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

S.B. NO. ²⁵⁰⁷ S.D. 2

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 the knowledge of

21   computer science 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) Permit students attempting to graduate from

6   public high schools to fulfill some math and

7   science requirements through the satisfactory

8   completion of computer science coursework; and

9   (2)   Requiring the University of Hawaii to permit

10   applicants to fulfill certain admission requirements

11   by demonstrating the satisfactory completion of high

12   school computer science coursework.

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 **credits.** (a) 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, which shall

21   include:

1   (A)   The goals of the computer science curricula;

2   (B)   Strategies for accomplishing the department's

3   goals; and

4   (C)   Timelines for carrying out the strategies

5   described in the plan;

6   (2) Establish and publish public school computer science

7   standards that will apply to all grade levels from

8   kindergarten through twelfth grade. The standards

9   established by the department shall focus on the

10   creation and use of software and computing

11   technologies at all grade levels from kindergarten

12   through twelfth grade;

13   (3) Establish dedicated computer science administrative

14   and leadership positions within the department;

15   (4) Establish means by which public school teachers may

16   become certified in teaching computer science; and

17   (5) Beginning with the 2021-2022 school year, ensure that

18   each public high school offers at least one computer

19   science course during each school year.

20   (b) Each computer science course offered by a public

21 school:

S.B. NO. 2507 S.D. 2

1   (1) Shall comply with the curriculum standards and

2   requirements established by the department pursuant to

3   this section; and

4   (2) May be taught in a traditional classroom setting,

5   blended learning environment, online environment, or

6   any other technology-based environment that is

7   appropriate for participating students.

8   (c) The department shall permit any student intending to

9 graduate from a public high school in 2022 or any year

10 thereafter to elect to fulfill:

11   (1) One mathematics credit requirement by satisfactorily

12   fulfilling one computer science credit; provided that

13   the student has fulfilled the requirements of second-

14   year algebra; and

15   (2) One science credit requirement by satisfactorily

16   fulfilling one computer science credit;

17 provided that the same computer science credit shall not fulfill

18 more than one credit requirement.

19   §302A-B Computer science teacher development programs.

20 (a) The department shall develop and implement professional

1   development programs for teachers who teach computer science

2   courses required under section 302A-A.

3   (b) The department may elect to fulfill the requirements

4   of subsection (a) by entering into a contract or arrangement

5   with one or more other entities to develop and implement the

6   computer science teacher development programs; provided that the

7   entity shall be:

8   (1) An educational agency, including a charter educational

9   agency, or a consortium of educational agencies in the

10   State;

11   (2) An institution of higher education located in the

12   State; or

13   (3) A nationally recognized provider of effective computer

14   science professional development, as determined by the

15   department based on information provided pursuant to

16   subsection (c).

17   (c) An entity that intends to enter into a contract or

18   agreement with the department pursuant to this section shall

19   first submit a proposal to the department that, at minimum,

20   shall address how the entity plans to:

1   (1) Instruct teachers with varying levels of knowledge and

2   experience in computer science;

3   (2) Provide teachers with concrete experience in hands-on,

4   inquiry-based practices;

5   (3) Utilize effective practices for professional

6   development;

7   (4) Emphasize the conceptual foundations of computer

8   science;

9   (5) Instruct teachers on how to effectively teach students

10   in computer sciences, including students from

11   demographic groups that are historically

12   underrepresented in computer science careers;

13   (6) Adapt its instruction to accommodate the particular

14   needs of teachers in different schools and districts;

15   and

16   (7) Meet other requirements established by the

17   department."

18   SECTION 3. Chapter 304A, Hawaii Revised Statutes, is

19   amended by adding a new section to be appropriately designated

20   and to read as follows:

S.B. NO. ²⁵⁰⁷ S.D. 2

1   "§304A-   Computer science; curricula plan; credits. The

2 University of Hawaii shall permit any applicant for admission to

3 a University of Hawaii campus for the 2022 academic year or any

4 academic year thereafter to fulfill:

5   (1)   One high school mathematics unit requirement by

6   demonstrating that the applicant satisfactorily earned

7   one computer science unit; provided that the student

8   also demonstrates that the student fulfilled second-

9   year algebra requirements; and

10   (2)   One high school science unit requirement by

11   demonstrating that the applicant satisfactorily earned

12   one computer science unit;

13 provided that the same computer science unit shall not fulfill

14 more than one unit requirement."

