College and Career-Ready School Models

<table>
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<tr>
<th>TEA Strategic Priority:</th>
<th>#3—Connect High School to Career and College</th>
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<tr>
<td>Statutorily allowable</td>
<td>Title I, Part A: Improving Basic Programs—Schoolwide Programs: Increasing learning time and offering enriched / accelerated curriculum, which may include: counseling, school-based mental health programs, specialized instructional support services, mentoring services, other strategies to improve students’ skills outside the academic subject areas. College and career readiness (career—tech, AP, IB, dual or concurrent enrollment, or ECHS), which can include: PD for dual credit teachers in collaboration with Career-Tech and IHE teachers; and Transportation for dual credit students; PD for teachers, paraprofessionals, and other school personnel to improve instruction and/or data-driven instruction.</td>
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Project Summary

College/Career Ready School Models support TEA’s Strategic Priority 3: Connecting High School to Career and College. By 2020, 65% of all jobs will require postsecondary education and training beyond high school (35% will require at least a bachelor’s degree; 30% will require some college or an associate degree). Job openings in healthcare, community services, and STEM will grow the fastest among occupational clusters. The models shown below focus on college/career readiness in unique ways that can be tailored to fit regional workplace demand and postsecondary opportunities.

1. **Early College High School (ECHS)** is an open-enrollment model that serves students in grades nine through twelve who are at-risk of dropping out or who wish to accelerate completion of high school by combining high school courses with college credit-bearing courses. In partnership with an Institution of Higher Education (IHE), an ECHS must offer an academic program that enables a participating student to receive both a high school diploma and either an associate degree or up to 60 hours toward a bachelor’s degree. Current evaluations of the ECHS model show ECHS students are significantly more likely to graduate high school than their peers who do not attend an ECHS. ECHS students are more likely to enroll in college the fall immediately after high school graduation. They are significantly more likely to enroll in two-year and four-year colleges than their peers who do not graduate from an ECHS. ECHS students are significantly more likely to earn a college degree than comparison groups of students, and data generally show that the ECHS model is accelerating achievement of those students traditionally underrepresented in higher education enrollments.

2. **Texas Science, Technology, Engineering, and Math Academy (T-STEM)** is an open-enrollment model that serves students who are at-risk of dropping out or wish to accelerate their learning in a STEM field in grades nine through twelve or six through twelve. T-STEM academies focus on improving instruction and academic performance in STEM-related subjects, and on increasing the number of students who study and enter STEM-related fields. Established by a Governor’s Executive Order in 2005, T-STEM Academies are rigorous secondary schools that provide students with opportunities and exposure to innovation and design in a STEM-focused instruction and learning that models real-world contexts. The most recent evaluations show T-STEM students outperform comparison school peers in STEM-related subjects. Research suggests that T-STEM students have a higher likelihood of taking part in advanced courses such as AP, IB, and dual credit. T-STEM students were also given more postsecondary supports at a greater percentage of student than other schools.

3. **Industry Cluster Innovative Academies (ICIA)** is a new (launched 2017) open-enrollment model serving students in grades nine through twelve and include aspects of both the ECHS and T-STEM models. With a business/industry partner(s) and IHEs, Industry Cluster Innovative Academies develop and implement applied learning opportunities for students including: internships, externships, apprenticeships, mentorship programs and career counseling. Like traditional ECHSs, Innovative Academies must offer students an opportunity to
graduate with an associate degree or up to 60 college credit hours. Innovative Academy program offerings should be determined by regional workforce needs in one of the identified Career Clusters: Advanced Technologies and Manufacturing; Aerospace and Defense; Biotechnology and Life Sciences (includes Health Care); Energy; Information and Computer Technology; Petroleum Refining and Chemical Products.

4. **Pathways in Technology Early College High School (P-TECH)** is a new (launching in the 2018-2019 school year) open-enrollment model serving students in grades nine through fourteen and includes aspects of both the ECHS and T-STEM models. P-TECH provides a smooth transitional experience so that students can receive a high school diploma, an industry-based credential, an associate degree, and participate in work-based education programs on or before the sixth anniversary of a student’s first day of high school. Utilizing partnership agreements with employers and institutions of higher education, the P-TECH program offers a coherent sequence of classes that lead to a high school diploma, an associate degree, a credential and work experiences so that students receive priority in interviewing with partnering employers when they have completed the program.

