

115TH CONGRESS  
1ST SESSION

# S. 754

To support meeting our Nation’s growing cybersecurity workforce needs by expanding the cybersecurity education pipeline.

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IN THE SENATE OF THE UNITED STATES

MARCH 28, 2017

Mr. KAINE (for himself, Mr. WICKER, and Mrs. MURRAY) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To support meeting our Nation’s growing cybersecurity workforce needs by expanding the cybersecurity education pipeline.

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 “Cyber Scholarship Op-  
5 portunities Act of 2017”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

8 (1) A well-trained workforce is essential to  
9 meeting the Nation’s growing cybersecurity needs.

1           (2) A 2015 report by the National Academy of  
2 Public Administration found that the United States  
3 faces a severe shortage of properly trained and  
4 equipped cybersecurity professionals.

5           (3) A 2015 study of the information security  
6 workforce found that the information security work-  
7 force shortfall is widening.

8           (4) The National Science Foundation’s Cyber-  
9 Corps: Scholarship-for-Service program is a success-  
10 ful effort to support capacity building in institutions  
11 of higher education and scholarships for students to  
12 pursue cybersecurity careers.

13 **SEC. 3. SENSE OF CONGRESS.**

14 It is the sense of Congress that—

15           (1) given the current need for cybersecurity  
16 professionals in the public and private sectors, Con-  
17 gress and the Federal Government should support  
18 existing programs to boost their success;

19           (2) the Federal Government should also build  
20 upon and develop existing programs to meet emerg-  
21 ing challenges, such as the need to protect critical  
22 infrastructure and the greater need for cybersecurity  
23 professionals of various skill levels;

24           (3) there is a need for greater engagement with  
25 students at the kindergarten through grade 12 level

1 to recruit young people to pursue career paths in cy-  
2 bersecurity;

3 (4) many community colleges offer degrees or  
4 industry-recognized credentials in cybersecurity and  
5 related fields that prepare students to fill high-de-  
6 mand cybersecurity jobs, and the Federal Govern-  
7 ment should support programs at 2-year institutions  
8 of higher education that help students develop skills  
9 necessary to support the Nation’s cybersecurity mis-  
10 sions; and

11 (5) the Federal Government should expand ex-  
12 isting programs to support re-training mid-career in-  
13 dividuals, such as veterans of the Armed Forces, to  
14 fill cybersecurity positions.

15 **SEC. 4. FEDERAL CYBER SCHOLARSHIP-FOR-SERVICE PRO-**  
16 **GRAM.**

17 Section 302 of the Cybersecurity Enhancement Act  
18 of 2014 (15 U.S.C. 7442) is amended—

19 (1) in subsection (a), by adding at the end the  
20 following: “Not less than 5 percent of scholarships  
21 provided under this section shall be provided to eligi-  
22 ble students who are pursuing an associate’s degree  
23 in a cybersecurity field without the intent of trans-  
24 ferring to a bachelor’s degree program and either

1 have a bachelor’s degree already or are veterans of  
2 the Armed Forces.”;

3 (2) in subsection (d), by adding at the end the  
4 following: “In the case of a scholarship recipient who  
5 is pursuing a doctoral or master’s degree, such  
6 agreement may include (if determined appropriate  
7 on a case-by-case basis by the Director of the Na-  
8 tional Science Foundation) an agreement for the re-  
9 cipient to work at an institution of higher education  
10 or for a local educational agency teaching cybersecu-  
11 rity skills for a period equal to the length of the  
12 scholarship following receipt of such degree.”;

13 (3) in subsection (f)—

14 (A) by striking paragraph (3) and insert-  
15 ing the following:

16 “(3) have demonstrated a high level of com-  
17 petency in relevant knowledge, skills, and abilities,  
18 as described in the national cybersecurity awareness  
19 and education program under section 401;”;

20 (B) by striking paragraph (4) and insert-  
21 ing the following:

22 “(4) be a student in an eligible degree program  
23 at a qualified institution of higher education, as de-  
24 termined by the Director of the National Science  
25 Foundation, who is—

1           “(A) a full-time student; or

2           “(B) a student who is enrolled for study  
3           leading to a degree on a less than full-time  
4           basis but not less than half-time basis; and”;

