Attachment 1: Lone Star STEM Academy Pilot – Request for Letters of Interest

Purpose

Vision

Between 2017 and 2027, STEM jobs in Texas are expected to increase by 20%, with careers in computing, engineering, and advanced manufacturing leading the way (Emsi, 2017). However, only about 26% of Texans were awarded certificates and degrees in STEM fields (US Department of Education). Additionally, according to the U.S. Department of Education, while the number of males in Texas earning computing degrees and certificates has almost doubled, the rate of females earning the same qualifications has remained relatively stagnant, thus widening the gender gap for this field. There has also been little movement in the percentage of underrepresented minorities in Texas earning engineering degrees and certificates.

In order to meet the current and growing statewide demand for STEM knowledge and skills, as well as address widening gaps in equity and access to STEM education, the TEA is partnering with Jobs for the Future (JFF) and the University of Texas Center for STEM Education (UTCSE) to use a United States Department of Education Office of Elementary and Secondary Education (OESE) Education Innovation and Research (EIR) grant.

This grant supports the development and/or expansion of College and Career Readiness School Models (CCRSMs) that focus on STEM pathways, with an emphasis on computer science, cybersecurity, and 6-12 STEM education programs.

Goal of Grant

The goal of the Lone Star STEM Academy project is to increase high-quality STEM education opportunities and outcomes for high-need students, with a particular focus on implementing programs of study that help students gain the skills, postsecondary credentials, and experience necessary to embark on well-paying careers in STEM fields, including careers in computer science and cybersecurity. Additionally, the project seeks to expand the number of teachers statewide that are trained and certified to be able to teach in computer science and cybersecurity pathways.

EIR grants require a rigorous approach to piloting innovative school practices to ensure that models are replicable across contexts and regions. To meet the level of evidence required by this type of grant, this initiative will be tested through a randomized controlled trial pilot design; eligible applicants will be randomly assigned to receive either the treatment grant or the control grant, which offer different levels of funding and support.

To meet the requirements for the EIR grant, up to 60 eligible applicant schools will be randomly assigned to either the treatment group or the control group across two grant cycles, so that there is an approximately equal distribution across the two groups. This experimental approach is necessary to ensure that any difference in outcomes can be attributed to the Lone Star STEM Academy model and thus support future reproducibility across the state.

Grant Opportunities

Lone Star STEM Academy - Cycle 1, Treatment and Control

Eligible applicants randomly assigned to the treatment groups will receive up to $50,000 for planning as well as be eligible to receive up to $30,000 in implementation and continuation funding to support the

development and implementation of a Lone Star STEM Academy that meet the planning and implementation guidelines as outlined in this LOI.

Treatment group campuses will also receive targeted technical assistance as well as professional development for teachers to gain certification to teach computer science and cybersecurity. At the end of the grant period, schools that have met the design elements as outlined in this LOI would be eligible for designation as a T-STEM Academy.

Eligible applicants randomly assigned to the control groups will receive between $3,000 to $5,000 during the corresponding planning year, as well as two years of additional funding at the same level, to support professional development efforts to ensure teachers gain certification to teach computer science and cybersecurity. In addition, funds can be used for professional development in the area of integrated STEM education. Applicants assigned to the control group in the first year, will not be eligible to move to the treatment group for the two subsequent years of the grant.

Program Activities

The American Institutes for Research will be conducting an independent evaluation of the Lone Star STEM Academy project. All participants, whether treatment or control, agree to provide student and school-level data; participate in site-visits, interviews, and surveys; and provide documentation and artifacts as related to the goals of this grant. Other activities, which depend on treatment or control group assignment, are detailed below and in the Program Requirements section of this LOI.

