
Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act of 2022 Fact Sheet

[The CHIPS and Science Act](#) passed the Senate with a 64-33 vote on July 27, 2022 and was followed by a 243-187 vote in the House of Representatives on July 28, 2022. The bill officially became law on August 9, 2022, when President Biden held a [signing ceremony at the White House lawn](#).

The bill left out key community college priorities that were originally in consideration, such as “Short-Term Pell”, the College Transparency Act, and TAACCCT and National Apprenticeships Act reauthorizations. However, community colleges were still present throughout the legislation. Below is a breakdown of relevant sections for community colleges.

DIVISION A – CHIPS ACT OF 2022

Sec. 102 – Creating helpful incentives to produce semiconductors (CHIPS) for America fund.

- Commerce R&D and workforce development programs: \$11 billion appropriated over 5 years to implement programs authorized in Sec. 9906, including the National Semiconductor Technology Center (“NSTC”), the National Advanced Packaging Manufacturing Program, and other R&D and workforce development programs authorized in Sec. 9906
 - \$5 billion in FY22
 - \$2 billion for NSTC
 - \$2.5 billion for advanced packaging
 - \$500 million for other related R&D programs
 - For use across the NSTC, advanced packaging, and other related R&D programs, the following would be provided:
 - \$2 billion in FY23
 - \$1.3 billion in FY24
 - \$1.1 billion in FY25
 - \$1.6 billion in FY26
- \$200 million for a Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Workforce and Education Fund: Funding provided to the National Science Foundation, spread over five years, to promote growth of the semiconductor workforce.

Sec. 103(c) – Advanced Microelectronics Research and Development. Amends the National Semiconductor Technology Center to include community college programs relevant to microelectronics in their expansions and incentivization efforts to reach geographically diverse participation.

DIVISION B—RESEARCH AND INNOVATION

Title I – Department of Energy Science for the Future

Sec. 10111(c) – Broadening Participation in Workforce Development for Teachers and Scientists. Amends the Department of Energy Science Education Enhancement Act and provides \$2 million per year to expand opportunities to increase the number of highly skilled STEM professionals working in disciplines relevant to the Department of Energy and to broaden the recruitment pool to community colleges, HBCUs, TCUs, HSIs, MSIs, and others to increase participation of underrepresented groups.

Title II – National Institute of Standards and Technology for the Future

Subtitle C—General Activities

Sec. 10241 – Educational Outreach and Support for Underrepresented Communities. Amends the National Institute of Standards and Technology Act to include community colleges, TCUs, HBCUs, HSIs, and MSIs in the Institute’s education and outreach activities to reach underrepresented communities.

Subtitle D—Hollings Manufacturing Extension Partnership

Sec. 10251 – Establishment of expansion awards pilot program as a part of the Hollings Manufacturing Extension Partnership. Establishes a pilot program of expansion awards for Hollings Manufacturing Extension Partnership (MEP) centers to provide services for workforce development (which may include training advanced manufacturing personnel), resiliency of domestic supply chains, and expanded support for adopting advanced technology upgrades at small and medium manufacturers. The grants can be used among other things to provide worker training and education, and to connect manufacturers with CTE entities, and community colleges.

Title III – National Science Foundation for the Future

Subtitle B—STEM Education

Sec. 10312 – Undergraduate STEM Education. Updates the Advanced Technological Education program housed under NSF to establish a network of centers for science and technical education and supports research and development to improve STEM education at community colleges. Supports awards to advance research on effective STEM education practices at community colleges, provide students with hands-on training and research experiences, and support career and technical education in STEM fields. Establishes a pilot program to develop and scale up successful models for providing students with hands-on course-based research experiences.

Sec. 10318 – Microelectronics Workforce Development Activities. Directs the National Science Foundation to make awards, including through existing programs, supporting the development and expansion of microelectronics education and workforce development activities at all levels of education, including traineeships.

Sec. 10318(a)(5) – Microelectronics Skilled Technical Workforce Programs. Grants awards under the Scientific and Advanced-Technology Act of 1992 (42 U.S.C. 1862h-j) to support programs for skilled technical workers in STEM disciplines that are aligned with skilled workforce needs of the microelectronics industry and lead to an associate’s degree, or equivalent certification.

Sec. 10318(b) – National Network for Microelectronics Education. Establishes a grant program for institutions of higher education and non-profit organizations (or consortia of such institutions and organizations) to establish partnerships to enhance and broaden participation in microelectronics education. This includes to develop regional partnerships among associate-degree-granting colleges, bachelor-degree-granting institutions, workforce development programs, labor organizations, and industry to create a diverse national technical workforce trained in microelectronics and ensure education and training is meeting the evolving needs of industry. The grants can also be used to develop local workforce pipelines via vocational and high school training programs, community college degrees and certificates, veteran post service opportunities, and mentoring.

Sec. 10321. Programs to address the STEM workforce. Provides undergraduate scholarships (including at community colleges) and authority for Federal research agencies to hire recipients of such awards.

Subtitle C—Broadening Participation

Sec. 10329 – Activities to expand STEM opportunities. Supports and incentivizes institutional reform efforts to expand opportunities and development for underrepresented minorities in STEM academic careers and undergraduate STEM studies. This includes implementation or expansion of successful, research-based bridge, cohort, tutoring, or mentoring programs, including those involving community colleges and technical schools, designed to enhance the recruitment and retention of students from underrepresented minority groups in STEM fields.

Subtitle G—Directorate for Technology, Innovation, and Partnerships

Sec. 10388 – Regional Innovation Engines. Supports Regional Innovation Engines to advance multidisciplinary, collaborative, use-inspired and translation research and technology development in key technology focus areas, including through support for multi-user testbeds and instrumentation. Eligible entities that can apply for grants to establish the Regional Innovation Engines include institutions of higher education and must include in their application a partnership with one or more IHEs that is an HBCU, TCU, HSI, MSI, EPSCoR institution, emerging research institution or community college.

Sec. 10393 – Scholarships and fellowships. Supports undergraduate scholarships (including at community colleges) in key technology focus areas. Not less than 10 percent of the funds made available should be used to support additional awards that focus on community college training, education, and teaching programs that increase the participation of populations that are historically underrepresented in STEM. Supports a scholarship to enable low-income individuals to pursue degrees in STEM fields.

Title V – Broadening Participation in Science

Subtitle B—Rural STEM Education Research

Sec. 10513 – Opportunities for online education. Authorizes NSF to support research on online STEM education and mentoring in rural communities.

Title VI – Miscellaneous Science and Technology Provisions

Subtitle C—Regional Innovation

Sec. 10621 – Regional Innovation Capacity. Directs the Department of Commerce to create 20 geographically distributed “regional technology and innovation hubs” in areas that are not leading technology centers. These hubs will focus on technology development, job creation, and expanding U.S. innovation capacity.

Sec. 10621(f) – Strategy Implementation Grants and Cooperative Agreements. Awards grants or cooperative agreements to regional technology and innovation hubs for the implementation of regional innovation strategies. Eligible use of funds includes the creation of partnerships between industry, workforce, nonprofit, and educational institutions, which may include community colleges, to create and align technical training and educational programs, including for a skilled technical workforce.

Subtitle L—National Nuclear University Research Infrastructure Reinvestment

Sec. 10742 – Purposes. Among other things, supports nuclear energy workforce development and the establishment or enhancement of nuclear science and engineering capabilities at historically Black colleges and universities, Tribal colleges or universities, minority-serving institutions, Established Program to Stimulate Competitive Research universities, and junior or community colleges.