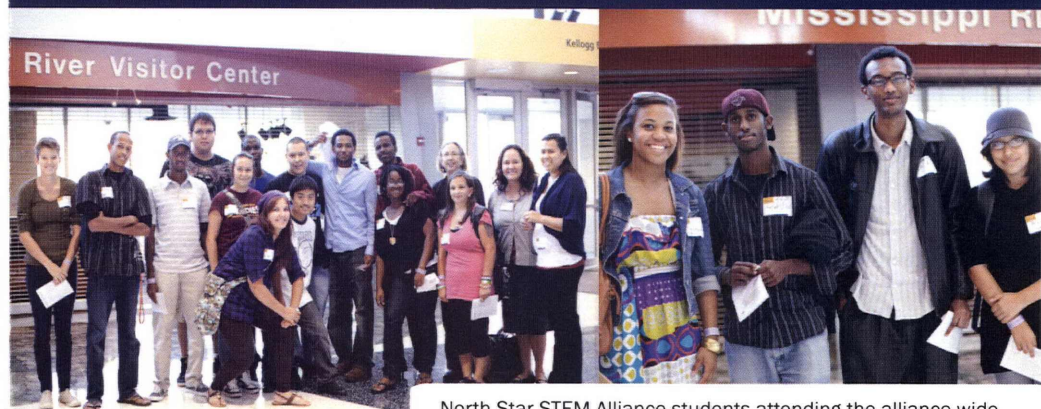


Minnesota's Louis Stokes Alliance
for Minority Participation



North Star STEM Alliance students attending the alliance-wide Kick-Off at the Science Museum of Minnesota.

The North Star STEM Alliance is a partnership of 16 Minnesota colleges and universities and two community organizations, the Science Museum of Minnesota, and the Minnesota High Tech Association, committed to supporting underrepresented minority students earning bachelor's degrees in STEM — science, technology, engineering, and mathematics.

The primary goal of the Alliance is to double the number of underrepresented minority students receiving STEM bachelor's degrees. We work together as a partnership to share effective practices and leverage opportunities for our students. In addition to student programs, we foster change toward greater diversity and inclusion on our campuses leading toward greater overall success of underrepresented students in STEM.

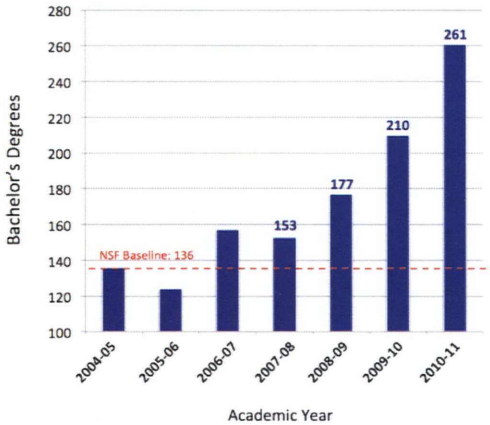
Progress Update

Steady Growth in Engagement and Degrees

Student engagement, participation in research, and the number of graduates have all risen steadily in the first five years of the Minnesota's LSAMP. More students are becoming leaders of cohort programs, thereby establishing strong role models for newer students. Student chapters of national professional societies also play a major role in student engagement. Faculty support Alliance students as research mentors and advisors.

The Alliance has achieved 261 graduates in four years of the Alliance, which is 96% of the Year 5 goal of 272 graduates. The accomplishment is based on the alignment of goals across our Alliance and implementation of best practices: undergraduate research, cohorts and community building, faculty and peer mentoring, academic support, and professional and career development.

Underrepresented Minority STEM Bachelor's Degrees



Best Practices in Retaining Underrepresented Minority Students in STEM

Undergraduate Research

Undergraduate research is the Alliance's most significant best practice in retention, providing a well-rounded professional development experience: deeper content knowledge, passion for STEM, and a network of STEM professionals and mentors. Many alliance first- and second-year students take a seminar which prepares them for undergraduate research.



June Sayers, a senior in environmental studies from St. Cloud State University, is doing research at the Outdoor Stream Lab of the University of Minnesota's National Center for Earth-Surface Dynamics, and NSF-funded Science and Technology Center.

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Meet Some of Our North Stars

Tom Lopez

Tom earned his bachelor's degree in physics from Augsburg College in 2011. He presented research funded by the Alliance at the North Dakota State University Undergraduate Research Symposium. Tom is now enrolled in a doctoral program in mechanical engineering at University of California-Riverside.

Keleghai Mentan

Kiki graduated with a bachelor of aerospace engineering and mechanics degree from the University of Minnesota-Twin Cities in 2010. She was a mentor and tutor with the Minnesota LSAMP Program. She will complete a Co-op with Toyota and master's degree in industrial engineering at the New Jersey Institute of Technology in May, 2012.



