

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 2023-24

- STEM faculty in the department of Teaching, Learning and Culture within the College of Education and Human Development
 - Assigned Courses: EDCI 724, EDCI 722, EDCI 720, TEFB 273, MATH365, MASC 351
 - Program lead faculty for STEM teacher preparation program, student placements, and MOUs with partnering districts
 - Co-chair of online graduate STEM degree program, recruitment, and graduate level mentorship
 - 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
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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
Texas Education Agency T-TESS Appraiser and STEM Application Reviewer
Quality Matters Certified - Online Instruction
Responsible Academic Conduct Certification, Texas Tech University

HIGHER EDUCATION TEACHING APPOINTMENTS

Clinical Assistant Professor, June, 2023 - Current
Instructional Assistant Professor, Aug, 2022 - May, 2023

Texas A&M University, College Station-TX

Texas A&M University, College Station-TX

TEACHING COURSEWORK

Texas A&M University, College Station-TX

- EDCI 720 - Engineering Design for School Teaching and Learning (graduate) Fall 2024
- MASC 450 - Integrated Mathematics Fall 2024
- TEFB 273 - Introduction to Culture, Community, Society and Schools (Field-based) Fall 2024
- EDCI 722 - Microcontrollers for Educators (graduate) Spr 2024
- MATH 365 - Structure of Mathematics I Spr 2024
- MASC 351 - Problem Solving in Mathematics Spr 2024
- EDCI 720 - Engineering Design for School Teaching and Learning (graduate) Fall 2023
- TEFB 273 - Introduction to Culture, Community, Society and Schools (Field-based) Fall 2023
- EDCI 724 - Science/Mathematics in Engineering - Physics Concentration (graduate) Spr 2023

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. <https://ttu-ir.tdl.org/handle/2346/96290>
Dissertation Committee: Dr. Jeong-Hee Kim (chair), Dr. Jerry Dwyer, Dr. Sungwon Shin, Dr. Joy Esquierdo

RESEARCH FOCUS

K12 STEM Education and program development
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

RESEARCH GRANTS

Funded

Base amount: \$2,972,188.00 (Co-PI)
Grant/Proposal#: 2310999
Funding Organization: US Department of Education (DOE)
Awarded#: P031S230327).
Title of Project: Pushing the Education and Human Development Pipeline (PEP): Furthering TAMU as a Hispanic-Serving Institution.
Project start date: 10-01-2023
Project end date: 09-31-2028

Base amount: \$4,000 (PI)
Grant: High Impact Practice (HIP)
Funding Organization: Texas A&M University Fund
Awarded: 01-16-2024
Title of Project: STEM Community Festival: A High Impact Learning Experience
Project start date: 01-16-2024
Project end date: 08-31-2024

Base amount: \$4,000 (Co-PI)
Grant: High Impact Practice (HIP)
Funding Organization: Texas A&M University Fund
Awarded: 01-16-2024
Title of Project: Aggies Play on STEM Day!: Engaging the Future in STEM
Project start date: 01-16-2024
Project end date: 08-31-2024

Submitted, Under-Review

Partnership amount: \$119,000
GEARUP Grant Proposal: Listing number 84.344A,
Funding Organization: Department of Education
Title of Project: Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)
Submission date: 04-2024
Project start date: 08-2025
Project end date: 08-2032

Not Submitted, Under-development

Target Base amount: \$2,000,000 (Co-PI)
Target Funding Organization: US Dept. of Ed, Institute of Educational Sciences, National Center for Education Research

Title of Project: Let's Talk Science with Mentors. Validation of a classroom pedagogical observation instrument for improving instruction for teachers of English Learners. Investigators: Lara-Alecio, R. (PI), Irby, B. J. (Co-PI), Perez, G. (Co-PI), Tong, F. (Co-PI), & Walker, D. (Co-PI)

RESEARCH ARTICLES IN-REVIEW

Perez, G. (2024, In-Progress). Title: An Emergent Pathway toward Engineering: The Epiphanies of a First-Generation Mexican American Engineer. Blind-review. Accepted for presentation at AERA Annual Meeting, Philadelphia.

Kipp, A., & Perez, G. (2023). Title: Constructive student roles for authentic collaboration in engineering design challenges. *The Science Teacher*. Manuscript ID: 2023-Oct-TST-IB-2181.

