NEWS From:

Congressman Mike Honda

FIFTEENTH DISTRICT - CALIFORNIA

For Immediate Release
July 10, 2002

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House Approves Bill to Strengthen Undergraduate Education for Future High-Tech Workforce

Bill Co-sponsored by Rep. Honda Authorizes $390 Million Over Five Years

WASHINGTON, D.C. — The House of Representatives approved by voice vote a Science Committee bill (H.R. 3130), co-sponsored by Rep. Mike Honda (D-San Jose), to address the decline in the nation's technical workforce and to improve undergraduate math and science education. "The Tech Talent Act of 2002" would establish or enhance programs at the National Science Foundation (NSF) to expand the number of U.S. students majoring in science, math, engineering and technology. The bill authorizes nearly $390 million over five years for these programs. The bill was approved late in the day on July 9, 2002.

"It is critical for the continued and future success of our economy that we educate and nurture the best scientists, mathematicians, engineers and technologists in the world," said Congressman Mike Honda. "Advanced scientific innovations led to the birth of Silicon Valley. In order for our country to continue to lead the industries of tomorrow, and for our workforce to have access to well-paying jobs, the building of our nation's intellectual capital is key."

The bill establishes new programs at the National Science Foundation (NSF), and enhances others, to expand the number of U.S. students who enroll – and excel – in science, technology, engineering and mathematics. While the technology sector has created increased demand for technically skilled workers, U.S. student interest in science, technology, engineering and mathematics has been in decline for over a decade. Factors contributing to this decline include poor preparation of faculty and few rewards for those faculty who do engage in undergraduate teaching and mentoring, and a shortage of adequate equipment and instrumentation. In addition, few assessment and evaluation tools exist to enable researchers to determine the key factors in improving undergraduate education and fostering interest in science, technology, engineering and mathematics fields.

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The legislation was endorsed by many leading business, education and technology associations and companies, including TechNet, Information Technology Association of America, the National Association of Manufacturers, American Council on Education, the Semiconductor Industry Association, Intel Corporation and Texas Instruments.

Legislative Background

The legislation establishes:

- a program at NSF to provide grants to institutions of higher education to increase the number and quality of graduates from physical science, mathematics, engineering and technology degree and transfer programs (authorized at $25 million for fiscal year (FY) 2003 and such sums as necessary thereafter);
- an Institutional Reform program to provide funding to enable institutions of higher education to expand successful reform efforts and to stimulate changes in institutional policies and practices that place higher value on faculty participation in undergraduate education (authorized at $15 million for each of fiscal years 2003-2007);
- a Faculty Development program to provide funding for sabbatical and training opportunities to enable current and future faculty—including graduate students and post-doctoral fellows—to become better educators (authorized at $8 million for each of fiscal years 2003-2007);
- grants to primarily undergraduate institutions to purchase research-grade instrumentation for use in undergraduate instruction and research (authorized at $10 million for each of fiscal years 2003-2007);
- grants for the creation of research programs that will provide undergraduates from a wide variety of institutions with research experiences and academic mentors (authorized at $10 million for each of fiscal years 2003-2007);
- a program to provide funding to minority serving institutions for course and curriculum improvement, faculty development, and stipends for undergraduate students engaged in research projects; and
- amendment of the *Scientific and Advanced Technology Act of 1992* to include improvement of core math and science courses at community colleges and to provide funding for student research programs and acquisition of state-of-the-art instruments at these institutions (authorized at $8.75 million in FY 2003, $9.25 in FY 2004, $9.75 in FY 2005, $10.25 in 2006, and $10.75 in FY 2007).

NSF Science and Engineering Indicators- 2002 revealed that the amount of degrees awarded in the physical sciences and engineering has been declining for more than ten years. Since 1975, the U.S. has dropped from third to thirteenth in the world in terms of the proportion of 24 year olds who hold natural science or engineering degrees while European and Asian countries have shown strong growth in degree production in all science and engineering fields.

According to the 2000 report, Before It's Too Late: A Report to the Nation from The National Commission on Mathematics and Science Teaching for the 21st Century, the technology-driven economy of the 21st century will add about 20 million jobs by 2008, including 5.6 million jobs in the health sciences and computer industries that will require science and mathematics skills.

More information can be found at www.house.gov/science.

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