

2016

UNO Website: Office of STEM Education - Community Engagement

UNO Office of STEM Education University of Nebraska at Omaha

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Recommended Citation

University of Nebraska at Omaha, UNO Office of STEM Education, "UNO Website: Office of STEM Education - Community Engagement" (2016). *Community Engagement*. Paper 17.
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Community Engagement

UNO / College of Education / Office of STEM Education / Community Engagement

Contact Us

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UNO STEM Outreach

With UNO's STEM outreach, the team prides itself on their connections across all age groups to provide meaningful experiences in science, technology, engineering and mathematics.



High-altitude balloon launch, part of EUREKA!-STEM with Girls Inc.

Members of numerous departments have implemented a variety of programs in order to meet the needs of the community. At UNO, the STEM Leadership Team strives to establish and preserve diverse STEM education opportunities, bridging relationships between faculty, campus and the community. Below are just a few programs that are growing STEM awareness.

The Academy of Inquiry-Based Learning

The Academy of Inquiry-Based Learning (AIBL) is an organization that supports engaging, interactive learning in which students are given ample opportunities to take ownership of their learning. At UNO, the AIBL in partnership with the Kelly Foundation has provided funding for professional development for STEM instructors who are looking for techniques in inquiry-based models of teaching and learning. Workshops opportunities involve three-day summer formats (with academic year follow-up seminars and chat sessions) that offer topics for discussion of successful models for

seminars and chat sessions) that offer topics for discussion of successful models for IBL, transitioning from lecture to IBL formats, question/answer sessions both beginners and experienced IBL instructors, and helpful hints/tips for a successful IBL course. Workshops also involve planning time for curriculum development and implementation. For more information please contact Dr. Angie Hodge at amhodge@unomaha.edu.

Aim For the Stars

Lead by members of the UNO Physics Department, the summer camps offered enable students to engage their curiosity to science.

Avenue Scholars Foundation

Avenue Scholars Foundation (ASF) is a private foundation local to the Omaha metropolitan area that serves struggling students. ASF Students become part of community of learners where they have access to community college courses and resources that are offered in a way that makes learning mathematics and science a way of thinking rather than simply as a course to survive. The Office of STEM Education currently partners with ASF by providing both instructors for courses and for tutoring in math and science. For more information please contact Dr. Elliott Ostler at elliottostler@unomaha.edu.

Bennington Gretna Professional Mathematics Development Project

This project involves approximately 60 elementary level teachers from two local school districts in a professional development setting that focuses on improving teachers' content knowledge within the context of relevant, hands-on pedagogies. The project involves a 6 day training format where each day is broken into mathematical content, hands-on pedagogies, and curriculum development and writing. Topics are currently focused on Conceptual Fractions and Geometry. The Office of STEM Education is participating in this program by providing long-term instructional support in the participating schools and by providing professional development during the academic year. For more information please contact Dr. Elliott Ostler at elliottostler@unomaha.edu.

Earth System Science Education Alliance

OSTEM helps to facilitate local coursework for NASA's Earth System Science Education (ESSEA) online course environment. ESSEA has more than 40 universities across the country that help to design modules for ESSEA courses, as well as facilitating local course options using the NASA curriculum. For more information please contact Dr. Neal Grandgenett at ngrandgenett@unomaha.edu.

Eureka!—STEM

An enrichment program that begins with a 4 week summer camp held on UNO's campus for middle school girls. The camp is focused on STEM, physical activity, and well-being. The girls spend over half of their time at the camp engaged in inquiry-based STEM activities led by UNO faculty and students with the hopes that the girls will later pursue careers in STEM.

FUSE

The Office of STEM EDUCATION supports undergraduate research in collaboration with UNO Fund for Undergraduate Scholarly Experiences (FUSE) Grants. The FUSE provides up to \$2,500 per student for faculty-supported student research and creative experiences. For details see the FUSE Request for Proposals document.

Proposals not meeting submission guidelines or poorly written proposals may be

Proposals not meeting submission guidelines or poorly written proposals may be rejected without review. Applicants are advised to use available resources, such as the [UNO Writing Center](#), to ensure that proposals meet the guidelines, are well written, and are properly edited.

Math Club

The Math Club seeks to provide opportunities to develop students' mathematics skills, leadership qualities, and provide social math environments. We do fun math problems, activities, and games and provide resources for students' to find employment, internships, REUs, educational partnerships, and conferences to attend. We also host events open to all majors interested in math. This gives students the chance to participate in mentoring relationships by learning from students at different levels in their academic careers and university faculty. For more information please contact Dr. Angie Hodge at amhodge@unomaha.edu.

MTA

Math Teaching Assistants with Building Bright Futures - For more information please contact Dr. Elliott Ostler at elliottostler@unomaha.edu.

Math Teachers' Circle

UNO hosts a monthly event for area mathematics teachers where mathematics professors (from UNO and from other universities) lead sessions on inquiry-based mathematics as part of the national Math Teachers' Circle group. For more information please contact Dr. Angie Hodge at amhodge@unomaha.edu.

Nebraska Mathematics Professional Development Series

Nebraska Mathematics Professional Development Series (NMPDS) is a statewide grant funded by the Nebraska Department of Education that is dedicated to improving mathematics teaching and learning across the state of Nebraska. The grant funds approximately 200 teachers in 4 locations across Nebraska in 5-day professional development formats. The Office of STEM provides instructional expertise and administrative support for this ongoing and very successful project. For more information please contact Dr. Elliott Ostler at elliottostler@unomaha.edu.

Nebraska Robotics Expo

The OSTEM helps to run the Nebraska Robotics Expo along with other leading partners that include the UNL Computer and Electronics Engineering Department, the UNL 4H Extension Office, the Nebraska Strategic Air and Space Museum, and Nebraska NASA Space Grant, along with other collaborators. This event is held every February and attracts thousands of youth and adults in robotics activities, STEM presentations, vendor booths, and a variety of engaging STEM activities.

NE STEM 4U

A pre-professional training program for UNO students focusing on teaching, research, and mentorship. NE STEM 4U provides high quality, engaging, hands-on experiments and opportunities for underprivileged youth in the Omaha metropolitan area during after school hours throughout the academic year.

River City Rodeo

The OSTEM assists in holding a large open invitation event at the River City Rodeo (RCR), which showcases the use of robotics in formal and informal learning. The RCR event is typically held every September.

STEM Teacher Research

STEM Teacher Research

In collaboration with the Comprehensive Teacher Induction Consortium, the UNO CADRE project has published and presented numerous papers on beginning mathematics and science teachers' development and retention. Researchers, Dr. Sheryl McGlamery and Dr. Saundra Shillingstad coordinate the research program. For more information please contact Dr. Sheryl McGlamery at smcglamery@unomaha.edu.

Techademy

The College of Information Science and Technology provides interactive information technology summer opportunities to students through exploration in camps such as mobile application development, cyber security, graphic design, and bioinformatics.

Youth at Infotec

The OSTEM helps to facilitate sessions at the Youth at Infotec events, which engage high school students in STEM related activities with a special focus on technology.

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