**LEA Financial Commitment (Start-Up and Annual Costs)**

**ECHS Start-Up Costs**

Start-up costs for LEAs will vary depending on several factors. The information below is for general planning purposes. LEAs should look at the requirements for each College and Career Ready model and develop a budget taking into consideration all requirements and resources that now exist on the campus.

**ECHS Annual, Ongoing Costs**

Annual, ongoing financial commitments for LEAs will vary depending on several factors. The information below is for general planning purposes. LEAs should look at the requirements for each College and Career Ready model and develop a budget taking into consideration all requirements and resources that exist on the campus.

*When possible, TEA staff has estimated costs by major expenditure categories used in the ESSA Consolidated Application and the Expenditure Reporting (ER) System. Costs, such as locally-determined salaries, benefits, and wages, could not be estimated.*

**Project Description**

**Goals and Student Achievement Objectives**

1. **ECHS** goals include: increasing graduation rates and college enrollment; increasing the number of students who graduate high school college ready as shown through enrollment in rigorous coursework in college-preparatory curriculum and college credit accrual in dual credit and/or Advanced Placement courses; and developing strong, long lasting partnerships between the school district and the IHEs that are operating ECHS programs. ECHS offers targeted academic support to maximize the achievement of all students enrolled.

2. **T-STEM** goals include: increasing graduation rates and college enrollment, increasing the number of students who graduate high school college and career ready, providing students with internships and experience in STEM fields, providing teacher externships in STEM fields, and increasing the number of students that enter STEM careers. T-STEM academies provide STEM-focused instruction that models real-world learning, partners with business and industry to provide students access to expertise and experience in STEM fields, uses data to drive instruction and pathways development, and follows the T-STEM Blueprint.
3. **ICIA** goals include: increasing graduation rates and college enrollments, increasing the number of student who graduate high school college ready, increase the number of students graduating high school with an associate degree, increasing the number of students who graduate high school with work-based credentials, and providing students work-based experiences at every grade level such as internships, job shadowing, and mentorships. ICIA offer rigorous instruction in academics and CTE coursework, provide clear pathways for student to earn work-based credentials, and/or an associate degree, and a clear pathway to a bachelor’s degree within two-three years after high school graduation so that students will be prepared for high-demand, high-wage, occupations in the targeted industry clusters.

4. **P-TECH** goals include: increasing graduation rates and college enrollments, increasing the number of student who graduate high school college ready, increase the number of students graduating high school with an associate degree, increasing the number of students who graduate high school with work-based credentials, and providing students work-based experiences at every grade level such as internships, job shadowing, and mentorships. P-TECH offer rigorous instruction in academics and CTE coursework, provide clear pathways for student to earn work-based credentials, and/or an associate degree. P-TECH provide students with priority in interviewing with partnering employers when they have completed the program.

### Expected Outcomes

Sample expected outcomes for all college and career ready models are listed below and include:

- Increased high school graduation rates.
- Increased numbers of students who go on to enroll and complete a postsecondary degree.
- Increased numbers of students who earn an industry-based credential or engage in a work-based learning opportunity.
- Increased readiness for placement in middle- and higher-wage job opportunities.

### How Will Success Be Measured and Data Sources Available

1. **ECHS**: A sample of performance measures applicable to the ECHS model that focus on ongoing continuous improvement and student achievement are listed below. The performance measures are formatted as SMART goals (the percentage of will increase from \( X\% \) to \( Y\% \) by \( Z \) (target date) or the number of will increase from \( X \) to \( Y \) by \( Z \)).

