



BROOKS ACADEMY OF SCIENCE AND ENGINEERING

T-STEM Renewal Application

2020-2021

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Background

District Affiliation

BROOKS ACADEMY OF SCIENCE AND ENGINEERING

CD #: 015830

Region: 20

Mailing Address (Line 1): 3803 LYSTER RD

Mailing Address (Line 2):

City, State, Zip: SAN ANTONIO, TX 78235

School Affiliation

BROOKS ACADEMY OF SCIENCE AND ENGINEERING

CDC #: 015-830-001

Region:

Mailing Address (Line 1): 3803 LYSTER RD

Mailing Address (Line 2):

City, State, Zip: SAN ANTONIO, TX 78235

Academy Information

What is the academy name?

Brooks Academy of Science and Engineering

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

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

25

Contacts

Applicant

Applicant 1

Job Title

District CTE Education Specialist

Name Prefix

Mr.

First Name

Jose

Last Name

Ayala

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Phone

210-633-9006

Principal

Principal 1

Name Prefix

Mrs.

First Name

Bonnie

Last Name

Salas

Email

bonnie.salas@brooksacademy.org

Phone

210-633-9006

Superintendent

Superintendent 1

Name Prefix

Mrs.

First Name

Lisa

Last Name

Schutz

Email

lisa.schutz@brooksacademy.org

Phone

210-541-0051

Narratives

Current Designations at BROOKS ACADEMY OF SCIENCE AND ENGINEERING:

- BROOKS ACADEMY OF SCIENCE AND ENGINEERING - P-TECH - 1920
- BROOKS ACADEMY OF SCIENCE AND ENGINEERING - T-STEM - 1213
- BROOKS COLLEGIATE ACADEMY - ECHS - 1920

Previous Planning Year Applications at BROOKS ACADEMY OF SCIENCE AND ENGINEERING:

- BROOKS COLLEGIATE ACADEMY - ECHS - Planning

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.

Architecture & Construction
Arts AV Tech & Communication
Business Marketing Finance
Health Science
Information Technology
STEM

Select the Program(s) of Study your academy plans to offer in 2021-2022.

Architectural Design

Select the Program(s) of Study your academy plans to offer in 2021-2022.

Digital Communications
Graphic Design and Multimedia Arts

Select the Program(s) of Study your academy plans to offer in 2021-2022.

Business Management
Marketing and Sales

Select the Program(s) of Study your academy plans to offer in 2021-2022.

Bio-Medical Science
Healthcare Therapeutics

Select the Program(s) of Study your academy plans to offer in 2021-2022.

Programming and Software Development
Web Development

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

Microsoft Office Specialist Word

OSHA 30 Hour General Industry

Autodesk Certified Professional or User in AutoCAD

Certified Nurse Aide/Assistant (CNA)

Medical Laboratory Assistant

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
AS Nursing	University of Tx at San Antonio	BS Nursing

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

Strategic Partnerships: IHE

IHE Partner 1

Affiliation

Palo Alto Community College

Name Prefix

Dr.

First Name

Robert

Last Name

Garza

Email

rgarza@alamo.edu

Phone

210-486-3960

Job Title

President

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.

Pending the final approval, the MOU will provide program enrolled students the opportunity to have dual enrollment and credit earned with the majority of program courses being lead by high school's qualified and vetted adjunct instructors. This process will eliminate the need for student travel to and from the college campus. Teachers will have the opportunity to qualify to teach courses that can lead students toward an associates degree and a level 1 certificate from the college in a sequence of courses in a technical program of study offered by the college. At the least, students can chose to have a rigorous high school education that can lead to an industry standard certification in the chosen program of study with some college credit earned.

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

Students interested in dual enrollment dual credit as part of their program of study will have on campus advising from the school's CCR staff, informal advising from the student's advisor on career interest, college program selections and appropriate high school dual credit courses to consider for

desired graduation outcomes (diploma, industry certificate). Students also avail themselves to using the academic counselors at the college to review their transcripts and program of study course selection requirements to complete their college credit requirements leading toward an AA or AAS associate degree and any associated level 1 certificate available. Students that complete their dual enrollment program of study in high school with the college experience of rigor and support will more likely continue on toward a bachelor's degree at a 4 year university.

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.

Because of ever tightening budgets, there are costs that the student will not be responsible for; such as, IHE Fees are waived with the exception of required textbooks which will be borne by the student/family. The high school's IHE travel transportation cost will be eliminated or substantially reduced by having the school's qualified faculty be vetted to be adjunct instructors for the IHE and thus offer dual enrollment classes held on the high school campus. The MOU will include provisions for the discontinuity of operation to ensure continued student opportunity to complete programs of study previously enrolled.

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

The sharing of student data between the IHE and the high school is very important in order to properly evaluate pre-enrolled students in dual enrollment dual credit courses. The data sharing will coordinate the type and level of support needed for each enrolled student to maximize their success in the program of study of their choice. The bottom line is that the student basically gets the same information from both campus advisors eliminating confusion. Errors noted will be dealt with and communicated to all involved with the student so that they will experience a timely high school graduation and post high school education/career goals.

Strategic Partnerships: Business Partner

Business/Industry Partner 1

Affiliation/Company

Cox Manufacturing

Job Title

Training Coordinator

Name Prefix

Mr.

First Name

Sean

Last Name

Althaus

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althauss@cox manufacturing.com

Phone

210-657-7731

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.

Cox manufacturing agrees to provide the following roles and responsibilities in partnership with Brooks Academy. 1. Provide a sitting member on the school's T STEM Advisory Committee to guide the Engineering program/ curriculum in coordination with our IHE. 2. Provide on-site visits to the company for our students from middle school through high school. 3. Provide guest speakers (Engineers and technicians to our program students and larger grade level audience.) 4. Provide mentors to students on their related Engineering based projects. 5. Provide opportunities for job shadowing and unpaid internships with staff supervision and following required state WBL requirements. 6. Provide limited summer teacher training and externships. 7. Provide selected program support in materials (in kind) and /or monetary

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.

