

119TH CONGRESS  
1ST SESSION

# S. 1534

To increase the participation of historically underrepresented demographic groups in science, technology, engineering, and mathematics education and industry.

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## IN THE SENATE OF THE UNITED STATES

APRIL 30, 2025

Ms. HIRONO (for herself, Ms. DUCKWORTH, Mr. DURBIN, Mr. GALLEGRO, Ms. KLOBUCHAR, Mr. PADILLA, Ms. ROSEN, Mr. SCHIFF, and Mr. VAN HOLLEN) 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 increase the participation of historically underrepresented demographic groups in science, technology, engineering, and mathematics education and industry.

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 “Women and Underrep-  
5       resented Minorities in STEM Booster Act of 2025”.

1 **SEC. 2. GRANT PROGRAM TO INCREASE THE PARTICIPA-**  
2 **TION OF WOMEN AND UNDERREPRESENTED**  
3 **MINORITIES IN STEM FIELDS.**

4 (a) FINDINGS.—Congress finds the following:

5 (1) According to the National Academies of  
6 Sciences, Engineering, and Medicine (NASEM),  
7 science, technology, engineering, and math (referred  
8 to in this Act as “STEM”) education is critical to  
9 ensuring the United States maintains a diverse and  
10 competitive workforce.

11 (2) According to NASEM and the National In-  
12 stitutes of Health (NIH), diverse teams of STEM  
13 professionals innovate at higher rates than teams  
14 composed of individuals with similar identities or  
15 backgrounds.

16 (3) According to the National Science Founda-  
17 tion (NSF), in 2020, women earned only 43 percent  
18 of bachelor’s degrees in physical and earth sciences,  
19 26 percent in mathematical and computer sciences,  
20 and 24 percent in engineering. By contrast, women  
21 earned 66 percent of bachelor’s degrees in social and  
22 behavioral sciences and 64 percent in agricultural  
23 and biological sciences.

24 (4) According to the NSF, STEM degree pro-  
25 grams that are currently underrepresented by  
26 women also receive greater Federal financial support

1 for education and living expenses, compared with de-  
2 gree programs with disproportionately high female  
3 enrollment. Thus, male graduate students receive  
4 more Federal financial support than women.

5 (5) According to the NSF, while Black or Afri-  
6 can Americans made up 14 percent of the population  
7 of the United States (ages 18–34 years) in 2021,  
8 only 9 percent of bachelor’s degree recipients in  
9 science and engineering were awarded to that same  
10 racial group. Moreover, while 22 percent of the pop-  
11 ulation of the United States (ages 18–34) were His-  
12 panic or Latino, they comprised only 17 percent of  
13 science and engineering bachelor’s degrees awarded  
14 that year.

15 (6) According to the National Center for Edu-  
16 cation Statistics (NCES), only 0.3 percent of bach-  
17 elors’ degrees and less than 0.2 percent of masters  
18 and doctoral degrees in STEM were awarded to  
19 American Indian and Alaska Native students from  
20 2020 through 2021, less than half their representa-  
21 tion of the total population of the United States in  
22 2021.

23 (7) The U.S. Census Bureau estimates that in  
24 2023, only 5 percent of women who worked full time  
25 in the United States were employed in computer, en-

1       gineering, or science occupations while nearly 12  
2       percent of men who worked full time in the United  
3       States were employed in computer, engineering, or  
4       science occupations. Less than 5 percent of Black or  
5       African Americans who worked full time in the  
6       United States were employed in computer, engineer-  
7       ing, or science occupations and only 4 percent of  
8       Hispanic or Latino Americans who worked full time  
9       in the United States were employed in computer, en-  
10      gineering, or science occupations, while the national  
11      average of the full-time workforce in the United  
12      States who were employed in computer, engineering,  
13      or science occupations was 9 percent.

14           (8) According to the U.S. Census Bureau, from  
15      2017 through 2021, only 5 percent of American In-  
16      dian and Alaska Natives who worked full time in the  
17      United States were employed in computer, engineer-  
18      ing, or science occupations.

19           (9) According to the National Center for  
20      Science and Engineering Statistics (NCSES),  
21      women leave STEM fields at much higher rates than  
22      men. In 2021, while 79 percent of women awarded  
23      STEM degrees in 2020 were employed in a STEM  
24      occupation, only 53 percent of women remained in  
25      STEM within 5 years of earning their highest de-

1       gree, and only 44 percent remained after 10 years.  
2       By contrast, 86 percent of men who had earned  
3       STEM degrees in 2020 were employed in STEM oc-  
4       cupations, 73 percent of men remained in STEM  
5       within 5 years of earning their degree, and 70 per-  
6       cent of men remained in STEM after 10 years.

7               (10) According to NCSES, STEM retention is  
8       even lower for women of color. In 2021, only 50 per-  
9       cent of Black women and 44 percent of Hispanic  
10       women who received STEM degrees in 2020 were  
11       employed in a STEM occupation, compared with 82  
12       percent of white, non-Hispanic women. Less than 30  
13       percent of Black or Hispanic women remained in  
14       STEM after 10 years, compared with 52 percent of  
15       white, non-Hispanic women.

16              (11) According to NCSES, STEM retention  
17       rates for Black or Hispanic men are higher than for  
18       women of any race but lower than white, non-His-  
19       panic men. In 2021, 87 percent of Black or His-  
20       panic men who received STEM degrees in 2020 were  
21       employed in a STEM occupation, compared with 93  
22       percent of white, non-Hispanic men. Only 51 percent  
23       of Black and 61 percent of Hispanic men remained  
24       in STEM after 10 years, compared with 74 percent  
25       of white, non-Hispanic men.

