Pathways to STEM Apprenticeship for High School CTE Students
CFDA 84.051E
Project Abstracts

The purpose of the Pathways to STEM Apprenticeship for High School Career and Technical Education (CTE) Students (Pathways to STEM Apprenticeship grants) demonstration program is to support State efforts to expand and improve the transition of high school CTE Students to postsecondary education and employment through apprenticeships in science, technology, engineering, and mathematics (STEM) fields, including Computer Science, that begin during high school. Funds were awarded to the following six states for a three-year project period:

Kentucky Department of Education
The *Kentucky STEM Apprenticeship Program* will provide high school CTE students in the Perry County School District and Hazard Independent Schools the opportunity to enroll in a Pathways in Technology Early College High (PTECH) School that offers a STEM curriculum. In concert with Hazard Community and Technical College, the Eastern Kentucky Concentrated Employment Program, and other partners, the project will develop a PTECH-like model that incorporates paid competency-based apprenticeships for CTE students in grades 11 and 12, preparing them for careers in either the STEM fields of health care or computer science. It will begin piloting the PTECH model in rural Perry County during the first semester of 2019 and place students as apprentices with local employers.
Project partners include:
- Hazard Community and Technical College
- Perry County School District
- Hazard Independent Schools
- Eastern Kentucky Concentrated Employment Program
- University of Kentucky College of Medicine
- Appalachian Regional Healthcare System
- Juniper Health

Maryland State Department of Education
This project will expand *Apprenticeship Maryland*, the State of Maryland's youth apprenticeship pilot program that began in Frederick and Washington Counties. Through the Apprenticeship Program Advisory Committee (APAC), the Maryland State Department of Education will continue its partnership with the Maryland Higher Education Commission, Registered Apprenticeship sponsors, and other organizations to transition high school CTE students to postsecondary education and employment through apprenticeships in STEM fields, including computer science, that begin in high school. The project will use the lessons learned from the pilot program to expand *Apprenticeship Maryland* into a statewide model through subgrants to additional school districts and community colleges.
Project partners include:
- Maryland Higher Education Commission
- Maryland Association of Community Colleges

- Stevenson University
- The Education Foundation of Baltimore County Public Schools
- University of Maryland Baltimore County Training Center
- Independent Electrical Contractors
- Associated Builders and Contractors

Nebraska Department of Education

The *Nebraska Pathways to STEM Apprenticeship* project will develop a competency-based computer science Registered Apprenticeship model in rural northeast Nebraska. The project will build on the region's current *Pathways 2 Tomorrow* program, which is an eight-school district partnership with rural northeast Nebraska high schools, Northeast Community College, and Educational Service Unit 2 that offers career and technical education course sequences in information technology and healthcare occupations. The project will focus on providing Registered Apprenticeship opportunities to rural English Language Learner (ELL) high school students in the region.

Project partners include:
- Educational Service Unit 2
- Northeast Community College
- Wayne State College
- Franciscan Care Services, Inc.
- Burt County Economic Development Corporation
- Pender Economic Development

Oregon Department of Education

The *Oregon Pathways to Apprenticeship in Computer Science (OrPACS)* project will develop a competency based apprenticeship pathway in computer science for high school students enrolled in computer science CTE programs of study. The project will align computer science programs of study that include paid work experiences with *Apprent*i, an Oregon registered apprenticeship for technology fields that is being implemented in Lane County and Central Oregon. *OrPACS* will focus on two workforce regions that have established partnerships between employers and educators to support the technology industry sector in each region. The project will pilot the online delivery of curriculum, mentorship, and work-based learning with rural school districts in the regions.

Project partners include:
- Lane Community College
- Central Oregon Community College
- Oregon State University
- University of Oregon
- Higher Education Coordinating Commission
- Five Talent
- Concentric Sky
- Technology Association of Oregon

Rhode Island Department of Education
The *Rhode Island Youth Apprenticeship Program* will develop two competency-based STEM apprenticeship programs, a Cyber-Security Analyst Apprenticeship Program and Data Analyst Apprenticeship Program. Both programs will be managed and located at the state's community college, the Community College of Rhode Island (CCRI), and will prepare students for entry-level cyber-security and data sciences roles at CVS Health and other Rhode Island employers seeking STEM talent. The project will begin to enroll high school CTE students throughout the state in the fall of 2019. Accepted apprentices will complete a paid internship experience with their employer in the summer before their senior year of high school, receive support from workplace mentors, earn postsecondary credit, and attain industry-valued credentials by the time they graduate from high school. Project partners include:
- Community College of Rhode Island
- CVS Health
- Apprenticeship Rhode Island

Tennessee Department of Education
Preparing Today's Students for Tomorrow's Tennessee will expand an existing, successful, work-based learning initiative in Hamilton County, Tennessee to create a pilot competency-based machine operator apprenticeship program for high school CTE students. The project will then use the lessons learned from the pilot program to develop a competency-based apprenticeship curriculum that aligns with existing high school CTE programs of study in advanced manufacturing, computer science, and health care. To pilot the curriculum and expand the competency-based apprenticeship model, the project will award competitive subgrants to school districts to implement a competency-based apprenticeship with local postsecondary and employer partners.
Project partners include:
- Tennessee Board of Regents
- Tennessee Higher Ed Commission
- Hamilton County Department of Education
- Gestamp Chattanooga, LLC