



**COLORADO**  
Department of Education

# **P-TECH**

## **Pathways in Technology Early College High Schools**

# Presenters

Mary Anne Hunter  
CDE

[Hunter\\_Mary@cde.state.co.us](mailto:Hunter_Mary@cde.state.co.us)

(303) 866-6596

**ShaJuana Williams**

Consultant, CWDC

[shajuana.williams@state.co.us](mailto:shajuana.williams@state.co.us)

(303)318-8081

**Lisa Hoxie**

Education Consultant

CDE and CWDC

[Hoxie\\_L@cde.state.co.us](mailto:Hoxie_L@cde.state.co.us)

(303) 318-8261



- ◆ Funding
- ◆ Requirements
- ◆ Career Pathways
- ◆ Business Partners
- ◆ Application & Reporting

# What is a P-TECH?

- 2015 signed into law (HB 15-1270)
- Create public-private partnership > prepare CO students > high-skill jobs of the future
- Partners to develop and operate up to a 6-year high school w/STEM focus

**School District, Charter, BOCES** that operates a high school

+

One or more **Community Colleges**

+

One or more local high-growth **industry employer(s)**

# Why are P-TECHs so important

- By 2020, nearly three in four jobs in Colorado will require some education beyond high school which includes a certificate, 2-year or 4-year degree. ([CDHE Masterplan](#))
- Work-based learning (WBL) is a key strategy in Colorado to:
  - close both the skills and opportunity gaps
  - meet the shifting talent demands of the economy
  - Colorado is one of few states where business is helping to lead critical initiatives related to talent development
  - Industry-led initiatives help strengthen alignment between needs of business & programs created in the public sector. ([Colorado Talent Pipeline Report – 2018](#))

# Colorado businesses are facing talent shortfalls

## The Impact of Colorado's Skills Gap

### **VOTERS & EMPLOYERS ARE ALIGNED ON COLORADO'S CHALLENGE TO PREPARE STUDENTS FOR LIFE AFTER HIGH SCHOOL**

**77%** OF EMPLOYERS STRUGGLE TO FIND COLORADANS WITH THE RIGHT SKILLS

**62%** OF COLORADANS BELIEVE OUR HIGH SCHOOLS ARE NOT PREPARING STUDENTS FOR THE WORKFORCE OR POST-SECONDARY EDUCATION

WHEN ASKED ABOUT COLORADO'S SKILLS GAP,

**86% OF EMPLOYERS**

SAY IT'S A THREAT TO THEIR BUSINESSES

AND

**MORE THAN 50% EXPERIENCE:**



HIGHER RECRUITING & TRAINING COSTS



PRODUCTIVITY & REVENUE LOSS



SLOWER BUSINESS GROWTH



LOWER WORK QUALITY



HIGHER TURNOVER

# The Changing Times...

<b>Old Think</b>	<b>New Think</b>
<ul style="list-style-type: none"><li>• College is the only way to success</li></ul>	There are multiple pathways to success and honor in all paths
<ul style="list-style-type: none"><li>• The classroom is the main location where learning takes place</li></ul>	Structured learning can take place in many locations including the workplace
<ul style="list-style-type: none"><li>• High school diploma leads to a good paying job</li></ul>	A lasting career requires education & training beyond high school and ongoing skill development
<ul style="list-style-type: none"><li>• Competencies are identified by educators</li></ul>	Competencies are identified collaboratively with business, colleges and communities
<ul style="list-style-type: none"><li>• Business as a philanthropic donor</li></ul>	Business as a partner and co-producer of talent

# CDE's P-TECH webpage

<http://www.cde.state.co.us/postsecondary/p-tech>

The screenshot shows the Colorado Department of Education's P-TECH webpage. The header includes the CDE logo and navigation links for Site Index, CDE Offices, and Staff Directory. A search bar is also present. The main navigation menu has four categories: School/News | Data & Accountability, Programs & Supports, Teaching & Learning, and Policy & Funding. The 'Programs & Supports' category is selected, leading to the 'Colorado P-TECH: Pathways in Technology Early College High Schools in Colorado' page. The left sidebar contains a list of program links, with 'P-TECH' highlighted. The main content area features a 'Home' link, a title, and three sections: 'What is P-TECH?' (describing the program's purpose and benefits), 'Why P-TECHs are so Important' (providing statistics on job requirements and degree attainment), and a list of resources including a 2018 P-TECH Fact Sheet and a 2013 Press Release.



