaching
 STEM Events Judging and Presentations
 Facilitator of Capstone Project Presentation Panels
 Organizer of STEM Career Days - School Districts
 Project Lead of Project Based Student STEM Camps - School Districts
 Project Lead of Migrant Student STEM Camps - Migrant Programs
 Project Lead of Summer STEM Bridge Programs - School Districts
 Project Lead of STEM Teacher Summer Academies
 Facilitator for Regional eSPORTS Gaming Events
 Project Lead of STEM Community Festivals and Events
 Project Lead of College & Career Readiness High School Camps - GEARUP Programs

➤ **CONFERENCE PRESENTATIONS**

Perez, G. & Kipp, L. A. (In-Review, July, 2023) Title: An Emergent Pathway toward Engineering: The Epiphanies of a First-Generation Mexican American Engineer. AERA 2023 Annual Meeting, American Educational Research Association. Accept/Reject Notice:

November 10, 2023.

Perez, G. (May 17-20, 2023). Title: “¡Soy ingeniero, y que! / I’m an engineer, so what!”: An autoethnographic perspective on STEM education. ICQI 2023, 19th International Congress of Qualitative Inquiry. Urbana, Illinois.

Perez, G. (May 17-20, 2023). Title: “Am I an insider or outsider?”: Mexican American stories within STEM: Narrative inquiry perspectives. ICQI 2023, 19th International Congress of Qualitative Inquiry. Urbana, Illinois.

Perez, G. (2023). Title: Transforming traditional laboratories into challenge-based learning experiences. Presentation delivered on 03/24/23, National Science Teachers Association - NSTA 2023, Atlanta GA.

(Prior to 2022)

HESTEC Conference - University of Texas Rio Grande Valley
Region One ESC Assessment Conference
Region One Teachers as Leaders Conference
Region One Technology Conference
Texas STEM Conference - Conference Chair
Rio Grande Valley Lead Conference
T3 International Conference
NSTA International Conference
Association for Science Teacher Education

➤ **PROFESSIONAL ASSOCIATIONS & STEM NETWORKS**

RGV Focus Leadership Association, Member
Texas STEM Coalition Executive Member 2021, President
Texas STEM Coalition Executive Member 2008 - 2021
2021 TEA STEM Executive Steering Committee, STEM Champion
2021 Regional STEM EcosySTEM, Regional Lead
STEM Core Network Texas Tech University, Member Affiliate
J-PEER, Journal of Pre-College Engineering Education Research, Reviewer
National Science Teachers Association
National Council of Teachers of Mathematics
American Society for Engineering Education
Texas Girls Collaborative Project, Executive Board Member
Texas Computer Education Association
Community Foundations of Texas Focus Group
Educate Texas Focus Group
Texas Regional Science Collaborative
Texas Regional Math Collaborative
Texas Regional Computer Science Collaborative

➤ **AWARDS and RECOGNITIONS**

2022 Jerry and Kay Cox Fellow - Texas A&M University
2022 Global Endowed Scholarship - Texas Tech University
2021 STEM Center for Research, Outreach, & Education (STEM CORE) - [Affiliate Member](#) - Texas Tech University
2021 National Alliance for Partnership in Equity (NAPE) [Award](#) - Regional Innovation through Challenge
2020 Million Women Mentors [Award](#), [Press](#)
2020 Helen Devitt Jones Graduate Fellowship
1997 Ronald E. McNair Graduate Scholar
1991 CAMP Scholarship - St. Edward’s University
1991 St. Edward’s University Academics Scholarship
1991 High School Salutatorian

➤ **TRAINING AND SCHOLARSHIP ACTIVITIES**

July 15-19, 2022, Cockrell School of Engineering, University of Texas at Austin, TX
2022 Petroleum Engineering and Science Educators Institute - Participant
Hildebrand Department of Petroleum and Geosystems Engineering
Event Contacts:
Dr. Hilary Clement Olson, Associate Professor of Instruction
Dr. Jon E. Olson, Frank W. Jesson Professor
Dr. Paul M. Bommer, Distinguished Professor
Dr. Larry Lake, Shahid and Sharon Ullah Endowed Chair
Kathy Ellins, Senior Research Fellow of Geoscience

