Controls Programmer Apprenticeships

Statutory and/or Budget Language

$500,000 of the general fund—state appropriation for fiscal year 2024 is provided solely for the office to contract with a nongovernmental entity for a controls programmer apprenticeship program.

Purpose

The purpose of this funding is to increase student access to the Controls Programmer Registered Apprenticeship, a high-demand, high-wage career pathway. Funding is intended to support:

- Development of student competencies through coursework and on-the-job training to satisfy the core requirements for a cross-sector of industries
- Creation of related career awareness, exploration, and preparation opportunities from elementary through high school
- Development of workforce related skills that benefit all employers and trades involved with building, operating, maintaining, and optimizing the built environment, which benefits students seeking a complementary way of earning their diploma through on-the-job experience
- Providing pathways with multiple entry points at the high school level
- Providing pathways to postsecondary credentials connecting high school and community colleges through the registered apprenticeship
- Expansion for scalability

Description of Services Provided

Funding is provided to increase the ability of young people to access high-wage, high-demand career pathways through development of the Controls Programmer Apprenticeship program. South Kitsap School District (SKSD), in collaboration with West Sound Science, Technology, Engineering, and Mathematics (STEM) Network (WSSN), provided funding for administrative oversight and support. Provided services included:

- Deployment of the in-person STEM Like ME! career connected learning program for middle and high school students, which included building connections with controls, heating, ventilation, and air conditioning (HVAC), leadership in energy and environmental design (LEED) certified architecture and interior design, information technology (IT)/computer science, green/clean energy/fuels/engines, water quality, engineering and construction trades professionals.
- Support for educators to implement the 2023–24 controls curriculum and provide training on apprentice reporting requirements, apprentice support, and liaison work between the employer and school district.

- Participation in the Advisory Committee for the Western Washington University (WWU) Cyber Range at Poulsbo/WWU Cybersecurity Program, which further highlighted connections between the multi-disciplinary careers in Controls, computer science and cybersecurity.
- Connection with school counselors to maintain awareness of the apprenticeship and compliance requirements related to related supplemental instruction (RSI) and on-the-job training (OJT).
- Teacher training throughout the year related to Controls Programmer competencies and utilizing materials in a virtual environment with their students. These included STEM Cafés exploring Controls Technology, Electronics, Green Energy, Clean Energy and Engineering Design, Construction Trades, Logic & Games, Space Engineering, Code.org/computer science, summer workshops for Blueprints, and Flightpath cohorts, Computer Science Opportunities Across the Region (COSTAR) and Northwest Earth & Space Sciences Pathway (NESSP) summer workshops, and Storytime STEM trainings featuring the story kits "The Boy Who Harnessed The Wind" and "My Papi Has A Motorcycle" which introduce the concepts of clean energy and engineering challenges, all of which place emphasis on reaching underrepresented students.
- Systemic program coordination for the Controls Programmer Apprenticeship.

Criteria for Receiving Services and/or Grants

South Kitsap School District is the sole grantee as there is only one registered Controls Programmer Apprenticeship in Washington.

Beneficiaries in the 2023-24 School Year

Number of School Districts	1
Number of Schools	2
Number of Students	123
Number of Educators	497
Other	1 ~ Funds provided to West Sound STEM Network for implementation. 123 students participated in RSI. 497 teachers participated in professional development directly related to deploying controls programmer virtual activities in the classroom.

Are Federal or Other Funds Contingent on State Funding?

No

State Funding History

Fiscal Year	Amount Funded	Actual Expenditures
2024	$500,000	$493,208
2023	$500,000	$500,000
2022	$500,000	$500,000
2021	$350,000	$350,000
2020	$350,000	$350,000

Number of Beneficiaries Per Fiscal Year (e.g. School Districts, Schools, Students, Educators, Other)

Fiscal Year	Number of Beneficiaries
2024	1 school districts
2023	2 school districts
2022	1 school district
2021	1 school district
2020	1 school district

Programmatic Changes Since Inception (If Any)

The Controls Programmer Apprenticeship received permanent registration on April 20, 2022.

New Partners: Interplay Learning, Quileute Tribal School, North Kitsap School District, Clover Park Technical College, Palmer Scholars.

Continuing Partners: Bremerton School District, Central Kitsap School District, Chimacum School District, Peninsula School District, South Kitsap School District, Bates Technical College, Olympic College, MacDonald-Miller Facilities Solutions, Siemens Corporation, West Sound STEM Network, ATS, Inc., Johnson Controls, Inc., Long Technologies, Chief Kitsap Academy, Pacific Northwest National Lab, Cyber Range, WWU Poulsbo, Peninsula College, Bainbridge Island School District, Sequim School District, Overcast Innovations.

Program Evaluation or Evaluation of Major Findings

Two apprentices have completed the program and are working at journey-level. South Kitsap School District offered a Controls Programmer course in their 2023–24 course catalog, and ten students enrolled. Bremerton High School again offered RSI courses with 113 students enrolled.

Controls programming professional development in 2023–24 supported teachers to deploy interactive and hands-on activities in both in person and virtual environments. Other districts can offer students significant portions of RSI components embedded in classes such as Robotics, Electronics, Physics, Drones, Project Management, Computer Science/Cybersecurity, HVAC, and shop classes. Staff continue outreach through the region's career counselors to maintain and increase understanding of controls-related curriculum and how their students can crosswalk the skills and knowledge gained into RSI credit should they enroll in the apprenticeship.

Several industry employers use the online curriculum for their current employees and any new apprentices. Employers and K–12 representatives worked together with the Controls Apprenticeship committee to further improve progress toward streamlined, easily accessible RSI.

The Controls Technology Apprenticeship Committee (a requirement of Labor & Industries) met and communicated regularly. Outreach continues to focus on populations furthest from opportunity.

Engagement has increased since COVID guidelines significantly delayed the apprenticeship development last year, and the apprenticeship is seeing an increase in interested applicants. Overcast Innovations, MacDonald-Miller, Johnson Controls, Inc., Long Technologies, and ATS, Inc. are looking forward to employing apprentices as they finish settling in their re-employed laid-off workers.

Major Challenges Faced by the Program

Employers faced significant layoffs and reduction in the workforce throughout COVID and are still prioritizing hiring their laid-off workers before turning their attention to hiring apprentices.

Controls companies' customers in our region are largely located in the greater Seattle area. Transportation to and from work sites, and restricted working hours continue to be a barrier for students, particularly for rural/remote or low-income students. Bus passes are the most common form of transportation aid, but available public transportation routes and hours of operation also limit opportunities for students.

Future Opportunities

The Program Coordinator is working to find additional Training Agents local to the region. Outreach to potential associations like the Washington State Society for Healthcare Engineering (WSSHE) or Washington Hospitality Association, and building upon tribal partnerships may produce more Training Agents in facilities such as the Suquamish Seafoods and Clearwater Hotel and Casino with the Suquamish Tribe, or the Seven Cedars Hotel with the Jamestown S'Klallam Tribe.

Districts are looking at innovative ways to capitalize on their current employees' vast knowledge base through part-time teaching opportunities.

Other Relevant Information

N/A

Schools/Districts Receiving Assistance

Click here to see a list of all OSPI grant recipients in the 2024 Fiscal Year.

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