

118TH CONGRESS  
2D SESSION

**S.** \_\_\_\_\_

To establish a grant program for education related to semiconductor manufacturing and related industries.

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IN THE SENATE OF THE UNITED STATES

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Mr. KELLY (for himself and Mr. BUDD) introduced the following bill; which was read twice and referred to the Committee on \_\_\_\_\_

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**A BILL**

To establish a grant program for education related to semiconductor manufacturing and related industries.

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 “CHIPS Training in  
5 America Act of 2024”.

1 **SEC. 2. AUTHORIZATION FOR THE CREATING HELPFUL IN-**  
2 **CENTIVES TO PRODUCE SEMICONDUCTORS**  
3 **(CHIPS) FOR AMERICA WORKFORCE AND**  
4 **EDUCATION FUND.**

5 Section 102(d) of Public Law 117–167 (commonly  
6 known as the “CHIPS and Science Act of 2022”) is  
7 amended—

8 (1) in paragraph (1)—

9 (A) by inserting “, in consultation with the  
10 Department of Commerce,” after “National  
11 Science Foundation”; and

12 (B) by inserting “, including establishment  
13 and maintenance of a single publicly accessible  
14 online clearinghouse of microelectronics edu-  
15 cation and workforce development information”  
16 before the period at the end of the paragraph;

17 (2) by redesignating paragraph (3) as para-  
18 graph (6); and

19 (3) by inserting after paragraph (2) the fol-  
20 lowing:

21 “(3) EVALUATION.—Not later than 90 days  
22 after the date of enactment of the CHIPS Training  
23 in America Act of 2024, the Director of the National  
24 Science Foundation shall establish key performance  
25 indicators to measure and monitor the impact of

1 Fund allocations on growing the microelectronics  
2 workforce.

3 “(4) WORKFORCE GOALS.—

4 “(A) GOALS ESTABLISHED.—Not later  
5 than 90 days after the date of enactment of the  
6 CHIPS Training in America Act of 2024, the  
7 Director of the National Science Foundation  
8 and the Secretary of Commerce shall jointly de-  
9 velop quantitative goals for growing the domes-  
10 tic semiconductor workforce.

11 “(B) SUBMISSION OF GOALS.—Such goals  
12 shall be submitted to—

13 “(i) the Committee on Appropriations  
14 of the Senate, the Committee on Com-  
15 merce, Science, and Transportation of the  
16 Senate, and the Committee on Health,  
17 Education, Labor, and Pensions of the  
18 Senate; and

19 “(ii) the Committee on Appropriations  
20 of the House of Representatives, the Com-  
21 mittee on Science, Space, and Technology  
22 of the House of Representatives, and the  
23 Committee on Education and the Work-  
24 force of the House of Representatives.

1           “(5) NATIONAL SEMICONDUCTOR TECHNOLOGY  
2           CENTER.—In this subsection, the term ‘National  
3           Semiconductor Technology Center’ means the entity  
4           established under section 9906(c) of the William M.  
5           (Mac) Thornberry National Defense Authorization  
6           Act for Fiscal Year 2021 (15 U.S.C. 4656(c)).”.

7   **SEC. 3. AUTHORIZATION OF NATIONAL SEMICONDUCTOR**  
8           **TECHNOLOGY CENTER ACTIVITIES.**

9           Section 9906(c)(2) of the William M. (Mac) Thorn-  
10          berry National Defense Authorization Act for Fiscal Year  
11          2021 (15 U.S.C. 4656(c)(2)) is amended—

12                 (1) in subparagraph (C)—

13                         (A) in clause (i), by striking “and” after  
14                         the semicolon;

15                         (B) in clause (ii), by striking the period at  
16                         the end and inserting “; and”; and

17                         (C) by adding at the end the following:

18                                 “(iii) the development of competency-  
19                                 based degree, credentialing, and certificate  
20                                 frameworks to increase standardization  
21                                 within semiconductor and microelectronics  
22                                 workforce development programs.”; and

23                 (2) by inserting the following after subpara-  
24          graph (C):

1           “(D)(i) Subject to clause (ii), in coordina-  
2           tion with the National Science Foundation, as-  
3           sist in the management and maintenance of the  
4           single publicly accessible online clearinghouse  
5           authorized in section 102(d) of Public Law  
6           117–167.

