



HUMBLE H S
T-STEM Renewal Application
2020-2021

Contents

[Background](#)

[Contacts](#)

[Narratives](#)

[Narratives: Degrees and Credentials](#)

[Narratives: Strategic Partnerships: IHE, Strategic Partnerships:
Business Partner](#)

[Narratives: Regional Workforce Alignment, Work-Based
Learning](#)

[Narratives: Advanced Academics](#)

[Narratives: STEM-Focused Extracurriculars, Student Support](#)

[Narratives: Leadership Team](#)

[Narratives: Benchmark 1 Products, Benchmark 2 Products,
Benchmark 3 Products, Benchmark 4 Products, Benchmark 5
Products, Benchmark 6 Products, Benchmark Products](#)

[Download Assurances Signature Page](#)

Background

District Affiliation

HUMBLE ISD

CD #: 101913

Region: 04

Mailing Address (Line 1): 20200 EASTWAY VILLAGE DR

Mailing Address (Line 2):

City, State, Zip: HUMBLE, TX 77338

School Affiliation

HUMBLE H S

CDC #: 101-913-001

Region:

Mailing Address (Line 1): 1700 WILSON RD

Mailing Address (Line 2):

City, State, Zip: HUMBLE, TX 77338

Academy Information

What is the academy name?

Humble High School TSTEM Academy

Which model does the district intend to implement at this time? Within these models, there are variations.

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

Grade Levels Served

What grade level(s) will your academy plan to serve in the 2020-2021 school year?

9
10
11
12

Enter the number of students that you plan to serve in 9th grade.

50

Enter the number of students that you plan to serve in 10th grade.

55

Enter the number of students that you plan to serve in 11th grade.

40

Enter the number of students that you plan to serve in 12th grade.

20

Contacts

Applicant

Applicant 1

Job Title

Dean of Advanced Academics

Name Prefix

Mrs.

First Name

Latoyia

Last Name

Pea

Email

latoyia.pea@humbleisd.net

Phone

281-641-6300

Principal

Principal 1

Name Prefix

Mrs.

First Name

Terri

Last Name

Osborne

Email

terri.osborne@humbleisd.net

Phone

281-641-6300

Superintendent

Superintendent 1

Name Prefix

Dr.

First Name

Elizabeth

Last Name

Fagen

Email

efagen@humbleisd.net

Phone

281-641-1000

Narratives

Current Designations at HUMBLE ISD:

- HUMBLE H S - T-STEM - 1617
- QUEST EARLY COLLEGE H S - ECHS - 1011

Previous Planning Year Applications at HUMBLE ISD:

Narratives

The majority of the following questions will be narrative response. Narrative responses are limited to a maximum of 250 words. We recommend writing your responses in a text-editing software such as Microsoft Word and then pasting your responses into the website when they are complete. Progress to the next section when you are ready.

Narratives: Degrees and Credentials

Degrees and Credentials

Select the Career Cluster(s) that your academy plans to offer in 2021-2022.

STEM

Select the Career Cluster(s) that your academy plans to offer in 2021-2022.

Biomedical Science

Engineering

Programming and Software Development

Which of the following credential(s) does the academy plan to offer students in 2021-2022 school year?

IC

What industry certifications does the academy plan to offer?

Item

Autodesk Certified Professional or User in AutoCAD

OSHA 30 Hour General Industry

Microsoft Technology Associate (MTA) Introduction to Programming Using Python

Does the IHE partner currently have an articulation agreement with a four-year IHE detailing how a student's associate degree and accrued credits could lead to a baccalaureate degree?

Yes

Provide the university name that your IHE partner has an articulation agreement with and the bachelor degree that students could earn using their associate degree and accrued credits. Each row represents a degree.

2-Year Degree	University	4-Year Degree
Engineering Associate of Science	Lamar University	Civil, Electrical, Industrial, or Mechanical Engineering
Engineering Associate of Science	Prairie View A&M University	Chemical, Civil, Electrical, or Mechanical Engineering

Engineering Associate of
2-Year Degree
ScienceUniversity of Houston
UniversityCivil or Mechanical Engineering
4-Year Degree

Narratives: Strategic Partnerships: IHE, Strategic Partnerships: Business Partner

Strategic Partnerships: IHE

IHE Partner 1

Affiliation

Lone Star College Kingwood

Name Prefix

Mrs.