15   SECTION 4.   There is appropriated out of the general

16 revenues of the State of Hawaii the sum of $ or so

17 much thereof as may be necessary for fiscal year 2018-2019 to

18 the department of education to fulfill its duties under section

19 2 of this Act.

20   The sum appropriated shall be expended by the department of

21 education for the purposes of this Act.

S.B. NO. ²⁵⁰⁷ S.D. 2

1   SECTION 5. The appropriation authorized under this Act

2 shall not lapse at the end of the fiscal year for which the

3 appropriation is made. Any unexpended and unencumbered balance

4 of the appropriation made in this Act as of the close of

5 business on June 30, 2019, shall lapse.

6   SECTION 6. In codifying the new sections added by section

7 2 of this Act, the revisor of statutes shall substitute

8 appropriate section numbers for the letters used in designating

9 the new sections in this Act.

10   SECTION 7. New statutory material is underscored.

11   SECTION 8. This Act shall take effect on July 1, 2018.

S.B. NO. 2507 S.D. 2

Report Title:
DOE; UH; Computer Science; Graduation; Admission; Appropriation

Description:
Requires the Department of Education to: (1) develop and implement a statewide computer science curricula plan for public schools; and (2) permit students to fulfill some graduation requirements through computer science coursework. Appropriates moneys to the Department of Education. Requires the University of Hawaii to permit applicants to fulfill certain admission requirements through computer science coursework. (SD2)

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

Date: 03/16/2018
Time: 02:00 PM
Location: 309
Committee: House Education
House Higher Education

Department:	Education
Person Testifying:	Dr. Christina M. Kishimoto, Superintendent of Education
Title of Bill:	SB 2507, SD2 RELATING TO EDUCATION.
Purpose of Bill:	Requires the Department of Education to: (1) develop and implement a statewide computer science curricula plan for public schools; and (2) permit students to fulfill some graduation requirements through computer science coursework. Appropriates moneys to the Department of Education. Requires the University of Hawaii to permit applicants to fulfill certain admission requirements through computer science coursework. (SD2)

Department's Position:
The Department of Education supports the intent of SB2507, SD2.

Currently, the Department is developing a multi-year comprehensive computer science plan. This plan will identify K-12 curriculum, software, and technologies.

To ensure equitable and expanded access to computer science learning opportunities for K-12 students by 2022, the Department is addressing the following eight deliverables:

1) Adoption of Computer Science Standards aligned to national efforts,
2) Development of single courses and pathway courses for maximum student access,
3) Identification of standards-based curricular resources,
4) Quality K-12 professional development in computer science including fellowships and externships for teachers,
5) A schedule of academic competitions in partnership with business, industry and government,
6) Expansion of regional and school-based student demonstrations,
7) Increased partnerships for access to meaningful internship and apprentice models, and
8) Improved career counseling and information sharing around current and emerging computer science related work and study opportunities in Hawaii.

Respectfully, the Department offers comment on the following proposals in this measure:

Computer Science Standards (page 4, lines 6-12): The Department is in the process of gathering feedback from stakeholders to adopt K-12 Computer Science Standards aligned to national efforts.

State Leadership (page 4, lines 13-14): A state leadership team has been established to lead Computer Science (CS) efforts.

Teacher Certification (page 4, lines 15-16): The multi-year plan includes action items to clearly identify the teacher certification process.

High School Course Offerings (page 3, lines 5-8 and page 4, lines 17-19): The Department currently offers Computer Science courses at 21 high schools. If a CS course is not offered by a high school, online options are available for students. Additionally, students are able to earn a fourth Math or Science credit by satisfactorily completing a CS course and Algebra II. With these credits, students are eligible to earn an Academic Honors and/or STEM Honors designation.

Contracts for Professional Development (page 6, lines 3-20 and page 7, lines 1-17): The Department shall follow all procurement guidelines if professional development services are rendered from external agencies such as institutes of higher education and nationally recognized providers.

The Department defers comment to the University of Hawaii for admission requirements related to computer science coursework.