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

ACADEMIC SERVICE

Manuscript JSER-D-24-00028, "The Relations Among Students' Digital Accessibility, Digital Competence, Self-Efficacy for Self-direction in Learning, and Self-rated Performance in Engineering Virtual Laboratories." Reviewed for *Journal of STEM Education* (04-2024)

PUBLICATIONS

Kipp, A., Clark, Hawk, N., & Perez, G. (2024). Generating Opportunities: Strategies to Elevate Science and Engineering Practices Using GhatGPT. *The Science Teacher*, 91(2), 43-47.

Kipp, A., Clark, S.; Fahrenwald, C., & Perez, G. (2023) "I Just Feel Worn Out": Constraints to Teacher Agency throughout COVID-19," *School Leadership Review*: Vol. 18: Iss. 1, Article 5.

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.
<https://drive.google.com/file/d/1-ECV06sHLSfMy4OKhtyR8ZVXqzAfwFQx/view?usp=sharing>

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

KEYNOTES & SELECTED 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 AND ADVISORY APPOINTMENTS

2023- 24 TAMU Higher Education Center - Undergraduate Student Honor's Faculty Committee

2023 - Current, TAMU - Graduate and Professional School, Graduate Committee Faculty

Depart	Major	Degree	Role
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TLAC	EDCI	EdD	Member
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TLAC	EDCI	PhD	Member
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TLAC	EDCI	MEd	Chair, Co-chair, Member
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TLAC	EDCI	MS	Member
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2023 - Current, RGVSA - Rio Grande Valley Science Association, Board Member

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

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

2023 - Current, Texas A&M University - Inaugural Economic Development and Community Impact Advisory Committee, Member
2022 - Current, 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, Committee member
2022 - Current, Texas A&M Communities of Practice (CoPs) - Teacher Certification, Clinical Experiences, Partnerships
2022 - Current, Texas A&M University, M.Ed. in Curriculum and Instruction, summer 2023 applications reviewer
2020 - Current, Texas Education Agency - TEA Executive STEM Committee, STEM Champion

MENTORSHIP & ADVISING

Spr 2023 to Current - Undergraduate in M/S in Certification

- Alan Callejas, faculty advisor
- Alexi Muñoz, faculty advisor
- Celia Rodriguez, faculty advisor
- Desiree Ramirez, faculty advisor
- Francisco Fuentes, faculty advisor
- Jahdaly Rios Torres, faculty advisor
- Leanne Treviño, faculty advisor
- Serina Hernandez, faculty advisor
- Yasmine Amaro, faculty advisor

Fall 2023-24 Graduate Cohort - Online Masters in STEM Education

- Martinez-Ramos, Rosa Maria, faculty advisor
- Martinez, Angelica M., faculty advisor
- Sokora, Brady, faculty advisor
- Turner, Jonathan, faculty advisor
- Herr, Sophia E., faculty advisor
- Flynn, Kellye R., faculty advisor
- Park, Jaehee, faculty advisor
- Fedor, Megan M., faculty advisor
- Brockenbush, Kimberly R., faculty advisor

Fall 2023-24 TAMU MS in STEM

- Kari M. Valentine, chair
- Ho-Gland, Kate, faculty advisor
- Elizabeth Miller, faculty mentor

Spring 2023-24 TAMU Academy for Future Faculty

- Daniel Martinez, faculty mentor

Faculty -

Fall 2023 to Current

- Andrew Kipp, Ed.D. - CEHD, faculty mentor
- Lee Cremer, Ph.D. - Chemistry, College of Arts & Sciences, faculty mentor
- Clarrisa Torrez - PEP Program Coordinator, program advisor

SERVICE

2024 Spring STEM Executive Committee - STEM Resources Review, Fort Worth-TX

2024, Spring - Recruitment and Service Events

- 01-2024: Area II Region IV BPA Regional Leadership Conference, South Texas College, McAllen-TX, judge
- 01-2024: Stellar Program Regional Recruitment, faculty advisor
- 01-2024: CEHD and GEARUP Counselor's Meeting, coordinator
- 01-2024: 9th Annual South Texas STEM Summit, presenter
- 02-2024: South Texas College - College Fair, Pecan Campus Recruitment, facilitator
- 02-2024: McAllen State-of-the-City Banquet, higher ed partner
- 02-2024: Tri-Agency Regional Convener Quarterly Meeting, higher ed partner
- 03-2024: TSTE-AE Conference, San Marcos-TX, McAllen Chapter, faculty advisor
- 03-2024: PEP Program Coordinator Interviewing Committee, member
- 04-2024: TAME, Student Organization Meeting, faculty advisor
- 04-2024: TAMU Colonias Program Clean-UP: Chicle and Dulce St, Donna-TX, volunteer