July 12-14, 2022, Washington, DC
2022 Zero Barriers in STEM Education: Accessibility and Inclusion Summit
Grant Writer and Project Lead, Team of 5 members
Smithsonian Science Education Center
Event Contact: Dr. Amy D'Amico, Director

➤ PROFESSIONAL DEVELOPMENT

TrainTraq Transcript 2022 - 2023, Texas A&M University
- Course# 3001 - Information Security Awareness, Date Completed: 07/31/2023
- Course# 11012 - FERPA Training, Date Completed: 07/31/2023
- Course# 2113357 - Responsible Conduct of Research (RCR) - TAMU, Date Completed: 04/08/2023
- Course# 99002 - Creating a Discrimination-Free Workplace, Date Completed: 09/14/2022
- Course# 99004 - Orientation to the A&M System, Date Completed: 09/14/2022
- Course# 3001 - Information Security Awareness, Date Completed: 09/14/2022
- Course# 2111669 - Required Emergency Alert System Notification, Date Completed: 09/14/2022
- Course# 2111716 - Financial Conflicts of Interest in Research, Date Completed: 09/14/2022
- Course# 2114400 - Ethics & Fraud, Date Completed: 9/0/2022
- Course #2113509 - New Hire Benefits Orientation, Date Completed: 06/17/2022

➤ REFERENCES

Dr. Jeong-Hee Kim
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Miguel Chuca
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➤ PROFESSIONAL EXPERIENCE

Project Engineer

2003 – 2005

Genemco, Inc., Edinburg-TX

- Successfully deployed food processing plant projects resulting in annual revenues of \$2.5 million annually. Maintained e-commerce website for domestic and international product sales.
- Supervised a project fabrication crew of 15 members: welders, technicians, and staff.
- Supervised industrial plant reconditioning of industry-grade pumps, motors, homogenizers, silos, conveyors, and other processing equipment to meet industry safety standards.
- Earned mid-level management and OSHA safety and health certifications.

Manufacturing Specialist

2002 – 2003

Texas Instruments, Inc., Dallas-TX

- Provided direct manufacturing support for wafer fabrication processes.
- Conducted machine calibration, maintenance, operation, and production activities in a cleanroom facility.
- Earned industry certifications for wafer fabrication processes, clean room facilities, and safety.

Wire Harness Electrical Technician

2001 – 2002

Boeing, Inc., Corinth-TX

- Fabricated and modified electrical and electronic systems.
- Supervised wire harness line assemblies, system integration, and testing.
- Earned industry certifications related to wire-harness production, OSHA occupational standards, personal protective equipment, and

safety.

English Teacher

Harmon Hall, Inc., Zacatecas, Mexico

2000 – 2001

- Accepted 2-yr faculty position with Harmon Hall International - Mexico.
- Served as lead educator for a teaching staff of 10 members.
- Developed and implemented innovative lesson design to support English Language learning through field-based performance-based experiences.

Product Test Engineer

Advanced Micro Devices, Inc, Austin-TX

1997 – 2000

- Performed back-end testing on various AMD family chipsets for personal computers and laptops.
- Managed multi-million dollar product inventories and customer samples.
- Supervised samples production, testing, and marketing processes.
- Prepared documentation and presentations for device yield reports and performance metrics. Earned relevant operations, testing, and programming certifications.

Engineering Technical Writer

Applied Materials, Inc., Austin-TX

1996 – 1997

- Served as lead editor for specialized project documentation for wafer fabrication systems in clean room environments.
- Drafted proposals, specifications, drawings, and bill of materials.
- Deployed project documentation for production use including machine setup, trouble-shooting, preventive maintenance, and operation processes. Earned appropriate publishing certifications.