



Newsletter

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The STEM TRAIL Center would like to acknowledge all University of Nebraska Spring 2021 graduates! Congratulations on all your hard work. A special shout out to all graduating STEM majors! We're eager to see the exciting things that you do in your career—please keep in touch.

As the academic year wraps up, staff and faculty here at the STC are busy finishing projects and scheduling events for next year. In case you missed our highlight in the Omaha World Herald this month, check out page 2 for how UNO STEM faculty are impacting STEM education nationwide.

If you have a child in grades 3-10, check out some exceptional STEM summer camp opportunities sponsored by UNO. Ignite your child's inner scientist at Aim for the Stars science and math camp July 12–August 6 or empower the next generation of women in STEM at the Nebraska GenCyber Camp (NGC), with free, all-girls camps focused on cybersecurity June 7-8 (elementary) & July 5-9 (middle school). Additionally, NGC will provide a free cybersecurity camp for teachers June 21-30.

In connection with Kiewit Luminarium, we are excited to highlight Derrick A. Nero, Ed.D., on page 3, and Julie Sigmon, Director of the Omaha STEM Ecosystem, on page 7. Learn about Dr. Nero's role on the advisory group for Kiewit Luminarium and how Julie Sigmon is collaborating with them to engage community partners. To see even more, take a quick peek at our Kiewit Luminarium construction update on page 2.

On page 5, we have a special spotlight on two of our NE STEM Mentors, Shana Huebner and Marie Powers. They are both exceptional students and we are excited for their upcoming opportunities!

Lastly, check out our resources and opportunities page for professional development opportunities and of course our STEM Scramble game! The first person to email us the correct answers at unostemtrailcenter@unomaha.edu will receive some STC swag!

We wish you all a great month! See you again with our summer edition of the STC newsletter soon.



Follow us on Twitter!

@UNOSTEMTRAIL



UNO's STEM TRAIL Center in the News!

UNO aims to fulfill Nebraska workforce needs through STEM education statewide

[Read the full article](#)

Aim for the Stars is OPEN!

Registration for UNO's 22nd Aim for the Stars Science and Math Camp is open for registration! Camp will run from July 12 – August 6. Please [visit the website](#) to find camp details, descriptions and the registration link. Our camps are for children entering grades 3 – 10 in the fall.

UNO's Executive Director of Health Security, Dr. Jane Meza, Director of Youth Safety, Rachael Jensen, and Aim for the Stars Director, Connie O'Brien, have worked hard to ensure that Aim for the Stars staff is prepared to provide a safe summer camp for your children. We welcome you with great excitement and hope your child will stop, look and wonder.



"Anything can make me stop, look and wonder, and sometimes learn." Kurt Vonnegut

Kiewit Luminarium; Construction Progress

The work on [Kiewit Luminarium](#) is happening! Take a look at the progress so far, and also check out a sneak peek of the Building Knowledge gallery, one of the many spaces planned inside!



Professional Development Funding STEM Teaching Practices Instructor Development Fellowship

The STEM TRAIL Center is pleased to offer professional development funding to full-time, non-tenure track faculty members at UNO. This program will provide up to \$1000 in funding per year to participate in conferences, workshops, or training events related to improvement of courses. [Click here to find out more.](#)

Centers Supporting Centers: STC Working Side by Side with Kiewit Luminarium Center for STEM-cellence

[Derrick A. Nero, Ed.D.](#), is an Assistant Professor of Engineering Education in the Department of Teacher Education at the University of Nebraska at Omaha. He is a member of UNO's STEM Leadership Team, advisor to the [UNO STEM TRAIL Center](#), and is part of the advisory group for Omaha's new [Kiewit Luminarium](#). Kiewit Luminarium is currently under construction downtown at The RiverFront and is scheduled to open in 2023.



Dr. Nero is a long-term STEM professional, working as an engineer and middle school STEM teacher prior to joining UNO. Dr. Nero has been a keen proponent of the STC and Kiewit Luminarium because of his love of STEM. Describing this relationship, Dr. Nero said, "What's being done in the classroom is what's needed and supported by the STEM TRAIL Center. When outsiders look in, they can see what the STEM TRAIL Center is doing solely as STC, but also how that feeds in or branches out to UNO and the Omaha community, such as Kiewit Luminarium, which will provide opportunities to just be engaged with knowledge."

When asked how he sees the STEM TRAIL Center partnering with Kiewit Luminarium, Nero envisions the STEM TRAIL Center giving published reports and perhaps producing research from interventions in partnership with Kiewit Luminarium. He sees the STEM TRAIL Center acting as a liaison, not only to UNO but to other universities and school districts. Further, Dr. Nero envisions this collaborative partnership to manifest into a standard or process of "how it's done" for further replication in other cities. He concludes, "We have set the foundation".

