

Improving science, technology, engineering, and mathematics (STEM) education and research is critical to our future and a key responsibility for IUPUI.

STEM is a good ACRONYM ("Alphabetical Character Rendition Of a Name Yielding a Meaning"). Science, technology, engineering, and mathematics education is truly the "stem" from which branches and flowers the skills necessary to pursue knowledge, careers, and scientific literacy in the 21st century—including Indiana's economic development priority, the health and life sciences.

That is why IUPUI has made intensive investments to promote STEM education throughout the educational pipeline.

IUPUI has put in place many initiatives. These initiatives range from professional development through major projects which, in turn, have yielded further investments.

This month I joined School of Science faculty at a breakfast with Nobel Prize-winning physicist Carl Wieman. He galvanized our interest in reviewing our pre-med curriculum, revisiting laboratory science course design, stimulating use of new software to improve our curriculum, and supporting students as they find the best STEM career.

Promoting student interest in STEM careers has been a key focus.

Our Purdue School of Engineering and Technology recently received a \$944,348 contract from the Indianapolis Private Industry Council (IPIC) for the STEMWorks Indiana Initiative. It focuses on improving STEM education for disadvantaged youth and dislocated workers. Our faculty will develop training, create "career blueprints," and provide access to coaches and mentors who will link participants to employers. The IPIC contract is part of a \$10 million U.S. Department of Labor grant program.

IUPUI also leads a national initiative to promote a high school biomedical sciences curriculum through Project Lead the Way.

Project Lead the Way prepares students for STEM careers in engineering and biomedical sciences. IUPUI is one of only three national teacher training sites. The School of Science at IUPUI has educated 250 high school teachers and instructors from 32 states to become master teachers in a four-course biomedical sciences elective track.

Teacher preparation is a vital part of IUPUI's STEM focus.

Indiana science teachers gained research experience at our first Molecular Medicine in Action for Teaching Professionals last fall. The teachers worked with some of the nation's top scientists in the Herman B Wells Center for Pediatric Research. This inaugural program is an expansion of the original Molecular Medicine in Action program for Indiana high school students—now in its 11th year and held each spring.

IUPUI was a partner in launching the Woodrow Wilson Teaching Fellowship with its first class in 2009.

Indiana's Woodrow Wilson Teaching Fellowship focuses on individuals with backgrounds in science, technology, engineering, and math because high-need urban and rural high schools have the most difficulty in recruiting and retaining teachers in these fields. Under Indiana's program, each Fellow receives a \$30,000 stipend to complete a master's program. The Lilly Endowment provided a grant of more than \$10.1 million to support the program, and the inaugural cohort of 59 included 20 at IUPUI.

Our School of Education received a five-year, \$2.7 million Teacher Quality Partnership grant to expand the Wilson Teaching Fellowship.

This U.S. Department of Education grant will lead to a master's degree in education and dual licensure. It is one of only 28 grants the federal government awarded to improve instruction and create new pathways in teacher preparation, while providing high-need schools with more teachers. The grant will attract educators from a wide range of professional backgrounds into the teaching profession.

IUPUI will continue to invest in STEM education and develop strong partnerships because it is critical for Indiana and critical for the nation.

CHANCELLOR CHARLES R. BANTZ