

Summary of Building the Cybersecurity Workforce Pipeline: A Study of the National Centers of Academic Excellence in Cybersecurity

Investing in cyber talent and education is critical to U.S. national and economic security. Understanding the effectiveness of current education initiatives will help policymakers make informed decisions. One such initiative is the National Centers of Academic Excellence in Cyber (NCAE-C), which is a consortium of about 400 institutions with cyber, computer science, and related degree or certification programs that meet high federal standards and are designated as centers of excellence by the National Security Agency. Our main goal was to determine whether NCAE-C accredited institutions are graduating cyber talent at a higher rate than schools without the designation. We find:

- 1. NCAE-C institutions graduated 50 percent of all cyber and cyber-related bachelor's degrees, 32 percent of all associate's degrees, and 19 percent of all non-degree credentials in 2020.** Compared to non-NCAE-C institutions, this suggests that NCAE-C schools have outsized impact in training cyber and cyber-related talent. Different methods for ranking NCAE-C institutions and states show us that larger institutions are producing many graduates across both award types, but that there are also lesser-known institutions that award a significantly high percentage of cyber-related awards.
- 2. NCAE-C institutions have also shown rapid growth in completions over the last decade in cyber and cyber-related fields.** Across all award types, the rate of growth of NCAE-C completions far outpaced non-NCAE-C institutions. For example, NCAE-C institutions experienced a 227% increase in cyber and cyber-related bachelor's degree completions from 2010 to 2020 compared to non-NCAE-C institutions experiencing only a 95% increase during the same period.
- 3. The NCAE-C program and its accredited institutions do more than just graduate cyber talent.** NCAE-C institutions are leaders in cyber education, with initiatives such as K-12 curriculum and pathway development, faculty professional development, regional hubs, and scholarship programs.

We recommend:

Congress should officially authorize the program as a program of record and provide yearly appropriations. Despite the promise it shows for growing the cyber workforce, the NCAE-C program is not regularly funded by Congress. A lack of consistent funding makes strategic planning difficult for program administrators.

For more information:

- **Download the Report:** <https://cset.georgetown.edu/publication/building-the-cybersecurity-workforce-pipeline>
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