Increased AP CS Course Capacity

Statutory and/or Budget Language

$62,000 of the general fund—state appropriation for fiscal year 2024 and $62,000 of the general fund—state appropriation for fiscal year 2025 are provided solely for competitive grants to school districts to increase the capacity of high schools to offer AP computer science courses. In making grant allocations, the office of the superintendent of public instruction must give priority to schools and districts in rural areas, with substantial enrollment of low-income students, and that do not offer AP computer science. School districts may apply to receive either or both of the following grants:

(i) A grant to establish partnerships to support computer science professionals from private industry serving on a voluntary basis as coinstructors along with a certificated teacher, including via synchronous video, for AP computer science courses; or

(ii) A grant to purchase or upgrade technology and curriculum needed for AP computer science, as well as provide opportunities for professional development for classroom teachers to have the requisite knowledge and skills to teach AP computer science.

Purpose

The Advanced Placement (AP) Computer Science (CS) competitive grant is provided to schools, districts, and state-tribal education compact schools (STECs) so they may increase the capacity of their high schools to offer AP CS courses.

Description of Services Provided

Funding may be used under two types of project proposals and schools/districts/STECs may apply for one or both:

- Partnerships: establish partnerships with CS professionals from industry to serve as co-instructors or guest speakers.
- Technology/Professional Development: purchase hardware or equipment needed for CS instruction and/or costs related to CS professional development for teachers.

Criteria for Receiving Services and/or Grants

All high schools, districts, and STECs are eligible. Priority is given to applicants in rural areas, with substantial enrollment of low-income students, and that do not yet offer AP Computer Science Principles nor AP Computer Science A.

Washington Office of Superintendent of
PUBLIC INSTRUCTION

Beneficiaries in the 2023-24 School Year

Number of School Districts	7
Number of Schools	9
Number of Students	300 (approximate)
Number of Educators	12
Other	N/A

Are Federal or Other Funds Contingent on State Funding?

No

State Funding History

Fiscal Year	Amount Funded	Actual Expenditures
2024	$62,000	$60,000
2023	$62,000	$61,786
2022	$62,000	$62,000
2021	$62,000	$60,056
2020	$62,000	$62,000

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

Fiscal Year	Number of Beneficiaries
2024	Districts: 7, Schools: 9
2023	Districts: 6, Schools: 9
2022	Districts: 3, Schools: 4
2021	Districts: 7, Schools: 9
2020	Districts: 7, Schools: 10
2019	Districts: 6, Schools: 14
2018	Districts: 10, Schools: 10
2017	Districts: 8, Schools: 9
2016	Districts: 7, Schools: 8
2015	Districts: 7, Schools: 7
2014	Districts: 7, Schools: 8

Programmatic Changes Since Inception (If Any)

N/A

Program Evaluation or Evaluation of Major Findings

This is the longer standing of the two state CS education grants managed by OSPI, first awarded in fiscal year 2014. AP Computer Science courses (AP CS Principles and AP CS A) are among the first CS courses widely adopted in Washington and remain appealing options for high school CS coursework. As of 2023, about 55% of high schools in Washington offer a CS elective; approximately 50% of those schools have students enrolled in a CS course. Over the years, these percentages have steadily increased by a few percentage points in large part due to the funding provided through this AP CS grant and the broader CS education grant.

Major Challenges Faced by the Program

1. Limited to AP CS: AP Computer Science Principles and AP Computer Science A are the two options for AP CS courses. Both have their strengths and challenges, but also important is that they are two of approximately 45 different options for state CS courses. Recently, a number of other CS courses have become increasingly popular: cybersecurity, video game design, and robotics to name a few. Using OSPI's annual dataset on CS education, a comparison of CS course sections in 2022–23 shows 12.9% of sections with students enrolled were AP CS. Robotics alone accounts for the highest percentage at 23.7%. Dedicating funding to a fraction of the curriculum options available means districts have less flexibility in how to support CS coursework with these funds.

2. Grant Design: The AP CS grant is designed for two types of applications: (a) technology purchases and teacher professional development, and (b) forming partnerships with industry partners to arrange for volunteer professionals as instructors in the classroom. The former makes up the vast majority of what is applied for, while the latter is clearly reminiscent of the Microsoft Technology Education and Learning Support (TEALS) model. TEALS is a national program with no similar programs of such scale given the capacity Microsoft has to volunteer professional software engineers to teach CS. TEALS is particularly prominent in underserved regions in Washington and there are no fees expected from schools in partnering with TEALS. Grant funding is therefore not a necessity for establishing a TEALS partnership. Moreover, while some grant recipients have made arrangements with local industry partners in a similar fashion, the level of involvement from those partners cannot realistically be comparable to that of TEALS. While (b) is not a moot option, allowing for other valid program activities could increase the impact of the grant.

Future Opportunities

With the AP CS grant totaling $62,000 compared to the $1,000,000 from the CS Education grant and the latter ultimately being a more generalized version of the former, a possible beneficial step forward that addresses the above observations is to subsume the AP CS grant into the CS Education grant. The amount of funding (total of $1,062,000) would remain the same, and would come with the following benefits:

- The application process would be simpler for interested schools and districts, many of whom apply to both CS grants each year anyway.
- Logistically the grant administration is simpler for OSPI to manage one grant and to communicate grant opportunities to local education agencies.
- There is greater flexibility provided to applicants in utilizing funds as they may focus on AP CS as well as other curricula and forms of support for CS education.

Other Relevant Information

Ever-present in CS education is a lack of diversity across demographics, most noticeably gender and race. The misconceptions and stereotypes on "who CS is for" are already well-formed in students' minds by the time they reach even middle school. Moreover, there is, unlike for high school and middle school, a distinct lack of data in K–5 CS education due to a lack of course codes at the elementary level. While AP CS is a worthwhile target of support, CS education in elementary and middle school deserves the same sort of recognition and support to effect long-term, positive change in diversity, equity, and inclusion efforts across Washington. See the proviso report for the Computer Science Education grant for a more detailed breakdown of state data.

Schools/Districts Receiving Assistance

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

Program Contact Information

Name Terron Ishihara

Title Computer Science Program Supervisor

Phone 360-791-1930

Email terron.ishihara@k12.wa.us