

A Bill for an Act Relating to Education.

*Be It Enacted by the Legislature of the State of Hawaii:*

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

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

The legislature also finds that recent survey and research results show a disparity between the demand for computer science education and its availability. Although sixty-seven per cent of parents and fifty-six per cent of teachers believe students should be required to learn computer science, and ninety per cent of parents want their children's schools to teach computer science, only forty per cent of schools offer these courses. Further, although seventy-one per cent of new STEM jobs are in computing, only eight per cent of STEM graduates hold degrees in computer science.

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

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

- (1) Requiring the department of education to:
  - (A) Develop and implement a statewide computer science curricula plan for public school students in kindergarten through

twelfth grade that may include design thinking as part of the curricula; and

- (B) Beginning with the 2021-2022 school year, ensure that each public high school offers at least one computer science course during each school year; and
- (2) Authorizing the department of education to enter into a contract or agreement with other entities to develop and implement computer science teacher development programs.

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

**“§302A- Computer science; curricula plan; public schools.** The department shall:

- (1) Develop and implement a statewide computer science curricula plan for public school students in kindergarten through twelfth grade that may include design thinking as part of the curricula; 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- 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;
- (2) Provide teachers with experience in hands-on, inquiry-based practices;
- (3) Utilize effective practices for professional development;
- (4) Emphasize the conceptual foundations of computer science;
- (5) Instruct teachers how to effectively teach students in computer science, including students from demographic groups that are historically underrepresented in computer science careers;
- (6) Adapt its instruction to accommodate the particular needs of teachers in different schools and districts; and
- (7) Meet other requirements established by the department.”

SECTION 3. There is appropriated out of the general revenues of the State of Hawaii the sum of \$500,000 or so much thereof as may be necessary for fiscal year 2018-2019 to the department of education to develop a computer science curricula plan, offer computer science classes, and contract for teacher development programs pursuant to section 2 of this Act.

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

## **ACT 51**

**SECTION 4.** Any unexpended and unencumbered balance of the appropriation made in this Act as of the close of business on June 30, 2019, shall lapse.

**SECTION 5.** New statutory material is underscored.<sup>1</sup>

**SECTION 6.** This Act shall take effect on July 1, 2018.

(Approved June 21, 2018.)

### **Note**

1. Edited pursuant to HRS §23G-16.5.