



Science Institute News

Fall 2025

SI Program Updates

In May of 2025, 25 STEM college educators in the LAMP Fellows Program immersed in hands-on science and collaborative learning at the Science Initiative Summer Institute at Historic Ranch A near Beulah, WY. Additionally, in June, 12 more educators from around the state gathered for the LAMP e-Camp, a weeklong institute held in collaboration with the Office of Online and Digital Learning and focused on transforming online teaching through active learning. Educators in both cohorts honed their instructional strategies throughout the summer and are now implementing these curricula with the support of weekend workshops and individualized coaching. This Fall, the community college Pedagogies of Innovative Excellence learning communities (comprised of educators from 5 of our statewide community colleges and UW) have focused on HSTEM (Being Human in STEM) practices. The LAMP PhD fellows learning community has immersed in reflective dialogue and practices that assist in maximizing learning and productivity. Also new this Fall – Rachel has partnered with LAMP graduate Ashleigh Pilkerton of the Honors College, the Ellbogen Center for Teaching and Learning, Academic Affairs and Nevin Aiken (Special Assistant to the Provost for Experiential Education) to launch the first campus-wide Experiential Education Learning Community.

This year, WRSP has 64 talented students performing undergraduate research. With generous support from the state, the program has grown from an initial cohort of four students in 2015 to its current position as the largest undergraduate research program on campus. Indeed, last spring, we received 100 applications for the program, which represents the greatest

demand for the program to date. In addition, our program will host the 4th annual WRSP Symposium with poster presentations on December 4.

IMPORTANT DATES

- Wyoming Undergraduate Research Coalition student club monthly meetings. Next meeting is Oct 30 from 6:30-7:30 PM in Science Initiative Bldg room 4004. Please contact Dr. Jamie Crait for membership information.
- WRSP Poster Symposium, Thursday, Dec 4 from 5:00-7:00 PM in Classroom Building 219. This event is open to the public.
- [Applications](#) for the LAMP LA program are open! Please submit by November 10th!
- [Applications](#) for the LAMP Educator Learning Community, “Leaving the Light On” open on Thursday, October 16th! Graduates of the LAMP Fellows Program are invited to apply. Please submit by Sunday, November 9th!
- This fall, the Roadshow is running three STEM-ology series during the weeks of September 15th (Engineering), October 13th (Technology), and November 17th (Controlled Environment Agriculture). Each STEM-ology event includes a Toddler Tuesday (10-10:30am; 10:30-11am), Senior Friday (10-11am), and Science Saturday (10-12pm), and brings families and community members to the Science Initiative Building for interactive science activities in a fun, hands-on environment.

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SI Program Updates Cont.

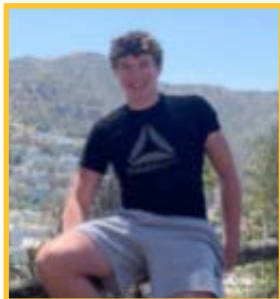
The Science Initiative Roadshow had its busiest year yet, reaching communities all across Wyoming! In 2024–25 we hosted 94 events in 17 counties, bringing hands-on STEM learning to K-12 students, seniors, and community members. This fall is already off to an exciting start with 40 events planned across 14 counties, including toddlers to seniors. We are also thrilled to share that this year's STEM Carnival was our largest ever, with 1,722 participants and 7 counties in attendance! With our continued growth, we are proud to be building statewide excitement and curiosity for all things STEM! To aid in the expansion of the Roadshow statewide and at UW, the Roadshow started a new position for graduate students – Senior Outreach Assistant. In this role, Senior OAs work alongside the directors to spearhead events statewide and act as peer mentors for current outreach assistants. Congratulations to Sabrina White, Nancy Weinheimer, and Quiana Jeffs who are serving this fall and spring as the Senior OAs for the Roadshow. The Roadshow is also collaborating with SER to develop middle and high school curriculum that focuses on Uranium and Carbon Capture. Lastly, the Roadshow has received another generous \$10,000 grant from the WY Department of Health Aging Division to continue STEM outreach work in senior centers across the state.