- 04-2024: GEARUP TIES Conference, Edinburg-TX, Faculty advisor
- 04-2024: Region One ESC New Grant Submission, GEARUP, faculty advisor
- 04-2024: TAMU CEHD TLAC Faculty Working Group, work member
- 04-2024: 2023-24 STaR EOY Mentorship Showcase, presenter
- 05-2024: RGVFocus - 2023 Annual Report & Scorecard Release, Higher Ed Representative
- 05-2024: CEHD and GEARUP Counselor's Meeting, program coordinator
- 06-2024: CEHD New Student Conference - McAllen, faculty advisor
- 07-2024: T3 International Summit-McAllen, coordinator

2023, Fall - Recruitment and Service Events

- 08-2023: TEA CTE TEKS Review Committee
- 09-2023: Tri-Agency Regional Convening Leadership Board
- Grant Development: STEM Professional Development
- 09-2023: TIES GEAR UP Conference, Presenter
- 09-2023: RGVSA Advisory Board Meeting, member
- 09-2023: CTE Directors Meeting, presenter
- 10-2023: SEHD Recruitment at South Texas College, booth
- 10-2023: TAMU-McAllen Tailgate Booth
- 10-2023: Texas Association for Bilingual Education Conference - TAMU Booth
- 10-2023: TAMU-McAllen Open House Booth
- Grant Support: DRK12 Proposal - Marine Robotics Competition
- 10-2023: Host Harlingen ISD SEHD Program presentation
- 11-2023: Campus Visit - Anne L. Magee Elementary, Program presentation
- 11-2023: Region One ESC UTECH Conference, TAMU Online MS-STEM Degree booth
- 11-2023: Region One GEARUP - STEMagination Event Booth
- 12-2023: 2024 TSTA-AE Convention/HoD

2023, Summer - Recruitment and Service 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, 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

2022, 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.

PROFESSIONAL DEVELOPMENT DELIVERED (2008 – Present)

- 2023-10-16, Workshop: *The Project-Based Learning Overview*, Premier High School San Juan, San Juan-TX
- 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

- 2024 Youth Career Conference Exhibitor, McAllen-TX, faculty advisor
- 2024 High Impact Practice - Aggies Play on STEM Day!, Anne L. Magee Elementary, Edinburg-TX (70 5th graders), faculty lead
- 2024 Area II Region IV BPA Regional Leadership Conference, Judge
- Judge, Areas: Network Design, Adobe Technology Applications. 5 teams, South Texas College, McAllen-TX.
- 2023 RGV FIRST Robotics, Judge
- First Tech Challenge (FTC) South Texas Regional Championship, McAllen High School. 40 teams.
- 2023 PSJA Engineering Institute, presenter
- Pharr-San Juan-Alamo (PSJA) Engineering Institute, 350 students grades 8-12. 11-04-2022.
- 2015 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

National/International

Perez, G. (2024) Title: An Emergent Pathway toward Engineering: The Epiphanies of a First-Generation Mexican American Engineer. AERA 2024 Annual Meeting, Philadelphia, PA., American Educational Research Association. Presented: April 14, 2023.

Kipp, L. A, Hawk, N., & Perez, G.. (2024). Title: Algorithm alleys: Strategies to elevate Science and Engineering Practices using ChatGPT. Presentation delivered on 03/21/24, Colorado Convention Center - 703, NSTA 2024, Denver, CO.

Miller, E. & Kipp, L.A. (2024). Title: Generating pathways: Strategies for differentiation and equity through Chat-GPT. Presentation delivered on 03/21/24, Colorado Convention Center - 703, NSTA 2024, Denver, CO. (faculty mentor)

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

Statewide

Perez, G. (2024) Title: STEM Workshop 101. TCEA 2024, Austin-TX.

Perez, G. & Kipp, L. A. (11-2023) Title: Transforming Traditional Laboratories Into Challenge-Based Learning Experiences. CAST 2023 - 380A, Science Teachers Association of Texas. Houston-TX.