Kiewit Luminarium's mission is to inspire lifelong interest and careers in science, technology, and engineering, and opens doors for everyone to discover. The purpose-built 82,000 square foot facility will hold four thematic galleries and over 100 exhibits designed to encourage inquiry-based learning and learning with your hands. Visitors will be able to experience phenomena and experiment with interactive exhibits that demonstrate scientific principles in an accessible way. Programming and events will bring Kiewit Luminarium exhibits to life, including specialized experiences for school field trips, a Youth Explainer program that will employ and engage young people, adult-only nights, and community partnerships.

Rachel Jacobson, President of Heritage Services, the entity managing Kiewit Luminarium's capital campaign and project development on behalf of Omaha Discovery Trust, said, "Thanks to our Advisory Group and community partners, like the [Omaha STEM Ecosystem](#) and the UNO STEM TRAIL Center, we already have great relationships ensuring we will reach every corner of the Omaha metro area community. This project is of and for the community and we are so pleased to have a diverse range of people and organizations helping us bring this project to life before our doors have even opened."



With Omaha as our campus, Dr. Nero believes the opportunities are endless, "the sky's the limit!" He is eager to show how our entire metropolitan area is full of opportunities to expand knowledge.

UNO Receives Two Federal Grants to Support In-person Summer Camps for Teachers and Students

National and economic security is highly dependent upon a strong cybersecurity workforce. More than 522,000 cybersecurity positions remain unfilled in the US in 2021. This shortfall of cybersecurity professionals increases every year and has left national agencies and corporations scrambling to meet their security needs. Careers in cybersecurity are high tech, lucrative, and positively impactful on society – by helping keep us all safe.

UNO has received two federal grants to offer immersive, all-expenses paid, summer camp experiences to educators and students from the greater Nebraska area to help address this need. The first grant will support 20 area teachers to learn about cybersecurity, build lessons, and receive one-on-one consultation about how they can introduce cyber concepts into their classrooms. Teachers will receive a stipend, lunch, and a cluster of technology items related to camp instructional materials. The camp will run from June 21-30.

The second grant will support two all-girls camps, one for 3rd-5th graders (June 7-8) and another for 6th-8th graders (July 5-9). Gender diversity in technology, especially cybersecurity, is absolutely essential. The Nebraska GenCyber Camp (NGC) for students aims to empower and engage young women by building their confidence in design and technology, breaking down role-based stereotypes, and showing them that they can have careers in computing and cybersecurity. NGC will use a variety of hands-on plugged and unplugged activities designed to raise interest in STEM and cybersecurity and improve the cybersecurity readiness and diversity of our future workforce.

Interested in participating? Want to learn more? Apply now on the Nebraska GenCyber website at www.nebraskagencyber.com or contact Dr. Matt Hale (NGC Program Director) at mlhale@unomaha.edu.



Dr. Matt Hale works with a camper at the 2019 Nebraska GenCyber Camp



A Massive Thank You to our graduating NE STEM 4U mentors. They have left a lasting impression on the program, the community, and the students they served. We wish you all the best of luck in your future endeavors and know that you are always welcome.



Nolan Meyer



Pranav Ojha



Eduardo Walmrath

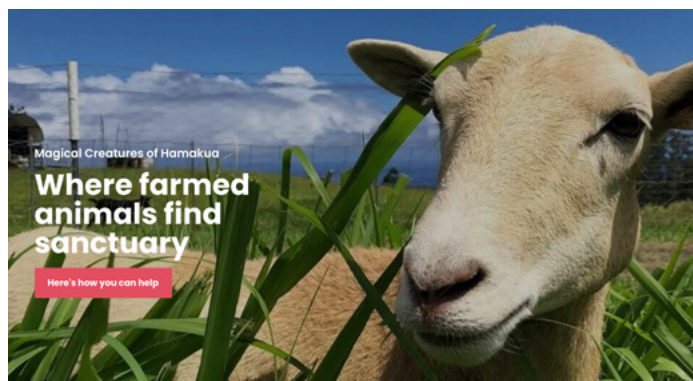


Kayla Rud

Spotlight on S-STEM; UNO Student Shana Huebner

UNO student Shana Huebner is currently a Junior, majoring in Environmental Science and Pre-Veterinary. She is also an S-STEM scholar and mentors through the NE STEM program. When describing mentoring and speaking of the challenges that the age of COVID has brought, Shana states, “The passion that kids have for STEM subjects is my favorite thing to see. When mentoring online, it’s difficult to gauge their level of interest or if they are enjoying the activities. I love mentoring in-person and cannot wait to mentor in-person again.”

Shana also has exciting news. She applied for an internship over a month ago at [Magical Creatures of Hamakua Animal Rescue and Sanctuary](#), located in Laupahoehoe, Hawaii. In late April, they contacted her and let her know the position was still open if she wanted it. She jumped at the chance, and left the first week of May! It is a farm sanctuary, and Shana will be working with cows, sheep, goats, pigs, dogs, and cats. Her work will consist of daily care of the animals, some vetting/medical care, and even hoof care. She will work five days a week and have two full days off to explore the Big Island or to relax in the housing they will provide.