5           (4) by striking subsection (m) and inserting the  
6           following:

7           “(m) EVALUATION AND REPORT.—

8           “(1) IN GENERAL.—The Director of the Na-  
9           tional Science Foundation shall evaluate and make  
10          public, in a manner that protects the personally  
11          identifiable information of scholarship recipients, in-  
12          formation on the success of recruiting individuals for  
13          scholarships under this section and on hiring and re-  
14          taining those individuals in the public sector work-  
15          force, including on—

16               “(A) placement rates;

17               “(B) where students are placed;

18               “(C) student salary ranges for students  
19               not released from obligations under this section;

20               “(D) how long after graduation they are  
21               placed;

22               “(E) how long they stay in the positions  
23               they enter upon graduation;

24               “(F) how many students are released from  
25               obligations; and

1           “(G) what (if any) remedial training needs  
2           are required.

3           “(2) REGULAR REPORTS.—The Director of the  
4           National Science Foundation shall submit reports to  
5           Congress under paragraph (1) not less often than  
6           once every 5 years.”; and

7           (5) by adding at the end the following:

8           “(n) RESOURCES.—The Director of the National  
9           Science Foundation shall work with the Director of the  
10          Office of Personnel Management to provide adequate re-  
11          sources to the CyberCorps community in the form of an  
12          online resource center, where all other relevant websites  
13          will be consolidated or eliminated, if possible. To the ex-  
14          tent applicable, such websites shall—

15               “(1) present up-to-date, accurate information  
16               about existing scholarship programs and job oppor-  
17               tunities;

18               “(2) present a modernized view of cybersecurity  
19               careers;

20               “(3) improve user friendliness; and

21               “(4) allow prospective job applicants to search  
22               positions by State, salary, and title.

23          “(o) ADVERTISEMENTS.—The Director of the Na-  
24          tional Science Foundation shall work with the Director of  
25          the Office of Personnel Management and State, local, and

1 tribal agencies to advertise cybersecurity positions to  
2 scholarship recipients under this section, such as by  
3 hosting, in coordination with such office and agencies, a  
4 virtual job fair for scholarship recipients.

5       “(p) CYBERSECURITY AT KINDERGARTEN THROUGH  
6 GRADE 12 LEVEL.—The Director of the National Science  
7 Foundation, in coordination with other Federal agencies  
8 as necessary, shall carry out a program to grow and im-  
9 prove cybersecurity education at the kindergarten through  
10 grade 12 level that—

11           “(1) increases interest in cybersecurity careers;

12           “(2) helps students practice correct and safe  
13 online behavior and understand the foundational  
14 principles of cybersecurity; and

15           “(3) improves teaching methods for delivering  
16 cybersecurity content for kindergarten through  
17 grade 12 computer science curricula.

18       “(q) CRITICAL INFRASTRUCTURE PROTECTION.—  
19 Due to the need for skilled cybersecurity professionals to  
20 protect the Nation’s critical infrastructure, the Director  
21 of the National Science Foundation may—

22           “(1) grant exceptions to students for fulfilling  
23 post-award employment obligations under this sec-  
24 tion (on a case-by-case basis and in coordination  
25 with other Federal agencies) who agree to work in

1 a critical infrastructure mission at a Federal Gov-  
2 ernment corporation or a State, local, or tribal gov-  
3 ernment-affiliated asset, system, or network that is  
4 considered to be part of a critical infrastructure sec-  
5 tor as described in Presidential Policy Directive–21,  
6 issued February 12, 2013 (related to critical infra-  
7 structure security and resilience), or any successor;  
8 and

9 “(2) develop a pilot program to enhance critical  
10 infrastructure protection training for students pur-  
11 suing careers in cybersecurity.

12 “(r) STUDY.—The Director of the National Science  
13 Foundation, in coordination with the Director of the Of-  
14 fice of Personnel Management, shall assess the potential  
15 benefits and feasibility of granting scholarship awards  
16 under this section to students who do not possess a bach-  
17 elor’s degree to pursue an associate’s degree or an indus-  
18 try-recognized credential in a cybersecurity field.”.

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