Thank you for this opportunity to provide testimony on SB 2507, SD2.

The Hawaii State Department of Education seeks to advance the goals of the Strategic Plan which is focused on student success, staff success, and successful systems of support. This is achieved through targeted work around three impact strategies: school design, student voice, and teacher collaboration. Detailed information is available at www.hawaiipublicschools.org.

david.miyashiro@hawaiikidscan.org   **David Miyashiro**
hawaiikidscan.org   Executive Director

March 16, 2018

Committee on Education
Rep. Justin H. Woodson, Chair
Rep. Sam Satoru Kong, Vice Chair

Committee on Higher Education
Rep. Angus L.K. McKelvey, Chair
Rep. Mark J. Hashem, Vice Chair

State Capitol
415 South Beretania Street
Honolulu, HI 96813

Aloha Chairs Woodson and McKelvey, Vice Chairs Kong and Hashem and Members of the Committee,

Founded in 2017, HawaiiKidsCAN is a nonprofit organization committed to ensuring that Hawaii has an excellent and equitable education system that reflects the true voices of our communities and, in turn, has a transformational impact on our children and our state. HawaiiKidsCAN is a branch of 50CAN: The 50-State Campaign for Achievement Now.

HawaiiKidsCAN is supporting SB 2507 SD2 to advance the momentum for greater equity and access to computer science (CS) learning opportunities.

Our changing economy

- CS and other science, technology, engineering and math (STEM) knowledge will become increasingly important as our diverse economy evolves. Between 2017 and 2027, STEM-related occupations are projected to grow by 8 percent in Hawaii, compared with just 4 percent for all other occupations.[1] In particular, some of Hawaii's fasting growing occupations between 2014 and 2024 will require CS experience, including web development (26 percent growth), computer systems analysis (20 percent growth) and software development (18 percent growth).[2] In 2016, these and other computer and

---

[1] "ECS Vital Signs: STEM Demand Hawaii." *Education Commission of the States.* http://vitalsigns.ecs.org/state/Hawaii/demand

[2] Software development includes systems software and applications software. "Employment Projections for Industries and Occupations." August, 2016. *Hawaii Workforce Infonet.* https://www.hiwi.org/admin/gsipub/htmlarea/uploads/Long-TermProjections-2014-2024-State.pdf

mathematical occupations carried a median hourly wage of $35.87 in Hawaii, nearly double the median hourly wage of $19.24 for all jobs that year.[3]

- These new skills are becoming increasingly important as our economy changes, with reports suggesting that automation may eliminate a third of our nation's jobs by 2030.[4] An initial investment in our students in these skills will be more than paid back as students become our workforce of tomorrow, ensuring that Hawaii is poised to not only survive this changing global economy, but thrive.

Our students need more access to CS opportunities

- To help meet the increasing demand for K-12 CS teachers, Hawaii should enable all high schools to offer computer science professional development to teachers. This is a critical step toward increasing K-12 CS capacity while preservice CS preparation programs are being developed for future educators. An initial allocation of $500,000 would enable each public school to train at least 1 existing teacher in computer science, creating the foundation for a robust computer science learning environment in Hawaii. This initial state investment in computer science could also be leveraged into public-private partnerships to further expand training access to additional teachers or around new innovations.

- Of the 14 public schools offering AP Computer Science courses, four received Title 1 funding in 2017-18, suggesting a shortage of courses available to low-income students.[5] Increasing access to these courses, especially for underrepresented communities, will provide students with additional opportunities to discover the CS field and help eliminate the gender- and ethnicity-based inequities seen in the CS workforce.

- In addition to technical knowledge, the skills taught in CS courses can help students across a range of other school subjects, including math, science and the humanities.[6] As we look to close our persistent achievement gaps across our schools, we must continue to explore rigorous and relevant learning experiences for our diverse students.

