

117TH CONGRESS  
1ST SESSION

# H. R. 4389

To increase cybersecurity education and job growth, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 9, 2021

Mr. LIEU (for himself, Mr. CARTWRIGHT, Mrs. TORRES of California, and Ms. KUSTER) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committees on Ways and Means, Education and Labor, and Oversight and Reform, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## A BILL

To increase cybersecurity education and job growth, and  
for other purposes.

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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the  
5 “New Collar Jobs Act of 2021”.

6 (b) TABLE OF CONTENTS.—The table of contents for  
7 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings.
- Sec. 3. Employee cybersecurity education.

Sec. 4. Student loan repayment for certain cybersecurity employees.

Sec. 5. CyberCorps scholarship-for-service program.

Sec. 6. Increased funding for Advanced Technology Education program.

Sec. 7. Cybersecurity training incentive for Government contracts.

1 **SEC. 2. FINDINGS.**

2 Congress find the following:

3 (1) Domestic factory output has increased by  
4 21 percent since June 2009, but manufacturing em-  
5 ployment has only increased 5 percent during that  
6 time, and has been flat since late 2014.

7 (2) As manufacturers leverage new technologies  
8 from robotics to distributed control systems to create  
9 modern factories and industrial plants, different em-  
10 ployment requirements have emerged including the  
11 need for cybersecurity talent.

12 (3) Leading cybersecurity experts have reported  
13 spike of 250 percent in industrial automation and  
14 control system cyber-incidents occurring during the  
15 period between 2011 and 2015 and as a result are  
16 seeking personnel with knowledge of their industry  
17 coupled with knowledge of security technology to  
18 prevent their organization from becoming victims of  
19 cyber-attacks.

20 **SEC. 3. EMPLOYEE CYBERSECURITY EDUCATION.**

21 (a) IN GENERAL.—Subpart D of part IV of sub-  
22 chapter A of chapter 1 of the Internal Revenue Code of

1 1986 is amended by adding at the end the following new  
2 section:

3 **“SEC. 45U. EMPLOYEE CYBERSECURITY EDUCATION.**

4 “(a) IN GENERAL.—For purposes of section 38, the  
5 employee cybersecurity education credit determined under  
6 this section for the taxable year is an amount equal to  
7 50 percent of the aggregate qualified employee cybersecu-  
8 rity education expenses paid or incurred by the employer  
9 during such taxable year.

10 “(b) LIMITATION.—The amount allowed as a credit  
11 under subsection (a) for the taxable year with respect to  
12 an employee shall not exceed \$5,000.

13 “(c) QUALIFIED EMPLOYEE CYBERSECURITY EDU-  
14 CATION EXPENSES.—For purposes of this section, the  
15 term ‘qualified employee cybersecurity education expenses’  
16 means amounts paid or incurred for each employee who  
17 earns a certificate or degree at the undergraduate or grad-  
18 uate level or industry-recognized certification relating to  
19 those specialty areas and work roles that are listed in  
20 NCWF Work Roles in the document entitled, ‘NICE Cy-  
21 bersecurity Workforce Framework (NCWF)’, published by  
22 the National Initiative for Cybersecurity Education  
23 (NICE) of the National Institute of Standards and Tech-  
24 nology.

1       “(d) CERTAIN RULES TO APPLY.—Rules similar to  
2 the rules of subsections (i)(1) and (k) of section 51 shall  
3 apply for purposes of this section.”.

4       (b) CREDIT MADE PART OF GENERAL BUSINESS  
5 CREDIT.—Subsection (b) of section 38 of such Code is  
6 amended by striking “plus” at the end of paragraph (32),  
7 by striking the period at the end of paragraph (33) and  
8 inserting “, plus”, and by adding at the end the following  
9 new paragraph:

10               “(34) the employee cybersecurity education  
11 credit determined under section 45U(a).”.

12       (c) DENIAL OF DOUBLE BENEFIT.—Subsection (a)  
13 of section 280C of such Code is amended by inserting  
14 “45U(a),” after “45S(a),”.

15       (d) CLERICAL AMENDMENT.—The table of sections  
16 for subpart D of part IV of subchapter A of chapter 1  
17 of such Code is amended by adding at the end the fol-  
18 lowing new item:

“Sec. 45U. Employee cybersecurity education.”.

19       (e) EFFECTIVE DATE.—The amendments made by  
20 this section shall apply to individuals commencing appren-  
21 ticeship programs after the date of the enactment of this  
22 Act.

1 **SEC. 4. STUDENT LOAN REPAYMENT FOR CERTAIN CYBER-**  
2 **SECURITY EMPLOYEES.**

3 Section 455 of the Higher Education Act of 1965 (20  
4 U.S.C. 1087e) is amended by adding at the end the fol-  
5 lowing:

6 “(r) LOAN REPAYMENT FOR CYBERSECURITY WORK-  
7 ERS IN ECONOMICALLY DISTRESSED AREA.—

8 “(1) IN GENERAL.—The Secretary shall cancel  
9 the amount described in paragraph (2) of the bal-  
10 ance of interest and principal due, in accordance  
11 with such paragraph, on any eligible Federal Direct  
12 Loan not in default for a borrower who—

13 “(A) makes 36 consecutive monthly pay-  
14 ments on the eligible Federal Direct Loan after  
15 the date of the enactment of this section pursu-  
16 ant to any one or a combination of the fol-  
17 lowing—

18 “(i) payments under an income-based  
19 repayment plan under section 493C;

20 “(ii) payments under a standard re-  
21 payment plan under subsection (d)(1)(A),  
22 based on a 10-year repayment period;

23 “(iii) monthly payments under a re-  
24 payment plan under subsection (d)(1) or  
25 (g) of not less than the monthly amount

1           calculated under subsection (d)(1)(A),  
2           based on a 10-year repayment period; or

3           “(iv) payments under an income con-  
4           tingent repayment plan under subsection  
5           (d)(1)(D); and

6           “(B) during the period in which the bor-  
7           rower makes each of the 36 consecutive month-  
8           ly payments described in subparagraph (A), has  
9           been employed in a cybersecurity job—

10           “(i) located in an area that, for at  
11           least 12 of such consecutive monthly pay-  
12           ments is an economically distressed area;  
13           and

14           “(ii) that requires that the borrower  
15           work in the economically distressed area no  
16           less than 60 percent of total work hours.

