



La Joya High School TSTEM Academy

T-STEM Renewal Application

2018-2019

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Background

District Affiliation

LA JOYA ISD

DC #: 108912

Region: 01

Mailing Address (Line 1): 201 E EXPY 83

Mailing Address (Line 2):

City, State, Zip: LA JOYA, TX 78560

School Affiliation

LA JOYA H S

CDC #: 108-912-001

Region:

Mailing Address (Line 1): 604 N COYOTE BLVD

Mailing Address (Line 2):

City, State, Zip: LA JOYA, TX 78560

Academy Information

T-STEM Academy Name:

La Joya High School TSTEM Academy

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

9-12

Grade Level	Number of Students
9	100
10	55

Contacts

Business Partner

Affiliation: Texas Workforce Solutions

Job Title: Education Liason

Full Name: Mr. David Gutierrez

Email: David@wfsolutions.org

Phone Number: 956-683-5981

Superintendent

Job Title: Superintendent of Schools

Full Name: Dr. Alda Benavides

Email: a.benavides@lajoyaisd.net

Phone Number: 956-323-2000

Applicant

Job Title: Academy Director

Full Name: Ms. Silvia Elizondo

Email: s.elizondo@lajoyaisd.net

Phone Number: 956-323-2989

IHE Liaison

Affiliation: South Texas College

Job Title: Director for Early College High Schools

Full Name: Ms. Sofia Pena

Email: sofia21@southtexascollege.edu

Phone Number: 956-872-2303

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)

Industry Certificates

Identify all industry certificates offered to students.

Certificate	Description
Architectural and Engineering Design Technology	The Architectural & Engineering Design Technology degree is designed to assist students in preparing architectural and structural construction documents, such as: residential projects, schoo

Level One Certificates

Identify all level one certificates offered to students.

Certification	Description
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Level Two Certificates

Identify all level two certificates offered to students.

Certification	Description
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Key Elements for Success

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-design-leadership-team-and-advisory-board/>

Provide a link to your mission statement.

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-design-leadership-team-and-advisory-board/la-joya-high-school-t-stem-mission-statement/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-south-texas-college-memorandum-of-understanding/>

Provide a link to the academy's master schedules.

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-master-schedule/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-student-igp-and-performance-acknowledgement-plans/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-design-leadership-team-and-advisory-board/la-joya-high-school-t-stem-mission-statement/la-joya-high-school-t-stem-mission-statement/2018-2019-la-joya-high-school-t-stem-academy-admission-policy-and-enrollment-application/>

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.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-recruitment-plan-timeline-and-materials/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-instruction-practices/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-extracurricular-activities/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-internship-and-externship-opportunities/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-capstone-project-description/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-student-portfolio-plans/>

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

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-academic-literacy-plan/>

Provide a link to the academy's Assessment strategy.

<http://www.lajoyaisd.com/district/school-directory/college-and-career-readiness-models-ccrm/la-joya-high-school-t-stem-academy/2018-2019-la-joya-high-school-t-stem-academy-assessment-strategy/>

Free-Response

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

The La Joya ISD human resource and personnel administrators understand the importance of recruiting and promoting teachers and support staff that are highly qualified as per the standards identified in Chapter 149: commissioner's rules concerning educator standards and the Southern Association of Colleges and Schools (SACS). La Joya High School T-STEM Academy uses these standards to strategically plan the training, appraisal and professional development of our teachers. Additionally, there is a concentrated effort to hire teachers with a Master's Degree in STEM content areas and with experience in teaching in diverse classrooms with at-risk students. The school board has an implement incentive-based policy of \$1,000 for teachers that have a Master's degree in a content area. Additionally, our partner institution of higher education also provides an incentive to teachers that are approved by the college to teach college classes. It is the continuous intent to recruit a teaching staff that has a proven record of performance and are meeting the academic, social, and behavioral needs of the targeted student population. LJHS T-STEM Academy ensures teachers are given several opportunities for specialized growth through professional development and training. For example, project/problem-based learning, Common Instructional Framework (CIF), Sheltered Instruction Observation Protocol (SIOP), Working on the Works (WOW), Advanced Placement Summer Institutes Training, Rubric Training, and Cooperative Learning and Advanced Placement (AP) periodic training. It is imperative that our teaching staff be updated with the academic, social, and emotional learning and teaching of our students. Additionally, the professional development is also focused on the targeted student population. This assures that teachers understand the uniqueness of addressing the needs of under-represented youth in higher education. A professional development and training calendar has been developed with input of the teaching staff, leaders and higher education partners. The dual credit (DC) teaching staff are allocated engaging training time to keep updated on the college curricula and delivery methods. The school district and higher education partners required that all teachers meet the rigorous teaching standards and policies. Therefore, they are engaged in continuous improvement and growth. During Professional Learning Communities (PLCs) teachers collaborate in the planning of their respective content, engage in cross-curricular implementation as well as support each other in the work. This helps to create a shared vision and collective effort geared towards student success. Additionally, the PLC time focuses on teachers being provided opportunities to voice areas in which they could use additional support. Teachers, support staff and the campus leader also have various options throughout the school year to grow professionally. STEM conferences, webinars, peer conversations and sharing at regional networking meetings also allow for problem solving, sharing ideas and lessons, and most of all allows a platform to keep updated and connected to the evolving STEM work in Texas. La Joya Independent School is committed to life-long learning for district teachers and staff. This is evident as the district has invested in several resources, tools, and professional development that have had a significant impact on equipping teachers for teaching success.

