



Harmony School Of Excellence-Austin  
T-STEM Renewal Application  
2018-2019

# Contents

[Background](#)

[Contacts](#)

[Narratives](#)

[Download Assurances Signature Page](#)

# Background

## District Affiliation

HARMONY SCIENCE ACADEMY (AUSTIN)

**DC #:** 227816

**Region:** 13

**Mailing Address (Line 1):** 9321 W SAM HOUSTON PKWY S

**Mailing Address (Line 2):**

**City, State, Zip:** HOUSTON, TX 77099

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## School Affiliation

HARMONY SCHOOL OF EXCELLENCE - AUSTIN

**CDC #:** 227-816-101

**Region:**

**Mailing Address (Line 1):** 2100 E ST ELMO RD

**Mailing Address (Line 2):**

**City, State, Zip:** AUSTIN, TX 78744

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## Academy Information

**T-STEM Academy Name:**

Harmony School Of Excellence-Austin

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

6-12

Grade Level	Number of Students
6	112
7	112
8	112
9	106
10	84
11	84
12	60

# Contacts

## Business Partner

**Affiliation:** Terra Pave International Company  
**Job Title:** President of the Terra Pave International Company  
**Full Name:** Dr. Yetkin Yildirim  
**Email:** yetkinyildirim@gmail.com  
**Phone Number:** 512-655-3550

## Superintendent

**Job Title:** Harmony Public Schools Chief Executive Officer  
**Full Name:** Mr. Fatih Ay  
**Email:** fay@harmonytx.org  
**Phone Number:** 713-743-3333

## Applicant

**Job Title:** Principal  
**Full Name:** Mr. Agil Sharifov  
**Email:** asharifov@harmonytx.org  
**Phone Number:** 512-693-0000

## IHE Liaison

**Affiliation:** Austin Community College  
**Job Title:** Executive Director of High School and College Relations  
**Full Name:** Dr. Shasta Buchanan  
**Email:** shasta.buchanan@austincc.edu  
**Phone Number:** 512-223-7679

# 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.**

Stand Alone Academy - All students on the campus are enrolled in the T-STEM academy

## Endorsements

**Identify the current endorsements that are offered:**

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

## Industry Certificates

Identify all industry certificates offered to students.

Certificate	Description
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## Level One Certificates

Identify all level one certificates offered to students.

Certification	Description
Web Developer Specialist Level I Certificate	Four year plans for high school students outlining all of the courses they need to take to earn a Level 1 Certificate or Occupational Skills Award as they graduate from high school