Kipp, L. A. & Perez, G. (11-2023) Title: Basil Bedla! Integrating Hydroponics Into the Science Classroom Using Challenge-Based Learning. CAST 2023 - 322B, Science Teachers Association of Texas. Houston-TX.

Regional

Perez, G. (2024) Title: Dispositions of a STEM Teacher, 9th Annual South Texas STEM Summit, South Padre Island-TX.

(2008 to 2022)

Texas STEM Conference, conference chair & presenter
South Texas STEM Summit, conference chair & presenter
Region One Technology Conference, co-chair, presenter
HESTEC Conference - University of Texas Rio Grande Valley, presenter
Region One ESC Assessment Conference, presenter
Region One Teachers as Leaders Conference, presenter
Rio Grande Valley Lead Conference, presenter
T3 International Conference, presenter
NSTA International Conference, presenter
Association for Science Teacher Education, presenter

PROFESSIONAL ASSOCIATIONS & STEM NETWORKS

American Educational Research Association (AERA)
Association for the Advancement of Sustainability in Higher Education (AASHE), Member
American Society for Engineering Education (ASEA), Member
City of McAllen MXLAN International Economic Summit 2024
Community Foundations of Texas, Focus Group
Educate Texas Focus Group, Member
J-PEER, Journal of Pre-College Engineering Education Research, Reviewer (J-PEER)
Journal for STEM Education Research, Reviewer
National Council of Teachers of Mathematics (NCTM), Member
National Science Teachers Association (NSTA), Member
P-16 Council, Member
RGV Focus Leadership Association, Member
Rio Grande Valley Science Association (RGVSA), Board Member
Regional STEM EcosySTEM, Regional Lead
Science Teachers Association of Texas (STAT), Member
STEM Core Network Texas Tech University, Member Affiliate
Texas Girls Collaborative Project (TxGCP), Executive Board Member
Texas State Teachers Association (TSTA), TAFE Student Chapter Advisor
Texas STEM Coalition Executive Member 2021, President
Texas STEM Coalition Executive Member 2008 - 2021
TEA STEM Executive Steering Committee, STEM Champion
Texas Computer Education Association (TCEA)
Texas Regional Science Collaborative, Member
Texas Regional Math Collaborative, Member
Texas Regional Computer Science Collaborative (TRCSC), Member

AWARDS AND RECOGNITIONS

2024 Jerry and Kay Cox Fellow - Texas A&M University
2024 SEHD Research, Enterprise & Outreach (REO)'s MINT (Maximizing Investigator Networking Tools) Challenge Coin
2023 Graduate Faculty Status - Texas A&M University Graduate and Professional School
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 GROWTH & DEVELOPMENT

TrainTraq Transcript 2022 - 2023, Texas A&M University

- Course# 2114742 - Building Evacuation Plan for Higher Education Center at McAllen (HECM) on 04/16/2024.

- 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

PROFESSIONAL EXPERIENCE

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
- Founder and chair of 2016 - 2022 South Texas STEM Summit, annual recruitment of 300+ STEM educators and administrators
- Established K16 partnerships with local universities, colleges, and industry to promote K16 STEM outreach programs
- Project lead for the Region One ESC STEM EcosySTEM network and the Texas Education Agency
- Lead organizer of regional STEM Leadership network meetings
- Project lead for multiple STEM community events in partnership with South Texas College and Laredo Community College
- Served on strategic planning teams to transition STEM services and products from grant-based to enterprise model
- 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
- Served as co-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

Project Engineer

Genemco, Inc., Edinburg-TX

2003 – 2005

- 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

Texas Instruments, Inc., Dallas-TX

2002 – 2003

- 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

Boeing, Inc., Corinth-TX

2001 – 2002

- 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 safety standards.

International English Teacher

Harmon Hall, Inc., Zacatecas,

Mexico

2000 – 2001

- Accepted faculty position with Harmon Hall International - Mexico.
- Taught English language instruction for non-native speakers.
- Served as lead educator and coach for a teaching staff of 10 members.
- Developed and implemented innovative lesson design to support 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, device yield reports and performance metrics.

Summer School Math Instructor (summer only)

St. Edward's University, Austin-TX

1998 – 1999

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

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.

Software Technical Writer (Part-Time)
Kingsville-TX

1994 – 1996

- Served as assistant editor for specialized homebuilders software documentation
- Deployed software flowcharts, user manuals, and general software features

Home Builders Software,

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