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THE COMPUTER SCIENCE EDUCATION ACT

SUPPORTING HIGH TECH, HIGH WAGE JOBS

More than 1.5 million high-wage computing jobs are expected to be created in the United States by 2018. Yet, between 2004 and 2008, the number of computer-related bachelor's degrees granted in the U.S. fell from roughly 60,000 to 38,000. If America is to remain an economic superpower—and if we're to support jobs for the middle class—we must be the world's leader in computer science education.

Unfortunately, introductory secondary school computer science courses have decreased in number by 17 percent since 2005 and the number of Advanced Placement (AP) computer science courses has decreased by 33 percent. Disparities also exist. In 2008, only 17 percent of AP computer science test takers were women and only 4 percent of AP computer science test takers were African-Americans.

While some states allow computer science courses to count toward a secondary school core graduation requirement, most states that have specific course requirements for graduation count computer science courses only as electives. Many states also do not have a certification process for computer science teachers, and where certification processes do exist, such processes often have no connection to computer science content.

To reverse these troubling trends and prepare Americans for jobs in this high-wage, high-growth field, the **Computer Science Education Act** will help states to increase and strengthen their computer science offerings in K-12 education. Funding will help schools work with college and universities to:

- Ensure computer science offerings are an integral part of the curriculum;
- Develop state computer science standards, curricula, and assessments;
- Improve access to underserved populations;
- Create professional development and teacher certification initiatives, including computer science teacher preparation programs in higher education;
- Form a commission on computer science education to bring states together to address the computer science teacher certification crisis; and,
- Establish an independent, rigorous evaluation of state efforts with reporting back to Congress and the administration.

The bill would provide two-year competitive planning grants to states of at least \$250,000 per state, as well as five-year competitive implementation grants to states to support their plans to increase and strengthen schools' capacity to offer effective computer science education.

Further Reading: [Education Week, "Schools Fall Behind in Offering Computer Science," July 14, 2010](#)