Closing gender gaps

- Of the 290 AP CS test takers in Hawaii in 2017, only 32 percent were female, highlighting the gender inequity in K-12 CS classes. Though this is a 70 percent increase from 2016

---

[3] "Occupational Employment and Wage Data - State of Hawaii 2016." August, 2017. Hawaii Workforce Infonet. https://www.hiwi.org/admin/gsipub/htmlarea/uploads/OES_2016_publication.pdf

[4] "Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation." Manyika, J. et al. *McKinsey Global Institute*. December 2017. https://goo.gl/GLShNP

[5] "Title I Eligibility Data by Complex Area for School Year 2017-2018." *Hawaii State Department of Education*. http://www.hawaiipublicschools.org/DOE percent20Forms/TitleI17-18.pdf

[6] "Trends in the State of Computer Science in U.S. K-12 Schools". Google Inc. & Gallup Inc. 2016. *http://goo.gl/j291E0*

and a whopping 557 percent increase from 2007, female participation on AP CS exams still pales in comparison to male participation.[7] Early exposure to CS can have a significant impact on eliminating the gender gap in the CS labor force. After participating in a hands-on introduction to coding through an *Hour of Code* event, female students are 10 percent more likely to say they like CS.[8] Encouraging women to enroll in AP CS courses in high school can increase the likelihood that they will go on to major in CS in college.[9] Nationally, high school students who take AP CS are twice as likely to try computer science in college and 6 times more likely to major in CS than those who take non-AP CS in high school. Women who learn CS in high school are 10 times more likely to study it in college.[10]

- Data shows that women constitute just 26 percent of employees in computing jobs, and just 30, 15 and 10 percent of tech roles in major companies Google, Facebook and Twitter, respectively.[11] These numbers are especially troubling when we consider the value of diverse workplaces, from greater innovation[12] to more startup success.[13] Closing these gaps at the K-12 level is essential if we are to prevent them from occurring at the office.

The world around us is changing. We must embrace the challenge of providing our children with an education that keeps up with the world. For more data on the importance of CS education in Hawaii, please see HawaiiKidsCAN's *State of Computer Science Education in Hawaii 2018* report at https://tinyurl.com/StateofCS.

Mahalo,

David Miyashiro
Founding Executive Director
HawaiiKidsCAN

---

7 "AP Program Participation and Performance State Report 2017." *CollegeBoard.* https://research.collegeboard.org/programs/ap/data/participation/ap-2017

8 The Hour of Code: Impact on Attitudes Towards and Self-Efficacy with Computer Science." Phillips, Rachel and Benjamin Brooks. January, 2017. Code.org. https://code.org/files/HourOfCodeImpactStudy_Jan2017.pdf
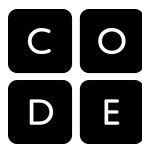
9 "AP Students in College: An Analysis of Five-Year Academic Careers" *College Board Research Report No. 2007-4.* Morgan, R. and John Kalric. http://research.collegeboard.org/sites/default/files/publications/2012/7/researchreport-2007-4-ap-students-college-analysis-five-year-academic-careers.pdf.

10 "Anybody Can Learn." *Code.org.* *http://blog.code.org/post/143007230537/computer-science-the-impact-of-k-12-on-university*

11 "The Stats On Women In Tech Are Actually Getting Worse." Peck, E. *Huffington Post.* December 6, 2017. https://www.huffingtonpost.com/2015/03/27/women-in-tech_n_6955940.html

12 "Diversity in Business Really Does Boost Innovation, According to a New Study." *FastCompany.com.* January 12, 2018. https://goo.gl/V2Ba2f

13 "Data Doesn't Lie: Tech Firms Need to Hire More Women to Succeed." Lacy, S. Wired.co.uk. December 27, 2017. http://www.wired.co.uk/article/sarah-lacy-gender-bias-silicon-valley

March 16, 2018

Re: SB 2507, SD2; Strongly Support

Dear Committee Members,

Code.org and Women in Technology (Maui Economic Development Board) strongly support SB 2507, SD 2, and recommend funding it at $500K this year. This bill allocates funding for computer science professional development for teachers, which is critical to ensuring that the state's schools have the capacity to offer courses in this subject. Further, the bill requests that the Department of Education develops a statewide computer science curricula plan and ensure that each public high school offers at least one computer science course in 2021-2022. The Department of Education has already established a team that is working to create opportunities for every K-12 student by 2022. Based on success in other states, we believe that this work, combined with the funding in the bill, will have immediate impact on access to high-quality computer science education.