# Funding

Years 1-4	district/charter school regular PPR
Years 5-6	State-based PPR ( <i>ASCENT</i> )

+ Students can authorize their **College Opportunity Fund (COF)** stipend per college credit hour taken

Students in their **5th or 6th year** of are **eligible for full-time funding** if they are scheduled for a **minimum of one class** in the semester of the pupil enrollment count date

# Other possible funding resources

Maximizing available funding streams:

- **Federal School Improvement Grants**
- **Secondary level Perkins program funding**
- **Assistance from IHE & business/industry partners**

# School Requirements

- ✓ Must be a public school or program in a high school
  - stand-alone school w/own school code, or
  - program within an existing high school using existing school's code
- ✓ Includes up to 6 years of high school

- ✓ Prepare students for high-potential careers in industry - graduate with high school diploma & industry-recognized associate degree
- ✓ Students may also earn pre-apprenticeship certificates and other industry-recognized certificates in addition to associate degree

# Academic Expectations

- High school diploma + high-growth industry recognized associate degree
- Industry recognized pre-apprenticeship and other certificates can be earned in addition to associate degree
- Must have a Science, Technology, Engineering and Mathematics (STEM) focus that is informed by current and projected industry standards
- Must receive workplace experiences and training (mentoring, job shadowing, internships, pre-apprenticeship training)

# STUDENTS

## Grade Levels

- ✓ For students beginning in the ninth grade
- ✓ High school diploma & official transcript cannot be dated/ conferred until student completes PTECH program
- ✓ Students not eligible for federal/other state financial aid from IHE

## Student Population

- ✓ All students
- ✓ Encourage enrollment of students that are:
  - socio-economically/ racially diverse;
  - 1<sup>st</sup> generation;
  - English language learners;
  - students w/disabilities

# Community College Responsibilities

## LEPs can partner with more than one CC

- ✓ At a minimum, provide:
  - course work
  - counseling
  - student support services
  - provisions relating to instructor qualifications with districts/charters/BOCES
  
- ✓ Communicate/share decision-making with other partners regarding school operations

# Career Pathways

# Not just 'technology'

## STEM focus

Illustrate in your application how your proposed career pathway aligns with science, technology, engineering or math

# COLORADO'S WORK-BASED LEARNING CONTINUUM

Work-based learning is a continuum of activities that occur, in part or in whole, in the workplace, providing the learner with hands-on, real world experience.

## LEARNING ABOUT WORK

**Career awareness and exploration** help individuals build awareness of the variety of careers available and provides experiences that help inform career decisions.

- Career Counseling
- Career Planning
- Career Fairs
- Career Presentations
- Industry Speakers
- Informational Interviews
- Mentoring
- Worksite Tours

## LEARNING THROUGH WORK

**Career preparation** supports career readiness and includes extended direct interaction with professionals from industry and the community.

- Clinical Experiences
- Credit-for-work Experiences
- Internships
- Pre-apprenticeship
- Project-based Learning

## LEARNING AT WORK

**Career training** occurs at a work site and prepares individuals for employment.

- Apprenticeship
- On-the-job Training
- Employee Development

EDUCATION COORDINATED



BUSINESS LED

### OUTCOMES:

Skilled Talent for Business + Meaningful Careers for Students & Job Seekers

talent**FOUND**



# Resources

[Colorado Talent Dashboard](#): Understand needs of labor market

[Building Industry-Driven Career Pathway Systems in Colorado](#): Step by Step Guide

[Colorado Labor Market Information](#): Colorado Labor Market Information

[CDE Postsecondary and Workforce Pathways Resources](#): Information and state guidance to advance PWR

[Competency Model Clearinghouse](#): Detailed competency models

[The Colorado Talent Pipeline Report](#): Annual report with current labor trends