First Name

Kimberly

Last Name

Klepczyk

Email

kimberly.m.klepczyk@lonestar.edu

Phone

281-312-1652

Job Title

Dean of Academic Partnerships

The T-STEM academy shall have strategic partnerships with business and industry partners and Institutions of Higher Education (IHEs) that are formally articulated in writing and clearly define a variety of STEM careers.

Describe how the IHE articulation agreement addresses the following IHE Blueprint Requirement: Curriculum alignment and courses of study, which enables a student to combine high school courses and college-level courses to earn either an associate degree, postsecondary certificate provided by an IHE, or industry certification.

Lone Star's President, Vice President of Instruction, and Dean of Academic Partnerships and Initiatives

will serve as members of the HHS T-STEM Academy Leadership Team. In addition to this, the Dean of Academic Partnerships and Initiatives (or designee) will be responsible for working with HHS T-STEM Academy faculty to develop and refine a clear and coherent academic program. This group will collaboratively work to recommend and implement academic and professional policy, recommend and implement budget and financial policy, and supervise the annual evaluation of the program and effectiveness of the partnership. The HHS T-STEM Academy Leadership Team will plan an integrated, four-year curriculum that provides a seamless transition from grade level to grade level. Within this framework, students will earn a distinguished level of achievement diploma and earn a minimum of 15 college credit hours that align with the Texas Core Curriculum as defined by the Texas Higher Education Coordinating Board. In addition to this, students will have the opportunity to complete additional hours that include opportunities for credentials and certificates that connect to associate and bachelor degrees in the STEM field. The HHS T-STEM Academy will provide training and ongoing professional development to support alignment of instruction. Each year, a subset of all partners (teachers, administrators, college personnel) will analyze student assessment data, conduct a needs assessment, and plan professional development activities.

Describe how the IHE articulation agreement addresses the following IHE Blueprint Requirements: Policies for: 1) advising students on the transferability of all college credit offered and earned, 2) ensuring the IHE transcripts college credit earned through dual credit in the same semester that credit is earned, 3) advising students as to the transferability and applicability to baccalaureate degree plans for all college credit offered and earned (college credits earned during high school should allow students to progress from an associate degree to a bachelor's degree and beyond in their chosen field), 4) students accessing the IHE facilities, services and resources

All of the partners will share in the responsibility of assisting students and parents with understanding the transferability of college credits. This endeavor will be achieved through work with high school counselors, college counselors, and HHS T-STEM Academy instructors. Lone Star's Office of Student Services will develop workshops to aid the HHS T-STEM Academy counseling staff members in gaining knowledge about college advising, financial aid, and support services to assist HHS T-STEM Academy students with being successful. College credit for each HHS T-STEM Academy student will appear on the college transcript as students complete a course. The college will record letter grades on students' college transcripts: A, B, C, D, F, and W = withdrawn. HHS T-STEM Academy will record final grades at the end of the semester in accordance with Humble ISD district policy and grades will correlate directly with college grades. During weekly advisory periods, an advisor will meet individually with students to oversee their academic progress, monitor grading and matriculation decisions, and advise students on making positive post-graduation plans. Students who are not meeting established measures will meet additionally with a mentor. Students will also have access to college tutors, academic advising and career services. HHS T-STEM Academy students will have the same access to services and facilities as other college students, including but not limited to the use of the library, computer labs, study rooms, science labs, bookstores, food/lounges, and other campus facilities.

Describe how the IHE articulation agreement addresses the following IHE Blueprint Requirements: Transportation costs and fees including provisions for discontinuing operation while ensuring students previously enrolled will have opportunity to complete their course of study.

