



TEXAS TECH UNIVERSITY™



# Institutionalizing STEM Outreach at Texas Tech University

Jaclyn Cañas-Carrell (Environmental Toxicology)

Jerry Dwyer (Mathematics)

Lawrence Schovanec (Provost)

Levi Johnson (STEM-CORE)



# Historical Perspective

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## Early Outreach and Engagement:

- *CISER*
- *T-STEM Center*
- *IDEAL*
- *TTU UIL*
- *GEAR*
- *NSF Project SERVE (Science Enrichment Using Retired Volunteer Educators)*

# Historical Perspective



## Outreach in Mathematics & Statistics

- TexPREP
- K-12 Math Clubs
- Service Learning
- S-STEM
- Outreach Mathematician



# Funding Progression

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## A “Siloed” Approach

- Individual
- Departmental
- Sciences
- Engineering
- Education

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## Collaborative Efforts

- NSF GK-12
- NSF MSP
- GTF MS<sup>2</sup>
- NSF Noyce
- NIH Bridges
- NSF I<sup>3</sup>



# Integrated STEM Initiative on the South Plains



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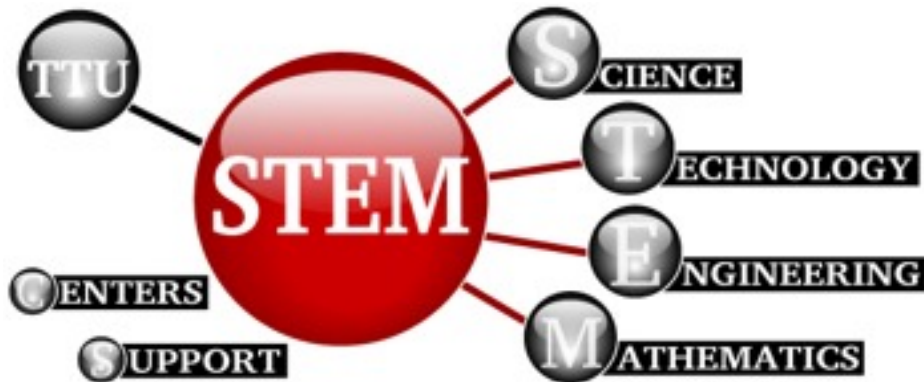


- Original PI Team
  - *Guy Bailey, President – PI*
  - *Lawrence Schovanec, Dean – Co-PI*
  - *Juan Muñoz, VP – Co-PI*
  - *Jerry Dwyer, Math – Co-PI*
  - *Jaclyn Cañas-Carrell, Environmental Toxicology – Co-PI*
- Presidential support
- Program administrator
- Campus-wide coordinator

# Integrated STEM Initiative on the South Plains



## ■ STEM Website



# Integrated STEM Initiative on the South Plains



- STEM Website
- STEM Education & Outreach Network
- K-12 Math & Science Clubs
- Fostered opportunities for collaboration
- Cross-departmental seminars
- Developed financial and HR infrastructure
- Institutional Research



## **Undergraduate Mentoring Initiatives**

- One-to-one
- Peer
- Seminars
- Faculty Round-tables
- Mentee training



## Community College Partners

- Plains Bridges – South Plains College
- Joint proposals – Midland College, Odessa College
- New partners – Howard College (4 campuses)
- Mesalands Community College (New Mexico)



## **Tenure and Promotion**

- Outreach scholarship vs. service
- Campus wide OP
- College guidelines
- Departmental guidelines



# STEM Center for Outreach, Research & Education



## **STEM-CORE Evolution**

- Motivated by I<sup>3</sup>, A&S STEM Council
- 6 Academic Deans
- 6 Associate Directors
- Administrator





## STEM-CORE Objectives

- [www.stem.ttu.edu](http://www.stem.ttu.edu)
- Database of resources
- Facilitate collaborations
- Enhance grant writing
- Assessment
- Advocate for T&P recognition



## Challenges

# Challenges



- Finance & HR processes
- Siloes
- Tenure & promotion traditions
- Traditional view of scholarship
- Dependencies on external funding



# Looking Ahead

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- Develop STEM-CORE resources
- Expand T&P guidelines
- Enhance research agenda
- Continued institutional research
- Texas critical degrees: Outcomes funding
- New TTU Office of Outreach & Engagement



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