



Fabens Wildcat TSTEM Academy
T-STEM Renewal Application
2018-2019

Contents

[Background](#)

[Contacts](#)

[Narratives](#)

[Download Assurances Signature Page](#)

Background

District Affiliation

FABENS ISD

DC #: 071903

Region: 19

Mailing Address (Line 1): P O BOX 697

Mailing Address (Line 2):

City, State, Zip: FABENS, TX 79838

School Affiliation

FABENS H S

CDC #: 071-903-001

Region:

Mailing Address (Line 1): P O BOX 697

Mailing Address (Line 2):

City, State, Zip: FABENS, TX 79838

JOHANNA ODONNELL INT

CDC #: 071-903-103

Region:

Mailing Address (Line 1): P O BOX 697

Mailing Address (Line 2):

City, State, Zip: FABENS, TX 79838

FABENS MIDDLE SCHOOL

CDC #: 071-903-041

Region:

Mailing Address (Line 1): P O BOX 697

Mailing Address (Line 2):

City, State, Zip: FABENS, TX 79838

FABENS EL

CDC #: 071-903-105

Region:

Mailing Address (Line 1): P O BOX 697

Mailing Address (Line 2):

City, State, Zip: FABENS, TX 79838

Academy Information

T-STEM Academy Name:

Fabens Wildcat TSTEM Academy

What grade level range will your academy serve in the 2018-2019 school year?

9-12

Grade Level	Number of Students
6	154
7	168
8	172
9	154
10	131
11	119
12	92

Contacts

Business Partner

Affiliation: El Paso Electric Company
Job Title: Engineer, CEM, CSDP, EE
Full Name: Mrs. Yolanda Aguilar
Email: yolanda.aguilar@epelectric.com
Phone Number: 915-543-5829

Superintendent

Job Title: Superintendent
Full Name: Mr. Eldefonso Garcia
Email: pgar@fabensisd.net
Phone Number: 915-765-2600

Applicant

Job Title: Director of Federal, STEM, and Special Programs
Full Name: Dr. Lourdes Alarcon
Email: lalarcon@fabensisd.net
Phone Number: 915-892-6186

IHE Liaison

Affiliation: The University of Texas at El Paso
Job Title: Director of Engineering programs
Full Name: Mr. Gabriel Gandara
Email: gaby@utep.edu
Phone Number: 915-747-5000

IHE Liaison

Affiliation: Texas A & M
Job Title: Agrilife Extension Officer
Full Name: Mr. Orlando Flores
Email: ooflores@yahoo.com
Phone Number: 915-443-8489

IHE Liaison

Affiliation: The University of Texas at El Paso

Job Title: Professor and Chair, Department of Mechanical Engineering

Full Name: Dr. Ashan Choudhuri

Email: ashan@utep.edu

Phone Number: 915-747-6906

Business Partner

Affiliation: Gamut Clinic

Job Title: Doctor

Full Name: Dr. Ulysses Urquidi

Email: u.urquidi@gamutmedical.com

Phone Number: 915-765-5119

Narratives

Model Implementation

Which T-STEM model does the district intend to implement at this time? Within these models, there are variations. For this purpose campus is defined as a CDC number not a physical location.

School-Within-School: Multiple Campuses - A subset of students in grades 6-12 are enrolled in the T-STEM academy. This model typically spans a middle school and high school. This may also be applicable if 9th grade is on a separate campus due to physical space issues.

Endorsements

Identify the current endorsements that are offered:

- Science, Technology, Engineering, and Mathematics (STEM)

Industry Certificates

Identify all industry certificates offered to students.

Certificate	Description
-------------	-------------

Level One Certificates

Identify all level one certificates offered to students.

Certification	Description
EMT	Emergency Medical Training

Level Two Certificates

Identify all level two certificates offered to students.

