



Commonwealth of Massachusetts

Executive Department Office of Lieutenant Governor Timothy P. Murray

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LIEUTENANT GOVERNOR MURRAY ANNOUNCES THE EXPANSION OF STEM PROGRAMS TO SUPPORT WORKFORCE DEVELOPMENT AND COLLEGE COMPLETION

Significant public-private partnership helps to reach more students pursuing STEM

FITCHBURG – Thursday, December 13, 2012 – Lieutenant Governor Timothy Murray today announced five designated Science, Technology, Engineering, and Math (STEM) programs will expand across the state to support the Commonwealth's goals of improving workforce development and increasing student retention among college graduates in Massachusetts. Lieutenant Governor Murray, Chair of the STEM Advisory Council, also announced that in addition to approximately \$428,000 awarded through the state's STEM Pipeline Fund, these expanded programs have identified matching funds at the targeted 3:1 ratio totaling more than \$1.3 million from participating corporations, private foundations, and federal government sources to enhance state assistance.

Known as the @Scale Initiative, the STEM Advisory Council has collaborated with government, academia, and the private sector to "scale up" existing programs in Massachusetts, replicating models and best practices to reach more students and adults studying and pursuing STEM education and careers. Now in its second phase, @Scale II is focusing on two new goals of the statewide STEM Plan released by Lieutenant Governor Murray in 2010: improving STEM workforce development and increasing graduation rates of students in STEM college majors in Massachusetts.

"Following the release of the Commonwealth's first statewide STEM Plan in 2010, the STEM Advisory Council is proactively working towards fulfilling critical goals to enhance and support STEM initiatives across the state," said Lieutenant Governor Murray. "By expanding these five programs today, we are partnering with stakeholders in the public and private sectors to help more students and workers achieve opportunities in STEM education, jobs, and workforce development.";

Of the five programs announced today, Lieutenant Governor Murray provided a brief overview of the Broadening Advanced Technological Education Connections (BATEC) initiative, based out of the University of Massachusetts Boston, to help close the skills gap and fill Big Data and middle skills jobs within the Information Technology (IT) sector, a priority of the Patrick-Murray Administration. Receiving just over \$89,000 in state funding through the STEM Pipeline Fund, the BATEC proposal is also receiving \$275,000 through the support of the National Science Foundation (NSF), in-kind donations, and from Massachusetts-based companies including EMC Corporation, IBM,

and Oracle to expand this IT initiative to community colleges.

As a result of this partnership, BATEC will start working with Bunker Hill Community College and plans to soon scale up to three other community colleges to address workforce gaps specifically within data and analytics. Through targeted training and education programs, this initiative will assist current students as well as displaced and/or incumbent workers with a Fast Track Certificate Program in Data Management beginning in the fall of 2013.

"Talent is the number one issue our companies are facing when it comes to growth. MassTLC is excited to be partnering with BATEC on this grant and other important initiatives that will help the next generation of workers understand and prepare for the skills that will provide them meaningful jobs in the dynamic, accelerating Big Data sector," said Tom Hopcroft, President and CEO of the Massachusetts Technology Leadership Council (MassTLC).

The four additional programs that will expand as a result of @Scale II include:

ABLE 4 STEM: ABLE 4 STEM will develop pathways in engineering and biology for implementation across the University of Massachusetts statewide system and the state's Community College system to help double the number of STEM degrees awarded to underrepresented minority students at both associate and bachelor's degree levels over a 4 year period. Also, a weeklong summer enrichment program will support 25 students between the first and second years of STEM major studies at the community college through introductory course lectures and team research projects, reinforcing retention and readiness for progression to baccalaureate programs.

STEM Power Network: Currently based out of the Central Massachusetts Workforce Investment Board (WIB), the STEM Power Network will now expand with the goal of reaching all 16 WIBS across the state. As a result of this initiative, a multi-regional STEM pathway will be developed to reach more career centers and employers statewide to support training in STEM related fields including: health care, advanced manufacturing, IT, biotechnology and life sciences, clean energy and sustainability, and financial services.

Western Regional Partnership: Forecasted retirements of production and assembly workers are expected to produce 400 advanced manufacturing job vacancies in the Berkshire and Pioneer Valley's advanced manufacturing companies in the next three years. The Career Vocational Technical Education STEM Western Regional Partnership made up of four regional vocational technical high schools (McCann, Putnam, Franklin and Westfield) and three community colleges (Berkshire, Springfield and Greenfield) – will (1) recruit and prepare youth ages 18-24 for careers in advanced manufacturing sectors; (2) increase the percentage of associate's and bachelor's degree recipients in STEM-related advanced manufacturing programs; (3) attract more students, especially those from low-income and underrepresented groups, into STEM; and (4) enhance teacher professional development through cross-training and peer training in STEM areas linked to advanced manufacturing.

