



# 2020-2021 Lone Star STEM Cycle 3 Year 1

## Letter of Interest (LOI) Application Due 11:59 p.m. CT, September 7, 2020

NOGA ID

Authorizing legislation

This LOI application must be submitted via email to [loiapplications@tea.texas.gov](mailto:loiapplications@tea.texas.gov).  
The LOI application may be signed with a digital ID or it may be signed by hand. Both forms of signature are acceptable.  
TEA must receive the application by **11:59 p.m. CT, September 7, 2020**.

Application stamp-in date and time

Grant period from

Pre-award costs permitted from

### Required Attachments

1. Excel workbook with the grant's budget schedules (linked along with this form on the TEA Grants Opportunities page)
2. Applicants must submit the additional attachments as detailed in the Required Attachment section on p. 6 on the Program Guidelines found on [TEA's Grant Opportunities](#) page.

### Amendment Number

Amendment number (For amendments only; enter N/A when completing this form to apply for grant funds):

### Applicant Information

Organization  CDN  Campus  ESC  DUNS

Address  City  ZIP  Vendor ID

Primary Contact  Email  Phone

Secondary Contact  Email  Phone

### Certification and Incorporation

I understand that this application constitutes an offer and, if accepted by TEA or renegotiated to acceptance, will form a binding agreement. I hereby certify that the information contained in this application is, to the best of my knowledge, correct and that the organization named above has authorized me as its representative to obligate this organization in a legally binding contractual agreement. I certify that any ensuing program and activity will be conducted in accordance and compliance with all applicable federal and state laws and regulations.

I further certify my acceptance of the requirements conveyed in the following portions of the LOI application, as applicable, and that these documents are incorporated by reference as part of the LOI application and Notice of Grant Award (NOGA):

- |   |   |
|---|---|
| <input type="checkbox"/> LOI application, guidelines, and instructions              | <input type="checkbox"/> Debarment and Suspension Certification |
| <input type="checkbox"/> General and application-specific Provisions and Assurances | <input type="checkbox"/> Lobbying Certification                 |

Authorized Official Name  Title

Email  Phone

Signature  Date

**Shared Services Arrangements**

Shared services arrangements (SSAs) are permitted for this grant. **Check the box below if applying as fiscal agent.**

- The LEA or ESC submitting this application is the fiscal agent of a planned SSA. All participating agencies will enter into a written SSA agreement describing the fiscal agent and SSA member responsibilities. All participants understand that the "Shared Services Arrangement Attachment" must be completed and signed by all SSA members, and submitted to TEA before the NOGA is issued.

**Statutory/Program Assurances**

The following assurances apply to this program. In order to meet the requirements of the program, the applicant must comply with these assurances.

Check each of the following boxes to indicate your compliance.

1. The applicant provides assurance that program funds will supplement (increase the level of service), and not supplant (replace) state mandates, State Board of Education rules, and activities previously conducted with state or local funds. The applicant provides assurance that state or local funds may not be decreased or diverted for other purposes merely because of the availability of these funds. The applicant provides assurance that program services and activities to be funded from this LOI will be supplementary to existing services and activities and will not be used for any services or activities required by state law, State Board of Education rules, or local policy.
2. The applicant provides assurance that the application does not contain any information that would be protected by the Family Educational Rights and Privacy Act (FERPA) from general release to the public.
3. The applicant provides assurance to adhere to all the Statutory and TEA Program requirements as noted in the 2020-2021 Lone Star STEM Cycle 3 Year 1 Program Guidelines.
4. The applicant provides assurance to adhere to all the Performance Measures, as noted in the 2020-2021 Lone Star STEM Cycle 3 Year 1 Program Guidelines, and shall provide to TEA, upon request, any performance data necessary to assess the success of the program.
5. The applicant provides assurance that they accept and will comply with [Every Student Succeeds Act Provisions and Assurances](#) requirements.
6. The applicant assures they understand that 2020-2021 Lone Star STEM Cycle 3 Year 1 applicants cannot request to be placed in the treatment or control group and should apply with the intent to complete the treatment requirements outlined in the LOI.
7. The applicant assures that the district plans to develop or expand a computer science or cybersecurity Program of Study.
8. The applicant assures the T-STEM blueprint components and artifacts as described in the Program Guidelines will be followed.

