

115TH CONGRESS  
1ST SESSION

# S. 648

To establish a grant program to promote the development of career education programs in computer science in secondary and postsecondary education.

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IN THE SENATE OF THE UNITED STATES

MARCH 15, 2017

Mrs. GILLIBRAND (for herself and Mr. WICKER) introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

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## A BILL

To establish a grant program to promote the development of career education programs in computer science in secondary and postsecondary education.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Computer Science Ca-  
5       reer Education Act of 2017”.

6       **SEC. 2. DEFINITIONS.**

7       In this Act:

8               (1) **ELIGIBLE PARTNERSHIP.**—The term “eligi-  
9       ble partnership” means a consortium between or

1 among at least 1 local educational agency, at least  
2 1 institution of higher education, and representatives  
3 of the community, including nonprofit organizations,  
4 local or regional employers (including State agen-  
5 cies) with a documented workforce need in the com-  
6 puter science sector, workforce investment boards or  
7 other entities providing employment services, re-  
8 gional economic development organizations, industry  
9 associations, representatives of labor organizations,  
10 or central labor coalitions, where appropriate, and  
11 parents and students.

12 (2) INSTITUTION OF HIGHER EDUCATION.—The  
13 term “institution of higher education” means—

14 (A) an institution of higher education as  
15 defined in section 101 of the Higher Education  
16 Act of 1965 (20 U.S.C. 1001); or

17 (B) a postsecondary vocational institution  
18 as defined in section 102(c) of the Higher Edu-  
19 cation Act of 1965 (20 U.S.C. 1002(c)).

20 (3) LOCAL EDUCATIONAL AGENCY.—The term  
21 “local educational agency” has the meaning given  
22 the term in section 8101 of the Elementary and Sec-  
23 ondary Education Act of 1965 (20 U.S.C. 7801).

24 (4) SECRETARY.—The term “Secretary” means  
25 the Secretary of Education.

1           (5) STATE EDUCATIONAL AGENCY.—The term  
2           “State educational agency” has the meaning given  
3           the term in section 8101 of the Elementary and Sec-  
4           ondary Education Act of 1965 (20 U.S.C. 7801).

5 **SEC. 3. ESTABLISHMENT OF GRANT PROGRAM.**

6           (a) IN GENERAL.—From the amounts appropriated  
7           to carry out this section, the Secretary shall award grants,  
8           on a competitive basis, to eligible partnerships to enable  
9           such partnerships to develop and operate a 4- or 6-year  
10          computer science career education program.

11          (b) APPLICATION.—

12           (1) IN GENERAL.—Each eligible partnership  
13           that desires to receive a grant under this Act shall  
14           submit an application to the Secretary at such time,  
15           in such manner, and containing such information as  
16           the Secretary may require.

17           (2) CONTENTS.—Each application submitted  
18           under paragraph (1) shall—

19           (A) describe the eligible partners and part-  
20           nership, the roles and responsibilities of each  
21           partner, and a demonstration of each partner’s  
22           ability to support the proposed program;

23           (B) describe how the eligible partnership  
24           will implement a computer science career edu-  
25           cation program, as described in subsection (c);

1 (C) ensure funding under the grant pro-  
2 gram is spent in a coordinated manner with  
3 other local resources;

4 (D) describe the State or local workforce  
5 shortages, as determined by the relevant State  
6 agency in charge of workforce data, in the com-  
7 puter science sector;

8 (E) make information, including career  
9 guidance and advisement resources, available  
10 about the program;

11 (F) ensure nonduplication of the partner-  
12 ship's development of computer science career  
13 education programs;

14 (G) ensure equitable access to the pro-  
15 gram; and

16 (H) demonstrate alignment of the partner-  
17 ship's computer science career education pro-  
18 gram to the State, regional, or local computer  
19 science sector.

20 (c) CONTENT OF COMPUTER SCIENCE CAREER EDU-  
21 CATION PROGRAM.—An eligible partnership that receives  
22 a grant under this Act shall use the grant funds to develop  
23 and operate a 4- or 6-year computer science career edu-  
24 cation program that—

1 (1) includes the development of a computer  
2 science program for both secondary education and  
3 postsecondary education that—

4 (A) is aligned with rigorous computer  
5 science standards for kindergarten through  
6 grade 12 computer science education;

7 (B) links secondary schools and institu-  
8 tions of higher education through nonduplica-  
9 tive sequences of courses in computer science  
10 career fields, including the investigation of op-  
11 portunities for secondary students to earn post-  
12 secondary credit while enrolled in secondary  
13 school, such as through credit transfer agree-  
14 ments including dual enrollment;

15 (C) uses, if appropriate and available, ex-  
16 periential or work-based learning in collabora-  
17 tion with local or regional employers;

18 (D) uses educational technology and dis-  
19 tance learning, as appropriate, to involve all of  
20 the partners in the eligible partnership more  
21 fully in the development and operation of the  
22 program;

23 (E) aligns with the skill needs of industries  
24 in the State or region; and

1 (F) creates innovative opportunities for  
2 students that lead to student attainment of in-  
3 dustry-recognized credentials;

4 (2) includes professional development for teach-  
5 ers that—

6 (A) is designed to prepare teachers to  
7 teach the fundamental concepts of computer  
8 science using effective teaching methods for all  
9 students;

10 (B) provides for joint training for teachers  
11 in the eligible partnership, including between  
12 secondary and postsecondary teachers and core  
13 academic teachers and career and technical  
14 education teachers at both the secondary level  
15 and postsecondary level;

16 (C) is designed to ensure that teachers and  
17 administrators are aware of current career  
18 pathways and the needs and expectations of  
19 business and industry;

20 (D) focuses on training postsecondary and  
21 secondary education faculty in the use of con-  
22 textual and applied curricula and instruction;  
23 and

24 (E) if needed, ensures secondary school  
25 teachers are qualified to teach postsecondary

1 courses in the secondary school according to ar-  
2 ticipation agreements;

3 (3) includes career and academic counseling for  
4 the students that—

5 (A) provides information to students re-  
6 garding available computer science career edu-  
7 cation programs;

8 (B) supports student progress in com-  
9 pleting computer science career education pro-  
10 grams;

11 (C) provides labor market information on  
12 local, State, regional, and national computer  
13 science employment opportunities, such as occu-  
14 pation demand, education requirements, and ex-  
15 pected compensation; and

16 (D) tracks student placement in appro-  
17 priate employment, or transfer to an institution  
18 of higher education; and

19 (4) provides equal access to the full range of ca-  
20 reer education programs, to individuals who are  
21 members of underrepresented groups and special  
22 populations, including the development of program  
23 services appropriate to the needs of special popu-  
24 lations.

1 (d) ADDITIONAL AUTHORIZED ACTIVITIES.—An eli-  
2 gible partnership that receives a grant under this Act may  
3 use the grant funds to—

4 (1) provide for the acquisition of computer  
5 equipment, software, and software licenses to di-  
6 rectly develop and support a computer science pro-  
7 gram;

8 (2) acquire technical assistance from State or  
9 local entities that have designed, established, and op-  
10 erated career education programs that have effec-  
11 tively used educational technology and distance  
12 learning in the delivery of curricula and services and  
13 in the articulation process; and

14 (3) establish articulation agreements with insti-  
15 tutions of higher education, and cooperative agree-  
16 ments with labor organizations, or business located  
17 inside or outside the State and served by the eligible  
18 partnership, especially with regard to using distance  
19 learning and educational technology to provide for  
20 the delivery of services and programs.

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