Describe the current STEM pathways available at the academy.

Our STEM Career Pathway Model is a comprehensive matrix and combination of our college-centered and I.S.D. programs and strategies that function to enhance connections between high schools, college/universities and jobs. Our STEM Pathways offer students multiple opportunities to explore and prepare for successful careers in new and emerging STEM fields, expanding beyond the notion that the only pathway to success is through a four-year university. South Texas College has been our key partner with La Joya I.S.D. and La Joya High School T-STEM Academy and has led and collaborated in our STEM Career Pathways process by assisting us in:

1. Preparing students for jobs requiring academic preparation and credentialing
2. Building collaborations between K-12 & higher education, between CTE & academic sectors
3. Deeply integrating industry-based partnerships

Our students and teachers are involved in community college-led activities and events that generate enthusiasm and engage interest in STEM-related career fields. Educational programs and strategies are in place and there is indication that it is improving our students' foundational STEM knowledge and skills. The leadership team have identified resources, processes and strategies that are encouraging student success. As mentioned before our business and community engagement is vital to keeping schools current, providing teachers with resources, and capturing student interest in STEM careers. As part of STEM integration, technology is integrated across the STEM Pathways to provide better access to education resources, virtual tours, internships and mentorship. La Joya High School T-STEM Academy will require students to follow a schedule of college academic classes that, through curriculum adjustments be taught at industry standards and will place an emphasis in STEM degree pathways. Lastly there is a curricular alignment that ensures all course credits count toward a meaningful credential. LJHS T-STEM Academy students can enroll in a STEM-related field in Engineering or Math. Through this coursework and STEM-related activities, LJHS T-STEM Academy will prepare their students for higher education, higher skills, and careers in Engineering or Mathematics. In addition to providing students the opportunity to earn up to 30 college credit hours towards an Associate's Degree in Engineering or in Math, students will also have the opportunity to enroll in a C.T.E. coherent sequence of courses related to STEM. A four-year crosswalk has been established which details how students will progress from one year to the next towards an Associate's Degree and concurrently awarding high school credits to meet graduation requirement. The LJHS T-STEM Academy is prepared to provide additional support for students taking STEM courses leading to industry certifications as well as for TSI, SAT, and ACT exams through weekly tutorials and Saturday Camps. The T-STEM Academy will also satisfy the House Bill 5 requirements as set forth by the Texas Legislature and will ensure that all courses are align with the new Texas Education Agency Endorsement Initiative. LJHS T-STEM will continue to work with IHEs and Industry partners to ensure the curriculum is aligned between high school, post-secondary, and industry experience requirements ensuring the continued success for our students.

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.

LJHS T-STEM Academy has established partnerships with IHE's, businesses, community partnerships, and parents to support a college readiness culture. The T-STEM Academy has a partnership and holds a Memorandum of Understanding (MOU) with South Texas College. The MOU details the agreement made between both institutions on the course of study, transportation costs and fees, instructional material, instructional calendar, grading periods, policies, etc. Through the MOU, both leadership teams meet to ensure students use their resources to make every effort to increase awareness, accessibility and ensure that students maximize the use of STC resources and facilities. STC provide students with full access to the College's Center for Learning Excellence (CLE) for all Academy students. In these centers, students obtain additional tutoring services and have access to individual and group study rooms. The T-STEM Academy also works with Workforce Solutions to identify regional STEM careers and we thereafter educate our youth about our region opportunities. Furthermore, the La Joya ISD has been instrumental in soliciting business and community partnerships. They have identified and secured key partners to support our STEM academy. At the district level, a process for community engagement has been developed. This process includes opportunities for business and community members to become school partners and provide ongoing efforts for input in school development, informational meetings, forums, and job shadowing. Moreover, the partnership also includes employers who allow for students and our teachers to be exposed to careers in STEM and other fields in our region and state economic development clusters. They will participate in activities that allow for internships, externships, work-based learning experiences, job shadowing, and apprenticeships. Data sharing is also part of our business and community partnership initiative. LJHS T-STEM Academy informs students and parents of the opportunities available through parent meetings, conferences, workshops, brochures, district websites, Facebook, Remind, Channel 17 and student mentorship. Our goal is to collaborate with educators, parents, and our community organizations to develop, exchange ideas, and implement policies and actions plans to ensure student success as all six (6) benchmarks from the T-STEM Blueprint objectives are met. The idea is to seek the collaborative strengths of families, educators, and community members so they can each contribute to the development and success of our diverse student groups. Building relationships with parents and engaging families in STEM initiatives is important. La Joya ISD along with our STEM academies facilitate the development of a comprehensive district-wide approach for action planning, provider identification, and outcome monitoring to ensure parent/family engagement success. Our family/parent outreach initiative is built on the collaboration between our school and families. Our districts collective goal is to facilitate parents/community leader's involvement in their children's schools, including understanding the importance of being engaged in their children's STEM education, advocating for access to rigorous curriculum and collaborating with school staff in shared decision-making.

