
A BILL FOR AN ACT

RELATING TO EDUCATION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that the importance of
2 computer science cannot be overstated. For example, fifty per
3 cent of Americans rank computer science as one of the most
4 important subjects of study, after reading and writing, and
5 seventy-five per cent of Americans believe computer science is
6 cool.

7 The legislature further finds that computing-based
8 occupations make up more than two-thirds of all projected new
9 jobs in the science, technology, engineering, and mathematics
10 fields, commonly known as STEM fields. This means that college
11 graduates with computer science degrees are in high demand among
12 employers across the nation. Students who learn computer
13 science in high school are six times more likely to major in it,
14 and women who learn computer science in high school are ten
15 times more likely to major in it.

16 The legislature also finds that recent survey and research
17 results show a disparity between the demand for computer science



1 education and its availability. Although sixty-seven per cent
2 of parents and fifty-six per cent of teachers believe students
3 should be required to learn computer science, and ninety per
4 cent of parents want their children's schools to teach computer
5 science, only forty per cent of schools offer such courses.
6 Further, although seventy-one per cent of new STEM jobs are in
7 computing, only eight per cent of STEM graduates hold degrees in
8 computer science.

9 The legislature also finds a similar disparity at the state
10 level, where computer science has the potential to drive job
11 growth and innovation throughout the economy. As of December
12 2016, there were 1,343 open computing jobs in Hawaii, and the
13 average salary for these computing jobs was \$78,414, which is
14 much higher than the average state salary of \$47,740. However,
15 only one hundred fifty-five Hawaii students graduated with a
16 computer science degree in 2014, and only fourteen schools in
17 Hawaii offered the advanced placement computer science course in
18 2015-2016. The legislature finds that promoting computer
19 science education is a matter of statewide concern.

20 The purpose of this Act is to promote computer science
21 education in the State by:



1 (1) Requiring the department of education to:

2 (A) Develop and implement a statewide computer
3 science curricula plan for public school students
4 in kindergarten through twelfth grade; and

5 (B) Beginning with the 2021-2022 school year, ensure
6 each public high school offers at least one
7 computer science course during each school year;
8 and

9 (2) Authorizing the department of education to enter into
10 a contract or agreement with other entities to develop
11 and implement computer science teacher development
12 programs.

13 SECTION 2. Chapter 302A, Hawaii Revised Statutes, is
14 amended by adding two new sections to be appropriately
15 designated and to read as follows:

16 "§302A-A Computer science; curricula plan; public schools.

17 The department shall:

18 (1) Develop and implement a statewide computer science
19 curricula plan for public school students in
20 kindergarten through twelfth grade; and



(2) Beginning with the 2021-2022 school year, ensure that each public high school offers at least one computer science course during each school year.

§302A-B Computer science teacher development programs.

(a) The department may enter into a contract or agreement with one or more entities to develop and implement computer science teacher development programs; provided that an entity shall be:

(1) An educational agency, including a charter educational agency, or a consortia of educational agencies in the State;

(2) An institution of higher education located in the State; or

(3) A nationally recognized provider of effective computer science professional development.

(b) An entity that intends to enter into a contract or agreement with the department pursuant to this section shall first submit a proposal to the department that, at minimum, shall address how the entity plans to:

(1) Instruct teachers with varying levels of knowledge and experience in computer science;



- 1 (2) Provide teachers with concrete experience in hands-on,
2 inquiry-based practices;
- 3 (3) Utilize effective practices for professional
4 development;
- 5 (4) Emphasize the conceptual foundations of computer
6 science;
- 7 (5) Instruct teachers on how to effectively teach students
8 in computer science, including students from
9 demographic groups that are historically
10 underrepresented in computer science careers;
- 11 (6) Adapt its instruction to accommodate the particular
12 needs of teachers in different schools and districts;
13 and
- 14 (7) Meet other requirements established by the
15 department."

16 SECTION 3. There is appropriated out of the general
17 revenues of the State of Hawaii the sum of \$ or so much
18 thereof as may be necessary for fiscal year 2018-2019 to the
19 department of education to develop a computer science curricula
20 plan, offer computer science classes, and contract for teacher
21 development programs pursuant to section 2 of this Act.



1 The sum appropriated shall be expended by the department of
2 education for the purposes of this Act.

3 SECTION 4. The appropriation authorized under this Act
4 shall not lapse at the end of the fiscal year for which the
5 appropriation is made. Any unexpended and unencumbered balance
6 of the appropriation made in this Act as of the close of
7 business on June 30, 2021, shall lapse.

8 SECTION 5. In codifying the new sections added by section
9 2 of this Act, the revisor of statutes shall substitute
10 appropriate section numbers for the letters used in designating
11 the new sections in this Act.

12 SECTION 6. New statutory material is underscored.

13 SECTION 7. This Act shall take effect on July 1, 2050.



Report Title:

DOE; Computer Science; Appropriation

Description:

Requires the Department of Education (DOE) to develop and implement a statewide computer science curricula plan for public school students in K-12 and ensure each public high school offers at least one computer science course each school year. Authorizes DOE to contract for computer science teacher development programs. Appropriates funds. (SB2507 HD1)

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