# Getting started at the district level

## *Getting Started* – [PTECH.org](http://PTECH.org)

- **Steering Committee**
  - consisting of key leaders and staff from each member organization  
- variety of expertise and perspectives at the table
  - decision-making body
- **Planning Team**
  - responsible for moving specific topics forward (i.e. developing aspects of the school curriculum, culture and programs)
  - meet on at least a weekly basis during school development
  - taking specific actions (i.e. vetting curricular resources, reviewing possible assessments, identifying a technology platform)

# Program Development

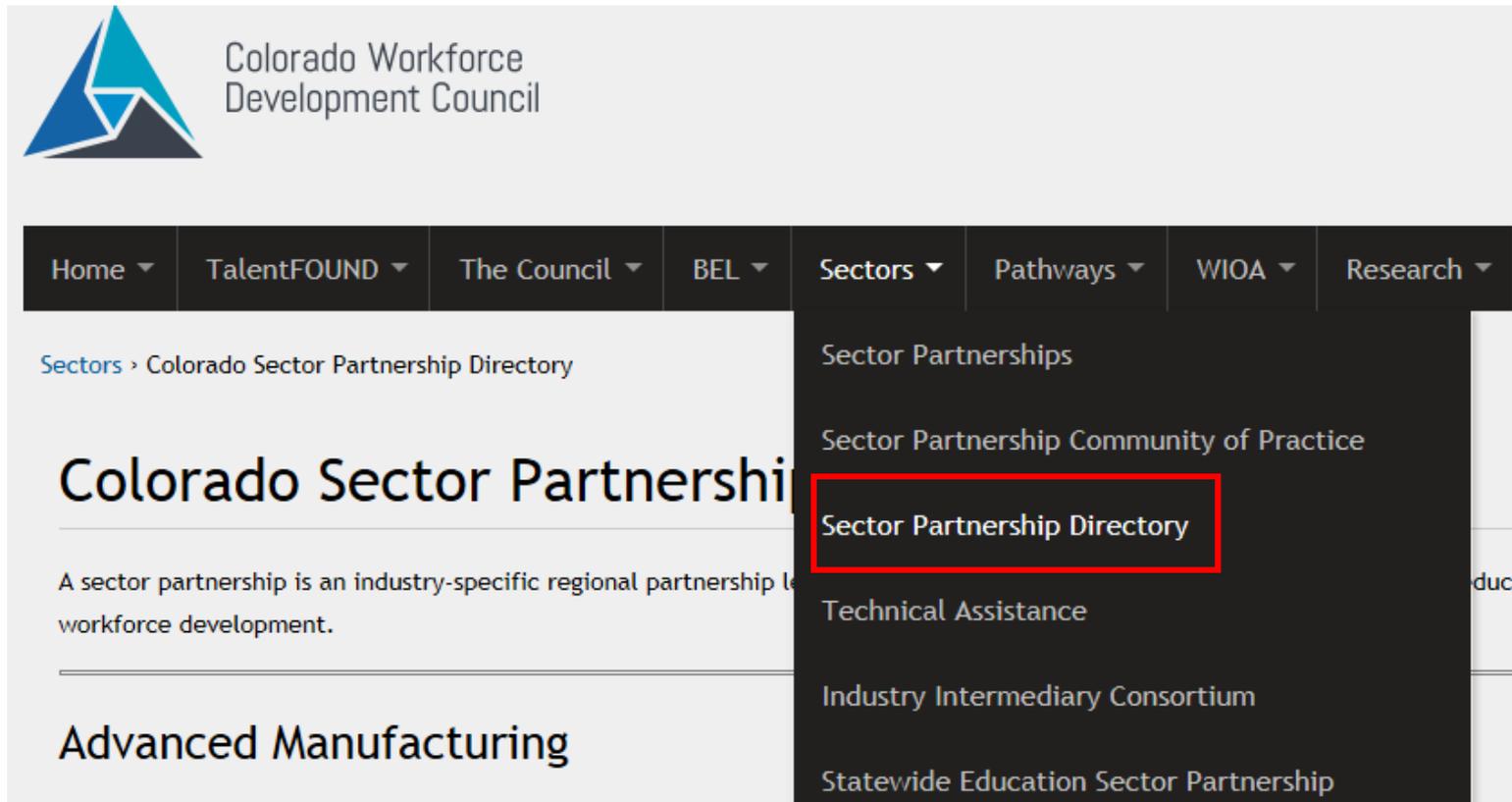
- Assure that experience for student is seamless beginning in 9<sup>TH</sup> GRADE – they need to understand the pathway they are embarking on
- How students course skills can translate for them once they graduate and begin working
- Creativity and flexibility is allowed through ptech model compared to traditional secondary ed path

