
SENATE COMMITTEE ON EDUCATION

Senator Carol Liu, Chair
2015 - 2016 Regular

Bill No: AB 1258
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Urgency: No
Consultant: Lynn Lorber
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Fiscal: Yes

Subject: Elementary and secondary education: Computer Science Education Grant Pilot Program

SUMMARY

This bill requires the Superintendent of Public Instruction to establish a computer science education grant pilot program for local educational agencies (LEA) to establish, expand and maintain computer science courses and provide professional development in computer science.

BACKGROUND

Existing law:

- 1) Requires the Instructional Quality Commission, on or before July 31, 2019, to consider developing and recommending to the State Board of Education, K-12 computer science content standards pursuant to recommendations developed by a group of computer science experts. (Education Code § 60605.4)
- 2) Requires the California State University (CSU) and requests the University of California (UC) to develop guidelines for high school computer science courses to be approved for admission, and encourages the UC to ensure that computer science courses that satisfy the math subject area requirements for admission build upon fundamental math content in courses that align with the academic content standards developed by the Academic Content Standards Commission. (EC § 66205.5)

ANALYSIS

This bill requires the Superintendent of Public Instruction (SPI) to establish a computer science education grant pilot program for LEA to establish, expand, and maintain computer science courses and provide professional development in computer science. Specifically, this bill:

- 1) Requires the SPI to establish a public-private computer science education grant pilot program through which a participating LEA may receive funding to establish and expand or maintain computer science courses, and to provide professional development for teachers to teach computer science, either as a stand-alone course or as integrated into other courses.

- 2) Establishes the grant pilot program as the Computer Science Education Grant Pilot Program, which is intended to support both of the following:
 - a) Innovative ways to introduce students in underserved areas and students from groups historically underrepresented in the field of computer science who would not otherwise have those opportunities to study computer science and inspire them to enter computer science careers.
 - b) Professional development for teachers to acquire the knowledge and skills necessary to teach computer science, either as a stand-alone course or as integrated into other courses.

Eligibility criteria

- 3) Requires local educational agencies (LEA) to demonstrate at least two of the following criteria to be eligible for a grant:
 - a) Engaged and committed leadership in support of introducing students who would not otherwise have opportunities to study computer science.
 - b) A plan to engage these students with the subject matter of computer science.
 - c) That certificated staff of the LEA are appropriately trained to carry out the plan.
 - d) The capacity to maximize the use of grant resources by addressing the availability of appropriate physical space and technology, projected enrollment, and other specific requirements set forth by the Superintendent of Public Instruction (SPI).
 - e) A history of successful partnerships within the community and partner support for computer science. Partnership support may include supplying materials or technology, instruction support, internships, mentorships, and apprenticeships.
 - f) The capacity to continue in the school years succeeding the initial grant year or years.
- 4) Requires the SPI to give priority for awarding grants to applicant LEAs with higher percentages of unduplicated students pursuant to the local control funding formula and as much as feasible, award grants to LEAs that collectively represent the geographic and socioeconomic diversity of the State.
- 5) Authorizes the SPI to consult with computer science experts to discuss and refine the eligibility criteria, and authorizes the SPI to consult with the panel of experts to be convened to develop the computer science content standards pursuant to current law.

Application

- 6) Requires an applicant local education agencies (LEA) to submit a specific plan, developed in consultation with teachers employed by the applicant LEA, for either, or both, of the following:
 - a) A computer science course designed to be of maximum value in meeting the particular needs of the students of that LEA, including students from groups historically underrepresented in the field of computer science.
 - b) Professional development for teachers employed by that LEA to acquire the knowledge and skills necessary to teach computer science to the LEA students, either as a stand-alone course or as integrated into other courses.
- 7) Requires the grant application to be on a form developed by the Superintendent of Public Instruction (SPI) and include, at a minimum, an itemized budget for the use of the grant funds, an identification of local matching resources constituting an amount equaling the amount that would be allocated from the grant pilot program, and an agreement by the grant recipient to provide the SPI with the data needed to complete the report (see #17).

Grant awards

- 8) Authorizes grant funds to be used for purposes associated with the costs of establishing or expanding computer science courses, or maintaining computer science courses that were previously established or expanded pursuant to this bill, including instructional materials, hardware, software, and firmware, and to fund professional development related to computer science education for participating teachers in accordance with the submitted plan.
- 9) Requires the SPI to award grants, not to exceed two years in duration, to applicant LEAs deemed eligible by the SPI. This bill authorizes a LEA that receives a grant to apply for a grant in a subsequent year, and prohibits grants from being automatically renewed for an additional year. This bill prohibits the SPI from awarding grants unless he or she determines there are sufficient funds in the Computer Science Education Grant Matching Account (see #10).

Matching Account

- 10) Establishes the Computer Science Education Grant Matching Account in the State Treasury to be used solely and exclusively for the grant pilot program pursuant to this bill. The purpose of the account is to provide funds for the grant pilot program.
- 11) Requires grants, and related administrative costs, to be funded by a combination of funds from the account and matching funds provided by a participating LEA. This bill requires a LEA that receives a grant to provide local matching resources, which may include in-kind donations, constituting an amount equal to the amount that

would be allocated to the local educational agencies (LEA) from the account. This bill prohibits expenditures from the account, with respect to a particular grant, from exceeding the amount of corresponding matching funds.