The college will waive tuition and fees for all HHS T-STEM Academy students enrolled in approved college-credit courses during the fall and spring academic terms. Humble ISD will provide all textbooks and materials from their operational budget. In addition to this, Humble ISD will support the HHS T-STEM Academy's day-to-day operational costs, including administrative and staff salaries,

transportation, facility and other school related expenditures. The college will pay Humble ISD for dual credit courses taught by Humble ISD faculty based on the prorated adjunct rate. The college agrees to keep textbooks in adoption for a three-year period for courses embedded at the high school when doing so does not negatively impact course quality. Humble ISD and Lone Star College reserve the right to terminate the HHS T-STEM Academy partnership and discontinue operation. If HHS T-STEM Academy is discontinued and only has a 9th and 10th grade cohort, the Academy may discontinue operation at the end of the school year. If HHS T-STEM Academy is discontinued and has an 11th and 12th grade cohort, the Academy will continue operation through that cohort's scheduled graduation from HHS. While in the process of discontinuing operation, HHS T-STEM Academy may not enroll any additional students in the grades that have been phased out. Also, while in the process of discontinuing operation, HHS T-STEM Academy will continue to meet all of the design elements required by the Texas Education Agency and continue to provide full support for all students enrolled in HHS T-STEM Academy,

Describe how the IHE articulation agreement addresses the following IHE Blueprint Requirements: Data sharing agreement that includes provisions for teacher data such as qualifications and student level data such as credit hours taken and earned, GPA, formative data to assess if student is on track for college readiness

HHS T-STEM Academy will collaborate with Lone Star's leadership team in the interpretation and application of research evaluation findings, both student outcomes and process evaluation data, for improvement of the program. Data sources include: number of credit hours taken and earned, GPAs, state assessment results, SAT/ACT, PSAT results, TSI readiness by grade level, qualifications of HHS T-STEM Academy staff, and location(s) where the courses are taught. The Office for Academic Partnerships and Initiatives and the LSC research team, HHS T-STEM Academy, and the Humble ISD research team will develop a research agenda that examines aspects of T-STEM Academies e.g., student academic performance, instructional impacts, curriculum development, effectiveness of professional development, and impact on educational policy and decision-making. This group will also be responsible for tracking academic and programmatic progress of the HHS T-STEM Academy students. To facilitate this task, each of the partners will provide demographic, academic, and other needed data on a semester basis. Under the supervision of the T-STEM Leadership Team, an evaluation of the program and of the effectiveness of the collaboration will take place each academic year. The results of the evaluation will be reported at the end of each academic year. This evaluation will satisfy all federal and state guidelines for the evaluation of K-12 schools, in addition to any other evaluative guidelines established for the program.

Strategic Partnerships: Business Partner

Business/Industry Partner 1

Affiliation/Company

STEM UP

Job Title

President/Founder

Name Prefix

Dr.

First Name

Lakeisha

Last Name

Hamilton

Email

stemupwitdrkiki@gmail.com

Phone

713-679-9115

Describe how the Business/Industry articulation agreement addresses the following Business/Industry Blueprint Requirements: Clear roles and responsibilities for work site supervisors, mentors, teachers, support personnel, and other partners.

STEM UP will serve on the Humble High School T-STEM Advisory Board and will identify dedicated staff to coordinate site visits to facilities, recruit and match mentors to students, identify appropriate internship opportunities, and support teachers and faculty in developing appropriate STEM curricula.

Describe how the Business/Industry articulation agreement addresses the following Business/Industry Blueprint Requirements: Support for students' activities, such a clubs, Career and Technical Student Organizations, competitions, and special invitations.

HHS T-STEM Academy will maintain communication with STEM UP in regards to upcoming events. STEM UP will serve as a positive role model to all students on campus and provide support for student activities, such as clubs, Career and Technical Student Organizations, competitions, and special initiatives.

Describe how the Business/Industry articulation agreement addresses the following Business/Industry Blueprint Requirements: Student access to business and industry partners and work-based learning facilities, services, and resources.