1. Mentors will be provided for students on their related engineering based projects. 2. Provide selected program support in materials and /or monetary donations for the school's robotics team. 3. Provide guest speakers (engineers and technicians) to our program Teachers and students and student CTSO organization audience. 4. Provide company on-site visits to our students from middle school through high school

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.

Students in middle through high school will receive services from the business partner through mentorships, guest speakers, student and program support, As the students in a program of study enter into their 11th-12th grade year, they will be afforded an opportunity to sign up for job shadowing (11th) or internship (12) through the CCR office. Students will be counseled on their roles and expectations as well as those of the associated site partner. Students will be reviewed on their academic standing, in general, and in their program of study. Participation of students assignment to a business partner will only be limited to what the business partner can reasonably accommodate based

on their ability to provide adequate supervision, and any related health and safety issues. Transportation will be provided to students, if needed, by the school. Participant students will be supervised and instructed on selected basic operations and tasks to be done by assigned company employee(s) for the duration of their internship stay.

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

The only cost borne by the school will be for off campus transportation of qualified enrolled program students to and from the business partner work site. If the cost can not be reimbursed through allocated CTE funds, then it will be covered through general funds (budgeted), company sponsorship on travel cost as well as through on campus student led contract work/auctions for program financial sustainability.

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

Engineering

nursing

health care therapeutics

biomedical technicians

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

Intro STEM career course, guest speakers

TSIA preparation/intervention class/ bridge programs

Refining STEM Career path research activity in advisory

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

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?

The challenges the school has experiences is teacher turnover and retaining highly-qualified teachers that could expand the dual credit offerings to other areas of high needs such as Math and Science. The steps that the campus has taken to address the aforementioned challenges is an emphasis with reviewing current teacher academic qualifications for dual credit to align teaching assignments. Some areas are very difficult to secure a qualified teacher (e.g. Science). The academy offers teachers the following incentives. 1. Reimbursement for additional state teaching credentials and testing requirements 2. PD for current qualified teachers to refresh academics along with lab skills as needed 3. Stipends for dual credit teaching assignments based on student performance to obtain college credit. 4. Teaching assignments of choice for following school year provided dual credit courses are also taught

Is the academy a TSIA testing site?

Yes

Narratives: Student Support, STEM-Focused Extracurriculars

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
STEM Plan	.Students are counseled by CCR to help establish interest inventories in careers to plan for Graduation course selctions
Interventions and Remediations	Tutoring by individual teachers as well as planned large group interventions for major exams and tests
Advising	Students have to CCR office to advise and record course selections based on grad plan and advisor teachers review and informally advie students on corrective measured needed and exploring possible courses to chose from for following school year.
summer	bridge enrichment programs between 8 and 9th, 9 and 10, 10 and 11th grade STEM programs with common skills across career choices
TSIA, SAT,ACT and credential exams	students are given saturday reviews on mock tests as neede to help increase confidence and make necessary corrections prior to actual test/exam to maximize scores

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
Daily	Class Advisors review student academic progress and required corrective actions, career guidance
Daily, Monthly, Quarterly-	Counselors meet with students regarding all social, emotional, and academic needs and concerns. Counselors also provide guidance programs as required by the district, state, and federal guidelines on a monthly or quarterly basis as required
Monthly,	IHE Partner's Academic Counselors meet with students as required by our College

or Activity Quarterly-	Description
Yearly	partners' policies for Academic Success and Progress, students have access to all IHE systems, programs, and offices for social and emotional college supports
Yearly	Students select upcoming courses under the approval of advisor and with final approval of CCR staff along with a review of academic standing and progress toward graduation, college credits and certifications, In the 9th grade-10 grade bridge students go to career signing ceremony to indicate their career goal and commitment to completing all requirements by graduation

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

With a determined effort to implement and evaluate the effectiveness of our schools programs, we will enlist our staff to access and self evaluate the progress of their student in the program course with reflections on what when wrong, and how to fix/improve. This data will be shared among program of study teachers for mutual support and reflections. The administration will use this information to help teachers better their teaching skills through the instructional specialists interventions and mentoring/coaching. This data will also help in realigning courses vertically as well as cross-curricular.

STEM-Focused Extracurriculars

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

Our school will offer the following CTSO's : HOSA, SkillsUSA.(new) TSA, and FBLA.(new) for students to member with to gain leadership skills and like minded individuals not found elsewhere. Our school has a highly regarded Vex Robotics team and a very active HOSA. With the programs of study we will be offering more students can now belong to an organization where they can compete other than for the few in robotics-- business leaderships, technical skills and general engineering skills. Our student are generally stronger when in a competition and when they are completing there are many opportunities for them to network, and learn from others outside their home sphere environment.

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
BM4	The leadership team will evaluate data from core and CTE courses for effectiveness in student progress and needed interventions and remediations as well as program support based on labor force trend data
BM5	Continuing to increase business partners to accommodate more qualified enrolled students in quality off campus work experience in specific programs of study
BM6	Help student support through internal and external partnerships to increase student levels of success and confidence toward graduation and self goals post high school

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

Benchmark Products

Benchmark 1 Products

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

Benchmark 2 Products

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

Benchmark 3 Products

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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.

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

Benchmark 4 Products

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

Provide a link to the academy's master schedule.

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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.

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

Benchmark 5 Products

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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.

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

Benchmark 6 Products

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d

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

http://base.brooksacademy.org/apps/pages/index.jsp?uREC_ID=363184&type=d