



STEM Academy Robert E. Lee

T-STEM Renewal Application

2019-2020

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Background

District Affiliation

GOOSE CREEK CISD

CD #: 101911

Region: 04

Mailing Address (Line 1): P O BOX 30

Mailing Address (Line 2):

City, State, Zip: BAYTOWN, TX 77522

School Affiliation

LEE H S

CDC #: 101-g11-002

Region:

Mailing Address (Line 1): P O BOX 30

Mailing Address (Line 2):

City, State, Zip: BAYTOWN, TX 77522

Academy Information

T-STEM Academy Name:

STEM Academy Robert E. Lee

Are you currently in the 2018-2019 planning year or are a 2018-2019 planning grantee?

Yes

What grade level range will your academy serve in the 2019-2020 school year?

9-12

Grade Level	Number of Students	School / CDC # Where Students are Enrolled
9	52	LEE H S (101911002)
10	39	LEE H S (101911002)
11	47	LEE H S (101911002)
12	45	LEE H S (101911002)

Contacts

Business Partner

Affiliation: ExxonMobil
Job Title: Technical Manager
Full Name: Mr. Wesley Robertson
Email: wesley.j.robertson@exxonmobil.com
Phone Number: 346-269-1348

Superintendent

Job Title: Superintendent
Full Name: Dr. Randal O'Brien
Email: randal.obrien@gccisd.net
Phone Number: 281-420-4800

Applicant

Job Title: CTE Specialist
Full Name: Mrs. Carling Caldwell
Email: carling.caldwell@gccisd.net
Phone Number: 281-420-4535

IHE Liaison

Affiliation: Lee College
Job Title: Director of Dual Enrollment
Full Name: Ms. Tracy Steenholdt
Email: tsteenholdt@Lee.Edu
Phone Number: 281-425-6295

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

Certificates

Does this academy offer Associate Degrees to students?

No

TSIA

Does this academy administer the TSIA exam?

Yes

What ID number do students use when taking the TSIA exam?

Local District Assigned ID

Key Elements for Success

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

<https://sites.google.com/gccisd.net/rel-stem-academy/home>

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

<https://sites.google.com/gccisd.net/rel-stem-academy/home>

Provide a link to the academy's master schedules.

<https://sites.google.com/gccisd.net/rel-stem-academy/home>

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

<https://sites.google.com/gccisd.net/rel-stem-academy/home>

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://sites.google.com/gccisd.net/rel-stem-academy/home>

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

<https://sites.google.com/gccisd.net/rel-stem-academy/home>

Free-Response

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

The Academy Leadership looks into the teachers interests and backgrounds to see if there are any connections that might garner their interest in a teaching position for the Academy. We also utilize a teacher survey, to see how we can improve the Academy for our students and our teachers. Our ultimate goal is to generate teacher buy-in by working collaboratively on the development of Academy Goals, Students Achievement Expectations as well as Professional Growth and Development opportunities.

Describe the current STEM pathways available at the academy.

Our STEM Academy has three pathways that we offer to our students. The largest is our Engineering pathway which uses the Project Lead the Way curriculum and is weighted at the Pre-AP level. Our second most populated pathway is Robotics. These students still take the PLTW Intro to Engineering course but will then branch off into their robotics courses. Our final pathway is the Instrumentation pathway. These students follow the Engineering pathway for their first and second year. As a third year, they will begin taking college certification courses at Lee college to begin their Instrumentation Certification.

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.

Our alliance with Lee College provides not only Dual Credit opportunities but also it allows us to offer our Instrumentation pathway. They provide guest speakers and campus tours which allow us to promote College Readiness within the Academy. The alliance with our industry partners allows us to be aware of what our local workforce needs. This enhances our Career Readiness within the Academy. Our business partners provide, industry tours, guest speakers, teacher externships, students internships and resources. Our Advisory Board has a representative from of the above mentioned entities as well as a student and parent representative. We have a back to school orientation as well as an Academy Showcase in which we invite our STEM Academy families to come participate in.

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

All of our courses have standards that pertain directly to work based or industry skills. We are piloting a new digital portfolio that will be utilized by all Academy students throughout their 4 years here. Teacher Externships are provided to Academy teachers, which will allow them to bring industry examples into their classrooms. We also utilize a Program of Study Framework which outlines the different experiences or opportunities that should be at each level within the STEM Academy. We start off with Guest Speakers, Co-Teaching with Industry, then we move into Field Experiences, and ultimately Job Shadowing and possibly Internships.

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

Our students STEM-focused extracurricular/co-curricular opportunities start as 8th graders. We offer a two day Summer Bridge program for all incoming 9th graders to the STEM Academy. Our students also have the opportunity to join our Blarglefish Robotics Team and/or our Technology Student Association chapter. Our robotics team has advanced to World's two out of the last four years. In TSA our students are able to attend Leadership conferences, compete on teams and participate in community service projects. Also, if our students maintain high Academic Achievement, have acquired leadership roles, and participated in community service events, they will be invited into the National Technical Honor Society.