Controlled Environment Agriculture (CEA) Network

This fall the University of Wyoming is launching the Controlled Environment Agriculture Network to accelerate workforce development, research and innovation in CEA. The network leverages UW's Plant Growth and Phenotyping Facility to provide hands-on training, industry partnerships, and testing for new technologies. Focused on workforce development and active collaboration among industry, academia, and communities, the effort is part of the Wyoming Innovation Partnership (WIP) and UW's Center for CEA. Created and coordinated by Carmela Rosaria Guadagno, CEA research center director, the network connects partners to share knowledge, pursue joint research and grants, and offer student internships and experiential learning. Early partners include Vertical Harvest in collaboration with Central Wyoming College, Papa Joe's Produce, Tén Galon, Crop King, RAYN Growing Systems, startups such as Harvest Today, Rooted Robotics and PAGE Technologies, and international firms European Photon Systems Instruments and Bluelab. The network will both prepare students for future jobs while advancing CEA technology. To join or learn more, email Carmela Rosaria Guadagno at cguadagn@uwyo.edu.



People in SI Programs



WRSP Scholar

Lucas Wall

Hometown: Laramie, WY

Major: Molecular Biology

Faculty Mentor: Dan Wall

Lucas is working with Dr. Dan Wall (Molecular Biology). Lucas is working with a virus that infects a type of bacteria called *Streptococcus mutans*. These bacteria are the leading microorganism responsible for dental decay.



Roadshow Outreach Assistant

Nancy Weinheimer

Hometown: Reading, PA

PhD candidate in Geology

"I am a PhD candidate in the Geology program, and I study bedrock weathering and soil erosion in landscapes affected by human land use and tectonic changes. It wasn't until college that I discovered my passion for studying Earth sciences, and so it's been especially exciting to bring my favorite subject to classrooms and communities across the state! As an Outreach Assistant, I enjoy leading activities on weathering and erosion, mineral identification, and Wyoming geography. Through outreach, research, and student life, I value connecting with people, asking questions about the natural world, and building community around our shared curiosity for Earth's surface processes."



LAMP Learning Assistant

Bree Coxbill

Hometown: Torrington, WY

Major: Physiology

Bree Coxbill is an LA for Dr. Ginka Kubelka's Team-based Learning Organic Chemistry course. Bree believes that student learning is cultivated when students experience community in their classes; she practices active listening and nurtures collaborative learning. She helps her students adopt growth mindset and pushes them to go beyond lower levels of cognitive and affective thought. Bree believes in the power of storytelling and in a recent reflection she wrote, "To make [the] learning process even more meaningful we can enhance our storytelling skills to build an emotional connection to the material. This way as we learn we can build a bridge to the real-world and to our personal lives/interests." When asked about Bree, Dr. Kubelka says, "Bree took Organic Chemistry I and II in a flipped classroom setting with me during the 2024/25 academic year, where she consistently demonstrated excellence, determination, and perseverance. Her academic performance was outstanding, but what truly set Bree apart was her warmth, positivity, and genuine care for others. Therefore, I was excited to have Bree join me as an LA for Organic Chemistry I this fall. During class, she not only answers students' questions, she also assures that they grasp underlying concepts, guiding our students on their journeys from simple memorization to a deeper understanding and application of underlying principles. The students' wellbeing and their progress on their learning path is always Bree's highest priority. She shares helpful hints and approaches with our students that helped her thrive in the course, creating a supportive and encouraging learning environment. We are so fortunate to have her in the classroom!"



LAMP Fellow

Utkarsh Kapoor

Assistant Professor, Chemical & Biomedical Engineering

Utkarsh Kapoor is a highly distinguished LAMP Fellow who has engaged deeply with evidence-based teaching and learning practices that are transforming both his classroom and research mentoring. During LAMP's weeklong experiential summer institute, Utkarsh developed skills in collaborative communication/reflective dialogue (CC/RD) and curriculum design and implementation. He created an instructional strategy for his Chemical Thermodynamics course that supports experiential learning. On this instructional strategy, Utkarsh exceeded expectations by crafting clear, measurable outcomes aligned with his assessment strategies and pedagogies. He integrated principles of CC/RD which allowed the strategy to 'go beyond' best practices into a truly innovative space of student-centered practice. Utkarsh has applied his LAMP learning to his research mentoring and has proposed future development of these applications in a recently submitted National Institutes of Health grant. Utkarsh is the epitome of a role model. As a learner in LAMP, he embodies the most noteworthy qualities of a committed, self-directed student. Living this example makes Utkarsh the best kind of teacher, one who knows how to be a great learner!