**Budget Narrative**

Describe how the proposed budget will meet the needs and goals of the program, including for staffing, supplies and materials, contracts, travel, etc. If applicable, include a high-level snapshot of funds currently allocated to similar programs. Include a short narrative describing how adjustments will be made in the future to meet needs.

The proposed budget will support the development of the program of study for cybersecurity at Southwest ISD. The purchase of instructional materials, technology, software, or specialized equipment to support engineering OR cybersecurity courses. The funds will also support the professional development for classroom teachers and counselors to include travel costs, substitutes, hotel, meals, registration, transportation. Teachers will also have the opportunity to receive teacher certification in cybersecurity or engineering. Currently, local campus and district funds support district programs of study by purchasing instructional materials, technology, software, or specialized equipment. Adjustments will be made to meet the future needs by providing local funds and continuing to explore grant and partnership opportunities.

**Statutory/Program Requirements**

1. What type of College Career Readiness School Model (CCRSM) is the campus currently? (T-STEM, P-TECH, ICIA, or ECHS) If not a CCRSM, what model do you plan to operate during the Implementation Year?

During the 2020-21 school year, Southwest High School will be in their ECHS planning year and will be reapplying for designation status in the Fall of 2020.

**Statutory/Program Requirements, (cont.)**

2. What CCRSM designation does your district plan to pursue through the Lone Star STEM grant?

Southwest ISD is currently in its planning year for ECHS at both Southwest High School and Southwest Legacy and CAST STEM is also in its planning year for PTECH.

3. What process and information was used to determine which pathway was selected for the 2020-2021 Lone Star STEM Cycle 3 Year 1 grant? Please include any relevant labor market data or documentation.

SWISD applied for and received the ECHS/PTECH planning year designation for 20-21 in order to expand college credit earning access by offering students the opportunity to attain an Associates degree. Parameters of the Lone Star STEM grant, labor market data, and input from employers and IHE's determined the pathway selected for the Lone Star STEM grant. STEM careers in computing, engineering, and advanced manufacturing are expected to increase by 20% between 2017 and 2027. According to the Alamo Workforce Development Area, the Labor Market Information for Region 20 indicates that careers in Cybersecurity/Information Security Analyst are expected to have the second highest growth rate among IT and STEM clusters in Texas current through 2026.

**Statutory/Program Requirements, (cont.)**

4. Describe plans for creating strategic alliances with industry partners and IHEs. What is the anticipated role for each IHE, business, and/or community partnership?

SWISD will create strategic alliances with industry partners and IHE's and continue to strengthen current relationships through a variety of opportunities. Campus and district stakeholders from Engineering or Cybersecurity will conduct active, intentional outreach activities such as developing target lists, tapping into personal networks or organizations, and taking steps to move toward fruitful partnerships. Once established, sustained engagement among campus staff and administration, Industry and IHE partners will continue through ongoing individual meetings as well as Advisory Meetings to ensure the Engineering OR Cybersecurity Program of Study is aligned appropriately to workforce needs and certifications.

The anticipated role for the IHE is to ensure the transferability of college credit between a 2 year and 4 year institution. To determine the allocation of costs for tuition, fees, and textbooks, and provide means for student travel. Partnerships between SWISD and IHE(s) include joint decision making procedures that allow for planning and implementation of a coherent program. Our partnership includes provisions and processes for collecting, sharing, and reviewing program and student data to assess the programs of the ECHS/PTECH Blueprints and standards.

The anticipated role for business, and community partnerships is to participate in community and advisory meetings, evaluate the effectiveness of preparing students for careers or furthering their education, evaluate facilities, equipment, and technology to ensure they are in line with industry standards. Their role will also be to offer work-based learning, internships, virtual experiences, and mentors from industry to volunteer time to work directly with students during the school year, as well as serve as judges and provide feedback for student projects and competitions. Externships will also be developed for teachers to stay current and connected with their field of study.

5. Identify the type of advanced courses (dual credit/AP/IB) currently implemented on the campus. Has the district identified what postsecondary credit will be available to students through the computer science, cybersecurity, and engineering programs?