Computing is a foundational skill for K-12 students. It develops students' computational and critical thinking skills and teaches them how to create—not just use—new technologies. Computer science is driving job growth and innovation in Hawaii and throughout the United States. More than half of projected jobs in STEM fields are in computing occupations, and computer science is one of the most in-demand degrees for new college graduates. According to the Conference Board, there are over 1,400 open computing jobs in the State of Hawaii, with an average salary salary of $80,734. The policies encouraged by this bill would better prepare Hawaii's students for high paying, in-demand careers.

Further, only 16 schools in Hawaii (that's only 19% of Hawaii schools with AP programs) even offer an AP Computer Science course. Out of 290 exams taken in AP Computer Science last year, only 32% of those were taken by female students, 43 exams were taken by Hispanic of Latino students, 1 exam was taken by a Black student, and 12 exams were taken by Native Hawaiian or Pacific Islander students. We know that students who have access to these courses early on are more likely to choose to take the subject later on. And we also know that students who live in rural or urban areas are less likely to have access to computer science courses. No teachers graduated from a university in Hawaii last year prepared to teach computer science. This is why immediate dedicated funding for preparing existing teachers to offer these courses is critical. Our calculations estimate $800,000 is needed to prepare one teacher in each school in the state (with the assumption that 25% of schools already have a teacher); we recommend $500,000 in funding for this year to make a strong step towards this goal.

Thank you for your efforts in providing young people in Hawaii the education they need to be successful upon leaving the K-12 system. Code.org and Women in Technology support SB 2507, SD 2, which will position Hawaii as a national leader in K-12 computer science education. If you have any questions, please contact Katie Hendrickson at Katie@code.org, Cameron Wilson at Cameron@code.org, or Isla Young at (808) 875-2307. Thank you for your consideration of this matter.

Sincerely,

Cameron Wilson
VP for Government Affairs
Code.org
www.code.org

Isla Young
Director K12-STEM Education
Women in Technology, MEDB
Kihei, Hawaii

www.medb.org
www.womenintechnology.com
www.stemworkshawaii.com

Microsoft

March 15, 2018

Representative Justin H. Woodson, Chair
Committee on Education

Representative Angus L. K. McKelvey, Chair
Committee on Higher Education

Re: Senate Bill 2507, SD2 Relating to Education
        Hearing: Friday, March 16, 2018 at 2:00 p.m.
        Conference Room: 309

Dear Chairs Woodson and McKelvey, and Members of the Joint Committees:

On behalf of Microsoft Corporation, we are writing in strong support for SB 2507, SD2, which if enacted, would greatly expand computer science education throughout the State and better equip Hawaii's students with the computing skills needed to thrive in the 21st century economy.

SB 2507, SD2 would make key improvements, including the development and implementation of statewide K-12 computer science curricula, permitting computer science courses to meet certain math and/or science graduation requirements, requiring the University of Hawaii to permit applicants to fulfill certain admission requirements through the completion of computer science coursework and by establishing a timeline to ensure that every public high school in the state offer at least one computer science course by the 2021-2022 school year. These changes will position the State to better prepare and strengthen the pipeline into many STEM and computing fields.

The importance of computer science to the economy of Hawaii and the United States cannot be overstated. Computing occupations are the number 1 source of all new wages across the country and make up more than two-thirds of all projected new jobs in the STEM fields. According to Code.org, there were 1,403 open computing jobs in the state of Hawaii, more than 4 times the average demand rate across the state, yet only 16 schools throughout the state offered an AP Computer Science course in the 2016-2017 school year. This bill will improve Hawaii students' ability to obtain the skills to flourish now and in the future.

Again, Microsoft is pleased to strongly support SB 2507, SD2 as it moves forward in the legislative process.

