



Coronado High School T-STEM Academy
T-STEM Renewal Application
2018-2019

Contents

[Background](#)

[Contacts](#)

[Narratives](#)

[Download Assurances Signature Page](#)

Background

District Affiliation

LUBBOCK ISD

DC #: 152901

Region: 17

Mailing Address (Line 1): 1628 19TH ST

Mailing Address (Line 2):

City, State, Zip: LUBBOCK, TX 79401

School Affiliation

CORONADO H S

CDC #: 152-901-020

Region:

Mailing Address (Line 1): 4910 29TH DR

Mailing Address (Line 2):

City, State, Zip: LUBBOCK, TX 79410

MACKENZIE MIDDLE

CDC #: 152-901-067

Region:

Mailing Address (Line 1): 5402 W 12TH ST

Mailing Address (Line 2):

City, State, Zip: LUBBOCK, TX 79416

SMYLIE WILSON MIDDLE

CDC #: 152-901-069

Region:

Mailing Address (Line 1): 4402 31ST ST

Mailing Address (Line 2):

City, State, Zip: LUBBOCK, TX 79410

IRONS MIDDLE

CDC #: 152-901-066

Region:

Mailing Address (Line 1): 5214 79TH ST

Mailing Address (Line 2):

City, State, Zip: LUBBOCK, TX 79424

Academy Information

T-STEM Academy Name:

Coronado High School T-STEM Academy

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

6-12

Grade Level	Number of Students
6	109
7	86
8	130
9	75
10	70
11	14
12	13

Contacts

Business Partner

Affiliation: Chick-Fil-A
Job Title: Restaurant Operator
Full Name: Mr. Matt Flaniken
Email: Matt.flaniken@chick-fil-a.com
Phone Number: 806-445-1312

Superintendent

Job Title: Superintendent of Schools
Full Name: Dr. Kathy Rollo
Email: Superintendent@LubbockISD.org
Phone Number: 806-219-0070

Applicant

Job Title: STEM Coordinator
Full Name: Mrs. Nancy Schunke
Email: nschunke@lubbockisd.org
Phone Number: 806-219-1266

IHE Liaison

Affiliation: Texas Tech University (OnRamps/University of Texas)
Job Title: Director of OnRamps at Texas Tech
Full Name: Mrs. Stephanie Hart
Email: stephanie.hart@ttu.edu
Phone Number: 806-834-6648

IHE Liaison

Affiliation: South Plains College
Job Title: Continuing and Distance Education Specialist
Full Name: Mrs. JimAnn Batenhorst
Email: jbatenhorst@southplainscollege.edu
Phone Number: 806-716-2503

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
Microsoft Word	Successful candidates for the Word 2016 exam have a fundamental understanding of the Word environment by creating and editing two- to three-page documents for a variety of purposes and situa
Microsoft Excel	Successful candidates will have a fundamental understanding of the Excel environment and create and edit a workbook with multiple sheets, and they use a graphic element to represent data vi
Microsoft PowerPoint	Successful candidates will have a fundamental understanding of the PowerPoint environment and demonstrate the correct application of PowerPoint 2016. Candidates create, edit, and enhance pre
Microsoft Access	Successful candidates will have a fundamental understanding of the application's environment. They understand basic database design principles. They know and demonstrate the correct appli
Microsoft Outlook	Successful candidates will create and edit professional-looking email messages, maintain calendars across time zones, and schedule tasks for a variety of purposes and situations. Candidates
Expert Word	Expert-level candidates for the Word 2016 exam proficiently use the advanced features of Word 2016 for document and content management and for advanced formatting.
Expert Excel	Expert-level candidates for the Excel 2016 exam have an advanced understanding of the Excel environment and have the ability to guide others to the proper use of the program's features.

Level One Certificates

Identify all level one certificates offered to students.

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

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.lubbockisd.org/domain/3757>

Provide a link to your mission statement.