Treatment

Districts randomly assigned to the treatment group will:

- Launch, extend, and/or expand a CCRSM with educational pathways that offer high quality, innovative STEM education, computer science, and/or cybersecurity coursework, known as a Lone Star STEM Academy.
- Designate a leadership team to attend webinars and convenings and work with Technical Assistance provider(s) to ensure they meet fidelity of planning and implementation guidelines.
- Receive registration for Foundations of CS for Teachers Online Course, an annual license to the WeTeach_CS for HS Curriculum, and in-person and virtual support through the University of Texas STEM Center. Additionally, registration costs will be waived for schools in the treatment group to send up to two teachers each year to attend the WeTeach_CS Summit to support them in obtaining their computer science teaching certification.

Lone Star STEM Academies must meet all other design elements as outlined in the Program Requirements section in this LOI.

Control

Districts randomly assigned to the control group will receive funding to be used to support professional development activities that ensure staff are prepared and able to teach computer science, cybersecurity, and/or STEM education classes.

Metrics

In addition to the independent evaluation, Lone Star STEM Academy schools will annually report on the following metrics. It should be noted that these metrics are related to the goals and evaluation of the

grant, and do not impact a school's ability to be designated as a College and Career Readiness School Model once the grant ends.

Recruitment and Retention – Overall and disaggregated by sub-groups
- % of at-risk students in incoming 9th grade cohort
- % of at-risk students who advance to 10th grade, by cohort
- % of females in incoming 9th grade cohort
- % of females who advance to 10th grade, by cohort
- % of African American students in incoming 9th grade cohort
- % of African American students who advance to 10th grade, by cohort
- % of Hispanic students in incoming 9th grade cohort
- % of Hispanic students who advance to 10th grade, by cohort
- % of economically disadvantaged students in incoming 9th grade cohort
- % of economically disadvantaged students who advance to 10th grade, by cohort
- % of English language learners and students with disabilities in incoming 9th grade cohort
- % of English language learners and students with disabilities who advance to 10th grade, by cohort

Success - Overall and disaggregated by sub-groups
- % of students on track to earn 12 or more college credits by high school graduation
- % of students taking and successfully completing dual credit and AP math, science, computer science, and other STEM courses by high school graduation
- % of students earning course credit in Algebra II
- % of students passing STAAR EOC assessments in Algebra I, English I and II, and Biology
- % of students meeting or surpassing college readiness benchmarks
- % of students earning STEM, computer science, and cybersecurity industry-recognized credentials
- % of students on track to graduate high school with a STEM endorsement
- % of students meeting TSI college readiness in mathematics

Applicant Eligibility

A Texas public school district or open-enrollment charter in Texas is eligible to apply for the Lone Star STEM Academy Pilot Grant Cycle 1 if the school district or open-enrollment charter school meets all of the following eligibility requirements:

- Demonstrate a commitment to design a program that meets all Lone Star STEM Academy requirements. A Lone Star STEM Academy must:
  - Be an autonomous school that is a stand-alone campus or a smaller learning community within a larger high school
  - Serve grades 6-12 or grades 9-12 with an active relationship with the feeder middle school(s) (If the applicant selects a 9-12 model, the academy must serve grade 9 during the first year of operation. If the applicant selects a 6-12 model, the academy must serve a middle grade (6, 7, or 8) and grade 9 during the first year of operation
  - Be a smaller learning community, personalizing the learning environment for all students
  - Be open enrollment, hosting lotteries for admission