Certification	Description
---------------	-------------

Key Elements for Success

Provide a link to the job description, roles of design team, leadership team, and advisory board.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406256

Provide a link to your mission statement.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406273

Provide a link to the final, signed, and executed MOU.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406258

Provide a link to the academy's master schedules.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406259

Provide a link to the academy's Student IGPs with CCRS and Performance Acknowledgement Plans.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406260

Provide a link to the academy's written admission policy and enrollment application.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406276

Provide a link to the academy's written recruitment plan including a timeline of recruitment and enrollment events, and recruitment materials for distribution at feeder schools and other appropriate locations in the community

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406262

Provide a link to the academy's description of instruction practices.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406261

Provide a link to the academy's STEM-focused extracurricular activities.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406277

Provide a link to the academy's internship and externship opportunities.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406263

Provide a link to the academy's Senior Capstone Project description.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406264

Provide a link to the academy's Student Portfolio Plans.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406265

Provide a link to the academy's Academic Literacy Plan.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406267

Provide a link to the academy's Assessment strategy.

https://www.fabensisd.net/apps/pages/index.jsp?uREC_ID=1141460&type=d&pREC_ID=1406278

Free-Response

Describe how the Academy will recruit, support, and retain highly qualified teachers.

At Fabens ISD, it is our desire to continue being very strategic in recruiting, supporting, and retaining the highly qualified teachers for the benefit of the students we serve. While we have a zero turnover, working with students in this community we know that the 2010 U.S. Census lists adult unemployment within the Fabens community at approximately 30% and identifies the population as including 44% with less than a high school diploma and only 4.4% with a bachelor's degree. As a matter of reality, practically all the college degreed adults in the community can also be identified as employees of the school district. Therefore, high school graduates are typically the first in their family to have an opportunity at post-secondary education. Pressures are intensified by the lack of family experience within a post-secondary institutional climate of college preparation, financial aid, and application for entry into post-secondary education life. All colleges/universities nearest to Fabens, range from 25 miles to 158 distance. This is reason enough to ensure that we focus on bringing the best to our students and ensuring a quality recruitment process, supporting our teachers, and providing all the resources available to us in order to retain them.

In the recruitment process, even though the turnover is zero, we still work to recruit through coordinated strategies and ensure that teachers that join Fabens ISD have the ability to demonstrate success for student growth, Teachers to be aware that we offer flexible schedules and advisory classes to focus on the areas of teaching and collaborate with others. In addition, it is critically important to ensure that they are an institutional fit along with understanding the culture, strengths, and traditions of students and families they will serve. Furthermore, that they have the knowledge, skills, and attitudes while demonstrating a passion and commitment to their success. To further strengthen the quality of teaching, we will continue to partner with IHEs to better prepare teachers for rural school settings.

Support by providing teachers with more hand-on development, securing professional development, opportunities for observation and feedback, and arranging for uninterrupted common planning time that will lead to facilitate ongoing collaboration between teachers. Moreover, to provide the technology to maintain instructional standards, facilitate parent communication, model and teach to others. In addition, with the additional assistance from the University of Texas at El Paso STEM lab in Fabens Center for Space Exploration Technology Research (cSETR), serving as IHE for our TSTEM academy, there will be multiple opportunities to create innovative practices. Furthermore, thru the cSETR, faculty will also focus on professional development as well as the opportunity to cross share curriculum and work together on the end assessment.

Retaining our teachers is significantly important. We will continue to provide a monitoring process to assess their needs in the classroom and for professional development opportunities. Equally important to continue creating and maintaining a positive learning environment that will lead to students and teachers successfully collaborating while staying focused on improving the effectiveness of teachers and benefit students.

Describe the current STEM pathways available at the academy.

Currently, the STEM pathways available at our academy are the following:

STEM Academy Engineering PATHWAY-General Engineering

Academic Year Course

Freshman

Principals of Engineering and Design

Sophomore

- Engineering Design and Presentation

- Elective*

Junior

- Engineer Your World I

- Elective*

Senior

- Engineer Your World II

- Elective*

*The following elective courses may be taken simultaneously with chosen pathway.

Scientific Research and Design I (Rockets 1: Tsiolkovsky), Engineering Design and Problem Solving (Rockets 2: Oberth), Introduction to Computer Science, Robotics.

Aerospace

Engineering

Academic Year

Course

Freshman

Principals of Engineering and Technology

Sophomore

- Engineering Design and Presentation (AutoCAD)

- Elective*

Junior

- Scientific Research and Design I (Rockets 1: Tsiolkovsky)

- Elective*

Senior

- Engineering Design and Problem Solving (Rockets 2: Oberth)

- Elective*

*The following elective courses may be taken simultaneously with chosen pathway.

Scientific Research and Design I (Rockets 1), Engineer Your World I, Engineer Your World II, Introduction to Computer Science, Robotics.