7           “(ii) If the National Science Foundation  
8           and the National Semiconductor Technology  
9           Center agree, the National Semiconductor  
10          Technology Center may take over primary man-  
11          agement and maintenance of such single pub-  
12          licly accessible online clearinghouse, with sup-  
13          port from the National Science Foundation.”.

14 **SEC. 4. NATIONAL STRATEGY ON MICROELECTRONICS**  
15 **WORKFORCE.**

16          Section 9906(a) of the William M. (Mac) Thornberry  
17          National Defense Authorization Act for Fiscal Year 2021  
18          (15 U.S.C. 4656(a)) is amended—

19               (1) in paragraph (2)—

20                       (A) by redesignating subparagraph (I) as  
21                       subparagraph (J); and

22                       (B) by inserting after subparagraph (H)  
23                       the following:

24                               “(I) For purposes of the duties described  
25                               in subparagraph (D) of paragraph (3) only, the

1 Secretary of Labor, the Secretary of Education,  
2 and the Secretary of Veterans Affairs.”.

3 (2) in paragraph (3), by inserting after sub-  
4 paragraph (C) the following:

5 “(D) NATIONAL STRATEGY ON MICRO-  
6 ELECTRONICS WORKFORCE.—

7 “(i) IN GENERAL.—

8 “(I) NATIONAL STRATEGY ON  
9 MICROELECTRONICS WORKFORCE DE-  
10 VELOPMENT.—Not later than 1 year  
11 after the date of enactment of the  
12 CHIPS Training in America Act of  
13 2024, in consultation with appropriate  
14 stakeholders in the microelectronics  
15 industry, relevant researchers or ex-  
16 perts at institutions of higher edu-  
17 cation, economic development organi-  
18 zations, and other apposite stake-  
19 holders, the Subcommittee shall de-  
20 velop a 5-year national strategy on  
21 microelectronics workforce develop-  
22 ment.

23 “(II) ADDITIONAL SUB-  
24 COMMITTEE MEMBERS.—For the pur-  
25 poses of this subparagraph only such

1                    Subcommittee shall also include the  
2                    Secretary of Labor, the Secretary of  
3                    Education, and the Secretary of Vet-  
4                    erans Affairs.

5                    “(ii) ELEMENTS.—The strategy devel-  
6                    oped under this subparagraph shall—

7                                       “(I) specify and prioritize annual  
8                                       and long-term objectives, including  
9                                       the role of each agency in supporting  
10                                       programs and activities designed to  
11                                       meet the objectives, to ensure a ro-  
12                                       bust, skilled domestic microelectronics  
13                                       workforce;

14                                       “(II) specify the common metrics  
15                                       that will be used to assess progress  
16                                       toward achieving the objectives;

17                                       “(III) describe the roles of and  
18                                       means of coordination with elemen-  
19                                       tary and secondary, and postsec-  
20                                       ondary, education systems in achiev-  
21                                       ing the objectives;

22                                       “(IV) describe how Federal fund-  
23                                       ing will be used to support the strat-  
24                                       egy’s microelectronics workforce ini-  
25                                       tiatives;

1                   “(V) describe the approaches to  
2                   be taken by each participating agency  
3                   to assess the effectiveness of the agen-  
4                   cy’s microelectronics workforce pro-  
5                   grams and activities;

6                   “(VI) describe how objectives  
7                   outlined in the strategic plan will  
8                   align with investments made using  
9                   funds from divisions A and B of Pub-  
10                  lic Law 117–167 (commonly known as  
11                  the ‘CHIPS and Science Act of  
12                  2022’);

13                  “(VII) describe how objectives  
14                  outlined in the strategic plan will  
15                  align with the objectives of the 5-year  
16                  STEM education strategic plan re-  
17                  quired under section 101 of the Amer-  
18                  ica COMPETES Reauthorization Act  
19                  of 2010 (42 U.S.C. 6621);

20                  “(VIII) describe how objectives  
21                  outlined in the strategic plan will  
22                  align with the objectives of the na-  
23                  tional strategy on microelectronics re-  
24                  search, as required under subpara-  
25                  graph (A), as applicable; and



1                   “(IX) be made publicly available  
2                   through the online clearinghouse au-  
3                   thorized in section 102(d) of Public  
4                   Law 117–167.