# Business Partners

# Colorado Workforce Development Council

## Sector Partnerships

<https://www.colorado.gov/pacific/cwdc/sector-partnerships>



The screenshot displays the Colorado Workforce Development Council website. The header features the organization's logo and name. A navigation menu is visible, with the 'Sectors' dropdown menu open. The dropdown menu lists several options, with 'Sector Partnership Directory' highlighted by a red rectangular box. The main content area shows the breadcrumb 'Sectors > Colorado Sector Partnership Directory' and the title 'Colorado Sector Partnership Directory'. Below the title, there is a brief definition of a sector partnership and the heading 'Advanced Manufacturing'.

Colorado Workforce Development Council

Home ▾ TalentFOUND ▾ The Council ▾ BEL ▾ Sectors ▾ Pathways ▾ WIOA ▾ Research ▾

Sectors > Colorado Sector Partnership Directory

## Colorado Sector Partnership Directory

A sector partnership is an industry-specific regional partnership for workforce development.

### Advanced Manufacturing

- Sector Partnerships
- Sector Partnership Community of Practice
- Sector Partnership Directory**
- Technical Assistance
- Industry Intermediary Consortium
- Statewide Education Sector Partnership

# Active & Emerging Sector Partnerships

## Colorado's Sector Partnerships

- R 2 NOCO Manufacturing
- R 2 NOCO Health
- R11 Mesa County Health Care
- R11 Mesa Manufacturing
- R13 Upper Arkansas Healthcare
- R13 Upper Arkansas Outdoor Recreation & Tourism
- R13 Upper Arkansas Technology
- R 8 SLV Value-Added Ag
- R 8 SLV Health and Wellness
- R 9 Southwest Colorado Healthcare



- R 1 Northeastern Colorado Manufacturing  
NECOM
- R 3 Metro Denver Retail
- R 3 Metro Denver Construction
- R 3 Denver Metro Technology
- R 3 Metro Denver Manufacturing
- R 3 Greater Metro Denver Healthcare
- R 3 Metro Denver Early Childhood
- R 3 Boulder/Broomfield Technology
- R 5 Health & Wellness
- R 4 COS Health
- R 4 CO Springs Manufacturing
- R 6 Southeastern Colorado Healthcare
- R 6 Southeast Colorado Manufacturing