- o Follow all requirements and indicators outlined in this LOI
- o Special consideration and priority will be given to districts that are seeking to develop or expand pathways in cybersecurity and computer science.
- Special consideration and priority will be given to districts that serve a population of greater than 40% students identified as being economically disadvantaged, calculated as an average over each of the preceding three school years (2015-2016, 2016-2017, 2017-2018).
- Special consideration and priority will be given to districts that are classified as rural.
- A public district or open-enrollment charter applying for this grant must be financially stable, as determined through fiscal review by the TEA's Division of Financial Audits.
- The TEA reserves the right not to award a grant to a district or open-enrollment charter school that is identified by the TEA as a high-risk grantee.
- A district or open-enrollment charter school must have submitted the annual financial audits to the TEA Division of Financial Audits in the time and manner required by that division.
- An open-enrollment charter school authorized by the State Board of Education applying for this grant must request an amendment to its open-enrollment charter in order for the school to be allowed to function as a Lone Star STEM Academy. The request must be submitted to the Commissioner of Education and must receive proper approval for the school to operate as a Lone Star STEM Academy. An amendment to request approval to function as a Lone Star STEM Academy that involves expanding grade levels, increasing the maximum enrollment of the charter, expanding the geographical boundaries, and/or adding a site or campus must be submitted to the Division of Charter Schools no later than June 1, 2019. A Notice of Grant Award will not be issued to a school selected for funding until such amendment is approved. Questions about the charter school amendment process should be directed to the Division of Charter Schools at 512-463-9575.
- An open-enrollment charter campus shall become ineligible for grant funding (or, if a campus has applied for and received funding for this grant, will have its grant funding placed on hold) if the Commissioner notifies the campus's charter holder of the Commissioner's intent to: (1) revoke or non-renew such charter under TEC Chapter 12, or (2) close the campus under TEC Chapter 39, for any reasons set forth in either statutory provision. If the Commissioner ultimately revokes or denies renewal of an open-enrollment charter of a charter holder or closes a campus that has been awarded funds under this grant program, grant funding shall be discontinued.
- Open-enrollment charter schools operated by a nonprofit charter holder must attach to the application a copy of the current (i.e., within the last 10 years) proof of nonprofit status for the application to be eligible for review and scoring.

Eligible applicants for Cycle 1 shall demonstrate how they will meet all requirements in this LOI for opening a Lone Star STEM Academy no later than the beginning of the 2020-2021 school year.

A campus that fails to meet one or more of the Lone Star STEM Academy eligibility requirements by the end of the Phase 1: Planning Phase (as described in Project Period) will not receive funding for Phase II: Implementation Phase under this grant program. The grant will be terminated. Absolutely no exception will be made to this policy under any circumstances.

An eligible school district or open enrollment charter school must submit a separate application for each academy it plans to operate. (A district may submit applications on behalf of more than one campus

within that district, as long as a separate application is submitted on behalf of each campus and all other eligibility requirements are met.)

Current College and Career Readiness School Model campuses are eligible to apply. Additionally, districts and campuses that are participating in a Regional Pathways pilot are also eligible to apply.

Grant Structure

Grant funds for Cycle 1 of this program will be disbursed in three phases:

- Phase I: Planning Phase (July 1, 2019, through June 30, 2020)
- Phase II: Implementation Phase (July 1, 2020, through June 30, 2021)
- Phase III: Continuation Phase (July 1, 2021, through May 31, 2022)

Continuation funding is contingent upon the availability of funds as appropriated through the EIR grant. Applicants will budget for all three phases in this application.

Treatment Group

Schools randomly assigned to the treatment group will follow the project period as defined below:

Phase I: Planning Phase (July 1, 2019, through June 30, 2020)

During Phase I, Cycle I: Planning Phase, Cycle 1 treatment grantees will receive up to $50,000 to develop an implementation proposal for a Lone Star STEM Academy. Implementation proposals are to be based on the program guidelines as detailed in this LOI. The implementation proposals, and, if necessary, grantees will be expected to work with the Technical Assistance provider(s) staff and coaches to revise and improve their proposals until the proposals meet all of the expectations of the grant.

A treatment grantee that fails to meet one or more of the Lone Star STEM Academy eligibility requirements by the end of Phase I: Planning and Implementation Phase (i.e., by June 30, 2020) will not receive implementation or continuation funding under this grant program. **The grant will be terminated at the end of Phase I**. Absolutely no exception will be made to this policy under any circumstances.

Phase II: Implementation Phase (July 1, 2020 through June 30, 2021)

Upon the receipt of an approved implementation proposal from a Cycle 1 treatment grantee and any applicable amendments to the original grant application required for plans to meet the TEA expectations, each academy will have access to one year of implementation funding of up to $15,000 for its projected capacity enrollment.