5                   “(iii) FOSTERING COORDINATION OF  
6                   WORKFORCE PROGRAMS.—The Sub-  
7                   committee shall coordinate programs and  
8                   activities of Federal agencies relating to  
9                   microelectronics workforce development,  
10                  and ensure such programs and activities  
11                  are consistent with the strategy required  
12                  under this subparagraph.

13                  “(iv) REPORTING AND UPDATES .—  
14                  Not less frequently than once every 5  
15                  years, the Subcommittee shall—

16                         “(I) update the strategy under  
17                         this subparagraph;

18                         “(II) submit the revised strategy  
19                         to the appropriate committees of Con-  
20                         gress; and

21                         “(III) make such strategy pub-  
22                         licly available through the online  
23                         clearinghouse authorized in section  
24                         102(d) of Public Law 117–167.”.

1 **SEC. 5. GRANT PROGRAM FOR EDUCATION RELATED TO**  
2 **SEMICONDUCTOR MANUFACTURING AND RE-**  
3 **LATED INDUSTRIES.**

4 Division H of title XCIX of the William M. (Mac)  
5 Thornberry National Defense Authorization Act for Fiscal  
6 Year 2021 (15 U.S.C. 4651 et seq.) is amended by insert-  
7 ing after section 9906 the following:

8 **“SEC. 9906A. WORKFORCE DEVELOPMENT ACTIVITIES.**

9 “(a) DEFINITIONS.—In this section:

10 “(1) ELIGIBLE INSTITUTION.—The term ‘eligi-  
11 ble institution’ means—

12 “(A) an institution of higher education, as  
13 defined in section 101 of the Higher Education  
14 Act of 1965 (20 U.S.C. 1001), at which the  
15 highest degree predominantly awarded to stu-  
16 dents is not a baccalaureate degree or higher  
17 degree;

18 “(B) a postsecondary vocational institu-  
19 tion, as defined in section 102(c) of the Higher  
20 Education Act of 1965 (20 U.S.C. 1002(c));  
21 and

22 “(C) an area career and technical edu-  
23 cation school, as defined in subparagraphs (A)  
24 or (B) of section 3(3) of the Carl D. Perkins  
25 Career and Technical Education Act of 2006  
26 (20 U.S.C. 2302(3)).

1           “(2) ELIGIBLE PARTNERSHIP.—The term ‘eligi-  
2           ble partnership’ means a partnership that—

3                   “(A) includes—

4                           “(i) an eligible institution;

5                           “(ii) a covered entity; and

6                           “(iii) a State, Indian Tribe, or polit-  
7                           ical subdivision thereof; and

8                   “(B) may include other entities.

9           “(3) NATIONAL SEMICONDUCTOR TECHNOLOGY  
10           CENTER.—The term ‘National Semiconductor Tech-  
11           nology Center’ means the entity established under  
12           section 9906(c).

13           “(b) GRANTS AUTHORIZED.—The National Semicon-  
14           ductor Technology Center shall make awards, on a com-  
15           petitive basis, to eligible partnerships to establish or ex-  
16           pand workforce development and academic programs of-  
17           fered by an eligible institution (which may include short-  
18           term programs or non-credit programs offered by that eli-  
19           gible institution), related to semiconductor manufacturing  
20           and related equipment, materials, advanced packaging,  
21           microelectronics, computer science, engineering, and re-  
22           lated industries.

