

growth, retention, and development of that workforce;

(2) examine paths to entry and re-entry into the cyber workforce;

(3) understand trends of the cyber workforce, including demographic representation, educational and professional backgrounds present, competencies available, and factors that shape employee recruitment, development, and retention and how to increase the size, diversity, and capability of the cyber workforce;

(4) examine and evaluate training practices, models, programs, and technologies; and

(5) other closely related topics as the Director determines appropriate.

**(c) Requirements**

In carrying out the activities described in subsection (b), the Director shall—

(1) collaborate with the National Institute of Standards and Technology, including the National Initiative for Cybersecurity Education, the Department of Homeland Security, the Department of Defense, the Office of Personnel Management, and other Federal departments and agencies, as appropriate;

(2) align with or build on the National Initiative on Cybersecurity Education Cybersecurity Workforce Framework wherever practicable and applicable;

(3) leverage the collective body of knowledge from existing cyber workforce development research and education activities; and

(4) engage with other Federal departments and agencies, research communities, and potential users of information produced under this subsection.

(Pub. L. 117–167, div. B, title III, §10315, Aug. 9, 2022, 136 Stat. 1530.)

**§ 18996. Cybersecurity workforce data initiative**

The Director, acting through the National Center for Science and Engineering Statistics established in section 1862p of this title and in coordination with the Director of the National Institute of Standards and Technology and other appropriate Federal statistical agencies, shall establish a cybersecurity workforce data initiative that—

(1) assesses the feasibility of providing nationally representative estimates and statistical information on the cybersecurity workforce;

(2) utilizes the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework (NIST Special Publication 800–181), or other frameworks, as appropriate, to enable a consistent measurement of the cybersecurity workforce;

(3) utilizes and complements existing data on employer requirements and unfilled positions in the cybersecurity workforce;

(4) consults key stakeholders and the broader community of practice in cybersecurity workforce development to determine data requirements needed to strengthen the cybersecurity workforce;

(5) evaluates existing Federal survey data for information pertinent to developing national estimates of the cybersecurity workforce;

(6) evaluates administrative data and other supplementary data sources, as available, to describe and measure the cybersecurity workforce; and

(7) collects statistical data, to the greatest extent practicable, on credential attainment and employment outcomes information for the cybersecurity workforce.

(Pub. L. 117–167, div. B, title III, §10317, Aug. 9, 2022, 136 Stat. 1531.)

**§ 18997. Microelectronics workforce development activities**

**(a) Creating helpful initiatives to produce personnel in needed growth industries**

**(1) In general**

The Director shall make awards to institutions of higher education, non-profit organizations, or consortia thereof, for research, development, and related activities to advance innovative approaches to developing, improving, and expanding evidence-based education and workforce development activities and learning experiences at all levels of education in fields and disciplines related to microelectronics.

**(2) Purposes**

Activities carried out under this section shall be for the purpose of supporting the growth, retention, and development of a diverse and sustainable microelectronics workforce to meet the requirements of the programs established in section 4656(c)(2)(C) of title 15 in support of the evolving needs of industry, academia, government, and Federal laboratories.

**(3) Uses of funds**

Awards made under this section shall be used to support activities, such as—

(A) development of industry-oriented curricula and teaching modules for topics relevant to microelectronics, including those that provide meaningful hands-on learning experiences;

(B) dissemination of materials developed in subparagraph (A), including through the creation and maintenance of a publicly-accessible database and online portal;

(C) development and implementation of training, research, and professional development programs for teachers, including innovative pre-service and in-service programs, in microelectronics and related fields;

(D) support for learning activities and experiences that provide physical, simulated, or remote access to training facilities and industry-standard processes and tools, including equipment and software for the design, development, manufacturing, and testing of microelectronics;

(E) increasing the integration of microelectronics content into STEM curricula at all education levels;

(F) Growing<sup>1</sup> academic research capacity in microelectronics by incentivizing the hiring of faculty in fields critical to microelectronics;

(G) support for innovative industry pathway programs that connect high school, vo-

<sup>1</sup> So in original. Probably should not be capitalized.