   - The percentage ECHS students passing STAAR Algebra I, English I, and English II EOCs and meeting STAAR postsecondary readiness standards in reading and math from \( X\% \) to \( Y\% \) by \( Z \).
   - The number ECHS students completing the Free Application for Federal Student Aid (FAFSA) each year in PEIMS and/or THECB data from \( X \) to \( Y \) by \( Z \).
   - Increased number or percentage of high school graduates enrolled in Texas and out-of-state postsecondary institutions the fall after graduation, as reported to THECB (PEIMS data) from \( X \) to \( Y \) by \( Z \).
   - The number of students taking the SAT or ACT will increase from \( X \) to \( Y \) by \( Z \).
   - The average ACT or SAT score will increase \( X \) to \( Y \) by \( Z \).
   - The number of articulation agreements between ECHS and colleges/universities will increase from \( X \) to \( Y \) by \( Z \).
   - The number of college options offered to ECHS students will increase from \( X \) to \( Y \) by \( Z \).
   - The number of dual credit hours (accepted by four-year colleges) earned each by ECHS graduates will increase from \( X \) to \( Y \) by \( Z \).
   - Number of associate degrees earned each year by ECHS graduates from \( X \) to \( Y \) by \( Z \).
2. **T-STEM Academy**: A sample of performance measures applicable to the T-STEM model that focus on ongoing continuous improvement and student achievement formatted as SMART goals include:

- The percentage of T-STEM students passing STAAR Algebra I and meeting STAAR postsecondary readiness standards in math will increase from X% to Y% by Z.
- The number of T-STEM students served in T-STEM Academies will increase from X to Y by Z.
- The number of business/industry agreements between the T-STEM Academy and high-demand workforce businesses/industries will increase from X to Y by Z.
- Number of STEM-related industry-based credentials earned by T-STEM students will increase from X to Y by Z.
- Number of work-based learning opportunities given and completed each year by T-STEM students (compared to the overall number of T-STEM students served) will increase from X to Y by Z.

3. **ICIA**: A sample of performance measures applicable to the Industry Cluster Innovative Academy model that focus on ongoing continuous improvement and student achievement formatted as SMART are listed below:

- Increased number of articulation agreements between Industry Cluster Innovative Academies and colleges and universities from X to Y by Z.
- The number of college and career-tech options offered to Innovative Academy students will increase from X to Y by Z.
- Number of industry-based credentials in high-demand, regional clusters earned by Innovative Academy students will increase from X to Y by Z.
- The number of work-based learning opportunities given and completed by Innovative Academy students (compared to the overall number of Innovative Academy students) will increase to Y, up from X, by Z.
- The number of dual credit hours (accepted by four-year colleges) earned by Innovative Academy graduates will increase from X to Y by Z.
- Number of associate degrees earned by Innovative Academy graduates will increase to Y, up from X currently, by Z.

4. **P-TECH**: a sample of performance measures applicable to the P-TECH model that focus on ongoing continuous improvement and student achievement, formatted as SMART are listed below:

- Number or percentage of students earning a work-based credential will increase from X to Y by Z.
- Number of business/industries providing work-based learning experiences for students will increase from X to Y by Z.
- The number of college and career-tech options offered to P-TECH students will increase from X to Y by Z.
- The number of work-based learning opportunities given and completed by P-TECH students (compared to the overall number of P-TECH students) will increase to Y, up from X, by Z.
- The number of dual credit hours (accepted by four-year colleges) earned by P-TECH graduates will increase from X to Y by Z.
- Number of associate degrees earned by P-TECH graduates will increase to Y, up from X currently, by Z.

**Training and Support TEA Offers**

The following is a limited summary of resources for each of the college ready school models.
1. **ECHS**

TEA maintains the [ECHS](#) website. The website offers information regarding ECHS and a list of the current ECHS designees and gives links to resources. The ECHS Blueprint (which outlines the requirements for planning, implementing and operating an ECHS) is linked from this site.

The ECHS website, maintained by TEA’s technical assistance provider, offers a wealth resources including training, archived webinars on relevant topics, and planning tools to help new campuses interested in becoming ECHS (such as Texas Early College High School: Countdown to Opening yearlong activities and milestones for effective implementation of an ECHS program).

Access materials from the [ECHS Best Practices Summit-2016](#). The ECHS Best Practices Summit brings together ECHS leaders from across Texas to share successful models and strategies for implementing and sustain ECHS campuses.

The [ECHS designation website](#) offers information regarding designation and links to the designation application. This site offers link to view a technical assistance webinar (from an earlier year) that provides information regarding the designation process. Note-The ECHS designation window for 2017-2018 is now closed. The ECHS designation window is typically open in the fall for designation in the next school year. For 2017-2018 school year, the designation window was open from October 2016-December 2016.