Sincerely,

Jonathan Noble   Allyson Knox
Director, Government Affairs   Director, Education Policy
Microsoft Corporation   Microsoft Corporation

devleague

COMMITTEE ON EDUCATION

Rep. Justin H. Woodson, Chair

Rep. Sam Satoru Kong, Vice Chair

Rep. Richard P. Creagan
Rep. Mark J. Hashem
Rep. Kaniela Ing
Rep. Lei R. Learmont
Rep. Angus L.K. McKelvey

Rep. Takashi Ohno
Rep. Richard H.K. Onishi
Rep. Sean Quinlan
Rep. Lauren Kealohilani Matsumoto

COMMITTEE ON HIGHER EDUCATION
Rep. Angus L.K. McKelvey, Chair
Rep. Mark J. Hashem, Vice Chair

Rep. Richard P. Creagan
Rep. Kaniela Ing
Rep. Sam Satoru Kong
Rep. Lei R. Learmont
Rep. Takashi Ohno

Rep. Richard H.K. Onishi
Rep. Sean Quinlan
Rep. Justin H. Woodson
Rep. Lauren Kealohilani Matsumoto

Friday, March 16, 2018 at 2:00PM, Conference Room 309

In consideration of
SB2507 SD2, **Relating to Education**

We support the Computer Science curricula plan to develop and implement a statewide program for students in K-12, permit students to fulfill some graduation requirements through computer science coursework, appropriates funds to the Department of Education and requires the University of Hawaii to permit applicants to fulfill certain admission requirements through computer science coursework.

DevLeague (http://www.devleague.com/) is the premier technical boot camp in the Pacific designed to provide mentorship and training to motivated individuals seeking a career change. We design our own curriculum based on relevant industry standards, teach in-demand technical skills such as JavaScript Web Engineer, Cyber Security Professional, Big Data Analyst and Enterprise Software Developer to help our adult students onboard with career starts into the software industry.

For the last 3.5 years, we have taught real-world software programming to middle and high school students. We started off with private schools such as Punahou School, Mid-Pacific Institute, Maryknoll School and Hawaii Baptist Academy where we created and

honed our curriculum. Today, we are in these Hawaii DOE public schools with the following day-time, for credit courses:

School	Course	Year
Waipahu High School	Web Development I	2016-2017
	Web Development II Capstone	2017-2018
	Cybersecurity	2017-2018
Kapolei Middle School	Web Development I	2017-2018
Kapolei High School	Cybersecurity	2017-2018
Roosevelt High School	Cybersecurity	2017-2018
Hawaii Technology Academy	Game Development I	2017 Fall
	Web Development I	2018 Spring
James Campbell High School	Cybersecurity	2018 Spring
Kalani High School	Intro to Python Programming	2018 Spring

The private-public partnership funding for these DOE programs are paid for by the kind donations from Public School of Hawaii Foundation, Hawaii Children's Foundation and workforce training funds provided by Department of Labor and Industrial Relations Workforce Division. These funds are designed to kick-start the DOE coding programs, establish curriculum, train teachers and build college and career pathways for students in industry-focused academy-based schools. It's a start.

In summer 2017, we held a two-week intensive educator training program where five DOE teachers learned hands-on web development so that they could design their own curriculum to take back into their classroom. The teacher from Hawaii Technology Academy then taught web development to a classroom of students and also taught two more teachers web development so they too could teach more students.

From February to May, 2018, we are currently conducting a two-month online educator training program where six DOE teachers are learning hands-on basics of bringing coding into the classroom. The educators learn computational thinking concepts, coding fundamentals, and tools allowing educators to gain understanding and build confidence. By the end of the program, educators will be able to effectively teach and implement coding into their curriculum, and equip their students with a "can do" growth mindset. We created the online educator training program to enable neighbor island participation. One participant is located in Lihue, Kauai.

The ask: $500,000 as recommended by Code.org. The biggest constraints now are more funding for schools and educator training in computer science. Now is the time to boldly invest in computer science at the K-12 level to build upon and continue the success of what we started so that every high school has a at least one computer science program and/or courses that fulfils the computer science credit. This serves multiple purposes:

- Exposes and engages students in STEM-related courses

- Fulfill graduation requirements through computer science coursework
- Enables college-bound students to fulfill a computer science credit
- Develops foundational skills for career-pathway students into IT apprenticeships and the entry-level technical workforce

Thank you for the opportunity to offer this testimony.

Mahalo!

Russel Cheng
Co-founder, Director

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	OCC Legislative Priorities Committee, Democratic Party of Hawai'i	Support	No

Comments:

      Good afternoon, my name is Melodie Aduja. I serve as Chair of the Oahu County Committee ("OCC") on Legislative Priorities of the Democratic Party of Hawaii. Thank you for the opportunity to provide written testimony on House Bill No. **SB2507 SD2** relating to DOE; UH; Computer Science; Graduation; Admission; and an appropriation.