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

LJHS T-STEM Academy's goal is for students to build a strong foundation in STEM core classes as they will complete four years of high school science and math in conjunction with four high school STEM electives. Students at LJHS T-STEM Academy have the opportunity to graduate with up to 30 college hours taking dual credit, Advanced Placement, articulated and concurrent enrollment courses. Not only will they graduate with college credit hours, they will also engage in a work-based learning experience that will foster and reinforce their 21st Century Skills throughout their high school career. The LJHS T-STEM Academy has partnered with Workforce Solutions to identify local workforce needs in the region. Based on this information but not limited to it, starting their 9th grade year, students will be given multiple opportunities to start filling their STEM portfolios with information and research that they have acquired through their work-based learning experience. Students will partake in a variety of activities such as, but not limited to, career fairs, guest speakers, presentations, career information, industry site visits, and mentoring opportunities to name a few. Our goal is to ensure students understand the connection between their work-based learning experience and academics. Students will be given the opportunity to reflect as well as demonstrated their learning through a presentation of their choice. Through the support of teachers and campus leadership staff, students will conduct studies, interviews, use technology to create pie charts, graphs, and other data points to show and validate what they have learned. Collection of data for their study also includes interviews, surveys, focus groups, phone conferences, meetings and using online resource tools. During their work-based learning experience, students will have the opportunity to connect with STEM business leaders, industries, and other civic engagement. In addition, LJHS T-STEM Academy students will be encouraged to partake in field experiences at STC and other institutions of higher education where they will collaborate with professionals solving real-life problems. Other opportunities will include job fairs and other workforce-related events set up through our District Business and Community Engagement Specialist. Our goal is that through these work-based learning experiences, our students will get real-life experiences in their selected field as they will work hand in hand with business partners, community members, and professionals.

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

LJHS T-STEM Academy students partake in a variety of STEM-related clubs, conferences, summer enrichment programs, speakers, and institutions of higher education field trips in the Rio Grande Valley. In addition, Academy students will be provided an opportunity to engage in internships and externships their 11th and 12th grade year in which they will work closely with professionals in their selected field. Project-based assessments and student outcomes for these internships/externships will be aligned to state and industry standards that will support college and career readiness standards as well as reinforce 21st Century Skills. LJHS T-STEM Academy students have the opportunity to engage in out of the classroom Project-Based Learning. The University of Texas Rio Grande Valley Ridley Floating Classroom at South Padre Island serves as a vehicle to enhance student's knowledge in STEM fields. Through activities such as, the Ridley Floating Classroom, our students have the opportunity to inspire environmental stewardship of our coastal natural resources in our neighboring communities. LJHS T-STEM Academy students also participate at the UTRGV Engineering Week. This event encourages and motivates our youth to pursue careers in engineering. Our T-STEM Academy female students were introduced to the GirlsGoCyberStart Game this year and were awarded \$400 for being one of the top schools with the most girls participating across Texas. LJHS T-STEM Academy also offers students the opportunity to engage in a competitive Robotics Team. Our Robotics Team competes in a number of occasions throughout the Rio Grande Valley and is growing in numbers. Our T-STEM Academy students participate in conferences where they improve their collaboration and communication skills, expand their critical thinking, and problem solving processes, and grow into mindful digital citizens. Furthermore, academy students visit South Texas College, the University of Texas in Edinburg, and in Brownsville, where they are exposed to post-secondary educational programs/degrees. College representative's talk to students about dual-enrollment, financial aid awareness, student affairs, student resources and services to name a few. The LJHS T-STEM Academy students participate in summer enrichment programs such as, the University of Texas Rio Grande Valley J-STEM (Journalism, Science, Technology, Engineering, & Math) innovative summer enrichment program and the South Texas College, Governors Summer Merit Program. The GSMP program engages students in the aspects of automation and real-left robotics technology. In addition students will experience post-secondary STEM educational opportunities leading to careers related to the state's primary industry clusters while developing collaboration among workforce development programs, colleges and universities and high schools. LJHS T-STEM Academy students and parents will also partake in meetings increasing their awareness about college, career, and work-based learning experiences. Through these meetings, other pertinent information is disseminated to parents in reference to job projection, salary trends, and the current job trends in specific geographical locations. LJHS T-STEM Academy is committed to ensure students are successful; consequently, an intervention plan to maintain student participation and their success in the Academy has been drafted.