Shana would like to stay in Hawaii as long as she can (who wouldn't!) but she is a student in demand. She's also been offered a position as an Environmental Intern for [Kiewit Corporation](#). She's connected with their Environmental Manager who is also very passionate about animals. The details are still being ironed out, but Shana hopes to start with them mid-June, as they've offered to bring her on as a full-time employee when she graduates.

Marie Powers accepted to INBRE

Congratulations to Marie Powers, S-STEM scholar and NE STEM mentor, who was recently accepted into the Institutional Development Award Program (IDeA) Networks of Biomedical Research Excellence (INBRE) program! This program immerses students in independent research projects and aims to strengthen biomedical research infrastructure by serving as a pipeline for students to continue into graduate school.

Marie is very excited to see what the program holds for her. Through INBRE, she will be able to have first-hand experience in biomedical research with a doctor at the University of Nebraska Medical Center. This summer, she will be working in the lab of Dr. Rakesh Singh. The two-year program will give her the tools she needs to be a competitive candidate for continuing her education after she graduates from the University of Nebraska Omaha.

This unparalleled opportunity to enhance her researcher toolkit will transfer directly into a real-life career and, after completing the program, Marie hopes to feel more capable in her future of conducting research.



Omaha STEM Ecosystem's Julie Sigmon – Kiewit Luminarium Connection

Julie Sigmon's introduction to the Heritage Foundation and the Exploratorium began in April 2019. Several meetings were held with various sectors in Omaha to lay the groundwork of what the new Kiewit Luminarium Center should offer in regard to exhibits and impact on STEM education. Julie Sigmon and Derrick Nero were a part of that meeting.

In July of 2019, Derrick and Julie were invited to the Exploratorium in San Francisco, to work with their design team in identifying key exhibits that would resonate in the Omaha Center. Following that trip, they met regularly with the design team (HDR/Kiewit Luminarium) and the Exploratorium team to refine the exhibits and design of the building. Key topics of on-going meetings included: What is the message? (STEM skills are critical for future workforce and vibrant community). Do building elements reflect engagement? Who is the audience? How does the audience connect with community partners after leaving the museum? (continuum of learning).

When Rachel Jacobson was identified as the new Executive Director for Heritage, June 2020, she expanded the advisory group, which continues to guide the mission and outreach and work closely with the Exploratorium on exhibit designs.



Recently, Julie has been working closely with Rachel and the Exploratorium team as they conduct research on ways to engage our community partners. For example, Julie connected them to Martha Bruckner, to reach out to educators in regard to field trips, i.e., is there always a purpose, just for fun, expectation of learning, etc. In addition, Julie has connected them to varied science center partners for similar research on the best way to utilize their role in the community.

The new Executive Director for Kiewit Luminarium will be announced in May/June 2021, and Julie hopes to continue her advisory role with them.

Add Your Summer Program to the STEM Community Platform!

With summer approaching, have you added your summer programs to the STEM Community Platform? We invite you to place your program information, summer camps and professional development opportunities. A healthy and vibrant community depends on a skilled and growing workforce, and access to quality STEM programs is key. There is no fee, so please add as many programs as you'd like!

The upload process is easy. Simply click on the link (<https://stemplatform.aiminstitute.org/>), create an account on the login page, visit the offerings page, scroll to the bottom of the page and click the Submit button to add your offering.

Thank you for helping ensure students in our community have access to the wonderful programs offered through UNO!

For more information, contact Julie Sigmon, Director of the Omaha STEM Ecosystem - Office: 402.738.2077, Cell: 402.740.2161
Email: Julie.sigmon@omahazoo.com





This could be YOU.

Apply now to be an NE STEM 4U mentor for summer 2021.

www.unomaha.edu/academic-affairs/ne-stem-for-u

Resources & Opportunities

Virtual Professional Development for K-12 Science

Teachers by S.D. EPSCoR - [Click for more information](#)

Office of Digital Learning drop-in hours are M-F 9am-4pm via Zoom. [Access the zoom room and calendar here!](#)

Start your own business with gBETA, a free accelerator for early-stage companies with local roots. [Click for more information.](#)

STEM Scramble!

DRIAESOT _____

PMTAIC _____

AOCESRNI _____

OLWDR _____

Need a hint and curious why these words matter this month?

Check it out! **Answers in next month's issue.*

Last month's STEM Scramble answers:

IRNAB: Brain **BEIOZM:** Zombie **LALIG:** Glial

NGEE: Gene **XSNOSSEPRI:** Expression



Consider a Gift, Support an Intern at your Company, or Volunteer!

Interested in donating? Please consider contributions to our UNO STEM TRAIL Center Excellence Fund #01149830 at the Nebraska University Foundation:

Checks can be mailed to:

University of Nebraska Foundation

PO Box 3465

Omaha, NE 68103-0465

reference: 01149830 - UNO STEM TRAIL Center Excellence Fund

[Or gifts can be remitted electronically.](#)

Let us know how we can support you:

unostemtrailcenter@unomaha.edu



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Have an idea for future programming? Interested in contributing your time or talents to the STC? Contact us!

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