To amend the Elementary and Secondary Education Act of 1965 to strengthen elementary and secondary computer science education, and for other purposes.

IN THE SENATE OF THE UNITED STATES

March 4, 2015

Mr. CASEY (for himself and Mr. RUBIO) introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

A BILL

To amend the Elementary and Secondary Education Act of 1965 to strengthen elementary and secondary computer science education, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Computer Science Education and Jobs Act of 2015”.

SEC. 2. REFERENCES.

Except as otherwise expressly provided, whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provi-
sion, the reference shall be considered to be made to a section or other provision of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6301 et seq.).

SEC. 3. COMPUTER SCIENCE DEFINITIONS.

(a) IN GENERAL.—Section 9101 (20 U.S.C. 7801) is amended—

(1) by redesignating paragraphs (7) through (10), (11), and (34) through (43) as paragraphs (8) through (11), (34), and (35) through (44), respectively, and by moving paragraph (34) (as so redesignated) to follow paragraph (33);

(2) by inserting after paragraph (6) the following:

“(7) COMPUTER SCIENCE.—The term ‘computer science’ means the study of computers and algorithmic processes and includes the study of computing principles, computer hardware, software design, computer applications, and the impact of computers on society.”;

(3) in paragraph (34), as redesignated by paragraph (1)—

(A) in the paragraph heading, by striking “CORE ACADEMIC” and inserting “PRIORITY”; and

(B) by striking “core academic” and inserting “priority”; and
(C) by striking “and geography” and inserting “geography, and computer science”; and

(4) in paragraph (35)(A), as redesignated by paragraph (1)—

(A) in clause (i), by inserting “(including computer science)” after “academic subjects”; and

(B) in clause (xi), by striking “core academic subjects” and inserting “priority subjects”.

(b) CONFORMING AND TECHNICAL AMENDMENTS.—

The Elementary and Secondary Education Act of 1965 (20 U.S.C. 1001 et seq.) is amended—

(1) in each of sections 1112(g)(4), 1603(b)(2)(B), 2113(c)(4), 2403(2)(A)(i)(I), 2415(3)(C), 3231(c)(2), 3302(e)(1)(B)(ii), and 7121(c)(1)(B), by striking “core academic subjects” and inserting “priority subjects”;

(2) in each of sections 1116(b)(3)(A), 1119(a)(2), 2123(a), 2134(a), 2416(a), 3102, 3115(c), and 4201, by striking “core academic subjects” each place the term appears and inserting “priority subjects”.

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SEC. 4. EXPANDING ACCESS TO ADVANCED PLACEMENT COMPUTER SCIENCE.

Section 1705(e)(4) (20 U.S.C. 6535(e)(4)) is amended by striking “and science” and inserting “science, and computer science”.

SEC. 5. COMPUTER SCIENCE IN STATE PLANS AND STATE REPORT CARDS.

(a) STATE PLANS AND STATE REPORT CARDS.—Section 1111 (20 U.S.C. 6311) is amended—

(1) in subsection (b)—

(A) in paragraph (1)(E), by inserting “, including computer science,” after “For the subjects”; and

(B) in paragraph (8)—

(i) in subparagraph (D), by striking “and” at the end;

(ii) in subparagraph (E), by striking the period at the end and inserting “; and”; and

(iii) by adding at the end the following:

“(F) how the State educational agency shall consider including computer science in academic standards, academic accountability, and assessments under subsection (b).”; and
(2) in subsection (h)(1), by adding at the end the following:

“(E) Workforce needs information.—

The State shall include, in the State report card, a description of the 10 most in-demand occupations in the State for the most recent year for which data are available, and how the subjects being taught in the public elementary schools and secondary schools of the State are exposing students to knowledge and skills that are or will be in demand in the State and local workforces.”.

(b) Highly Qualified Teachers.—Section 1119(a)(2) (20 U.S.C. 6319(a)(2)) is amended by striking the period after “school year” and inserting “, except that computer science teachers shall be highly qualified not later than the end of the 2016–2017 school year.”.

SEC. 6. COMPUTER SCIENCE IN MATHEMATICS AND SCIENCE PARTNERSHIPS.

(a) Subpart Heading.—Part B of title II (20 U.S.C. 6661 et seq.) is amended by inserting after the part heading the following new subpart heading:

“Subpart 1—Partnership Grants”.

(b) Purposes and Definitions.—
(1) Section 2201(a)(3) (20 U.S.C. 6661(a)(3)) is amended by striking “and engineers” and inserting “engineers, computer science professionals, and informatics professionals”.

(2) Section 2201(b) (20 U.S.C. 6661(b)) is amended—

(A) in paragraph (1)—

(i) in subparagraph (A)(ii), by striking “or science” and inserting “science, informatics, or computer science”; and

(ii) in subparagraph (B)(i), by inserting “informatics, computer science,” after “science,”;

(B) by redesignating paragraph (2) as paragraph (3); and

(C) by inserting after paragraph (1) the following:

“(2) MATHEMATICS AND SCIENCE.—Except when used in subsections (b)(2)(B) and (e)(3)(A)(ii) of section 2202, the term ‘mathematics and science’ means science, technology, engineering, mathematics, and computer science.”.