## 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.**

<https://www.harmonytx.org/AboutUs.php>

**Provide a link to your mission statement.**

<https://www.harmonytx.org/AboutUs.php>

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

<https://hseAustin.harmonytx.org/t-stem/>

**Provide a link to the academy's master schedules.**

<https://hseAustin.harmonytx.org/t-stem/>

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

<https://hseAustin.harmonytx.org/t-stem/>

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

<https://www.harmonytx.org/admissions.php>

**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://new.harmonytx.org/admissions.php/>

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

<http://www.parent.harmonytx.org/>

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

<http://www.stemsos.com/>

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

<http://stem.harmonytx.org/internships/>

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

<https://sites.google.com/a/harmonytx.org/pbl/pbl-projects/capstone>

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

<https://sites.google.com/a/harmonytx.org/pbl/projects/hs-level-3-tasks>

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

<http://stem.harmonytx.org/t-stem-academies/academic-literacy/>

**Provide a link to the academy's Assessment strategy.**

<https://hseaustin.harmonytx.org/t-stem/>

## Free-Response

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

Harmony School of Excellence-Austin prioritizes recruitment and retention of best quality professionals. The Academy utilizes substantial amount of funds and puts efforts attract talented teachers in STEM related subjects as part of it's recruitment strategy. The Academy holds multiple Job Fairs to search for talents throughout the year and it accepts and processes the job applications year-round. The Academy utilizes 21st century tools to manage it's recruitment process effectively. The Academy is partnering with teacher preparation programs such as UTeach and alternative certification programs such as Texas Teachers, A+ Teachers and etc. with the purpose of recruiting best qualified candidates. The Academy will continue it's efforts and successful implementation in this area in upcoming years as well. HSE-Austin conducts yearly Comprehensive Needs Assessment to determine areas of need. As part of this CNA review process, committee members consisting of stakeholders review and analyze the available data to identify strengths and weaknesses and to develop thorough professional development plan tailored to individuals' needs. Teachers and teams also have voice in design process of their own professional development plans as this approach ensures active participation and productive outcomes. Harmony School of Excellence-Austin is approved to receive additional Teacher Incentive Fund (TIF) Grant from the Federal Government which will enable the Academy to maximize teacher quality through systematic professional development sessions, mentoring and coaching support and increase teacher retention via incentive initiatives based on the student progress. Implementation of these practices will be increased next year. Teachers collaborate with each other for common planning and reflect on each other. School leaders monitor teacher performances through Harmony Teacher Evaluation and Support System(H-TESS) and provide teachers with quality feedback and guidance support. The Academy's yearly calendar reflects scheduled Professional Development days for faculty. HSE-Austin is partnering with Educational Service Centers, Universities, online vendors to deliver the best PD for it's faculty and will maintain these partnerships. New and emerging teachers to HSE-Austin receive additional mentoring support via Mentor-Mentee program. More experienced teachers in subject areas are sharing their best practices with new teachers and they reflect on their performance as the new teachers progress throughout the year. HSE-Austin provides financial support for it's teachers and administrators through Graduate degree programs and certification programs who desire to advance in their professional career. This is rewarding practice for the Academy teachers and it helps with teacher retention. STEM area teachers increase their knowledge and improve their skills in utilizing the most advanced project-based learning strategies by collaborating with other T-STEM academies in the area. Best practices are shared in these session. Harmony School of Excellence-Austin is developing plans to achieve and maintain it's Role Model status in Teacher Selection, Development and Retention benchmark.

**Describe the current STEM pathways available at the academy.**

"The purpose of creating campus endorsements and pathways is to provide our students with a specialized experience to further their college and career opportunities. HSE-Austin offers STEM endorsements to students including STEM-Mathematics Pathway, STEM- Science Pathway, Engineering Pathway, Technology Pathway-Programming, ACC-CTE: Web Developer Specialist Pathway. Beside that Stem endorsements, HSE will initiate PLTW-Biomedical Sciences pathway in 2018/2019 school year. PLTW- BIOMEDICAL SCIENCES

HSE will offer one class each year to complete the pathway in four academic years.

9th:Principle of Biomedical Sciences (2018)

10th:Human Body Systems (2019)

11th:Medical Interventions (2020)

12th:Biomedical Innovations (2021)

**ACC- CTE CERTIFICATE PROGRAM**

This certification program allows students to find an entry job in this area! The first 2 classes will be articulated with ACC curriculum and taught at HSE. The last 2 will be taught at ACC with college professors.

9th:Principles of Information Technology

10th:Web Technologies

11th: ITSE 2309 Database Programming; Oracle OR ITSE 1303 Introduction to MySQL

12th: ITSE 2302 Intermediate Web Programming

Besides those new pathways in STEM area for rising freshman students, we offer Engineering, Programming, and Fine Arts pathways.

**ENGINEERING-CTE**

Principle of Applied Engineering

Engineering Design and Presentation I

Advanced Engineering Design

Engineering Design and Problem Solving

Information Technology- Programming & Interactive Media

Principles of Information Technology

Web Technologies

Computer Programming I

Computer Programming II

"

**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.**

Harmony School of Excellence-Austin has formalized strong partnership with key business, industry and community partners via established agreements. These partnerships allow HSE-Austin students to benefit from rigorous college level courses in the form of dual credits and expose HSE-Austin students to real-life job experiences in STEM areas. HSE-Austin secured and renewed it's partnership with Austin Community College and Lone STAR College via Memorandum of Understanding to deliver dual credit courses as the integral component of rigorous college preparation program. HSE-Austin is also partnering with University of Austin in Texas by attending their STEM conferences, PBL projects and researches in the form of field trips and college visits. Representatives and faculty from these partnering institutions are providing valuable services for our students that contribute to overall success of the Academy. HSE will initiate Dual Credit classes at our campus taught by ACC professors and will also be offering ACC-CTE Web Developer Specialist Level I Certificate. Also, HSE is going to launch PLTW Biomedical Sciences pathway for the 2018-2019 school year.