23           “(c) APPLICATION.—An eligible partnership desiring  
24           a grant under this section shall submit an application to  
25           the National Semiconductor Technology Center at such

1 time, in such manner, and containing such information as  
2 the National Semiconductor Technology Center may re-  
3 quire. The application shall require—

4           “(1) a description of the eligible partnership;

5           “(2) a description of the workforce needs that  
6 will be addressed through the activities funded by  
7 the grant;

8           “(3) a description of the eligible partnership’s  
9 strategy to sustain such activities after the grant pe-  
10 riod;

11           “(4) a description of how the eligible partner-  
12 ship will recruit and retain individuals with barriers  
13 to employment (as defined in section 3 of the Work-  
14 force Innovation and Opportunity Act definition (29  
15 U.S.C. 3102)) in programs that receive grant fund-  
16 ing; and

17           “(5) a description of how programs supported  
18 by grants under this subsection align with the work-  
19 force pathways and credential frameworks estab-  
20 lished by the National Semiconductor Technology  
21 Center or the National Science Foundation.

22           “(d) SELECTION.—In selecting eligible partnerships  
23 to receive a grant under this section, the National Semi-  
24 conductor Technology Center shall give priority to eligible  
25 partnerships located in areas with growing microelec-

1 tronics ecosystems, as determined by the National Semi-  
2 conductor Technology Center, that serve or intend to serve  
3 as members of broader sectoral partnerships and coordi-  
4 nate with State and local workforce development boards  
5 (as established under sections 101 and 107 of the Work-  
6 force Innovation and Opportunity Act (29 U.S.C. 3111;  
7 29 U.S.C. 3122)), respectively.

8 “(e) AMOUNT; DURATION.—

9 “(1) AMOUNT.—A grant awarded under this  
10 section shall be for an amount equal to or less than  
11 \$7,000,000.

12 “(2) DURATION.—A grant awarded under this  
13 section shall be for a period not to exceed 5 years.

14 “(f) FEDERAL COST SHARE.—

15 “(1) MAXIMUM FEDERAL SHARE.—The Federal  
16 share of the costs of a grant under this section shall  
17 not exceed 50 percent of such costs.

18 “(2) REQUIRED WORKER AND COMMUNITY IN-  
19 VESTMENTS.—Non-Federal costs contributed by a  
20 covered entity under this section shall be considered  
21 as part of an eligible entity’s commitments to worker  
22 and community investments as required under sec-  
23 tion 9902(a)(2)(B)(ii)(II).

24 “(g) REPORT.—

1           “(1) REPORT TO THE NATIONAL SEMICON-  
2           DUCTOR TECHNOLOGY CENTER.—Each eligible part-  
3           nership receiving a grant under this section shall  
4           prepare and submit an annual report to the National  
5           Semiconductor Technology Center that contains in-  
6           formation about each of the following with respect to  
7           individuals participating in a program funded by a  
8           grant under this section:

9                   “(A) The total number of participants,  
10                   disaggregated by sex, race, and ethnicity.

11                   “(B) The total number of participants who  
12                   completed the program.

13                   “(C) The indicators required by section  
14                   116(b)(2)(A)(i) of the Workforce Innovation  
15                   and Opportunity Act (29 U.S.C.  
16                   3141(b)(2)(A)(i)).

17           “(2) REPORT TO CONGRESS.—Not later than  
18           180 days of receiving the annual report under para-  
19           graph (1), the National Semiconductor Technology  
20           Center shall—

21                   “(A) prepare and submit a report con-  
22                   taining a summary of the information described  
23                   in paragraph (1) to the Committee on Com-  
24                   merce, Science, and Transportation and the  
25                   Committee on Health, Education, Labor, and

1 Pensions of the Senate and the Committee on  
2 Science, Space, and Technology and the Com-  
3 mittee on Education and the Workforce of the  
4 House of Representatives; and

5 “(B) make such report publicly available.

6 “(h) AUTHORIZATION OF APPROPRIATIONS.—There  
7 are authorized to carry out this section \$50,000,000 for  
8 each of fiscal years 2025, 2026, and 2027.”.

9 **SEC. 6. PROHIBITION ON ADDITIONAL MICROELECTRONICS**  
10 **EDUCATION AND WORKFORCE CLEARING-**  
11 **HOUSE.**

12 A Federal agency shall not establish a microelec-  
13 tronics education and workforce clearinghouse that is du-  
14 plicative or alternative to the online clearinghouse author-  
15 ized in section 102(d) of Public Law 117–167 (commonly  
16 known as the “CHIPS and Science Act of 2022”).