



Gainesville STEM Academy
T-STEM Renewal Application
2018-2019

Contents

[Background](#)

[Contacts](#)

[Narratives](#)

[Download Assurances Signature Page](#)

Background

District Affiliation

GAINESVILLE ISD

DC #: 049901

Region: 11

Mailing Address (Line 1): 800 S MORRIS ST

Mailing Address (Line 2):

City, State, Zip: GAINESVILLE, TX 76240

School Affiliation

GAINESVILLE H S

CDC #: 049-901-001

Region:

Mailing Address (Line 1): 2201 S I-35

Mailing Address (Line 2):

City, State, Zip: GAINESVILLE, TX 76240

Academy Information

T-STEM Academy Name:

Gainesville STEM Academy

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

9-12

| Grade Level | Number of Students |
|-------------|--------------------|
| 9 | 14 |
| 10 | 14 |
| 11 | 34 |
| 12 | 4 |

Contacts

Superintendent

Job Title: Interim Superintendent
Full Name: Mr. Larry Smith
Email: larry.smith@gainesvilleisd.org
Phone Number: 940-665-4362

Applicant

Job Title: Assistant Superintendent for Curriculum and Instruction
Full Name: Ms. Veronica Kunschik
Email: vkunschik@gainesvilleisd.org
Phone Number: 940-665-4362

IHE Liaison

Affiliation: North Central Texas College
Job Title: Dean of Instruction
Full Name: Dr. Larry Gilbert
Email: lgilbert@nctc.edu
Phone Number: 940-498-6216

Business Partner

Affiliation: Trident Process Systems
Job Title: Vice-President
Full Name: Ms. Kari Hutcherson
Email: khutcherson@tridentprosystems.com
Phone Number: 940-668-4081

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 (SWS) - A subset of students on the campus are enrolled in grades 9-12 are enrolled in the T-STEM academy.

Endorsements

Identify the current endorsements that are offered:

- Science, Technology, Engineering, and Mathematics (STEM)
- Business and Industry
- Public Services
- Arts and Humanities
- Multi-disciplinary Studies

Industry Certificates

Identify all industry certificates offered to students.

| Certificate | Description |
|-----------------|---|
| CSWA - Academic | Certified SOLIDWORKS Associate - Academic (pursuit in progress) |

Level One Certificates

Identify all level one certificates offered to students.

| Certification | Description |
|------------------------|--|
| Engineering Technology | Engineering Technology Level 1 Workforce Certificate (pending IHE MOU) |

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.

<http://www.gainesvilleisd.org/Page/5073>

Provide a link to your mission statement.

<http://www.gainesvilleisd.org/Page/5070>

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

<http://www.gainesvilleisd.org/Page/5716>

Provide a link to the academy's master schedules.

<http://www.gainesvilleisd.org/Page/5717>

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

<http://www.gainesvilleisd.org/Page/5726>

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

<http://www.gainesvilleisd.org/Page/5718>

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

<http://www.gainesvilleisd.org/Page/5719>

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

<http://www.gainesvilleisd.org/Page/5720>

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

<http://www.gainesvilleisd.org/Page/5721>

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

<http://www.gainesvilleisd.org/Page/5722>

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

<http://www.gainesvilleisd.org/Page/5723>

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

<http://www.gainesvilleisd.org/Page/5724>

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

<http://www.gainesvilleisd.org/Page/5073>

Provide a link to the academy's Assessment strategy.

<http://www.gainesvilleisd.org/Page/5725>

Free-Response

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

As the program starts developing, the district will focus on marketing efforts that will attract highly qualified, talented teachers. Alongside these recruitment efforts, the district will assign new STEM teachers a STEM mentor through our district-wide mentorship program to offer continued education and professional development to the teachers. There will be monthly district-wide STEM meetings that will solicit teachers' feedback to strengthen the program from within. Furthermore, the district is currently partnered with 5 districts throughout the nation and two international partnerships in Egypt and Jordan. This partnership involves technology enriched opportunities to dialogue and virtually interact with the districts. Additionally, teachers will receive retention stipends for effective implementation of programs. Committees will be established to address specific needs and will meet prior to STEM meetings to update STEM committee members on progress. The district currently is involved with four opportunities in established STEM districts through EDUCATE TEXAS.

Describe the current STEM pathways available at the academy.

As G-STEM grows, the variety of options within our GISD Engineering Pathway will expand. Freshmen embark upon their engineering journey with the PLTW course Introduction to Engineering Design. Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software and use an engineering notebook to document their work (PLTW, 2018).

In the 18-19 Sophomores and juniors will be able to satisfy their craving to learn more with a buffet of three different specializations: Aerospace Engineering, Civil Engineering, and Computer Integrated Manufacturing. These courses are offered "all-you-can-learn" style. That is, students are welcome to enroll in as many or as few as their schedule allows.

Seniors culminate the GISD Engineering Pathway through the capstone PLTW course: Engineering Design and Development. The knowledge and skills students acquire throughout PLTW Engineering come together in Engineering Design and Development as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards, completing Engineering Design and Development ready to take on any post-secondary program or career (PLTW, 2018).

In summary, course offerings pose no limit to our students' ambitions.

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.

Gainesville ISD currently has a sound relationship with North Central Texas College (NCTC), the local IHE. Dr. Larry Gilbert, Dean of Dual Credit is our point of contact with the college.

To date, we have partnered with a nearby law enforcement agency to enhance our robotics program. Students learned about the role robotics plays as an essential component of modern law enforcement. For example, students observed a tactical demonstration of how bomb-disposing robots can solve real-world problems concerning public safety.

Gain Education and Access Results or "GEAR" is a community partnership between Gainesville Independent School District and local businesses. The program is designed to help students in order to become college and career ready after high school. The program was developed in 2015 by Select Energy Services and GISD. At the end of the semester, if the student meets all of the requirements laid out by the partner company, students are eligible for a bonus scholarship to pursue higher education. Select Energy is the first company to be offering the training at its Gainesville operational headquarters, but the partnership will recruit additional Gainesville companies to join the initiative.

We have currently initiated a targeted effort to recruit a local engineering partner whose facility students can visit as a practicum.

In addition to local partnerships, Gainesville ISD is also recruiting companies interested in establishing virtual partnership.

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

Project Lead the Way is our flagship engineering curriculum. Gainesville ISD is calendaring events to offer students opportunities to demonstrate their learning through modeling lessons to students in lower grade levels, simulating a field experience.

GEAR gives students access to high quality, hands on business training in a variety of disciplines, including STEM-related fields. GEAR also provides students the opportunity to earn scholarship money to pursue higher education. In addition to a life-changing experience, GEAR students also earn money. Each student earns \$15 per hour while working with the company. Eight of those dollars go to the student's regular paycheck, and the remaining seven dollars are put to the student's scholarship fund, in addition to receiving a \$2000 scholarship.

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

GISD is currently working on partnering with campuses (internally and externally) to showcase learning and foster competition opportunities for students. Our Engineering teacher formed an after-school robotics club and took students to compete in a regional event. The Gainesville High School Robotics team made it to the semifinals, lacking only a few more points to make the final round out of 19 teams.

We are also committed to a summer bridge program for STEM academies to build community awareness and recruit and retain teachers and students.