At Southwest High School, students have access to a wide variety of courses such as dual credit, Advanced Placement, and OnRamps. The following Dual Credit courses are offered at Southwest High School:

ENGL 1301, ENGL 1302, ENG 2322, ENG 2323, MAT 1414, MATH 1442, MATH 2412, MATH 2413, MATH 2414, BIOL 1406, BIOL 1407, HUMA 1311, MUSI 1306, HIST 1301, HIST 1302, GOVT 2305, GOVT 2306, SPCH 1315, and PSYC 2301.

The following AP Courses are offered at Southwest High School: English Language, English Literature, Calculus AB, Statistics, World History, US History, Government, Economics, Psychology, Spanish Language, and Spanish Literature.

The following OnRamps courses are also offered :Chemistry, Physics 1, and Physics 2.

The type of advanced courses that will be implemented at Southwest are dual credit courses. These courses will lead to an Associate of Applied Science degree in Network Administration or Cybersecurity through St. Philips College.

**Statutory/Program Requirements, (cont.)**

6. Describe any planned STEM-focused informal activities (field experiences, clubs, competitions, summer STEM camp, etc.) that will be offered to students, whether they are offered by the school or by a community partner.

SWHS students participate in Chief Science Officers, STEM Club, FIRST Robotics Competition, SW Aviation Club, Green Energy Day, Chemistry Club, and Skills USA. In order to build a pipeline in SWISD, students are encouraged to participate in STEM activities outside of school for enrichment across the district.

All SWISD Elementary and Middle Schools offer the following after school clubs:

- K -2 Robotics, 3rd - 5th Robotics, and 6th - 8th Robotics Clubs building foundational knowledge in Engineering Design and programming and increasing in complexity through middle school. These schools compete in a variety of competitions throughout the region.
- 3rd - 5th Solar Car Challenge - Students learn about renewable energy while working through the engineering design process to build solar cars and put their creations to the test through competition.
- K - 5th Coding Club - Students build a foundation in computer science through coding.
- 6th - 8th Texas Alliance for Minorities in Engineering (TAME) - enables students to pursue careers in STEM.
- 6th - 8th grade Cyber Patriots

SWISD offers community engagement opportunities such as the STEAM Extravaganza in the Fall and STEAM Showcase in the Spring. During these events, families across the district are invited to engage in STEM related hands-on activities. The STEM Club students get to showcase their final products to the community as well. In the Fall, SWISD participates in Core4STEM's Latino and Latina day, sponsored by the San Antonio Hispanic Chamber of Commerce. On these days, middle school students meet local industry leaders in STEM related fields, watch presentations, and participate in hands-on activities. In the Spring, SWISD takes 480 girls, 1st - 8th grade to the University of Texas in Austin's Engineering School for "Girl Day". This is a full day of hands-on learning in multiple fields of engineering, led by UT graduate students.

**Statutory/Program Requirements (Cont.)**

7. Describe the Academy's plans for implementing an interdisciplinary approach to learning where academic concepts are coupled with real-world experiences through Project or Problem Based Learning (PBL) and/or Engineering Design Challenges that are offered regularly throughout the school year. Please include how the Academy will support and develop teachers in offering this, including considerations for scheduling, professional development, and structures for cross-disciplinary collaboration.

The Academy will expose student-learners to explore real world problems using a PBL framework. Learners in all grade levels experience a curriculum that is built around PBL concepts inspired by the Buck Institute. This approach ensures learners meet the required state learning standards and are exposed to a high-inquiry based PBL learning environment. Our learners will explore a variety of PBL options all geared to promote an innovative and entrepreneurial spirit in line with their individual career pathways. Our dedicated facilitators guide students throughout the PBL process by providing feedback and allowing opportunities for reflection. Learners encounter a collaborative environment where they practice social/emotional skills necessary in a real-world socially-conscious driven setting. Our mission is to engage all learners in their educational experience by modeling 21st century skills and to solve problems facing our global society through innovation.

8. Describe how the district plans to recruit, retain, and support historically underrepresented populations in STEM (e.g, females, economically disadvantaged, at-risk, etc...).

SWISD will strategically recruit underrepresented populations ( 84.3% eco dis, 69.2% at risk) by establishing a committee with all stakeholders to assist in the distribution of recruitment messages and materials to allow parents and the community at large to know about the ECHS campuses. Multiple methods of communication and community events will be used at each middle school campus. A 7th and 8th grade CTE course offers highlights the Programs of Study to include our ECHS Programs. The specific events outlined in question 6 will recruit the 48.5% female population.

