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H.R. 5929 – the Computer Science Education Act

Background

- Breakthroughs in computer science are reshaping our society and economy by transforming industry, creating new fields of commerce, driving innovation in all fields of science, and bolstering productivity.
- From 2008 through 2018, more than 1.5 million high-wage computing jobs will be created in the United States, the largest growth area across the STEM (science, technology, engineering and mathematics) fields.
- Providing students with computer science education in elementary and secondary school is critical for student success in the 21st century and for strengthening the workforce.
- However, computer science courses in our schools are fading at a time when they are most needed: 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.
- Moreover, significant disparities in access to computer science education exist for women and minorities: In 2008, 17 percent of AP computer science test takers were women, even though women represented 55 percent of all AP test takers, and only 4 percent of AP computer science test takers were African-Americans, even though African-Americans represented 7 percent of all AP test takers.
- While some States allow computer science courses to count toward a student's secondary school core graduation requirements, most States that have specific course requirements for graduation count computer science courses only as electives, chilling student interest in computer science courses.
- 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.

What the Computer Science Education Act does:

America simply cannot afford to continue wasting talent and opportunities in this field. That is why I introduced the Computer Science Education Act to help catalyze change and reform through:

- Planning grants for states to work with stakeholder to assess their computer science offerings in K-12 and develop concrete steps to make them stronger.
- Implementation grants for states, in partnership with local school districts and institutions of higher education to carry out state plans by:
 - Developing state computer science standards, curriculum, and assessments
 - Improving access to underserved populations
 - Creating professional development and teacher certification programs
 - Establishing on-line courses
 - Ensuring computer science offerings are an integral part of the curriculum.
- A blue-ribbon commission to review the national state of computer science education and bring states together to address the computer science teacher certification crisis.

- Computer science teacher preparation programs in higher education.
- An independent, rigorous evaluation of state programs funded under this Act with reporting back to Congress and the Administration.

Supporting Organizations

The Computing in the Core Coalition:

- Anita Borg Institute for Women and Technology
- Association for Computing Machinery
- Computer Science Teachers Association
- Computing Research Association
- Google
- Intel Corporation
- Microsoft
- National Center for Women and Information Technology
- SAS

Congressional Co-sponsors

- Shelley Berkley (NV-1)
- Lois Capps (CA-23)
- Yvette Clarke (NY-11)
- John Conyers (MI-14)
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- Lucille Roybal-Allard (CA-34)
- Loretta Sanchez (CA-47)
- Janice Schakowsky (IL-09)
- Robert "Bobby" Scott (VA-03)
- Lynne Woolsey (CA-06)

Further Reading

Education Week, "Schools Fall Behind in Offering Computer Science," July 14, 2010

http://www.edweek.org/ew/articles/2010/07/14/36compsci_ep.h29.html?qs=computer+science