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

Provide a link to the academy's master schedules.

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

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.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

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

<https://www.lubbockisd.org/domain/3757>

Provide a link to the academy's Assessment strategy.

<https://www.lubbockisd.org/domain/3757>

Free-Response

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

The district HR department attends job fairs throughout the region to find highly qualified teachers for our district. Our campus attends the job fair the district hosts for potential employees and we also send school representation to the Region 17 job fair as well. We support pre-service teachers on our campus through Texas Tech University, Lubbock Christian University, and Wayland Baptist University through observation hours and student teaching opportunities. This gives us the opportunity to identify potential candidates for our program as well. Once a list of candidates is created, we designate an interview team that is comprised of our school principal and additional administrators, our STEM coordinator, and teachers from our campus. Their input is considered to help select highly qualified teachers who will fit our program.

Candidates who are hired will be matched with a mentor teacher and each of our administrators are responsible for a different department within our program. This allows the administrator to be more involved with a group of teachers as they progress in their careers. This also helps us to retain great teachers by developing positive and supportive relationships with administration while also promoting growth. Department administrators work with teachers to identify and choose quality professional development opportunities for our teachers as well as support their work in the classroom as they seek to implement innovative practices.

Building teacher capacity and encouraging teachers to become leaders on the campus empowers our teachers to play a larger role on the campus as a whole beyond their classroom. We also promote an open classroom environment where teachers feel welcome to visit each other's rooms for sharing best practices. We believe all of these things contribute to retaining quality teachers in our program.

Describe the current STEM pathways available at the academy.

The Coronado T-STEM Academy currently has two STEM pathways in Engineering and Robotics. Our engineering pathway is comprised of four courses that give our students a broad survey of various types of engineering and the tools that engineers use include technology and problem solving skills. The courses in this pathway use curriculum from the Engineering Your World Program at the University of Texas, teacher created curriculum, and the Engineering Projects in the Classroom (EPICS) program from Purdue University. Students take the following course sequence:

- Principles of Applied Engineering (YGCH11) 9th (also eligible for Dual Credit)
- Engineering Design and Problem Solving (YGEH31) 10th
- Engineering Math (YGEH51) 11th
- Engineering in the Community (YGDH21) 12th

Our robotics pathway encourages the study of engineering in the context of robotics and computer science. Students participate in FIRST Robotics programs as part of the class curriculum to give them a real world project as a basis for learning. Students take the following course sequence for the robotics pathway:

- Principle of Applied Engineering (YGCH11) 9th
- Robotics I (YGHR11) 10th
- Robotics II (YGHR21) 11th
- PBR-STEM (YNYH51-71) 12th

For both of these pathways, we are also recommending additional support electives including:

- Computer Programming I (YIPH11)
- Advanced Computer Programming and Business Information Management (YBIM11). With the BIM I course, students can earn certifications in Microsoft Word, Excel, Access, and PowerPoint.

We are also currently working to add additional pathways into our program in the future.

At the middle school level, students have options to take STEM electives and engineering courses that engage them in project based learning and hands-on STEM activities.

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.

We currently have several partnerships with IHE's here in Texas that support students as part of our T-STEM academy. Our campus offers a number of classes Dual Credit through South Plains College including:

- US History AP (SPC = US History 1 Fall/ US History II Spring)
- Statistics AP (SPC = Statistical Methods 1342 Spring)
- Spanish 3 PAP (SPC = Spanish 1412 Spring)
- Spanish 4 AP (SPC = Spanish 2311 Fall/Spanish 2312 Spring)
- French 3 PAP (SPC = French 1412 Spring)
- German 3 PAP (SPC = German 1412 Spring)
- US Government AP (SPC =Federal Government 2305 Fall or Spring)
- English 4 AP (SPC = Composition I 1301 Fall/ Composition II 1302 Spring)

In addition to the dual credit offerings above, we will begin offering dual credit/enrollment through the University of Texas and Texas Tech University OnRamps Program in the following classes: College Algebra, Chemistry, and Physics.