(e) AUTHORIZED ACTIVITIES.—

(1) Section 2202(c) (20 U.S.C. 6662(c)) is amended—
(A) in paragraph (4), by striking “and science” and inserting “science, informatics, and computer science”; 

(B) in each of subparagraphs (A), (C), and (D) of paragraph (4), by striking “or science” and inserting “science, informatics, or computer science”; 

(C) in paragraph (5), by striking “and science.” at the end and inserting “, science, computer science, and informatics.”; 

(D) in paragraph (8), by striking “and engineers” and inserting “engineers, computer science professionals, and informatics professionals”; and 

(E) in paragraph (10), by striking “engineering and technology” and inserting “informatics”.

(2) Section 2202(e)(2)(C) (20 U.S.C. 6662(e)(2)(C)) is amended—

(A) in clause (ii), by striking “or the sciences” and inserting “the sciences, informatics, or computer science”; and 

(B) in clause (iii), by striking “engineering, and science.” and inserting “engineering, science, informatics, and computer science.”
(d) CONFORMING AND TECHNICAL AMENDMENTS.—

(1) The table of contents in section 2 is amended by inserting after the item relating to the heading to part B of title II the following:

“Subpart 1—Partnership Grants”.

(2) Section 2201 (20 U.S.C. 6661) is amended—

(A) in subsection (a), in the matter preceding paragraph (1), by striking “part” and inserting “subpart”; and

(B) in subsection (b), in the matter preceding paragraph (1), by striking “part” and inserting “subpart”.

(3) Section 2202 (20 U.S.C. 6662) is amended—

(A) in subsection (a)—

(i) in each of subparagraphs (B) and (C) of paragraph (2), by striking “part” and inserting “subpart”;

(ii) in paragraph (3), by striking “part” and inserting “subpart”; and

(iii) in paragraph (4), by striking “part” and inserting “subpart” each place the term appears;
(B) in each of paragraphs (1) and (2)(E) of subsection (b), by striking “part” and inserting “subpart”;  

(C) in subsection (e), by striking “part” and inserting “subpart”;  

(D) in each of paragraphs (1) and (2) of subsection (d), by striking “part” and inserting “subpart”;  

(E) in subsection (e)(1), by striking “part” and inserting “subpart” each place the term appears; and  

(F) in subsection (f), by striking “part” and inserting “subpart”.  

(4) Section 2203 (20 U.S.C. 6663) is amended by striking “part” and inserting “subpart”.  

SEC. 7. EXPANDING TEACHER PREPARATION PROGRAMS FOR COMPUTER SCIENCE TEACHERS.  

(a) Computer Science Model Teacher Preparation Program.—Part B of title II (20 U.S.C. 6661 et seq.), as amended by section 6, is further amended by adding at the end the following:
Subpart 2—Model Teacher Preparation Program

SEC. 2211. COMPUTER SCIENCE MODEL TEACHER PREPARATION PROGRAM.

“(a) Establishment.—The Secretary is authorized to award grants, on a competitive basis, to institutions of higher education to improve training for elementary school and secondary school computer science teachers.

“(b) Eligibility.—The Secretary may award a grant under this section to an institution of higher education that—

“(1) has, at minimum—

“(A) a program in teacher education; and

“(B) a program in computer science or informatics; and

“(2) submits an application at such time, in such form, and containing such information and assurances as the Secretary may require.

“(c) Use of Funds.—An institution of higher education that receives a grant under the section shall use the grant funds to carry out not less than 1 of the following activities:

“(1) Develop courses for undergraduate students that—

“(A) prepare such students to teach computer science in elementary schools and secondary schools;
“(B) address content and pedagogy in informatics or computer science education; and

“(C) engage the teacher education department and other relevant departments at the institution of higher education.

“(2) Develop and fund teacher mentoring programs to support elementary school and secondary school computer science teachers who are new to the profession.

“(d) DURATION OF GRANTS.—Each grant awarded by the Secretary under this section shall be for a period of 5 years.

“(e) REPORT.—Not later than 180 days after the conclusion of the grant period described under subsection (d), an institution of higher education that receives a grant under this section shall submit to the Secretary and Congress a report that—

“(1) identifies the number of teachers served under the grant;

“(2) identifies the number of teachers described in paragraph (1) who obtain a teaching position in a computer science classroom; and

“(3) evaluates the activities carried out under this section.”.
(b) TECHNICAL AMENDMENT.—The table of contents in section 2 is amended by inserting before the item relating to part C of title II the following:

“Subpart 2—Model Teacher Preparation Program

“Sec. 2211. Computer science model teacher preparation program.”.

4 SEC. 8. COMPUTER SCIENCE IN THE ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM.

Section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1) is amended—

(1) by striking “and mathematics” and inserting “mathematics, informatics, and computer science” in each place the term appears;

(2) in subsection (a)(3)(B), by striking “or mathematics” and inserting “mathematics, informatics, and computer science”;

(3) in each of subsections (b)(1)(D)(i), (e)(1)(A), (d)(1), by striking “or mathematics” and inserting “mathematics, informatics, or computer science”; and

(4) in subsection (i)—

(A) in paragraph (5), by striking “or mathematics” and inserting “mathematics, or computer science”; and

(B) in paragraph (7), by striking “or mathematics” each place the term appears and
inserting “mathematics, informatics, or computer science”.