In addition,STEM Academy

MEDICAL Pathway

All students registered under STEM Academy: Medical endorsement are required to full fill the following:

HOSA Member: all activities and competitions are involved through HOSA. There is an annual membership fee of \$30. Students are HOSA members all four years of High School.

Scrubs: HOSA members (ALL STEM Academy: medical members) must purchase and wear scrubs on the assigned day of the week.

Attend field trips organized for all STEM Academy: engineering and medical students.

Maintain a good attendance, discipline, and academic record.

*students challenge EMT test to obtain EMT certification at the end of senior year.

**students not registered for EMT class, may take Engineering Design & Presentation (AutoCAD). This curriculum relates to biomedical engineering and 3D printing in the medical field.

Describe how strategic alliances with industry partners and IHEs will support the Academy. The description should include details regarding the role of each IHE, business, and/or community partnership; along with parent/family partnerships and communication conventions with the Academy.

There are numerous industry partners that form part of our STEM Advisory Board. Their level of expertise will further enhance the efforts to continue the support to our TSTEM Academy. There is a strong level of commitment from their part when they learned that the 2010 U.S. Census lists adult unemployment within the Fabens community at approximately 30% and identifies the population as including 44% with less than a high school diploma and only 4.4% with a bachelor's degree. As a matter of reality, practically all the college degreed adults in the community can also be identified as employees of the school district. Therefore, high school graduates are typically the first in their family to have an opportunity at post-secondary education. Pressures are intensified by the lack of family experience within a post-secondary institutional climate of college preparation, financial aid, and application for entry into post-secondary education life. All colleges/universities nearest to Fabens, range from 25 miles to 158 distance. This has led to have a very strong collaboration with The University of Texas at El Paso, Texas A & M,

El Paso Electric Company among many others to continue that level of support. Their roles bring several things to our academy as it relates to increase student achievement as we work together to engage and expose students to the innovative areas of STEM with those that we serve. This will allow for building those strong relationships and network with other districts within our area. It is critical that there is a positive impact for all students through the dissemination of STEM. We strongly believe that fostering an environment through meaningful adult and peer relationships. The IHEs that we work with are able to facilitate those opportunities that we are looking forward to having such as job shadowing, taking part in a lab, observations, etc. On the other hand, the business and community partnerships at Fabens understand the need that our students have for those opportunities at a local level. There is a clear plan in place for student support and success in order for them to achieve a high persistence rate. In addition, we instill the expectations that our students will expand and participate in all leadership STEM activities inside and outside the classroom.

As all these factors are considered, it is vital that parent groups continue to come together in order to better educate them of the benefits their child has in pursuing STEM. It is critical that parents and families participate and question so they may understand why it is important to increase student achievement in addition to ensure that their children are prepared to be successful, lifelong, global learners. It is equally important that they understand why we advocate to create and implement high quality programs and opportunities that will lead them to be successful members of society. Communication conventions with the academy will continue to include families at all grade levels.

Describe the Academy's work-based and contextual learning in the curriculum.

All students in TSTEM academy are required to enroll in Principles of Information Technology (PIT) course. This course focuses on students having the opportunity to better understand the writing of resumes, letters of interest, portfolios, email etiquette as well as the use of programs such as Word, Excell, PowerPoint. These are focus areas as we know that they will be very useful for students as they finish high school and prepare for either work while attaining their baccalaureate degrees.

All engineering courses through SystemsGo and UT Austin UTeach Engineering curriculum include 21st Century Skills and have a strong correlation with TEKS objectives, the use of Engineering Design Process, and presentation skills for the sale/pitch of a product.

In addition, the EMT class is required in order to obtain 24 hours of ambulance and hospital rotations, total of 48 hours.

Describe the STEM-focused extracurricular activities (field experiences, clubs, and competitions) offered to students.

At Fabens ISD, students have the opportunity to stay focused on academics but also the STEM focused extracurricular activities that allow for clubs, field experiences, etc.:

Underwater ROV SeaPerch: Grand SouthWest SeaPerch Challenge

Tsiolkovsky Rocket (competition through Scientific Research and Design course)

Oberth Rocket (competition through Engineering Design and Problem Solving)

Engineering Competition through BorderPlex Jobs

Health Occupations Students of America (H.O.S.A)

Clubs: Student TSTEM Advisory Board, Ozobots through intermediate school

Other clubs and experiences are currently in progress of development and implementation.