1           (12) Data from the U.S. Census Bureau indi-  
2           cate that certain Asian American subgroups are still  
3           underrepresented in STEM. From 2017 through  
4           2021, while 8 percent of workers in the United  
5           States were employed in computing, engineering,  
6           and science occupations, less than 8 percent of Cam-  
7           bodian, Filipino, Hmong, and Laotian workers were  
8           employed in these occupations. These subgroups are  
9           even less represented when compared to all workers  
10          of Asian descent. In 2023, nearly 20 percent of all  
11          workers of Asian descent who were employed full  
12          time in the United States were employed in com-  
13          puter, engineering, and science occupations.

14          (13) The U.S. Census Bureau estimates that in  
15          2023, only 5 percent of Native Hawaiian and other  
16          Pacific Islander (NHPI) workers were employed in  
17          computing, engineering, and science occupations.

18          (14) Also, according to NCES, Native Hawai-  
19          ian and other Pacific Islander (NHPI) STEM de-  
20          gree recipients are underrepresented compared with  
21          their overall population (0.2 percent of all United  
22          States individuals). NHPI students received less  
23          than 0.2 percent of all bachelor's degrees, and less  
24          than 0.1 percent of master's and doctoral degrees,  
25          awarded in STEM from 2020 through 2021.

1           (15) According to research published by the  
2 American Association for the Advancement of  
3 Science (AAAS), undergraduate students identifying  
4 as lesbian, gay, bisexual, or queer (LGBQ) were 7  
5 percent less likely to be retained in STEM programs  
6 compared with their heterosexual counterparts, de-  
7 spite the fact that LGBQ students are 10 percent  
8 more likely to participate in undergraduate research  
9 experiences, which is a significant contributor to  
10 STEM retention absent other factors such as sexual  
11 or gender identity, than their heterosexual counter-  
12 parts.

13           (16) According to research published by the  
14 American Society for Cell Biology, transgender and  
15 gender nonconforming undergraduate students, who  
16 represent 1 in 14 adults in the United States aged  
17 18–24, are 10 percent less likely to remain in STEM  
18 majors than their cisgender counterparts.

19           (17) Research published by the AAAS also indi-  
20 cates that 22 percent of LGBTQ professionals had  
21 thought about leaving their STEM job, compared  
22 with 15 percent of non-LGBTQ STEM profes-  
23 sionals. Moreover, 12 percent of LGBTQ profes-  
24 sionals planned to leave their STEM profession

1 within the next 5 years, compared with 8 percent of  
2 non-LGBTQ professionals.

3 (18) Finally, according to the NSF, persons  
4 with a disability are underrepresented in the general  
5 workforce (4 percent) compared with their represen-  
6 tation in the general United States population (9  
7 percent), and even less represented in the STEM  
8 workforce (3 percent).

9 (b) PROGRAM AUTHORIZED.—The Director of the  
10 National Science Foundation shall award grants to eligible  
11 entities, on a competitive basis, to enable such eligible en-  
12 tities to carry out the activities described in subsection (d),  
13 in order to increase the participation of women, persons  
14 underrepresented in science and engineering, and persons  
15 with disabilities in the fields of science, technology, engi-  
16 neering, and mathematics.

17 (c) APPLICATION.—Each eligible entity that desires  
18 to receive a grant under this section shall submit an appli-  
19 cation to the National Science Foundation at such time,  
20 in such manner, and containing such information as the  
21 Director of the National Science Foundation may reason-  
22 ably require.

23 (d) AUTHORIZED ACTIVITIES.—An eligible entity  
24 that receives a grant under this section shall use such  
25 grant funds to carry out 1 or more of the following activi-

1 ties designed to increase the participation of women, per-  
2 sons underrepresented in science and engineering, or per-  
3 sons with disabilities, or 2 or more of such groups, in the  
4 fields of science, technology, engineering, and mathe-  
5 matics:

6 (1) Online workshops.

7 (2) Mentoring programs that partner science,  
8 technology, engineering, or mathematics profes-  
9 sionals with students.

10 (3) Internships for undergraduate and graduate  
11 students in the fields of science, technology, engi-  
12 neering, and mathematics.

13 (4) Conducting outreach programs that provide  
14 elementary school and secondary school students  
15 with opportunities to increase their exposure to the  
16 fields of science, technology, engineering, or mathe-  
17 matics.

18 (5) Programs to increase the recruitment and  
19 retention of underrepresented faculty.

20 (6) Such additional programs as the Director of  
21 the National Science Foundation may determine.

22 (e) DEFINITIONS.—In this Act:

23 (1) MINORITY.—The term “minority” means  
24 American Indian, Alaskan Native, Black (not of His-  
25 panic origin), Hispanic (including persons of Mexi-

1 can, Puerto Rican, Cuban, and Central or South  
2 American origin), Asian (including underrepresented  
3 subgroups), Native Hawaiian, Pacific Islander origin  
4 subgroup, or other ethnic group underrepresented in  
5 science and engineering, or lesbian, gay, bisexual,  
6 transgender, or queer (LGBTQ), or gender-noncon-  
7 forming.

8 (2) PERSON WITH A DISABILITY.—The term  
9 “person with a disability” means an individual with  
10 1 or more disability types as defined by the U.S.  
11 Census Bureau’s Current Population Survey (CPS).

12 (3) UNDERREPRESENTED IN SCIENCE AND EN-  
13 GINEERING.—The term “underrepresented in science  
14 and engineering” means a minority group whose  
15 number of scientists and engineers per 10,000 popu-  
16 lation of that group is substantially below the com-  
17 parable figure for scientists and engineers who are  
18 White and not of Hispanic origin.

19 (f) AUTHORIZATION OF APPROPRIATIONS.—There  
20 are authorized to be appropriated to carry out this section  
21 \$15,000,000 for each of fiscal years 2026, 2027, 2028,  
22 2029, and 2030.

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