STEM UP will help define and provide opportunities for appropriate workplace experiences (e.g., design projects, visits, speakers, internships, and apprenticeships) to prepare students for the world of work based on the curriculum scope & sequence of the HHS T-STEM Academy. STEM UP staff will assist HHS T-STEM Academy in identifying organizations in the STEM field to ensure that each student has the opportunity to participate in multiple hands-on experiences during the course of the program.

Describe how the Business/Industry articulation agreement addresses the following Business/Industry Blueprint Requirements: Transportation fees and costs.

HHS T-STEM Academy will cover all transportation fees and cost related to student program participation.

Narratives: Regional Workforce Alignment, Work-Based Learning

Regional Workforce Alignment

List the regional high-demand occupations your academy intends to address through selected program(s) of study and work-based learning.

Regional High-Demand Occupation

Civil/Petroleum/Mechanical/Industrial/Electrical/Chemical/Electronics Engineer

Computer Systems Analysts

Network and Computer Systems Administrator

Biomedical Engineer

Work-Based Learning

Complete the activity tables below illustrating the work-based learning activities that your academy plans to offer students at each grade level. Please ensure the activities are STEM focused.

Add up to three activities offered to 9th grade students.

9th Grade Activities

NHRA Mello Yello Drag Racing YES Program

Nepri AVID Career Day Lunch & Learn

Add up to three activities offered to 10th grade students.

10th Grade Activities

iFly STEM Career Presentation

Nepri Engineers Week Lunch & Learn 10th Grade Activities

Add up to three activities offered to 11th grade students.

11th Grade Activities

Calpine Guest Speaker

Seeberger Architecture Site Visit

Add up to three activities offered to 12th grade students.

12th Grade Activities

TSTC STEM Career Day

Space Center U Program

Narratives: Advanced Academics

Advanced Academics

Select the type of advanced courses (dual credit/AP/IB) your campus plans to offer students in 2021-2022.

DC

AP

IB

What type of dual credit courses does your campus plan to offer?

AGCM

Describe any challenges in ensuring your academy has educators with qualification to teach dual credit. What steps did your academy take to address the need?

In reviewing campus data, it was revealed that most teachers have earned Master degree credentials in the field of education. Unfortunately, this greatly limits the number of staff members with 18 graduate credit hours in specific content areas. In order to recruit highly qualified staff, the campus site-based decision team will create an ideal candidate profile to use during spring hiring events. Also, as interviews begin, the interview committee will consistently screen candidates that meet dual credit course qualifications. In addition to this, the master scheduling team will review courses for the 20-21

school year and make adjustments to align our dual credit course offerings with teacher qualifications that currently exist on campus.

Is the academy a TSIA testing site?

Yes

Narratives: STEM-Focused Extracurriculars, Student Support

Student Support

Provide examples of how the campus plans to provide students with academic services. List activities and brief descriptions of the activities. Add a new row for each provided service.

Activity	Description
TSI Mandatory Tutorials	Intervention
House	Advisory/College Readiness
SMASH Camp	Summer Bridge

Provide examples of how the campus plans to provide students with wrap-around services. List activities and brief descriptions of the activities. Add a new row for each wrap-around service.

Activity	Description
T-STEM Summit	Parent Outreach & Involvement
Family Cookout	Parent Outreach & Involvement
Spring Showcase	Skill Building Instruction

How does your academy use the access, achievement, and attainment data for program improvement?

Advisory Board members meet quarterly to discuss student progress, share data, and collaboratively plan to ensure success in the areas of access, achievement, and attainment. Representation for this group includes district leadership, campus administration, Lone Star administration, Academy teachers, and business and industry partners. During these meetings, current program data for all three areas is

presented and gaps are collectively identified. Each meeting closes with the opportunity for members to recommend solutions that will assist HHS T-STEM Academy with meeting program goals as established by the Texas Education Agency. Also, HHS T-STEM Academy uses program data consistently during weekly PLC meetings to monitor student progress and determine interventions. Staffings are held three times each semester to discuss at-risk students as it relates to grades, social emotional learning, and TSI scores. As a team, Student Success Plans are then developed in order to address concerns and establish systems to support growth. In addition to this, the Academy has established a professional development model of continuous learning that addresses prioritized needs as informed and evaluated by multiple sets of quantitative and qualitative data (student assessment data, instructional/classroom evaluations, technological developments, workforce demands, and demographic changes). Access, achievement, and attainment data is used to develop authentic professional development opportunities that support teachers with implementing instructional strategies that meet the needs of students.