9. Does the applicant plan to develop or extend an engineering program as well as a computer science or cybersecurity program?

Southwest High School plans to develop a cybersecurity program.

10. Does the applicant have at least one teacher certified to teach computer science?

Yes, there is at least one teacher certified to teach computer science.

11. Does the applicant have at least one teacher certified to teach cybersecurity?

Yes, there is at least one teacher certified to teach computer science.

**Equitable Access and Participation**

Check the appropriate box below to indicate whether any barriers exist to equitable access and participation for any groups that receive services funded by this program.

- The applicant assures that no barriers exist to equitable access and participation for any groups receiving services funded by this program.
- Barriers exist to equitable access and participation for the following groups receiving services funded by this grant, as described below.

Group	<input type="text"/>	Barrier	<input type="text"/>
Group	<input type="text"/>	Barrier	<input type="text"/>
Group	<input type="text"/>	Barrier	<input type="text"/>
Group	<input type="text"/>	Barrier	<input type="text"/>

**PNP Equitable Services**

Are any private nonprofit schools located within the applicant's boundaries?

- Yes  No

*If you answered "No" to the preceding question, stop here. You have completed the section. Proceed to the next page.*

- Yes  No

*If you answered "No" to the preceding question, stop here. You have completed the section. Proceed to the next page.*

**5A: Assurances**

- The LEA assures that it discussed all consultation requirements as listed in Section 1117(b)(1) and/or Section 8501(c)(1), as applicable, with all eligible private nonprofit schools located within the LEA's boundaries.
- The LEA assures the appropriate Affirmations of Consultation will be provided to TEA's PNP Ombudsman in the manner and time requested.

**5B: Equitable Services Calculation**

1. LEA's student enrollment	<input type="text"/>
2. Enrollment of all participating private schools	<input type="text"/>
3. Total enrollment of LEA and all participating PNP (line 1 plus line 2)	<input type="text"/>
4. Total current-year program allocation	<input type="text"/>
5. LEA reservation for direct administrative costs, not to exceed the program's defined limit	<input type="text"/>
6. Total LEA amount for provision of ESSA PNP equitable services (line 4 minus line 5)	<input type="text"/>
7. Per-pupil LEA amount for provision of ESSA PNP equitable services (line 6 divided by line 3)	<input type="text"/>
<b>LEA's total required ESSA PNP equitable services reservation (line 7 times line 2)</b>	<input type="text"/>



**Appendix I: Amendment Description and Purpose** (leave this section blank when completing the initial application for funding)

An amendment must be submitted when the program plan or budget is altered for the reasons described in the "When to Amend the Application" document posted on the [Administering a Grant](#) page. The following are required to be submitted for an amendment: (1) Page 1 of the application with updated contact information and current authorized official's signature and date, (2) Appendix I with changes identified and described, (3) all updated sections of the application or budget affected by the changes identified below, and, if applicable, (4) Amended Budget Request. Amendment Instructions with more details can be found on the last tab of the budget template.

*You may duplicate this page*

**Amended Section**

**Reason for Amendment**



# Southwest

Independent School District

11914 Dragon Lane • San Antonio, TX 78252-2647 • 210-622-4300 • Fax 210-622-4301 • www.swisd.net

August 26, 2020

Dear Lone Star STEM Grant Review Committee,

I am pleased to offer a letter of support for the Lone Star STEM grant application on behalf of Southwest Independent School District. If funded, we plan to implement our newly designated Early College High School program at Southwest High School and to offer an Associate's of Applied Science degree in Cybersecurity. This model and STEM pathway was selected based on labor market research for the Alamo region that projects a 24% increase in cybersecurity jobs over the next few years, along with a medium to high living wage for many entry level positions.

We understand that the Lone Star STEM Grant, if awarded, is a three year commitment, and that it is focused on implementing and expanding STEM programs through the designated College and Career Readiness model. Southwest ISD will support all grant initiatives and strive to create a sustainable, successful program that will benefit our students for years to come.

Should you have any questions, please don't hesitate to contact us.