2. **T-STEM Academy**

TEA maintains the [T-STEM Academy](#) website that offers information about the T-STEM initiative and a list of the current T-STEM designees.

The [T-STEM Blueprint](#) is a road map for benchmarks, program requirements, and indicators to facilitate individual T-STEM Academy growth along the Blueprint Rubric Continuum of Developing, Implementing, Mature, and Role Model. The Blueprint website is an interactive site that includes resources used by successful T-STEM Academies and offers campuses interested in the T-STEM model the ability to complete a self-assessment to determine T-STEM readiness.

Access materials from the [2017 T-STEM Summer Leadership Institute](#). The Summer Leadership Institute brings together leadership teams from designated T-STEM Academies from across the state to share best practices, discuss challenges, and engage in professional development developed around the T-STEM Blueprint.

The [T-STEM designation](#) website offers information regarding designation and links to the designation application. This site offers a link to view a technical assistance webinar (from an earlier year) that provides information about the designation process. Note-The T-STEM designation window for 2017-2018 is now closed. The T-STEM designation window is typically open in the Winter/Spring for designation in the following school year. For 2017-2018 school year, the designation window was open from February 2017-April 2017.

The [T-STEM Blueprint Frequently Asked Questions](#) (FAQ) website offers answers to the critical issues regarding the T-STEM Academy model.

3. **ICIA**

TEA maintains the [Innovative Industry Cluster Academy](#) website. The website offers information about the Industry Cluster Innovative Academy initiative and a list of the current grantees. The ICIA website, maintained by TEA’s technical assistance provider, includes a wealth of resources including recorded webinars on relevant topics and tools for implementation.
4. **P-TECH**

TEA maintains the [P-TECH website](#). The website offers information about the P-TECH initiative and a list of the current P-TECH grantees and designees. TEA offers technical assistance and support to P-TECH grantees and designees. Additional P-TECH resources will be available in the 2018-2019 school year including a P-TECH Blueprint.

**Required Activities or Components**

1. **ECHS**

Campuses must apply for and reapply for the ECHS designation from TEA annually. The agency publishes information on the [annual submission deadlines](#) on its web site. Many schools complete a planning year before implementing an ECHS. The planning year is completed prior to submitting an ECHS designation application. Exemplar ECHSs have operated for three or more years and have shown that their EHCS has increased student academic achievement, as well as college and career readiness of those enrolled. Planning year benchmarks focus on developing and implementing required policies and procedures, recruiting and enrolling eligible students, and developing detailed articulation agreements between secondary and postsecondary organizations. The [Texas ECHS Blueprint](#) lists these annual milestones.

- Serve the target population
- Be open enrollment and enroll students who are at-risk of dropping out of school
- Meet the requirements of the ECHS Blueprint
- Partner with an Institution of Higher Education (IHE) with joint decision-making procedures
- Offer a course of study where students can earn and associate degree or 60 semester hours toward a baccalaureate during grades 9-12
- Administer the TSIA to all incoming 9th graders to enable students to begin college courses as soon as they are able
- Have a full-time leader that has full autonomy in decision making in the ECHS areas
- Be an autonomous high school (located on a college campus; or stand-alone near a college campus; or in a smaller learning community within a larger high school that is near a college or university campus with their own separate cohort of students)
- Give students access to the IHE facilities
- Offer common planning time for ECHS instructional faculty and appropriate higher-education faculty.

2. **T-STEM Academy**

Campuses must apply for and reapply for the T-STEM designation from TEA annually. The agency publishes information on the [annual submission deadlines](#) on its web site. Many schools complete a planning year before implementing an ECHS. The planning year is completed prior to submitting a designation application. Exemplar T-STEM Academies have operated for three or more years and have demonstrated that their T-STEM Academy has increased student academic achievement, as well as college and career readiness of those enrolled. Planning year benchmarks focus on developing the T-STEM Blueprint Benchmarks in Mission-Driven Leadership; Academy Culture and Design; Student Outreach, Recruitment, and Retention; Teacher Selection, Development, and Retention; Curriculum, Instruction, and Assessment; Strategic Alliances; and Advancement and Sustainability. The [Texas T-STEM Blueprint](#) lists these annual milestones. At a minimum, a T-STEM Academy must:

- Serve the target population
- Be open enrollment and enroll students who are at-risk of dropping out of school
- Serve students in grades 6-12 or grades 9-12
• Meet the requirements of the T-STEM Blueprint
• Be an autonomous school (stand-alone or a smaller learning community with separate physical space and a separate cohort of students)
• Have a full-time leader that has full autonomy in decision making for the T-STEM Academy areas
• Implement the T-STEM Design Blueprint
• Develop and implement STEM pathways based on local need
• Offer a rigorous STEM focused curriculum
• Offer opportunities for students to take part in STEM curricular activities
• Ensure students have opportunities to earn a minimum of 12 college credit hours
• Incorporates applied learning opportunities such as internships and capstone projects
• Develop partnerships with business/industry in high-demand workforce areas

3. **ICIA**

Schools and districts must apply for designation as an Industry Cluster Innovative Academy. At minimum, an Industry Cluster Innovative Academy must:

• Serve the target population
• Be open enrollment and enroll students who are at-risk of dropping out of school
• Partner with an Institution of Higher Education (IHE) with joint decision-making procedures
• Offer a CTE program of study (based on targeted Industry Clusters and a high-demand workforce need) in which students earn an industry credential(s) and earn 60 college credit hours and/or an associate degree.
• Ensure that the 2-year and 4 years IHEs have articulation agreements so that students can earn a baccalaureate within two to three years of high school graduation
• Develop partnerships with business/industry in high-demand workforce areas where the business/industry partner gives an in-kind/cash contribution to support the Academy in areas such as internships, externships, apprenticeship programs, equipment etc.
• Develop curriculum for coursework in collaboration with the business/industry and the IHE collaborate
• Assemble a leadership/advisory team that consists of all partners (business/industry, community, IHE, ISD)

4. **P-TECH**

Schools and districts must apply for designation as an Industry Cluster Innovative Academy. The first planning grant awards for Innovative Academies were announced in December 2016. TEA expects to offer more opportunities for designation in the future. At minimum, an Industry Cluster Innovative Academy must:

• Serve the target population
• Be open enrollment and enroll students who are at-risk of dropping out of school
• Partner with an Institution of Higher Education (IHE) with joint decision-making procedures
• Offer a CTE program of study in which students earn an industry credential(s) and 60 college credit hours and/or an associate degree.
• Develop partnerships with business/industry in high-demand workforce areas where the business/industry partner programs, equipment etc.
• Provide work-based learning opportunities for all students at every grade level.
• Develop curriculum for coursework in collaboration with the business/industry and the IHE collaborate
• Assemble a leadership/advisory team that consists of all partners (business/industry, community, IHE, ISD)
Program Duration, Timeline, Significant Milestones

Each of the College and Career Ready models need significant planning prior to implementation. Implementation of each of the models should ideally begin at the start of a school year with 9th grade students. T-STEM and ECHS should refer to the program blueprint for timelines. Additional timelines are mentioned in the information given above. Industry Cluster Innovative Academies should refer to the timelines and milestones in both the ECHS and T-STEM Blueprints.

Facilities or Resources to Support the LEA

1. ECHS

The various ECHS models address the facilities demands of colleges and high schools differently. Colleges and universities collaborate with high schools to define commitments for facilities and resources each organization is expected fulfill.

Resources for ECHS implementation are available on TEA’s web site. Depending on legislative appropriations, TEA offers technical assistance to ECHS designees through leadership coaching, trainings, and convenings. Districts interested in implementing the ECHS model should visit designated ECHS sites to see the model in action and talk with those now implementing.

2. T-STEM Academy

The various T-STEM models address the facilities demands of STEM design differently. T-STEM Academies collaborate with IHEs and business/industry partners to decide pathways based on high-demand workforce need. Resources for T-STEM implementation are available on TEA’s web site. Depending on legislative appropriations, TEA gives technical assistance to ECHS designees through leadership coaching, trainings, and convenings. Districts interested in implementing the T-STEM model should visit designated T-STEM Academies to see the model in action and talk with those implementing.