STEM-Focused Extracurriculars

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

Scholars in the T-STEM program participate in an array of field experiences. This includes trips to Houston Baptist University, Texas State Technical College, LSU, Texas A&M University, Lamar University, University of Houston, Houston Space Center, Houston Intercontinental Airport, iFly, Women Engineers Conference, Offshore Technology Conference, Science in Sports with the Houston Rockets, WaterWorks, Houston Museum of Natural Science and Energy, NHRA Drag Racing, Seeberger Architecture, and various college fairs. In addition to this, T-STEM Ambassadors club members meet bi-monthly to collaborate among grade level representatives from each cohort. In this group, students take initiative and help ensure that the student voice of our scholars is valued. Ambassadors facilitate planning for community outreach, recruitment, and campus events. We also look forward to having students compete in our annual campus design competition during our Spring Showcase. Through this experience, students will be challenged to combine innovation with instructional concepts that have been covered in class. Each of the above experiences affords scholars the opportunity to make real-world connections between STEM and the workforce. And, because of this exposure, we are confident that Academy participants will have the education and skills needed to be successful in STEM careers upon graduation.

Narratives: Leadership Team

Leadership Team

List the Leadership Team's three priorities for the next year and describe how the selected

priority contributes to the academy's success. Each priority should be a benchmark from the ECHS/T-STEM/P-TECH Blueprint.

Benchmark	Description
Strategic Alliances	Additional business and industry partners connected to program pathways will provide more support to students in the form of resources and assistance with program planning.
Work-Based Learning	Rigorous work-based learning options, such as job shadowing, will prepare students for STEM careers and expose them to real-world careers.
Student Support	An increase in wrap-around services will support students with academic progress, social-emotional learning, and STEM leadership opportunities outside of the classroom.

Narratives: Benchmark 1 Products, Benchmark 2 Products, Benchmark 3 Products, Benchmark 4 Products, Benchmark 5 Products, Benchmark 6 Products, Benchmark Products

Benchmark Products

Benchmark 1 Products

Provide a link to the academy's mentor/induction program plans.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's annual training or professional development plan with the academy and IHE faculty

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's leadership meeting agendas and notes.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Benchmark 2 Products

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

<https://sites.google.com/humbleisd.net/hhs-tstem-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/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's brochures and marketing in Spanish, English, and/or other relevant languages.

<https://sites.google.com/humbleisd.net/hhs-tstem-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/humbleisd.net/hhs-tstem-academy/home>

Benchmark 3 Products

Provide a link to the academy's meeting agendas and minutes, with action items and decision logs.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's final, signed, and executed MOU with their industry partner/business.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's final, signed, and executed MOU with their IHE

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's list of strategic partners with each member's organization, title and role in providing work-based learning for students by grade level.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Benchmark 4 Products

Provide a link to the academy's four-year crosswalk document

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's master schedule.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's curriculum alignment documents.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's testing calendar and schedule for TSI, ACT, SAT or other assessments.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's documentation detailing a minimum of three course of study examples that outline student pathways from high school, to associate degrees, to work credential and beyond.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Benchmark 5 Products

Provide a link to the academy's documentation of appropriate work-based learning expereinces for students at all grade levels.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's current dated regional high demand occupation list.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's aggregate data describing student participation in work-based learning experiences as well as percentage of students earning industry certification and credentials by type.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's samples of student artifacts such as writing, portfolios, presentations, or links to digital content.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Benchmark 6 Products

Provide a link to the academy's bridge program calendar and curricula.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link the academy's tutoring and other intervention/remediation program schedules,

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>

Provide a link to the academy's calendar of family outreach events.

<https://sites.google.com/humbleisd.net/hhs-tstem-academy/home>