17           “(2) CANCELLATION AMOUNT.—After the con-  
18           clusion of the employment period described in para-  
19           graph (1), the Secretary shall cancel the lesser of  
20           the following:

21           “(A) The obligation to repay the balance of  
22           principal and interest due as of the time of such  
23           cancellation, on the eligible Federal Direct  
24           Loans made to the borrower under this part.

25           “(B) \$25,000.

1           “(3) INELIGIBILITY OF DOUBLE BENEFITS.—  
2           No borrower may, for the same service, receive a re-  
3           duction of loan obligations under both this sub-  
4           section and—

5                     “(A) subsection (m); or

6                     “(B) section 428J, 428K, 428L, or 460.

7           “(4) DEFINITIONS.—In this section:

8                     “(A) CYBERSECURITY JOB.—The term ‘cy-  
9           bersecurity job’ means—

10                       “(i) a skill role as defined in the  
11                       NCWF Work Roles by the National Initia-  
12                       tive for Cybersecurity Education (NICE)  
13                       Cybersecurity Workforce Framework  
14                       (NCWF) of the National Institute of  
15                       Standards and Technology, Special Publi-  
16                       cation 800–181, or any successor docu-  
17                       ment; or

18                       “(ii) teaching a cybersecurity course  
19                       for a skill role described in clause (i).

20                     “(B) ECONOMICALLY DISTRESSED AREA.—

21           The term ‘economically distressed area’ means  
22           an area that meets one or more criteria under  
23           section 301(a) of the Public Works and Eco-  
24           nomic Development Act of 1965 (42 U.S.C.  
25           3161(a)).”.

1 **SEC. 5. CYBERCORPS SCHOLARSHIP-FOR-SERVICE PRO-**  
2 **GRAM.**

3 (a) **FUNDING INCREASE.**—It is the sense of the Con-  
4 gress that the number of scholarships awarded by the Na-  
5 tional Science Foundation for scholarships awarded under  
6 the Federal cyber scholarship-for-service program estab-  
7 lished by section 302 of the Cybersecurity Enhancement  
8 Act of 2014 for fiscal year 2019 and each succeeding fiscal  
9 year should be not less than double the number of such  
10 scholarships awarded for fiscal year 2018.

11 (b) **CYBERSECURITY COURSE INSTRUCTION.**—Sec-  
12 tion 302 of the Cybersecurity Enhancement Act of 2014  
13 (15 U.S.C. 7442) is amended—

14 (1) in subsection (a), by striking “and security  
15 managers” and inserting “security managers, and  
16 cybersecurity course instructors,”; and

17 (2) in subsection (d), by adding at the end the  
18 following: “Such work may include teaching a cyber-  
19 security course for a skill role as defined in the  
20 NCWF Work Roles by the National Initiative for  
21 Cybersecurity Education (NICE) Cybersecurity  
22 Workforce Framework (NCWF) of the National In-  
23 stitute of Standards and Technology, Special Publi-  
24 cation 800–181, or any successor document.”.



1 (c) ELIMINATION OF PRIORITY FOR FEDERAL GOV-  
2 ERNMENT EMPLOYMENT PLACEMENTS.—Section 302(b)  
3 of such Act (15 U.S.C. 7442(b)) is amended—

4 (1) in paragraph (2), by adding “and” at the  
5 end;

6 (2) by striking paragraph (3); and

7 (3) by redesignating paragraph (4) as para-  
8 graph (3).

9 **SEC. 6. INCREASED FUNDING FOR ADVANCED TECH-**  
10 **NOLOGY EDUCATION PROGRAM.**

11 It is the sense of the Congress that the amount ex-  
12 pended for the Information Technology and Cybersecurity  
13 Division of the Advanced Technological Education pro-  
14 gram of the National Science Foundation established by  
15 section 3(a) of the Scientific and Advanced-Technology  
16 Act of 1992 (Public Law 102–476) for fiscal year 2019  
17 should be an amount equal to not less than 110 percent  
18 of the amount expended for such division for fiscal year  
19 2018.

20 **SEC. 7. CYBERSECURITY TRAINING INCENTIVE FOR GOV-**  
21 **ERNMENT CONTRACTS.**

22 (a) IN GENERAL.—Subpart 15.3 of the Federal Ac-  
23 quisition Regulation shall be revised to require, in the eval-  
24 uation of a competitive proposal received in response to  
25 a solicitation for a contract valued in excess of

1 \$5,000,000, that the head of an executive agency award  
2 a five percent score increase to each competitive proposal  
3 submitted by a qualified offeror.

4 (b) DEFINITIONS.—In this section:

5 (1) EXECUTIVE AGENCY.—The term “executive  
6 agency” has the meaning given that term in section  
7 102 of title 40, United States Code.

8 (2) QUALIFIED OFFEROR.—The term “qualified  
9 offeror” means a business that has claimed the em-  
10 ployee cybersecurity education credit under section  
11 45U of the Internal Revenue Code of 1986, as added  
12 by section 3, at least once within the three-year pe-  
13 riod preceding the date on which the business sub-  
14 mits a competitive proposal for a contract valued in  
15 excess of \$5,000,000.

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