      The OCC Legislative Priorities Committee is in favor of House Bill No. **SB2507 SD2**   and supports its passage.

      House Bill No. **SB2507 SD2**, is in accord with the Platform of the Democratic Party of Hawai'i ("DPH"), 2016, as it requires the Department of Education to: (1) develop and implement a statewide computer science curricula plan for public schools; and (2) permit students to fulfill some graduation requirements through computer science coursework; appropriates moneys to the Department of Education; and requires the University of Hawaii to permit applicants to fulfill certain admission requirements through computer science coursework.

      Specifically, the DPH Platform states, "[w]e recognize that the responsible use and development of technology in all its manifestations offers immense potential for our community, government, including institutions of higher education and business sectors. We encourage synergistic research, development, commercialization and educational programs to promote technological proficiency and innovation. In particular we support Science, Technology, Engineering and Math (STEM) initiatives in our public, private and charter schools as these prepare the next generation to address the needs of our state. We also support programs that facilitate incubator, i.e.start-up, opportunities for new and promising technologies, and encourage the local retention of our intellectual resources." (Platform of the DPH, P. 3, Lines 149-156 (2016)).

      Given that **SB2507 SD2** requires the Department of Education to: (1) develop and implement a statewide computer science curricula plan for public schools; and (2) permit students to fulfill some graduation requirements through computer science coursework; appropriates moneys to the Department of Education; and requires the University of Hawaii to permit applicants to fulfill certain admission requirements through

computer science coursework, it is the position of the OCC Legislative Priorities Committee to support this measure.

Thank you very much for your kind consideration.

Sincerely yours,

/s/ Melodie Aduja

Melodie Aduja, Chair, OCC Legislative Priorities Committee

Email: legislativepriorities@gmail.com, Text/Tel.: (808) 258-8889

SB-2507-SD-2
Submitted on: 3/15/2018 2:03:56 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Justin Delos Reyes	Individual	Support	No

Comments:

My name is Justin Delos Reyes and I am in support of bill SB2507! I am a Computer Science teacher at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Emil Nerona	Individual	Support	No

Comments:

My name is Emil Nerona and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Raiden Fia	Individual	Support	No

Comments:

My name is Raiden Fia and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Aron Miguel Manalang	Individual	Support	No

Comments:

My name is Aron Miguel Manalang and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2

Submitted on: 3/15/2018 2:06:29 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Miggy Sabater	Individual	Support	No

Comments:

My name is Sealthiel Miggy Sabater and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Evian Garduque	Individual	Support	No

Comments:

My name is Evian Garduque and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Naomi Hoyohoy	Individual	Support	No

Comments:

My name is Naomi Hoyohoy and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
John Amita	Individual	Support	No

Comments:

My name is John Amita and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Nigel Arias	Individual	Support	No

Comments:

My name is Nigel Arias and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2
Submitted on: 3/15/2018 2:07:35 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Thomas Galeai	Individual	Support	No

Comments:

My name is Thomas Galeai and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2
Submitted on: 3/15/2018 2:07:43 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Julia	Individual	Support	No

Comments:

My name is Julia Danielson and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2
Submitted on: 3/15/2018 2:07:47 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
arlene sagaoinit	Individual	Support	No

Comments:

My name is Arlene Sagaoinit and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Gianni Domingo	Individual	Support	No

Comments:

My name is Gianni Domingo and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Izaya Delos Santos	Individual	Support	No

Comments:

My name is Izaya Delos Santos and I am in support of bill SB2507! I am a student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2

Submitted on: 3/15/2018 2:09:18 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Aprilyn Pena	Individual	Support	No

Comments:

My name is Aprilyn Pena and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2
Submitted on: 3/15/2018 2:09:33 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
cameron	Individual	Comments	No

Comments:

My name is Cameron Harney and I am in support of bill SB2507! I am a student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Cheana Alfeche	Individual	Support	No

Comments:

My name is Cheana Alfeche and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Mose Timoteo	Individual	Support	No

Comments:

My name is Mose Timoteo and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Jason Williams	Individual	Support	No

Comments:

