

A collaboration of University of Northern Iowa, Iowa State University and University of Iowa

IMSEP Launches

The Regents Mathematics and Science Education Initiative, signed into law by Governor Culver on May 9, 2008, is now officially named The Iowa Mathematics and Science Education Partnership (IMSEP). The IMSEP main office is located at the University of Northern Iowa, in rooms 113 D and E in the Business and Community Services Center. Visit the new Web site at <http://www.iowamathscience.org>. The site includes resources, project activities, events, partners and more.

Infrastructure Evolves

Jeff Weld, director of IMSEP, would like to welcome Kari Jastorff as program manager, and Jill Humston, an instructor in UNI's Department of Chemistry and Biochemistry who will coordinate program evaluation and external funding opportunities. The inter-university executive board has had a few personnel changes while meeting frequently this summer. An advisory council of business and education professionals will be established by fall to enhance communications and to expand the horizons of IMSEP.

Math & Science Education Institute

The Math & Science Education Institute was created to support IMSEP's core projects and numerous math and science education activities. The institute is coordinating and expanding Iowa's STEM education activities, including a granting structure to support Regent faculty in collaborative efforts that reinforce IMSEP goals. Teams of faculty in math, science and education from across the three state universities have responded to a call for proposals for projects that carry the IMSEP mission across the state. The institute is also coordinating Regent university resources to examine new degrees and alternate licensure paths to increase Iowa's math and science teacher workforce. A partnership with the Iowa Intern Licensure Collaborative is already underway.

Update on Core Projects

IMSEP core project's highlights:

- **Project Lead The Way**, managed by IMSEP executive board member Loren Zachary, assistant dean, ISU College of Engineering, is a national pre-engineering curriculum package for middle and high school students to learn science and math through engineering. Several engineering faculty from Iowa State University and University of Iowa have been certified to train teachers this summer, in turn training dozens of Iowa teachers to implement Project Lead the Way in their schools this fall.
- Star Math and Science Majors to Teaching, led at UNI, has been renamed **I-Teach Math and Science**. I-Teach begins with an "Exploring Math and Science Teaching" seminar that rotates exemplary teachers through weekly encounters with freshmen and sophomore math and science majors who enroll tuition-free. From there, internships, scholarships and mentorship are the core characterizations of the program. It will be piloted at UNI and North Iowa Area Community College this fall. ISU and other community colleges will offer the seminar in spring 2009.
- **Community College STEM Instructor Preparation**, piloted this year by Larry Ebbers, professor, ISU Department of Educational Leadership and Policy Studies, and Tom Greenbowe, professor, ISU Department of Chemistry and IMSEP executive board member, is a program which has developed fall and spring courses, an advisory board, a certification process and promotional strategies for attracting participants from across Iowa's community college

network.

- **Real World Internships for Teachers**, one of the strongest ways to upgrade the quality of teaching in STEM fields, has already been piloted this summer with secondary science teachers working in ISU and UNI research labs. IMSEP leaders are partnering with the Iowa Association of Business and Industry to create internship opportunities across Iowa's private sector to allow teachers across the state to participate in real world internships.
- **Corridor STEM Initiative**, a partnership project managed by Ron Fielder, chief administrator, AEA, operated summer camps for young scientists and engineers at six eastern Iowa sites this summer.

Math Transitions Guide

Last November, UNI hosted a statewide Math Transitions Congress to discuss the challenges facing students during the high school-to-college transition. One of the main challenges identified was the need for communication between math instructors at the university and high school levels--particularly the identification of key skills and competencies expected of students entering the universities. As a result, faculty from Iowa's state universities, working with scores of teachers and consultants, have developed the "Regent Universities Mathematics Transitions Guide." The guide gives high school teachers the math competencies students need to enter university math courses. The guide also addresses teaching methods at the high school and college level to assist instructors. It is being distributed to Iowa Schools, AEAs and universities. The guide can be viewed at http://www2.state.ia.us/regents/StudentInfo/Math_Guide.pdf.

Collaborations and Partnerships

Numerous affiliations and partnerships are being forged, in fulfillment of the IMSEP goal to enhance collaboration across Iowa. Latest partners on the quest to regain Iowa's STEM education leadership include:

- Glenwood's Science Research and Innovation Center
- Des Moines' Central Campus (Energy and Sustainability academy)
- The Iowa Biotechnology Association (Bioscience Educational Consortium)
- The Science Center of Iowa (Robot exhibit)
- Iowa Women of Innovation celebration
- The STEM Equity Pipeline project of the Iowa Department of Education (NSF proposal)
- Dozens of Iowa school districts from Cedar Rapids to Waterloo to Sioux City
- North Iowa Area Community College and other community colleges

Iowa STEM Education Public-Private Partnerships Symposium this Fall

A December 2 summit, the "Iowa STEM Education Public-Private Partnerships Symposium," is being planned by IMSEP leaders. This event will bring together education and industry partners to share ideas, strategies and plans for the future of STEM education in Iowa. The morning will feature established and emerging partnerships involving industries such as Rockwell-Collins, Pella Corporation, John Deere, Wyeth Labs and others, networked closely with education partners. The afternoon will be devoted to building on and developing new partnerships. Watch for more information as plans develop.

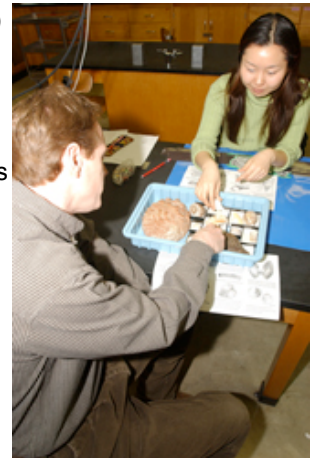
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