- 12) Authorizes the State Treasury to receive, and deposit into the Computer Science Education Grant Matching Account, any gifts, grants, or donations received from private persons or entities.
- 13) Requires the funds deposited in the account to be available, upon appropriation in the annual Budget Act or in another statute, to the Superintendent of Public Instruction (SPI), for the purpose of funding grants and covering related administrative costs to the California Department of Education (CDE). This bill requires administrative costs to be kept to a minimum, and in no event are expenditures from the account to the CDE to exceed 5% of the allocations made from the account in any fiscal year.
- 14) Requires unencumbered funds to be returned to their initial donors. This bill authorizes the SPI to refund to the donor all or a portion of any gift, grant, or donation made if the funds received from the donor have not been encumbered because the SPI has determined that there are surplus funds in the account or because the provisions of this bill have not become operative due to a lack of sufficient funds.
- 15) Prohibits the provisions related to the account from becoming operative unless and until the SPI certifies, in writing, to the Director of Finance that there are sufficient funds in the account to implement the grant pilot program. This bill defines "sufficient funds" as an amount sufficient to support at least two grants and the associated administrative costs to the CDE.
- 16) States legislative intent that no moneys from the state General Fund be used to fund the grant pilot program established by this bill.

Miscellaneous

- 17) Requires the SPI to submit an annual report to the Governor and the Legislature on the grant pilot program. This bill requires the report to be submitted by January 10, beginning in 2018, and annually thereafter through 2021. This bill requires the report to include, but not be limited to, all of the following data:
 - a) The number of applicants and grants awarded annually.
 - b) The number of student participants annually, the number of unduplicated students and students from groups historically underrepresented in the field of computer science, who have taken a computer science course or a computer science course with a teacher trained pursuant to the grant pilot program, and to the extent available, any increase in the number of students who enroll or intend to enroll in computer science programs at postsecondary educational institutions.

- c) The increase in the number of courses offered and teachers trained in computer science as a result of the grant pilot program.
 - d) The amount of grant funds awarded each fiscal year, classified by local educational agencies (LEA).
- 18) Requires the Superintendent of Public Instruction (SPI) to provide notice of the grant pilot program to all LEAs and encourage them to apply for participation. This bill authorizes any LEA to apply for participation in the grant pilot program. This bill defines “local educational agency” as a charter school, school district, or county office of education.
- 19) States legislative findings and declarations relative to the benefits of computer science education and limited access to computer science by underrepresented students.
- 20) Sunsets the provisions of this bill on July 1, 2021.

STAFF COMMENTS

- 1) ***Need for the bill.*** According to the author, “As we continue to move towards integrating computer science into all K-12 classrooms, we must also improve the future participation and success of underrepresented populations in this field of study. When we look at the number of students that took the Advanced Placement Computer Science exam in California in 2013, out of the 4,964 students, 74 were African-American, 392 were Hispanic, and 1,074 were females. Consequently, there is a need to incentivize school districts to support innovative ways to introduce and engage students from historically underrepresented groups to computer science. At the same time, it is critical to encourage school districts to offer professional development to their teachers on this emerging subject matter.”
- 2) ***Timing.*** Existing law requires the Instructional Quality Commission, on or before July 31, 2019, to consider developing and recommending to the State Board of Education, K-12 computer science content standards pursuant to recommendations developed by a group of computer science experts. One could argue that the development or expansion of computer science courses and professional development for teachers should follow the adoption of academic content standards in computer science. On the other hand, it may be necessary to first establish the Computer Science Education Grant Matching Account to secure necessary funding for these efforts.
- 3) ***Teaching credentials in computer science.*** California has three Single Subject Teaching Credentials (Mathematics, Business, and Industrial and Technology Education) and a supplementary authorization (Computer Concepts and Applications) that authorize a teacher to provide instruction in computer science. The Commission on Teacher Credentialing is currently modifying their Computer Concepts and Applications authorization to reflect a change in focus from teaching

basic computer use, keyboarding, and software application to broader preparation in computer science education. Changes to the authorization are expected later this year.

4) ***Fiscal impact.*** This bill has been amended since the last fiscal analysis. According to the Assembly Appropriations Committee's analysis of the prior version of this bill, the bill would impose:

- a) Unknown administrative costs to the California Department of Education (CDE), likely in excess of \$300,000. Costs to administer these new grants will depend on the size and scope of the grants. For example, a grant program that awards \$1 million dollars to 15 school districts will necessitate a different staffing level than a program that provides \$10 million dollars to 150 school districts. Staff will be needed to monitor account funds, develop requests for applications, review and score applications, notify grant recipients and collect data to comply with annual reporting requirements. Further, CDE indicates they do not currently have staff or resources available to promote or advocate for donations and/or grants from non-state sources.
- b) This bill does not provide a specific grant amount and specifies that the funding shall be contingent upon "sufficient funds" in the newly created fund and subject to an appropriation by the Legislature. The source of revenue for the fund will be gifts, grants or donations.

5) ***Related and prior legislation.***

RELATED LEGISLATION

AB 252 (Holden, 2015) establishes the Advanced Placement (AP) STEM Access Grant Program through July 1, 2021, for purposes of awarding funds to cover the costs associated with a high school establishing or expanding its AP science, technology, engineering and mathematics (STEM) curriculum. AB 252 is pending in the Senate Appropriations Committee.

PRIOR LEGISLATION

AB 1530 (Chau, 2014) required the Superintendent of Public Instruction to consider identifying, developing or revising model curriculum on computer science for kindergarten - 6th grade. AB 1530 was held in the Senate Appropriations Committee.

AB 1540 (Hagman, 2014) expanded the opportunity for high school students to enroll in community college computer science courses and makes other changes to concurrent enrollment provisions. AB 1540 was held in the Assembly Appropriations Committee.

AB 2210 (Ting, 2014) required the Instructional Quality Commission to consider incorporating computer science curriculum content into the mathematics, science,

history-social science, and language arts frameworks. AB 2210 was held in the Senate Appropriations Committee.

SUPPORT

California State PTA
California Teachers Association

OPPOSITION

None received.

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