- R 7 Southern Colorado Healthcare
- R 7 Southern Colorado Manufacturing



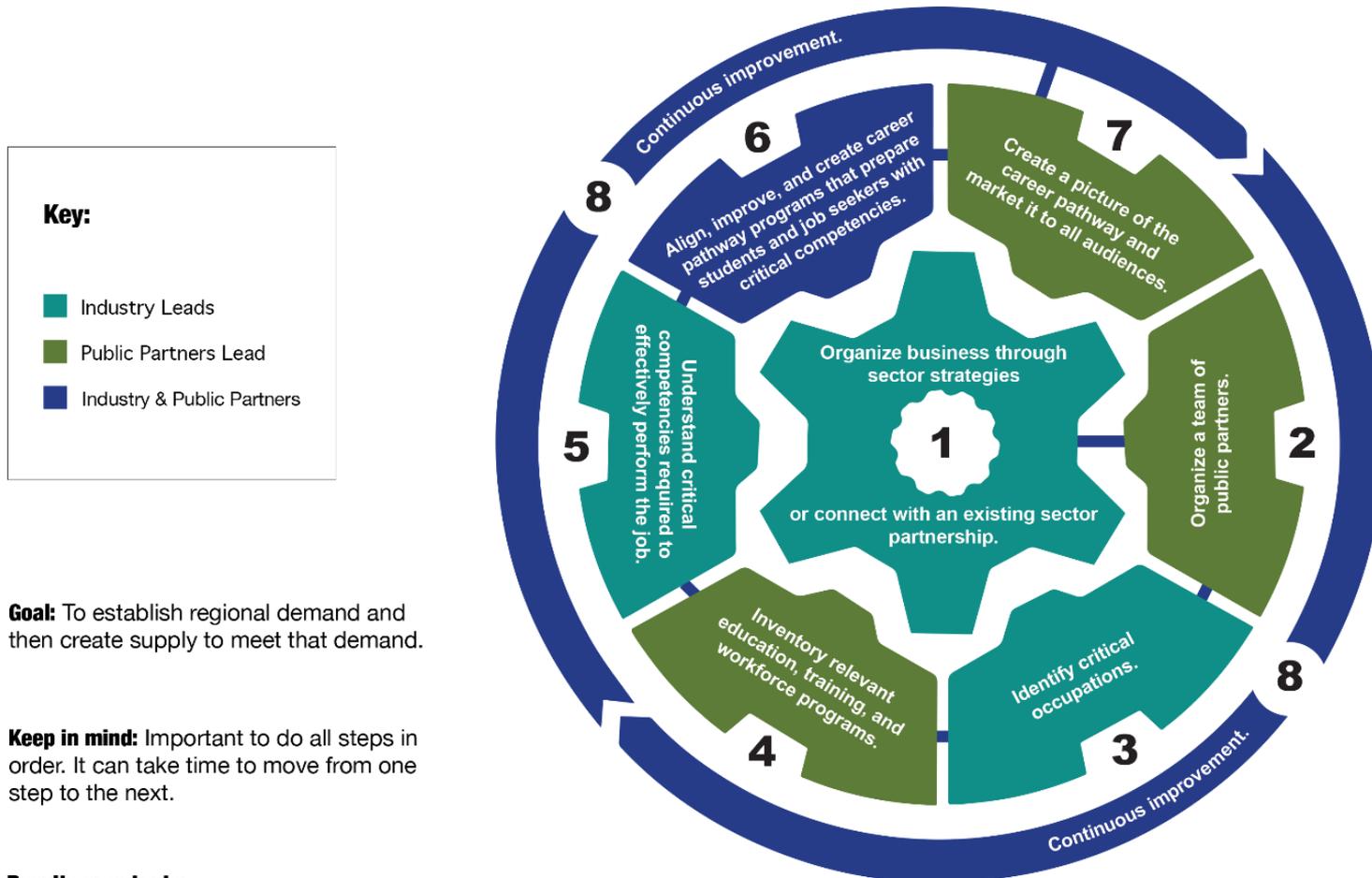
Sector Partnerships

# What is a career pathway system?

A career pathway system **aligns** public partners and engages them in a continuous conversation that is led by industry to ensure that job-seekers and students move seamlessly through and among support programs, educational institutions, training opportunities, and work-based experiences to build skills and credentials that meet **industry demand** and prepare them for jobs and careers.

# Identify regional demands create supply to meet demand

## Meeting Regional Talent Demand Through Regional, Industry-led Career Pathways Systems Building



**Goal:** To establish regional demand and then create supply to meet that demand.

**Keep in mind:** Important to do all steps in order. It can take time to move from one step to the next.

**Results or outputs:**

Pathways that didn't exist are created. Pathways already in existence are improved. Business has access to appropriately skilled talent pipeline. Individuals have access to the education, training, and work experience needed to enter careers.

# Building industry-driven career pathway systems

## [Building Industry-Driven Career Pathway Systems in Colorado Step-by-Step Guide](#)

- Guide released by CWDC released in fall of 2016
- Designed for workforce boards, educational institutions & employers seeking to build a career pathway system for their community
- Outlines step-by-step approach that:
  - aligns education & training programs w/needs of regional economy
  - ensures that students & job seekers are prepared w/right skills & experiences to get jobs in driving sectors of their local economies



A free online resource for career pathways & critical occupations in Colorado

**CAREERS** IN  
**COLORADO**

POWERED BY talent **FOUND**

Select Language |   

## Find Careers in Growing Industries in Colorado

Using [career pathways](#), explore in-demand careers including the education, training, and skills needed to get you there.