Phase III: Continuation Phase (July 1, 2021, through May 31, 2022)

Cycle 1 treatment grantees who meet the TEA expectations during the implementation year and develop an approved sustainability plan will have access to one year of continuation funding of up to $15,000 to support continued implementation. Implementation must proceed as originally scheduled because the grant will not be extended beyond May 31, 2022, due to any circumstances.

Control Group

Schools randomly assigned to the control group will follow the project period as defined below.

Phase I: Planning Phase (June 1, 2019, through June 30, 2020)

Cycle 1 control grantees will be given grant funds of up to $3,333.33 for professional development to support teacher certification in computer science and cybersecurity, or for professional development to

support integrated STEM education. Cycle 1 control grantees will develop a professional development and support plan to ensure that grant funds are used to ensure staff are prepared and able to teach computer science, cybersecurity, and/or STEM courses.

Phase II: Implementation Phase (July 1, 2020, through May 31, 2022)
If Cycle 1 control grantees use control grants to continue professional development and/or teacher certification efforts as related to the goals of this grant, Cycle 1 control grantees will have access to continued funding at the same level.

Phase III: Continuation Phase (July 1, 2020, through May 31, 2022)
If Cycle 1 control grantees use control grants to continue professional development and/or teacher certification efforts as related to the goals of this grant, Cycle 1 control grantees will have access to continued funding at the same level, not to be extended beyond May 31, 2022 due to any circumstances.

Budget/Use of Funds

General Allowable Activities and Use of Funds
- Professional development for classroom teachers in the areas outlined in the School Design elements, as detailed in the Program Requirements section of this LOI
- Travel costs, including hotel, meals, registration, transportation (if over 30 miles from campus), for educators to attend professional development in STEM, computer science, cybersecurity, project-based learning, STEM conferences, AP training, or other as approved by the TEA and in line with the goals of the Lone Star STEM Academy Pilot
- STEM instructional materials
- STEM consumables or equipment, including technology
- Teacher certification in computer science and cybersecurity
- Specialized equipment purchases to offer innovative courses
- Activities related to providing relevant Work-Based Learning opportunities, including internships, capstone projects, or virtual experiences
- Activities related to increasing participation in advanced dual credit courses
- Activities related to teacher externships and real-world research experiences
- Professional development for school counselors

Unallowable Activities and Use of Funds
- Debt service (lease-purchase)
- Construction of new buildings
- Renovation/remodeling of existing structures
- Fundraising activities of any kind
- Lease-purchase agreements
- Lease-purchase of vehicles
- Lease-purchase of portable buildings
- Purchase of furniture, except for computer tables
- Writing grants to obtain other grant funds
- Training on grant writing
- Audit services for state-funded grants
- Promotional materials

- Food or drinks

Program Requirements – Fidelity of Planning and Implementation

The program requirements for this grant include all of the design elements of the T-STEM Blueprint and thus schools in the treatment group who meet all the planning and implementation requirements for this grant would be eligible to move directly to T-STEM designation.

Design Elements

School Design

- o The Lone Star STEM Academy shall be:
    - On a college or university campus, or
    - In a high school – as a standalone high school campus or in a smaller learning community within a larger high school, or
    - At a central location, such as a STEM or CTE center where students are enrolled in their home campus
- o Lone Star STEM Academy staff shall include:
    - A Lone Star STEM Academy building-level leader with authority to make scheduling, hiring, and budget decisions
    - Qualified Lone Star STEM Academy teachers who work directly with the Lone Star STEM Academy students, which may include adjunct high school faculty capable of teaching college-level courses
    - Counseling staff who support Lone Star STEM Academy students, including activities such as: coordinating with Institutions of Higher Education (IHEs) for registration and monitoring of students' high school and college transcripts and monitoring high school and college courses to ensure all requirements are met
- o The Lone Star STEM Academy shall establish a leadership team that includes high-level personnel with decision-making authority who meet regularly and report to each organization. Regularly scheduled meetings must address the following topics:
    - Identification of members and the role each member will play in the design, governance, operations, accountability, curriculum development, professional development, outreach, sustainability, and continuous monitoring and improvement of the Lone Star STEM Academy
    - Assumption of shared responsibility (between the school district, industry partners, and the IHE) for meeting annual implementation and success metrics
    - Guidance for mid-course corrections as needed
    - Identification and implementation of sustainability structures to address and minimize the challenges of staff turnover and potential fluctuations in funding
- o The leadership team shall include and meet regularly – in person and/or virtually – with the leaders from the district, IHE, business/industry, and informal STEM providers who have decision-making authority.
    - District leaders (may include):
        - Superintendent
        - Assistant superintendent of curriculum and instruction, or equivalent position
        - Lone Star STEM Academy principal or director