Sincerely,

Lloyd Verstuyft, Ed.D.  
Superintendent of Schools  
Southwest Independent School District

Paul Black  
Principal  
Southwest High School



ALAMO COLLEGES DISTRICT  
St. Philip's College

Office of the President

September 1, 2020

Dr. Lloyd Verstuyft  
Superintendent  
Southwest Independent School District  
11914 Dragon Lane  
San Antonio, Texas 78252

Dear Dr. Verstuyft,

**St. Philip's College (SPC)** agrees to serve as a postsecondary partner for **Southwest Independent School District (SWISD)** in support of the District's Letter of Interest 2020-2021 Lone Star STEM, Cycle 3 Grant application for **Southwest Legacy High School** that will be submitted to the Texas Education Agency.

The goal of the grant project is to increase high-quality STEM education opportunities and outcomes for high-need students, with a targeted 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 cybersecurity. If the SWISD application for Southwest Legacy High School is selected for funding, St. Philip's College pledges to form a dual credit partnership for the Early College High School cybersecurity programs and assist in creating a cybersecurity pathway that will include secondary schools, higher education institutions, and industry partners.

St. Philip's College, founded in 1898, is a comprehensive, public, two-year community college within the Alamo College District in San Antonio, Texas. It has the unique distinction of being a Historically Black College and a Hispanic-Serving Institution. St. Philip's is accredited by the Southern Association of Colleges and Schools Commission on Colleges. It is governed by the Texas Higher Education Coordinating Board to award degrees in Associate of Arts, Associate of Science, Associate of Applied Science, and Certificates of Completion. Additionally, the National Security Agency and the Department of Homeland Security have designated SPC as a National Center of Academic Excellence in Cyber Defense Two-Year Education. In the field of cybersecurity, St. Philip's College offers an Associate of Applied Science degree in Information Technology Cybersecurity Specialist, one certificate, and three occupational skill awards.

St. Philip's has a long and successful history of serving the educational needs of the greater San Antonio-Bexar County metropolis and surrounding areas. It also has enjoyed a long and successful relationship with Southwest ISD. This grant project will allow us to expand our existing partnership, meet the growing statewide demand for STEM knowledge and skills, and address closing the gaps in equity and access to STEM education in the South Texas area that we serve.

Best wishes for the successful submission of the Lone Star STEM Grant application.

Sincerely,

Adena Williams Loston, Ph.D.  
President



September 3, 2020

Lloyd Verstuyft, Ed.D.  
Superintendent  
Southwest Independent School District  
11914 Dragon Lane  
San Antonio Texas 78252

Dear Dr. Verstuyft:

Education Service Center, Region 20 serves as a regional lead for cybersecurity and an employer in the industry. We currently have multiple cybersecurity initiatives around the region working to prepare a diverse cybersecurity workforce. One of our primary goals alongside our corporate and industry partners is to increase the percentage of people in cybersecurity from underrepresented groups. In the last year, ESC-20 has had 4 high school interns in cybersecurity. Additionally, we have prepared over 100 students to understand the industry through the Virtual Cybersecurity Externship. With a plan to open a work-based learning lab that will allow students to gain hands on experience serving clients, ESC-20 will further expand its footprint in the cybersecurity industry and its role as an industry partner throughout the state. We look forward to partnering with Southwest ISD in preparing their students to enter the industry and further leveraging our industry partners who have committed to helping develop the local cybersecurity workforce in the #1 cybersecurity city in the country. Our partners industry partners include:

- Accenture
- Cisco
- Rackspace
- Netsync
- NSA Texas
- CPS Energy (the largest municipally owned utility company in the country)
- Adjuvant
- Crescendo
- San Antonio Economic Development Foundation
- University of Texas at San Antonio (top cybersecurity program in the country)

Through this letter we acknowledge our commitment to assist Southwest ISD access Work-based learning opportunities such as placement in internships and participation in the WBL Cybersecurity Lab.

ESC-20 takes pride in the commitment and involvement of preparing our students for careers and opportunities that prepare them for long-term success. If you have any questions, please contact Naomi Woods at 210-370-5603 or [naomi.woods@esc20.net](mailto:naomi.woods@esc20.net).

Respectfully,

  
Carolyn Castillo | Sep 3, 2020 14:53 CDT

Carolyn Castillo, Ph.D.  
Deputy Director

CC/NW/rs