Our engineering curriculum is supported by The University of Texas which includes ongoing training for teachers and training for new teachers on the Engineer Your World Curriculum. Students also have the opportunity to complete the first year engineering course as dual enrollment through the University of Texas.

Our Business partner is Chick-Fil-A which hosts a Leadership Academy on our campus for students throughout the school year. Leadership is one of our campus and academy goals for students. Business leaders come monthly to teach leadership and service skills to our students.

We are working to add new business partnerships to better support our engineering and robotics curriculum for the future.

The T-STEM Academy has a number of opportunities to interact with parents and community partners throughout the year which help to support its mission. Our juniors will soon attend an informational session with parents called Senior 101 that will help them prepare to navigate through their last year of high school and then transition to college. There are several parent meetings that are hosted throughout the year for parents and students including our AP Parent meeting, 9th grade parent meeting, Math parent meetings, and meeting for our Mental Health program called "More than Sad." These are all in addition to typical PTA meetings and general school parents meetings held during the school year. New this year will be an OnRamps Informational night for parents and students that will help students prepare for the expectations of our new OnRamps courses in the fall.

We also host the AVID Family Night and AVID College and Career Fair for students and parents each year. Many of our STEM students are also AVID students so these events help to support both programs.

Lastly, our 9th grade Bridge program will be held this summer and will include specific sessions on our academy, support for rigorous coursework, parent informational sessions, and a mini college fair for students.

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

Students in the T-STEM Academy participate in Project Based Learning curriculum as part of the program. Our robotics program is project based through FIRST Robotics and includes opportunities for students to work with mentors in engineering and robotics from Texas Tech and the local community. In our engineering pathway, the senior level capstone course is a community projects course. Students select a project in their community they want to solve and produce a solution. In our first year of the course, students have focused on school community projects, but we plan to expand to neighborhood projects as well in the future.

Academy students have the opportunity to take Problem Based Research courses through the Advanced Technology Center which gives them a chance to partner with local businesses on a particular problem of their choosing.

In addition, many of our academy students participate in the AP Capstone program. This allows students to choose a research project to complete in the senior year to complete the Capstone program. They are guided by teachers on campus but collaborate with community members to complete their research.

Coronado has also been focused on increasing project based learning experiences for students in all classes. This past year, we recently sent several teachers from our quadrant to a three day intensive PBL training to further improve their skills in designing these experiences for students.

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

Coronado T-STEM academy has access to all of the typical high school clubs and organizations, but also has several STEM-focused activities for our pathway students. Our STEM -focused extracurricular activities include the following:

--META Robotics (Mustang Engineering and Technological Applications in Robotics) Teams: Compete in three robotics competitions during the school year including FIRST FRC Robotics and FTC Robotics Competitions.

--Coronado STEM Girls-This is a group dedicated to promoting STEM fields with our female students. We partner with the Texas Tech Society of Women Engineering to bring a variety of STEM activities and mentorship to our girls through meetings during the course of the year.

--YTI (Youth for Technology and Innovation) is a club formed to promote interest in computer technology with students. Students are working to learn to build their own computers and toward the goal of building a solar car in the future.

--UIL Math and Science Team-Pathway students have the opportunity to participate in UIL Academic teams throughout the year.

--SHPE Junior, Society for Hispanic Professional Engineers Junior Chapter-We are in the beginning of the process to bring a SHPE Junior chapter to our campus with help from the SHPE chapter at Texas Tech University.

--Drone Club-This was started last year and is under a bit of re-organization. We plan to continue with this in the future.

At our middle schools, students participate in a variety of engineering and STEM activities to introduce kids to STEM Careers. Our middle school campuses host Lego robotics teams and STEM contest teams that compete in an Egg Drop contest and a catapult contest.