- CTE Director
- Department chairs
- School counselors
- Business and industry partners
- IHE leaders (may include):
  - College or university president
  - Provost
  - Department Chairs for core academic disciplines
  - Lone Star STEM liaison
- Business/Industry (may include):
  - CEO/President
  - Education/community outreach specialist
- Informal STEM provider (may include):
  - Museum
  - Science center
  - STEM professional association
  - Community-based organization, such as the Boys and Girls Club or Explorers Club
- Implementation of an annual professional development plan for teachers and staff, including all content areas, dual credit, and CTE that focuses on research-based instructional strategies that focus on rigor, build college and career readiness, and STEM fluency skills and are based on needs assessment of student data. Professional development must include, but is not limited to:
  - Project-based learning
  - Engineering design challenges and inquiry-based learning
  - Technological literacy and integration
  - Data-driven, differentiated, student-centric instruction
  - Content knowledge in STEM fields
  - Disciplinary literacy instruction
  - Collaborative learning
- The annual professional development may include, but is not limited to:
  - A mentoring and induction program
  - An externship program to expose teachers, counselors, and/or administrators to STEM content and careers
  - Summer authentic research experiences for teachers to gain experience in applying STEM content knowledge in the context of real world problem-solving
- Provision of opportunities for Lone Star STEM Academy teachers to receive extensive training and support through regularly scheduled formative peer observations and collaboration opportunities with feeder pattern focus groups, industry, and IHE partners
- A focus on cross-curricular collaboration that may include, but is not limited to:
  - Common planning time for teachers across content areas and in CTE to collaboratively develop integrated STEM projects with content integrity
  - Opportunities for cross-disciplinary co-teaching
  - Cross-curricular teacher learning communities

- Offering of inclusive STEM activities both inside and outside the classroom for all students
- Offering of informal STEM experiences for students that include:
  - Content-focused field trips
  - Opportunities for students to identify and solve real-world problems
  - Engagement with a diverse population of STEM experts
- The Lone Star STEM Academy students shall be cohorted into core classes to the extent possible; this does not exclude non-Lone Star STEM students from enrolling in the same class
- The Lone Star STEM Academy and activities shall be offered at no cost to students

Target Population
- The Lone Star STEM Academy recruitment and enrollment practices that identify, recruit, and enroll the subpopulations of at-risk students (as defined by PEIMS), including ELLS, students with disabilities, and students who have failed state administered assessments. Enrollment decisions shall not be based on state assessment scores, discipline history, teacher recommendation, parent or student essays, minimum grade point average (GPA), or other criteria that creates barriers for student enrollment.
- The Lone Star STEM Academy shall identify, recruit, and enroll subpopulations (in addition to those who are at risk as defined by PEIMS) that are historically underrepresented in STEM pathways and careers (e.g., first-time college goers, females, students of low socioeconomic status, African American, Hispanic, Native American).
- The Lone Star STEM Academy shall clearly document recruitment and enrollment policies and practices; refining and improving them annually based on data reviews.
- Recruitment and enrollment processes (including marketing and recruitment plans, materials, and timelines) shall include input from key stakeholders; target student populations as defined above; and include regular activities to educate students, counselors, principals, parents, and school board and community members.
- If the Lone Star STEM Academy has more applicants than available space, they shall use either a performance-blind, open-access lottery system for admissions that encourages and considers applications from all students (all students have an equal opportunity for acceptance, regardless of background or academic performance) or a weighted lotter system that favors students who are at-risk or who are part of the targeted subpopulations for the Lone Star STEM Academy.

