

---

## I-TEACH Math and Science Evolves

---



Dr. Catherine Miller and Jason Lang, co-instructors of the *I-Teach Math & Science* teacher recruitment seminar at the University of Northern Iowa (UNI), say their recruiting approach this semester for the *I-Teach* seminar was different than the prior semesters it was offered. This year, they are ramping up recruiting efforts by working harder to target those students who are already declared as math and science majors. Promotion of the seminar includes making information available to all math and science professors, posting flyers on bulletin boards in all buildings on campus where technology classes are taught, and a mass email campaign. Dr. Catherine Miller widened the net even further by contacting students in several cultural student groups on campus to better address the IMSEP goal related to diversity. In February, Dr. Miller and Mr. Lang will get the word out to prospective UNI students at two UNI academic fair events. Meanwhile coordinators from all four campuses currently offering the seminar—the University of Northern Iowa (UNI), Iowa State University (ISU), North Iowa Area Community College (NIACC), and Hawkeye Community College (HCC)—will gather in early February to exchange best practices to enhance this recruitment program. As of January 2010, about 150 students have participated in the *I-Teach* program, and the number of science and mathematics teaching majors at ISU and UNI has grown by more than 60 since last year, according to data provided by registrars' offices.

---

## Nontraditional Pathway to Math or Science Classroom Paved

---



A committee of experts from Iowa's public universities, led by coordinator Dr. Merrie Schroeder, has crafted a special pathway into secondary school teaching. Titled the *Iowa Teacher Intern License Pathway—Answering the Call to Teach*, this streamlined program for degreed professionals begins next August, with an April 16 application deadline. The IMSEP team is particularly keen on the potential contribution of this nontraditional route to teaching math and science and plans to support candidates through the NSF Robert Noyce Scholars program. As demand for such programs, an in-house study last summer of STEM bachelors-degreed alumni from UI, ISU and UNI over a 25-year period revealed that over half of them, now STEM professionals of all sorts, would be somewhat or very likely to pursue teaching licensure if certain conditions—namely the ability to keep day jobs, study close to home, be of low cost and of high quality—can prevail. That defines the Intern License Pathway. Information about the program can be found at <http://www.iowateacherintern.org/>. The Iowa Mathematics and Science Education Institute study of interest in nontraditional licensing can be viewed at <http://www.iowamathscience.org/reports/>.

---

## Science and Math Teacher Preparers Build on Summer Summit Success

---

Mathematics teacher educators from across Iowa have been invited to attend relevant sessions of the Iowa Council of Teachers of Mathematics (ICTM) Annual Conference on February 19 in Des Moines. UNI's math educators Dr. Jihwa Noh and Dr. Bridgette Stevens will lead sessions specific to continuing the conversation started at the August 14 summit of mathematics and science teacher educators. There are several other sessions where mathematics teacher educators are presenting work done with teachers that would be of interest to mathematics teacher educators, as well as Department of Education (DOE) sessions on the Iowa Core Curriculum. Meanwhile, science teacher educators from across Iowa are now represented by an ad-hoc committee to carry on the mission of elevating science teacher education at every college and university in the state. If you wish to join the mathematics education effort, send an email to Jihwa Noh at [jihwa.noh@uni.edu](mailto:jihwa.noh@uni.edu). If you would like to join the science education group, send a note to Jeff Weld at [jeff.weld@uni.edu](mailto:jeff.weld@uni.edu).

---

## Math & Science Academy for Under-Represented Youth to Expand

---

The *Iowa Math and Science Academy* (IMSA), funded by an IMSEP competitive grant, will expand the number of students reached thanks to a College Access Network grant secured by IMSEP and project director Angela Francis. The \$11,200 grant will increase program capacity by about one-fourth, or ten more participants. IMSA is a college-preparatory program designed to draw diverse students into the science, technology, engineering and mathematics (STEM) fields. High schoolers from Black Hawk, Bremer, Buchanan, Butler and Grundy counties in Iowa may apply to participate in this program, which spans summers and academic years through senior year. Ms. Francis said, "This grant allows IMSA to expand and serve additional students who are interested in STEM and who would benefit from the support services that our program offers." For more information about IMSA, email IMSA program director Angela Francis at [angela.francis@uni.edu](mailto:angela.francis@uni.edu).



Thanks to the Iowa College Access Network more students will now have an opportunity to take college-prep courses.