3. ICIA

Facilities and resource needs for the Industry Cluster Innovative Academies vary depending on the specific industry cluster and program(s) of study the school decides to offer (based on regional workforce demands). TEA offers technical assistance during the planning process to help Academies and their business/industry partners decide specific resource needs (if not already identified).

4. P-TECH

Facilities and resource needs for P-TECH vary depending on the specific pathway and program(s) of study the school decides to offer (based on regional workforce demands). TEA offers technical assistance to granted and designated schools.

Staffing Requirements for LEAs

Each of the College and Career Ready models will need to have a planning/leadership team prior to implementation. The planning/leadership team should define the roles for leaders and/or coordinators/project directors to implement the model’s requirements.

All models need a full-time leader (see blueprint requirements) and a dedicated counselor. Instructional staffing requirements will vary depending on the pathway and program(s) of study being offered.
1. **ECHS**

Under the authority of Texas Education Code (TEC) §29.908(b) and Texas Administrative Code (TAC) §102.1091, TEA has developed an ECHS Designation process that ensures districts operating ECHS campuses maintain the integrity of the ECHS model and underlying research-based practices, which target and serve students who might not otherwise attend college.

TEC 29.908(b) instructs the Commissioner to establish and administer an ECHS program for students who are at-risk of dropping out of school or who wish to accelerate high school graduation. ECHS programs must offer a course of study that allows participating students to combine high school courses and college credit-bearing coursework during grades nine through twelve.

The Commissioner compiles agency resources to develop and complete a rigorous evaluation of ECHS programs. ECHS evaluations focus on how well ECHSs increase student academic achievement and postsecondary readiness.

TEA may exercise the right to not renew or revoke a school’s ECHS designation, if the school is not complying with application assurances or the directives in (TAC) §102.1091(g)(2) if the ECHS does not demonstrate success in maximizing student achievement based on progress reports and program data; if the campus fails to meet student achievement standards specified in the ECHS application; or, if the LEA fails to provide accurate, timely, and complete information, as required by TEA, to evaluate ECHS programs.

2. **T-STEM Academy**

Under the authority of TEC §39.407 and §39.416 and the TAC §102.1093, TEA has developed a T-STEM Designation process that ensures campuses operating T-STEM Academies maintain the integrity of the T-STEM model and underlying research-based practices, which target and serve students who are at-risk of dropping out. T-STEM programs must follow the T-STEM Blueprint.

TEA may exercise the right to not renew or revoke a school’s T-STEM designation, if the school is not complying with application assurances or the directives in TAC §102.1093 (h); if the T-STEM Academy does not demonstrate success in maximizing student achievement based on progress reports and program data; if the campus fails to meet student achievement standards specified in the T-STEM application; or, if the LEA fails to provide accurate, timely, and complete information, as required by TEA, to evaluate T-STEM programs.

3. **P-TECH**

Under the authority of TEC §29.553 and TAC §102.1095, TEA has developed a P-TECH Designation process that ensures campuses operating P-TECH maintain the integrity of the P-TECH model and underlying research-based practices, which target and serve students who are at-risk of dropping out. P-TECH programs must follow the P-TECH Blueprint.

TEA may exercise the right to not renew or revoke a school’s P-TECH designation, if the school is not complying with application assurances or the directives in TAC §102.1095 (h); if the P-TECH does not demonstrate success in maximizing student achievement based on progress reports and program data; if the campus fails to meet student achievement standards specified in the P-TECH application; or, if the LEA fails to provide accurate, timely, and complete information, as required by TEA to evaluate P-TECH programs.
Resources

Additional resources (not listed in the above sections) are listed below for each model.

**ECHS**
- Jobs for the Future (JFF) early college designs
- Institute of Education Sciences (IES), What Works Clearing House, [ECHS](#)

**T-STEM**
- The [STEM School Study](#)-University of Chicago STEM Education
- The 2011 [Texas High School Project evaluation](#) provides information about the last TEA funded T-STEM Evaluation

**P-TECH**
- The [P-TECH 9-14 Model](#) at ptech.org.
- “Proving P-TECH Success: Students Graduate with Diploma and Tech Degree” from [U.S. News & World Report](#).
- “P-TECH: How High Schoolers Are Redefining Their Future” from [Ted.com](#).

**TEA Contact Information**

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