Strategic Alliances
- The Lone Star STEM Academy shall develop, sign, and execute a Memoranda of Understand (MOU) with the IHE partner(s) to include (at a minimum):
  - Courses of study, which enable a student to combine high school courses and college-level courses towards credentials and certifications including associate and/or bachelor's degree
  - Policy for advising students on the transferability of all industry certifications and college credit offered and earned
  - Policy to ensure the IHE transcripts college credit earned through dual credit in the same semester that credit is earned

- Policy regarding 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)
- Policies regarding eligibility of Lone Star STEM Academy students for financial assistance from the higher education partner(s), specifically, waivers for tuition and fees
- Data sharing agreement that includes provisions for:
  - Teacher data such as qualifications
  - Student-level data such as credit hours and industry certifications taken and earned; GPA, formative data to assess if student is on track to be successful in college-level courses
- Administration of statewide instruments under TEC Subchapter B, Chapter 39
- Transportation costs and fees
- Grading periods and policies
- Instructional materials
- Instructional calendar including location of each course that will be offered
- Student enrollment and attendance policies
- The Lone Star STEM Academy shall develop, sign, and execute an MOU that clearly defines the roles and responsibilities of a strong partnership with business and/or industry partners to provide:
  - A detailed plan for work-based learning experiences for students appropriate to each grade level, both in-person and virtual, such as facility visits, guest speakers, presentations, career information, job shadowing, internships, externships, and apprenticeships
  - Clear roles and responsibilities for worksite supervisors, mentors, teachers, support personnel, and other partners
  - Documentation of entry-level knowledge, skills, and abilities for each pathway occupation, including necessary employability skills
  - For capstone work-based learning experiences, a data sharing agreement that includes provisions to capture and monitor student growth on the knowledge, skills, and abilities over the course of capstone work-based learning experiences as defined for each occupation
  - Career mentoring
  - Support for students' activities, such as clubs, Career and Technical Student Organizations, competitions, and special initiatives
  - Course path and program monitoring
  - Lone Star STEM students access to business and industry partners and work-based learning facilities, services, and resources
  - Opportunities for business and industry partners to assist teachers in developing real-world, industry-based problems STEM projects
- The Lone Star STEM Academy shall establish an Advisory Board who meets regularly and includes representatives from a variety of stakeholders such as; school board, community, higher education, business and industry, and informal STEM experience

providers to provide support and guidance to the Lone Star STEM Academy in resource acquisition, curriculum development, work-based learning, and student/community outreach to ensure a successful academic and career pipeline.

