# *Controls Programmer Apprenticeships*

## 1.  Purpose:

Programmable electronic controls are found in every industry sector, in the public and private sectors, in every region in our state, and across the country. While some forms of programmable electronic controls have been in use for many years, recent technological advancements that dramatically reduced costs and improved usability has accelerated their application in the past ten years- even more so, in the past five. The need for Controls Programmers is great within the region, and this, combined with the state goal of 70% of Washingtonians obtaining a post-secondary credential by age 26, means that the Controls Programmer Apprenticeship is a high-value program for education and industry. Career-Connected Learning must start early, and South Kitsap School District (SKSD) has developed pathways from elementary school to high school around Controls Programming.

## 2.   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. SKSD, in collaboration with West Sound STEM Network (WSSN), provided funding for administrative oversight and support. Funding was primarily designated for program development and historically, has supported convening stakeholders, i.e. education, state agencies, and employers to clarify occupational gaps/need within the region (2018-2019); collaboration with industry in identification of 74 required competencies, developing curriculum in collaboration with industry, K-12 and higher education, and developing CTE frameworks and obtaining approval (2019-2020); and the development of apprenticeship training handbook/guidelines, support for the Washington State Apprenticeship & Training Council (WSATC) approval process, outreach, and provisional enrollment (2020-2021).

Enrollments were limited due to the impacts of the pandemic and related worksite access restrictions, and employee shortages. In 2021, Bremerton High School provisionally enrolled 14 students in online and in-person Related Supplemental Instruction, which is applicable to several trades. Two students were able to participate in on-the-job apprenticeship training remotely. Through collaboration with career counselors, students were provided with wrap around supports (outreach, mock interviews, and resume development) to help assist with securing employment

and/or apprenticeship. Funding support further aided employers with apprentice reporting requirements, and liaison work between the employer and school districts. The program received WSATC recognition approval in April 2022.

The goals of the program include:
- Increasing the ability of young people to access high-demand, high-wage pathways through Controls Programmer Career-Connected Learning opportunities will develop an individual's competencies through coursework and on-the-job training to satisfy the co-requirements for a cross-sector of industries having various occupational titles.
- Increasing awareness of Controls Programming careers and creating opportunities for apprenticeship exploration and preparation.
- Creating a talent river that benefits all employers and trades involved with building, operating, maintaining, and optimizing any built environment. The talent river includes our high school youth seeking a complimentary way of earning their diploma through on-the-job experience.
- Providing permeable pathways with multiple entry points at the high school level.
- Providing pathways to post-secondary credentials via the Controls Programmer Apprenticeship that connects high school and community and technical colleges.
- Building for scalability.

## 3. Criteria for receiving services and/or grants:
South Kitsap School District is the sole grantee.

### Beneficiaries in 2021-22 School Year:

| | |
|---|---|
| Number of School Districts: | 1 |
| Number of Schools: | N/A |
| Number of Students: | N/A |
| Number of Educators: | N/A |
| Other: | 1 - Funds provided to West Sound STEM Network for implementation |

### Number of OSPI staff associated with this funding (FTEs):

### Number of contractors/other staff associated with this funding:

| FY22 Funding: | | |
|---|---|---|
| | State Appropriation: | $500,000 |
| | Federal Appropriation: | $0 |
| | Other Fund Sources: | $0 |

TOTAL (FY22)                    $500,000

## 4. Are federal or other funds contingent on state funding?

No

## 5. State funding history:

| Fiscal Year | Amount Funded | Actual Expenditures |
|---|---|---|
| 2022 | $500,000 | $500,000 |
| 2021 | $350,000 | $350,000 |
| 2020 | $350,000 | $350,000 |

## 6. Number of beneficiaries (e.g., school districts, schools, students, educators, other) history:

| Fiscal Year | Number of Schools |
|---|---|
| 2022 | 1 School District |
| 2021 | 1 School District |
| 2020 | 1 School District |

## 7. Programmatic changes since inception (if any):

- The Controls Programmer Apprenticeship received permanent registration on April 20, 2022.
- The related supplemental instruction (RSI) and on-the-job training (OJT) competencies are developed. Lessons and unit plans were drafted in Spring of 2022 and development continued in 2021-2022.
- Online courses were cross-walked with all competencies within the Controls Programmer Apprenticeship.

## 8. Evaluations of program/major findings:

- Approximately 20 schools across 17 school districts participated in training to learn how to deploy interactive and hands-on activities in a hybrid environment.
- Estimated 13,830 students potentially impacted through classroom and/or hands on career-connected learning.
- 461 teachers participated in Controls Technology Competency-related professional development, with 51 teachers participating in a Controls Technology externship.
- Bremerton High School offered the RSI during the 2021-2022 school year with an increase from 2020-2021 to 14 high school students enrolled. Additionally, two Bremerton students were hired after graduation as apprentices and both are currently employed full-time for one of the employer sponsors.

- Outreach materials were produced and shared with students and families regarding the apprenticeship.
- Districts are preparing to offer the apprenticeship courses with worksite options.
- Three new apprentices were hired following graduation in 2021-2022 and it is anticipated more will be hired in 2022-2023.

## 9. Major challenges faced by the program:

Due to remaining impacts of the pandemic, high school students were learning remotely from March 2020 through approximately December 2021, with some continuing with remote learning through June 2022. This past school year, as high school students returned to on-site, RSI continued on-site and with the employer. Program staff are working with an online provider of trades-based modules that are used in industry to continue offering online coursework, which will increase student access.

Employers continued to experience significantly reduced labor pools. Employers are seeing an increase in re-employing laid off workers and will attempt to prioritize hiring their laid off workers first. In other words, it is a challenge for an employer to hire an apprentice, when regular workers need to be hired back.

## 10. Future opportunities:

Hybrid RSI (both in person and online) will continue for 2022-2023 within the districts. The 2021-2022 school year, while challenging, also provided opportunities for innovation and thinking differently about instruction. The funding provided yielded high return on investment with respect to the continued need for remote learning. Controls Programming professional development supported teachers to deploy interactive and hands-on activities in a hybrid environment.

Three new apprentices were hired following graduation in 2021-2022 and it is anticipated more will be hired in 2022-2023.

## 11. Statutory and/or budget language:

ESSB 5693, Sec. 522(31) - $500,000 of the general fund—state appropriation for fiscal year 2022 and $500,000 of the general fund—state appropriation for fiscal year 2023 are provided solely for the south Kitsap school district for the controls programmer apprenticeship program.

## 12. Other relevant information:

Leveraged and other funding includes a Career Connect WA (CCW) Equity grant, businesses' provision of in-kind donated time, and apprentice pay from employers.

## 13. Schools/districts receiving assistance:
See [OSPI's grantee list](#).

## 14. Program Contact Information:
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