**Advanced  
Manufacturing**



**Information  
Technology**



**Healthcare**



**Business  
Operations**



**Construction**



**Cybersecurity**

**Have a Career in Mind?**

[Search Colorado's top careers >](#)

# Resources

[Active & Emerging business sector partnerships](#) – by region in Colorado  
(*talentFOUND dashboard*)

[Colorado Talent Dashboard](#) - Understand needs of labor market

[Building Industry-Driven Career Pathway Systems in Colorado](#) Step-by-Step Guide

[Colorado Labor Market Information](#) - LMI Gateway

[CDE Postsecondary and Workforce Pathways Resources](#) - Information and state guidance to advance PWR

[Competency Model Clearinghouse](#) - Detailed competency models

[The Colorado Talent Pipeline Report](#) - Annual report with current labor trends

# Application Process

# Application submission to CDE

Submit application packet to CDE

- no later than December 1<sup>st</sup> to begin operation the following fall

Link to P-TECH Application, Eligibility and Reporting webpage

<http://www.cde.state.co.us/postsecondary/ptechapplicationeligibilityandreporting>

## P-TECH Application, Eligibility and Reporting

P-TECH applications are accepted on a rolling basis. It is strongly recommended that school districts wishing to open a fall term submit an application no later than December 1st of the prior year.

- [P-TECH Application](#)
- [P-TECH Agreement \(sample doc.\)](#)
- [P-TECH Sample Rubric](#) - Example of the criteria used by P-TECH application reviewers

Please visit the Colorado P-TECH [Resources and Training](#) web page tools and resources to help plan a P-TECH school.

# Review and Determination

1. Reviewed by Education and Training Committee (*CWDC*)
  - minor changes needed – send info/materials to CDE
  - denied – adjust and reapply
2. Approved = recommends to Commissioner of Education & Executive Director of the DHE for joint approval

Base on:

- Quality of proposed design;
  - Degree of collaboration & full participation in partner agreement
- One full AY to implement after approval

# Application Sections

1. Proposal narrative & operational model
2. Proposed Enrollment Plan/Selection of students
3. Cost projections by year
4. Signed Agreement Between all Partners

# Reporting

# Annual P-TECH Report

1. How many current students are/will be the first to attend college in their families?
2. Indicate by grade level whether or not students are accumulating credit in a manner to meet their expected graduation target date as defined by school/district policy
3. A description of the progress on all performance measures

# Student coding & documentation

- [Student October Count Audit Resource Guide](#) – funding and audit documentation
- [Attendance Requirements](#) - for Student October Count & audit purposes

# Accountability

PTECH schools are required to comply with the requirements and responsibilities for state, district and school stakeholders in the state's accountability process established by the Education Accountability Act of 2009 (S.B. 09-163).

Please refer to the P-TECH section of the [Student October Count Audit Resource Guide](#)

# Graduation Rate Reporting

P-TECH student will be counted in the LEP/host school's graduation rate in the year in which the student completes the LEP/host school's minimum graduation requirements and continue on in PTECH for 5<sup>th</sup> or 6<sup>th</sup> year.

*See Guidance Document at:*

<http://www.cde.state.co.us/postsecondary/p-tech-and-graduation-rates-guidance>

## P-TECH

Legislation and Guidance

Application, Eligibility and Reporting

Resources and Training

- [2018 P-TECH Fact Sheet](#)
- [P-TECH Press Release Sept 2015](#)

### Approved P-TECH Schools

- Cañon City High School (Cañon City RE-1) – approved 2018
- EC@N-STEM (Adams 12) - approved 2016
- Pathways in Technology Early College High School (St. Vrain Valley) – approved 2015
- Power Technical Early College – James Irwin Charter School (El Paso 49) – approved 2015
- STEM School Highlands Ranch (Douglas County) – approved 2018
- Warrior Tech (St. Vrain Valley) - approved 2019
- Warrior Way High (Mesa 51) - approved 2019

### Pathways in Technology Early College High School - PTECH

C.R.S. 22-35.3-101-105

#### Jump to Section:

- [School Specifications](#)
- [Partnerships](#)
- [Funding](#)
- [State Reporting and Accountability](#)
- [Application Process](#)

[P-TECH School Specifications Overview Chart](#)