My name is Jason Williams and I am in support of bill SB2507! I am a Computer Science teacher at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
caleb jarra	Individual	Support	No

Comments:

My name is Caleb Jarra and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2
Submitted on: 3/15/2018 2:13:15 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Christian Nalos	Individual	Support	No

Comments:

My name is Christian Nalos and I am in support of bill SB2507! I am a AP Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2
Submitted on: 3/15/2018 2:14:31 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Seth	Individual	Support	No

Comments:

My name is Seth Coleman and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Ernest	Individual	Support	No

Comments:

My name is Ernest Abuel and I am in support of bill SB2507! I am a Computer Science student at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

SB-2507-SD-2
Submitted on: 3/15/2018 2:15:32 PM
Testimony for EDN on 3/16/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Rica-Jane Laforteza	Individual	Support	No

Comments:

My name is Rica-Jane Laforteza and I am in support of bill SB2507! I am a Computer Science science at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Submitted By	Organization	Testifier Position	Present at Hearing
Justin Delos Reyes	Individual	Support	No

Comments:

My name is Justin Delos Reyes and I am in support of bill SB2507! I am a Computer Science teacher at Campbell High School and believe the state needs to do more to address the apparent need of funding and support of Computer Science courses and accessibility for grades K-12. All anyone needs to do is reflect on the news and current career trends to see why this is a very important issue, from protecting your identity, your financial data, health data, education data, personal data, and even our democracy, to careers providing livable wages making $50K to $70K starting more than ever do we need Computer Scientist, Information Technologist, and CyberSecurity specialist. Hawaii is a unique place and we are at a crossroads where if done right we can provide a formidable work force in the CS fields providing livable wages to our own state citizens and doing our part to contribute to our national security. My Computer Science classes have been visited by decision makers in the DOE, business leaders, FBI, NSA, various branches of military personnel who have all been saying the same thing; what can we do to support, what can we do to get the word out, what can we do to get funding, what can we do? The need is now and it requires adequate support and funding please support bill SB2507 to provide Computer Science education and accessibility to all students in grades K-12!

Testimony Presented Before the
House Committees on Education and Higher Education
March 16, 2018 at 2:00 p.m.
By
Donald O. Straney
Vice President for Academic Planning and Policy
University of Hawai'i System

LATE

SB 2507 SD2 – RELATING TO EDUCATION

Chairs Woodson and McKelvey, Vice Chairs Kong and Hashem, and members of the committees:

Thank you for the opportunity to comment on SB 2507 SD2 that requires the Hawai'i Department of Education to develop and implement a statewide computer science curricula plan for public schools and permits students to fulfill some graduation requirements through computer science coursework. SB 2507 SD2 requires the University of Hawai'i to permit applicants to fulfill certain admission requirements through computer science coursework.

The University of Hawai'i (UH) appreciates the efforts of the legislature to boost job growth and innovation in Hawai'i through the development of computer science education. UH defers to the Department of Education in matters of curricula planning for public schools, and offers these comments, pertaining only to Section 3 of SB 2507 SD2 (pages 7-8) which would amend Chapter 304A of the Hawai'i Revised Statutes by adding language on admission requirements to any University campus in 2022 or thereafter.

Specifically, this section states that the University of Hawai'i shall permit any applicant for admission to fulfill: a) one high school mathematics unit requirement by demonstrating that the applicant satisfactorily earned one computer science unit provided that the student also has fulfilled second-year algebra requirements; and b) one high school science unit requirement by demonstrating that the applicant satisfactorily earned one computer science unit, provided that the same computer science unit shall not fulfill more than one unit requirement.

While UH generally recognizes the need for strong science curricula, it is unclear that any change is needed to the admissions requirements at UH, as stated in SB 2507 SD2, to support computer science. The admissions eligibility at the UH community colleges are to be 18 years of age or older and to have earned a high school diploma, GED, or equivalent. At UH four-year campuses, students seeking admissions could use a computer science course as one or more electives.

The UH does not support substituting computer science courses for the foundational science courses such as biology, chemistry, and physics, or math courses. Instead, UH encourages high school students to supplement this foundation with computer science courses, particularly students intending to go into the STEM fields, including information and communications technology (ICT).

Thank you very much for the opportunity to provide comments on SB 2507 SD2.