



WPI

Worcester Polytechnic Institute
100 Institute Road
Worcester, MA 01609
www.wpi.edu

WPI Leading Nationwide Drive to Inspire Young Scientists and Engineers

WORCESTER, Mass. – June 5, 2014 – Recognizing the need to promote science, technology, engineering and math (STEM) education at earlier ages, Worcester Polytechnic Institute (WPI) has committed significant resources, energy and expertise over the past decade to improving STEM education, and supporting those who teach STEM succeed more consistently.

The core of Worcester Polytechnic Institute's mission is the development of well-educated and inspired scientists and engineers. That job does not begin at the undergraduate level; young people must be engaged and motivated at a much earlier age if America is to generate the quantity of scientists and technologists it needs to thrive and prosper.

Over the past 12 years, WPI staff and faculty have engaged more than 116,500 boys and girls, and more than 5,500 teachers, through STEM-focused programs aimed at engaging and inspiring K-12 students, and at giving educators better tools and techniques for teaching the STEM disciplines more effectively.

A sampling of WPI's many STEM initiatives:

- ***The STEM Education Center at WPI*** is dedicated to supporting and preparing K-12 educators and administrators. This two-year-old center builds on a longstanding history of WPI that has helped address a critical shortage of educators qualified to teach math and science – a gap that could leave the United States at a competitive economic disadvantage. President Barack Obama has set a goal of training more than 100,000 new math and science teachers over the next decade through his "Educate to Innovate" campaign. The STEM Education Center at WPI focuses on three pillars, all of which are aimed at supporting and preparing teachers in STEM fields: Licensure and Degrees, Professional Development, and Innovation in Teaching.
- ***ASSISTments*** is a web-based cognitive tutoring system developed at WPI that integrates student learning and assessment of student progress. Made available to schools free of charge, it is currently used by about 15,000 students nationally and internationally.
- ***The Massachusetts Academy for Mathematics and Science*** celebrates its 22nd anniversary this year. It enrolls about 100 academically accelerated 11th and 12th graders annually, emphasizing math and science within a comprehensive, project-based academic program. Mass Academy allows participating seniors the ability to complete a full year of college, enrolling in classes at WPI, making it the only public school in the state whose students attend a private university full-time.
- ***Camp Reach*** is one of several WPI K-12 programs aimed at enhancing math and science education for girls. Each summer for the past 16 years, 30 seventh-grade girls from Massachusetts have participated in the two-week residential program including hands-on

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workshops, a design project for a community organization, field trips, recreational activities, and follow-up programs during the academic year. Three years ago President Obama named Camp Reach as a recipient of the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring for 2011.

- ***Frontiers*** is a summer program for high school students seeking an intensive, immersive experience in science and engineering. Entering its 31st year, this residential research and learning experience challenges high school juniors and seniors to explore the outer limits of science, mathematics, and engineering using state-of-the-art technology. Students focus on STEM challenges and projects in aerospace engineering, biology/biotechnology, biomedical engineering, chemistry/biochemistry, civil and environmental engineering, computer science, electrical and computer engineering, environmental and sustainability studies, interactive media and game development, mathematics, mechanical engineering, physics, robotics and global sustainability. *Launch* is a similar, but non-residential, program for high-schoolers.
- ***ExxonMobil Bernard Harris Summer Science Camp*** will welcome about 50 underrepresented sixth, seventh and eighth grade students from Bay State middle schools to WPI this summer to partake in a hands-on STEM camp. This is the fifth time in six years that WPI has been selected to host this residential program, which, thanks to the vision and generosity of veteran astronaut Dr. Bernard A. Harris, Jr. and ExxonMobil, is free of charge to campers and is the largest of its kind in the United States. Campers work with WPI faculty, secondary school teachers, and ExxonMobil engineers on projects that focus on technology, natural science, engineering, and mathematics, and they attend classes that include problem solving, research, and critical thinking and communications skills incorporated with the sciences, engineering, technology, design concepts, and field excursions.
- ***The FIRST Robotics Resource Center*** is a source of expertise, ideas, and information for young teams competing in FIRST Robotics programs across the country.

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Journalists and media representatives seeking additional information should contact Andy Baron at 508-831-5916, ajbaron@wpi.edu, or Eileen Brangan Mell, 508-831-6785, ebmell@wpi.edu.