HSE-Austin is planning to participate in On-Ramps program offered by the UT-Austin so students may have broad and diverse choice for dual credit courses. Harmony School of Excellence-Austin is partnering with business and industry companies such as TokYo Electron America, Silicon Labs, Dell Inc, Samsung Plant and Terra Pave International Company and maintains well established Memorandum of Understanding to engage students with STEM related internships, job site visits, STEM camps to inspire them to pursue career in these areas. Engineers from industrial partner companies are members of our T-STEM Advisory Board and they meet with high school students directly to coach them with their advanced STEM projects and guide them towards STEM area. This is a tremendous benefit to our students if we consider the fact that majority of our students are coming from low-income families and significant percentage of these students are first generation college students. The Academy leaders regularly review the outcomes and expectations of these partnerships and develop strategic partnership goals for upcoming years by effective and two-way communication with it's stakeholders. HSE-Austin is planning on expanding dual credit partnership so students can obtain Associate Degree from accredited IHE upon graduation from high school. Harmony School of Excellence-Austin receives strong support from the community. We have secured partnership with the non-profit KLE Foundation and our students will continue receiving Coding Class starting 6th grade. KLE Foundation is funding curriculum and teacher training for Coding Course for our school as a result of this partnership. HSE-Austin is also in close partnership with local organizations to provide students with scholarship opportunities towards college education. Parent -teacher organization of HSE-Austin support school and students by establishing community networks for marketing and student recruitment purposes as well as for increasing social and well-being level of our students and staff. The Academy faculty engages in parental involvement via home visits, parent-teacher conferences and school events. The Academy utilizes variety of communication methods and 21st century tools to ensure real time communication with all stakeholders.

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

STEM is heavily promoted to high school students and we are constantly increasing the awareness and integration of STEM in middle school grades. We push STEM through individualization of projects related to the science or math course the student is enrolled in via a project-based learning process that is outlined for all students. In an engineering class there is a high use of technology and technological applications and they complete many assignments on TinkerCAD (a prelude to using AutoCAD), 3-D design and printing, and bridge design online. Our engineering classes are inspired in the "Engineer Your World" program derived by the University of Texas and they provide the curriculum, materials, and assignments. These students get a good look at workforce related activities. These programs add to an already high focus on 21st century skills through the general use of technology in creating websites and using Google applications, recording videos, and using websites such as YouTube. HSE has expanded its real-world problem solving by the students and is working on elevating that more throughout all subjects. Middle school students use technological skills like creating google presentations and google documents, picture slideshows, and picture stories online. We have entire class projects, which work great with the students and model the project-based learning process. These classes work with hands-on activities and have had numerous visitors. Developing a stronger real-world connection in core classes to STEM and real-life scenarios needs to progress. Considering the increased teacher involvement along with general trial and error this progression should be smooth in the upcoming year. Gain in an overall understanding of STEM, its components, and applications with our student population and their families is a goal for advancement. The current knowledge is low and we need to improve upon that in the upcoming year. HSE will be offering two new STEM pathways which are PLTW-Biomedical Sciences and ACC (Austin Community College\_ Web Developer Specialist Level I Certificate. This certification program allows students to find an entry job in this area. The first two classes will be articulated with ACC curriculum and taught at HSE. The last two will be taught at ACC with college professors or ACC will send professors to HSE campus.

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

Our current STEM program is supported by our central office and provides a general outline and guidance for teachers, particularly in math and science, to work through with the students throughout the year. The district STEM coordinator works with the campus coordinator and STEM departments to develop and coordinate opportunities for students. As for STEM electives all middle school students take 3 classes of science and are offered a technology elective. High school also has 4 science classes and all take at least a fifth advanced science credit. Some STEM electives include: AP Calculus, AP Biology, AP Physics, Concepts of Engineering and Technology, Principles of Engineering, Engineering Design and Presentation, Engineering Design and Problem Solving, Principles of Information Technology, Computer Programming I, Web Technologies, Scientific Research and Design and Earth and Space Science. These electives make students eligible for our Science, Math, Engineering or CTE Informational Technology pathways. Students work on PBL projects in which a website and videos are developed to work as a student portfolio. Currently PBLs are developed in individual classes but our plans include the use of these projects with an interdisciplinary approach to promote collaboration between disciplines. Currently extra-curricular experiences are planned to enrich the STEM programs with summer camps, clubs, festivals, field trips and competitions. HSE offers an STEM summer camps for middle school and high school students in collaboration with UT-Dallas and Camp All Saints. Experimental science and robotics are offered as extracurricular clubs and we are working on expanding our STEM clubs to include coding, athletics among others, and biomedical. HSE's biggest event of the year is our STEM Fest where students and teachers prepare PBL and project presentations to be showcased to the community. This festival grows every year and includes every subject. Our plan is to increase community participation. Students also participate in STEM based field trips at least once every year many with our collaboration with AUSTEM and partner universities. Some examples are trips to Silicon Labs, Samsung Electronics, Tokio Electron, Introduce a Girl to Engineering, SXSW Edu, City of Austin Career Fair, college visits among many others. Finally students participate in different competitions like our district and state science fairs, Austin Energy Regional SF, 80Ten STEM Fest among others. STEM related internships and summer programs are also offered to students as guidance counselors compile different opportunities and share them with students. These opportunities include paid internships with the city of Austin, our partner institutions, NASA, colleges among others. Our plan for next year is to finalize a counseling website to bring together this information and improve our communication with families.