Tom Lopez at the 2010 Research Symposium

Abdou Harissou Ouro Bang'na Nassam

Harissou completed his bachelor of civil engineering degree from University of Minnesota-Twin Cities in 2010. He became the first North Star STEM Alliance student to enter the Bridge to the Doctorate program. He is enrolled in the New Mexico State University graduate program in civil and environmental engineering. Harissou has helped other students become aware of this opportunity following his involvement in the LSAMP Program.

Andres Santiago Padron

Andres completed a bachelor of aerospace engineering and mechanics at the University of Minnesota-Twin Cities in 2010. He excelled at the University of Minnesota's College of Science and Engineering and is now enrolled in the Ph.D. program at Stanford University.

James Rodriguez

James completed a bachelor of biomedical engineering degree from the University of Minnesota-Twin Cities in 2010. He reestablished the Society for Hispanic Professional Engineers (SHPE) student chapter. In the same year, the chapter hosted the 2010 regional SHPE conference. He was also the lead peer mentor for the First-Year Scholars cohort and led the biweekly meetings. James accepted the President's Student Leadership and Service Award for his outstanding service.

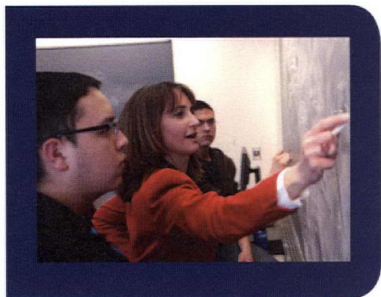
Jessica Santiago

Jessica completed her B.S. in physics from the University of Minnesota-Twin Cities in 2011. She began her research career the University of Minnesota Multicultural Student Research Opportunity Program. She became active in the North Star STEM Alliance through outreach activities and many hours as a peer tutor. Jessica is now enrolled in a Ph.D. program in physics at Rice University.

Cohorts and Community Building

Students are invited to join cohorts as first-year students, transfer students, or by college. Student organizations such as the Society of Hispanic Professional Engineers, the National Society of Black Engineers, and the American Indian Science and Engineering Society (AISES) provide important support for underrepresented students. Giiwed'anang, the North Star AISES Alliance, brings together Native American students in STEM across Minnesota for gatherings at AISES conferences.

The Summer Bridge program at St. Olaf College and the Gateway Program at University of Minnesota-Morris give students a head start on experiencing college coursework, building relationships, and getting comfortable with campus life.



Augsburg College professor Rebekah Dupont leads a popular 1-credit supplemental instruction to calculus.

Faculty and Peer Mentoring

Faculty and peer mentoring helps students feel a greater belonging to their campus. For example, a team of four Century College faculty meet with the Century cohort throughout the year. Each student meets with his or her faculty mentor several times a semester.

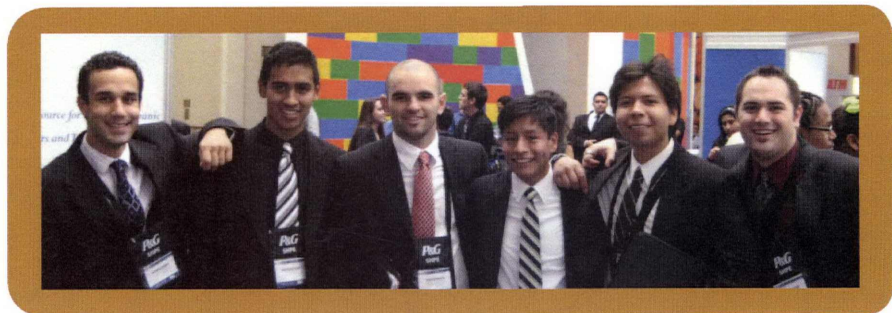
Peer mentoring helps students learn expectations for course work, acclimate to campus, and locate resources. New transfer students meet with the University of Minnesota peer mentors in a transfer cohort group to build new networks at the university.

Academic Support

Participation in study groups and supplemental instruction is a primary strategy for increasing academic achievement as well as building community.

Professional and Career Development

The Alliance provides professional development opportunities such as presenting research at professional meetings, meeting with STEM professionals at Minnesota High Tech Association events, visiting local industry, and participating in internships, career fairs, and courses on preparing for graduate school.



James Rodriguez leads students to a Society of Hispanic Professional Engineers conference.

The North Star STEM Alliance can offer these services and resources to undergraduate students engaged in the Alliance:

- Funding for undergraduate research experiences
- Student employment in leadership roles
- Stipends for participation in community and professional activities
- Connections to tutoring, mentoring and study group support
- Preparation for and support in identifying undergraduate research experiences locally, nationally, and internationally
- Exploration of post-baccalaureate studies
- Eligibility to apply for the Bridge to the Doctorate program funded by the National Science Foundation that supports graduate studies
- Social networking among faculty, students and professionals in STEM
- Exposure to professional opportunities and professional societies
- Notifications on scholarships, summer experiences, study abroad opportunities and internships
- Leadership and service opportunities



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Learn more about us at www.northstarstem.org.

Contact us at info@northstarstem.org.