- o The Lone Star STEM Academy shall work with the local workforce development board to identify, create, and maintain a list of in-demand STEM occupations and programs of study that lead to these occupations to be used as a resource in creating structured pathways for students and updated as local needs change.
- o The Lone Star STEM Academy shall establish or expand one or more STEM pathways that are informed by regional and state workforce and economic development needs and contribute to students earning credentials and certifications that prepare them for high-wage, high-demand, high skill STEM occupations.
- o The Lone Star STEM Academy shall provide a course of study that enables participating students the opportunity to complete high school graduation requirements and earn an industry certification or credential in a STEM focused field.
  - A four-year crosswalk must be in place detailing how students will progress towards this goal including alignment of high school and college-level courses. This crosswalk must provide pathways to a certification, an associate degree, and/or a bachelor's degree and must follow the courses and fields of study listed in the Texas Higher Education Coordinating Board (THECB) Lower Division Academic Course Guide Manual (ACGM) and/or the Workforce Education Course Manual (WECM). The campus may implement multiple dual enrollment delivery models such as:
    - College courses taught on the college or high school campus by college faculty
    - College courses taught on the high school campus or college campus by qualified high school faculty
    - College courses taught virtually, via distance/online/blended learning
- o The Lone Star STEM Academy shall biannually implement a structured data review process designed to identify student strengths and weaknesses and develop individual instructional support plans.
- o The Lone Star STEM Academy shall provide a TSI assessment to students as early as possible (but not as a prerequisite to admissions)
  - The Lone Star STEM Academy shall develop a plan for test preparations for TSIA, SAT, and/or ACT success, including academic preparation classes for students, interventions for students who do not pass TSIA, and assessment fee waivers for all administrations of the TSIA
  - The Lone Star STEM Academy shall review TSIA, SAT, and ACT testing data, particularly for the number/percentage of students who have currently passed each section of the TSI assessment, to ensure the Lone Star STEM Academy is on track to meeting success measures
- o The Lone Star STEM Academy shall adopt an interdisciplinary approach to learning where academic concepts are coupled with real-world experiences through Project or Problem Based Learning (PBL) and Engineering Design Challenges that are offered

regularly throughout the school year. This curriculum should be organized around the STEM competencies and supports teaching for a deeper understanding of STEM that is based on current research of how students learn and is connected to real-world contexts and careers in STEM fields.

Work-Based Learning

- o The Lone Star STEM Academy shall collaborate with the Local Workforce Development Board to define local workforce needs in STEM careers
- o The Lone Star STEM Academy shall have current, signed MOUs with business/industry partners that are reviewed annually and clearly articulate the requirements outlined in this LOI
- o The Lone Star STEM Academy shall provide:
    - Appropriate Work-Based learning for students in the Lone Star STEM Academy at every grade level that includes career awareness, career exploration, career preparation, and career experience
    - Policies and protocols to make work-based learning a viable method for helping students meet academic standards
    - Work-based learning experiences that are well-planned and properly sequenced to provide a progression of learning experiences for students – each one building upon the last
    - Work-based learning may include, but is not limited to: facility visits, guest speakers, presentations, career information, career fairs, informational interviewing, job shadowing, internships, mentoring, and apprenticeships
    - Career counseling and guidance resources that align to state and regional STEM workforce needs and pathways options
- o The Lone Star STEM Academy ensures that students:
    - Understand the connection between their work-based learning and academics
    - Understand the required academic, technical, and employability skills necessary for a career path
    - Are provided with opportunities to reflect on their work experiences
    - Demonstrate their learning in writing, portfolio, presentation, digital, or by other means of authentic learning and skill development related to industry expectations

Student Support

- o The Lone Star STEM Academy shall provide layered academic support to the students by personalizing the learning environment in the following ways:
    - Developing individualized, STEM focused student plans with specific graduation plans for ongoing academic support
    - Providing academic support for intervention, remediation, and acceleration
    - Providing tutoring and/or Saturday school or extended learning opportunities for identified students in need of academic support
    - Providing advisory and/or college readiness and support time built into the program of study for all students

- Providing students with application, financial aid counseling, and college and career counseling
- Providing bridge programs (an intensive academic preparation program that provides opportunities to strengthen academic skills necessary for high school and college readiness) and to support student transition from middle school to the Lone Star STEM Academy program (as well as elementary to middle school, if applicable)
- Establishing a mentorship program available to all students
- Providing resources for career support including career exploration, work-based learning, and industry certifications for high-wage, high-demand, high-skill STEM fields

o The Lone Star STEM Academy shall provide layered social and emotional support to the students as needed, such as:
- Connection to social services
- Parent outreach and involvement opportunities
- A structured program of community service to promote community involvement
- Skill building instruction for students, such as time management, study skills, collaboration, and interpersonal relationship skills

o The Lone Star STEM Academy shall provide enrichment and extra-curricular opportunities such as clubs, Career and Technical Student Organizations, competitions, and special initiatives

Fidelity of Planning and Implementation Artifacts (Treatment Group, Phase 1)

A suggested list of planning year activities that align with these artifacts can be seen in *Attachment 4*.

