



## T-STEM Centers



### T-STEM CENTERS

- **Aggie STEM Center**  
Texas A&M University  
College Station
- **Southeast Regional  
T-STEM Center**  
University of Texas Medical  
Branch, Galveston
- **Ingenuity Center**  
University of Texas, Tyler
- **Transformation 2013**  
Collaborative of Regions 13  
and 20 ESC's  
Austin & San Antonio
- **STEM Center of South Texas**  
Region 1 ESC  
Edinburg
- **Center for STEM Education  
and Research**  
University of Texas at Dallas
- **Texas Tech T-STEM Center**  
Texas Tech University  
Lubbock

### OVERVIEW

The Texas High School Project, working with the Texas Education Agency, supports seven T-STEM Centers statewide tasked with supporting T-STEM academies and all Texas schools by designing innovative science, technology, engineering, and mathematics (STEM) curricula, delivering professional development and creating strategic partnerships among businesses, higher education entities, and school districts. All of the centers offer a core of content-based professional development with an emphasis on math and science in addition to providing coaching and leadership development.

T-STEM Centers are located at universities and regional education service centers throughout the state.

### SIX GOALS OF T-STEM CENTERS

- Align high school, postsecondary education and economic development activities in STEM areas with the broader high school curriculum.
- Lead the transformation of teaching methods, teacher preparation, and instruction in STEM areas.
- Demonstrate how the implementation of T-STEM teaching and learning increases the number of Texas high school students from diverse backgrounds graduating prepared to succeed in postsecondary study and careers in STEM-related fields.
- Train administrators, principals, and teachers in effective leadership strategies for supporting T-STEM instruction.
- Disseminate promising practices and research-based strategies for integrated STEM teaching and learning.
- Improve student achievement outcomes in mathematics and science and increase the number of students who pursue postsecondary studies and careers in science, technology, engineering, and mathematics.

T-STEM CENTER PROFILES

T-STEM CENTER

SELECTION OF PROGRAMS OFFERED

**AGGIE STEM CENTER**

Texas A&M University



The Aggie STEM Center is a partnership of Texas A&M University's College of Education and Human Development and the Dwight Look College of Engineering.

AREAS OF SPECIALTY:

- STEM research - published in journals and PBL materials
- School observation and evaluation reports
- Online project based learning modules
- University graduate-level STEM project based learning class both on campus and online
- Interdisciplinary project based learning

**SOUTHEAST REGIONAL STEM CENTER**

University of Texas Medical Branch, Galveston



The Southeast Regional T-STEM Center, based at the University of Texas Medical Branch in Galveston, is a partnership of Texas State University College of Education and Rice University.

AREAS OF SPECIALTY:

- Biology, biotechnology, biomedical sciences, bio-defense, nanotechnology
- Robotics
- Career Connections – Online Profession Sessions series on STEM careers
- Virtual laboratory learning experiences and environments
- Engineering design-including biomedical engineering

**INGENUITY CENTER**

University of Texas, Tyler



The Ingenuity Center is based at the University of Texas at Tyler education department. The Center links regional resources to improve the STEM preparation of teachers through research, professional development, curriculum development, and technical assistance.

AREAS OF SPECIALTY:

- Surveys of enacted curriculum (analysis of intended, enacted, and assessed curriculum)
- Technology: innovative integration in the curriculum and probe ware
- Gaming development and use as curriculum tool
- Specialized gender equity offerings (equity collaborations and research)
- Mobile trailer unit

**TRANSFORMATION 2013 CENTER**

Region 13 ESC (Austin)



The Transformation 2013 T-STEM Center is a partnership between two education service centers, Region XIII (Austin) and Region 20 (San Antonio).

AREAS OF SPECIALTY:

- Immersion model professional development for STEM educators
- Texas training hub for National Council on Teaching and Learning offerings
- Wrap-around services for K-12 TEKS, STAAR, and content areas
- Texas Higher Education Coordinating Board College and Career Readiness Standards train the trainer

T-STEM CENTER PROFILES

T-STEM CENTER

SELECTION OF PROGRAMS OFFERED

**STEM CENTER OF SOUTH TEXAS**

Region 1 ESC (Edinburg)



The STEM Center of South Texas is based at Region 1 Educational Service Center and partners with the University of Texas Pan American. The Center plays a key role in the regional network of businesses, community organizations, and institutions of higher education in the Rio Grande Valley.

AREAS OF SPECIALTY:

- STEM-focused instructional strategies for English language learners and exceptional children
- Integrating curriculum
- Concept-based instruction
- Rigor in assessment and instruction-STAAR
- Project based learning curriculum development

**CENTER FOR STEM EDUCATION AND RESEARCH**

University of Texas at Dallas



The Center for STEM Education and Research is located within the University of Texas at Dallas Department of Science Education in the School of Natural Sciences and Mathematics.

AREAS OF SPECIALTY:

- Interdisciplinary connections between arts and sciences in content development
- Research and evaluation on STEM teaching and learning
- Culture of STEM communities
- Online STEM course development

**TEXAS TECH T-STEM CENTER**

Texas Tech University



TEXAS TECH UNIVERSITY  
T-STEM Center™

The Texas Tech University T-STEM Center is hosted in the Department of Engineering at Texas Tech University.

AREAS OF SPECIALTY:

- FRAME: engineering design process
- Rocketry: physics and chemistry
- Robotics: application of math, team work, communication, and presentation skills
- Multidisciplinary mathematics, physical science, and engineering teacher certification program