## Key IMSEP Objectives to be Aim of Faculty Grants

---

One of the most successful aspects of the *Iowa Mathematics and Science Education Partnership (IMSEP)* has been the involvement of scores of university faculty in outreach programming to thousands of Iowa teachers and tens of thousands of Iowa learners, funded through competitively awarded grants. Projects over the last year include enrichment STEM camps for youth, science and math content bolstering for teachers and the development of innovative curriculum. This February a new call-for-proposals will invite faculty from across the Regent universities, collaborating with schools and other entities, to focus their energies on five high priority IMSEP objectives:

- Double the number of pre-K through 12 and community college mathematics and science teachers produced by Iowa public universities;
- Decrease the number of unlicensed mathematics and science teachers in Iowa;
- Decrease the attrition rate for mathematics and science teachers in Iowa;
- Increase the ethnic, racial and socioeconomic diversity of mathematics and science teachers in Iowa;
- Increase the number and diversity of students who major in mathematics and science fields in Iowa's Regent universities.

When the immense human resources of Iowa's world-class universities are brought to bear on the STEM education challenges facing Iowa, great progress can be (and already has been) made. Current and prior faculty grants are summarized at <http://www.iowamathscience.org/competitivegrants.shtml>

## FIRST Tech Challenge and FIRST LEGO League Showcase Iowa's Best

---

The FIRST (*For Inspiration and Recognition of Science and Technology*) Tech Challenge (FTC) Iowa Championship was held recently at the University of Iowa's Memorial Union, and IMSEP staffers got to see firsthand the excitement student teams from around the Midwest brought to the competition. Then, the FIRST LEGO® League (FLL) Iowa Championship was held the following weekend at Iowa State University, where members of the IMSEP team were on hand. Hundreds of Iowa elementary, middle, and high school students participated in these two events. FLL hosted 72 teams from across Iowa, and FTC had 17 teams from Iowa and surrounding states. "These types of events really showcased our future math and science superstars," said IMSEP program manager Kari Jastorff. "We also witnessed kids working in teams, identifying problems, finding ways around roadblocks and coming up with creative and unique solutions." Winners from both the FTC and FLL events qualified to be invited to the World FIRST Competition which will be held in Atlanta, Georgia, in April 2010.



*Team members make last-minute adjustments during the FTC Iowa Championship at the University of Iowa.*

## IMSEP Director Joins NAEP Panel

---



Commonly referred to as "the nation's report card," the National Assessment of Educational Progress (NAEP) is taken by U.S. youth in grades 4, 8 and 12. Recent changes to the NAEP Science Frameworks call for a rigorous four-day work session in Texas at the end of January, where a panel of experts will develop new criteria for benchmarking students' progress in science state-by-state. All 2009 U.S. science test-takers will be partitioned into three achievement categories for reporting purposes: Basic, Proficient and Advanced. IMSEP director Jeff Weld joins 19 panelists from across the country to work on setting achievement standards for the 12th grade test. The U.S. Secretary of Education will then release the 2009 test results before the end of 2010. For more information about NAEP, go to <http://nces.ed.gov/nationsreportcard/>.

## IMSEP Updates

---

**National Lab Day in Iowa** – Termed a "national barn-raising for hands-on learning," National Lab Day is part of a series of White House STEM education initiatives to revamp the way science and mathematics are taught and learned at all levels. A variety of activities across Iowa during the first week of May will celebrate National Lab Day, including the 3rd annual Student STEM Symposium conducted by the Iowa Mathematics and Science Coalition (IMSC), an FY2010 addition to the IMSEP family of programs. Register your interest in National Lab Day at <http://www.nationallabday.org/>.

**IMSEP Day at the Capitol** – Join us on Wednesday, March 24, for IMSEP Day at the Capitol. Forty displays are expected; showcasing the great things the Regent universities and other key partners are doing regarding math and science education enhancement across Iowa. The event spans from 9:00 AM to 2:30 PM. For more details contact IMSEP communications specialist Tonja Richards at 319-273-2716 or send an email to [tonja.richards@uni.edu](mailto:tonja.richards@uni.edu).

**The Race is On** – Education officials incorporated STEM education components into Iowa's application for federal "Race to the Top" funding. Iowa is one of 40 states competing for Phase 1 funding. States will be notified of the outcome of their proposals in April. Another round of funding is scheduled for later in the year. To read Iowa's application or find a summary and fact sheet, go to [http://www.iowa.gov/educate/index.php?option=com\\_content&view=article&id=1910:race-to-the-top&catid=1051:race-to-the-top](http://www.iowa.gov/educate/index.php?option=com_content&view=article&id=1910:race-to-the-top&catid=1051:race-to-the-top).