STEM Pathways Project: Through the addition of Supplemental Instruction, tutoring and expanded internship opportunities, the Massachusetts College of Liberal Arts will build upon its already successful STEM Pathways Project to further increase both enrollments in STEM majors (23% 2008-2012) and the number of students graduating with a degree in STEM fields (49% 2008-2012). Based upon the success of this initiative at MCLA, this campus will convene leaders from across the nine state universities to promote MCLA's successful practices and to learn from initiatives at other campuses

with the goal to inform the development of a system-wide best-practice retention and graduation rate program, improving student outcomes in STEM majors across the Commonwealth.

"These @SCALE funds will benefit students majoring in STEM at all Massachusetts Community Colleges by increasing their success in Associate's degree completion and will also connect them with a STEM bachelor's degree program at a UMass campus if they choose to pursue that pathway," said John Cunningham, Vice President for Academic Affairs, Student Affairs, and International Relations, at the University of Massachusetts System Office, about the ABLÉ 4 STEM project.

"Now more than ever in my life in the plastics industry, it's my firm belief that we need premier schools like McCann to train a work force that is greatly needed," said Don Rochelo, owner, COO/Chairman/Apex Resource Technologies, Inc., about the Western Regional Partnership project. "We missed an entire generation of workers being trained due to the misconception that manufacturing was dead in the U.S. when in fact, we don't have enough people to do the work. Please provide the investment in our industries future and that of the fine young men and woman being trained by fully supporting McCann pursuit of this grant. ";

"We know that science, technology, engineering, and mathematics (STEM) are among the keys to our competitive advantage both here in the Berkshires, and across the Commonwealth," said Mary K. Grant, Ph.D., President of Massachusetts College of Liberal Arts (MCLA), about the STEM Pathways project. "The Berkshire STEM Pipeline is doing important work in partnership with the Berkshire Compact for Education to engage K-12 students with programs that will inspire creativity and critical thinking and deepen connections to STEM subjects."

Since 2011, the STEM Advisory Council and business community have also worked with projects in Phase I of @Scale to achieve two other goals, quantitative gains in student interest and readiness. The seven Phase I @Scale projects are: Quinsigamond Community College's (QCC) Advanced Robotics Program; Mass Insight Education's Math + Science Initiative; DIGITS Project; WPI's Project Lead the Way; MassBioEd Foundation's BioTeach; Massasoit Community College's Science Transfer Initiative; and the Museum of Science's Gateway Project. With both state and private sector funding, Phase I @Scale projects will reach at least 150 teachers and 8,270 students across the state.

"The @Scale initiative is building momentum. The seven phase 1 projects selected for impact on student interest and readiness for STEM majors are now in implementation, benefitting students and educators across the Commonwealth," said David Cedrone, Associate Commissioner for Economic and Workforce Development and STEM. "These five new phase II projects address our goals to increase college graduation rates in STEM majors and address high impact workforce development needs. And early in the new year we will select projects that impact student achievement in math and science and student interest in early education and after-school, completing the @Scale portfolio."

Governor's STEM Advisory Council

On October 14, 2009 Governor Patrick signed an [Executive Order creating the Governor's STEM Advisory Council](#). As Chair of the STEM Advisory Council, Lieutenant Governor Murray released the state's first STEM plan at the STEM Summit in 2010, tying economic development to educational enhancement in STEM fields. The plan established targeted goals and benchmarks to promote STEM education, jobs, and

workforce development as part of the Patrick-Murray Administration's STEM Initiative.

The Council serves as a vehicle for STEM advocates from the public and private sectors, as well as legislators and educators, to engage in meaningful collaboration with the Governor and Lieutenant Governor's Office, the Executive Office of Education and their agencies, the Department of Higher Education, the Department of Elementary and Secondary Education, and the Department of Early Education and Care, the Executive Office of Housing and Economic Development, and the Executive Office of Labor and Workforce Development.

To read the STEM Plan or learn more about the Patrick-Murray Administration's STEM Initiatives and the Governor's STEM Advisory Council, visit www.mass.gov/governor/stem.