School Design

o Description of each member and role on the Lone Star STEM Academy leadership committee
o Lone Star STEM Academy/IHE/Industry leadership meeting agendas and minutes
o School Board and board of regents' presentations
o Lone Star STEM Academy leader/liaison meeting agendas and notes
o Mentor/induction program plans
o Professional learning community agendas and notes
o Technology needs assessment and plan to add necessary technology to support STEM
o Annual training and professional development plan with Lone Star STEM Academy and IHE faculty, including a list of opportunities that demonstrate an emphasis on:
- Project-based learning
- Engineering design challenges and inquiry-based learning
- Technological literacy and integration
- Data-driven, differentiated, student-centric instruction
- Content knowledge in STEM fields
- Disciplinary literacy instruction
- Collaborative learning
- Cross-curricular, STEM integration

- Annual summary of progress in skills and certification of staff to teach computer science and cybersecurity
- Annual summary of progress in skills of staff to teach interdisciplinary, integrated STEM education
- Sustainability plan

Target Population
- Written admission policy and enrollment application
- 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
- Written communication plan for targeting identified audiences, parents, community members, school board, higher education personnel, etc.
- Brochures and marketing in Spanish, English, and/or other relevant language(s)
- Annual disaggregated enrollment, retention, and outcomes reports with plan for continuous improvement

Strategic Alliances
- Advisory Board Meeting agenda and minutes
- Signed and executed MOU between district and higher education partner
- Signed and executed MOU between district and business/industry partner
- A list of strategic partners with each member's organization, title, and role in providing WBL for students by grade level

Curriculum, Instruction, and Assessment
- Four-year STEM crosswalk
- Course syllabi of project-based curriculum with STEM competencies
- Master schedule
- Calendar of in-school and out-of-school STEM opportunities for students
- Curriculum alignment documents
- Testing calendar and schedule for TSIA, ACT, and SAT
- Documentation detailing a minimum of three course of study examples that outline student pathways from high school to associate degree, to industry certifications, and beyond

Work-Based Learning
- Documentation of appropriate WBL available for students at all grade levels that includes career awareness, career exploration, career preparation, and career experience
- Current dated regional high-demand STEM occupation list
- Documentation of entry-level knowledge, skills, and abilities for each occupation, including necessary employability skills
- Aggregate data describing Lone Star STEM student participation in WBL experiences as well as percentage of students earning industry certification and credentials by type
- Samples of student artifacts such as writings, portfolios, presentations, or links to digital content

Student Support
- o Bridge program calendar and curricula
- o Tutoring and other intervention/remediation program schedules
- o Calendar of family outreach events
- o Schedule of regularly scheduled counseling/advisory events and records of completion for these support services
- o Advisory/study skills curriculum material

Evaluation Criteria and Selection Process

Applicants will be reviewed for eligibility and readiness based on responses to *Attachment 2* using the criteria in *Attachment 3*. Then, as required by the EIR grant, AIR will randomly assign up to 15 schools to the treatment group and 15 schools to the control group.

Closing and Next Steps

Please review and complete *Attachment 2* which serves as the Letter of Interest for Cycle 1 grants for the Lone Star STEM Academy Pilot. Upon completion, submit to CCMP@tea.texas.gov by June 20, 2019 at 5pm (CDT).

The subject line should read as follows: *Lone Star STEM LOI - <INSERT DISTRICT NAME>; Ex. Lone Star STEM LOI – TEXAS ISD*

The TEA will review the letters of interest and select up to 30 districts and/or open-enrollment charter schools to apply for either treatment or control grants. Successful proposers will be contacted regarding timeline, decision points, and next steps.

If any assistance is needed, please contact Michelle Sedberry, STEM Coordinator at michelle.sedberry@tea.texas.gov.