

UNO STEM Priority Phase III Strategic Plan (2025—2030)

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INTRODUCTION

In January 2024, UNO STEM leaders began the process of developing Phase III of the UNO STEM Priority Strategic Plan (2025–2030). The objective for the creation of the Phase III STEM Priority Strategic Plan is to accomplish the STEM Priority mission by increasing STEM academic and economic energy across Omaha and the region.

The UNO STEM TRAIL Center (STC) is responsible for the development and implementation of the UNO STEM Phase III Strategic Plan; however, the plan itself represents a campuswide focus on STEM priorities and objectives. The STC team partnered with Calderon Research and Consulting Services, LLC (CRCS) to provide support for the design and facilitation of the strategic planning process.

The **mission** of the **UNO STEM Priority** is to enhance the quality of life for students, faculty, and the community by advancing excellence in STEM teaching, learning, and research.

*Updated in October 2025

Results and findings from the partner input and materials review are available in separate reports. This document includes the final five strategic priorities and corresponding objectives for the STEM Priority Phase III plan over the next five years. It also provides documentation of the methods and approaches used to develop them.

UNO STEM PRIORITY PHASE III STRATEGIC PLAN 2025–2030

The UNO STEM Priority Phase III Strategic Plan will be activated on January 1, 2025 with objectives accomplished on or before January 1, 2030. Below are the four priorities for the UNO STEM Priority Phase III Strategic Plan with fourteen corresponding objectives.

Priority ONE: Grow an engaged and connected campuswide STEM community.

- 1.01 Propagate a human-centered culture and approach to STEM teaching, learning, and research.
- 1.02 Mobilize the STEM Leadership Team to design and implement pathways that facilitate interdisciplinary engagement opportunities for faculty and staff members.
- 1.03 Create and curate a hub to connect and assess the full range of UNO student success initiatives in the STEM disciplines.
- 1.04 Facilitate integration of evidence-based models for STEM teaching and learning.

Priority TWO: Expand interdisciplinary STEM research and infrastructure.

- 2.01 Expand capacity to facilitate interdisciplinary grant funded research.
- 2.02 Design and develop infrastructure that facilitates interdisciplinary collaboration.
- 2.03 Leverage interdisciplinary expertise and synergies to create new intellectual property (IP) and innovations for the public good.
- 2.04 Elevate Discipline-Based Education Research (DBER) as a recognized research agenda that generates new knowledge about teaching and learning across STEM disciplines.

Priority THREE: Maximize local and regional STEM networks to increase economic energy.

- 3.01 Cultivate and sustain authentic partnerships to advance access to STEM education and employment opportunities.
- 3.02 Partner with K-12 schools, business and industry, and nonprofit agencies to amplify STEM community assets and address needs.
- 3.03 Leverage Omaha STEM Ecosystem to build the effectiveness of partnerships and programs.

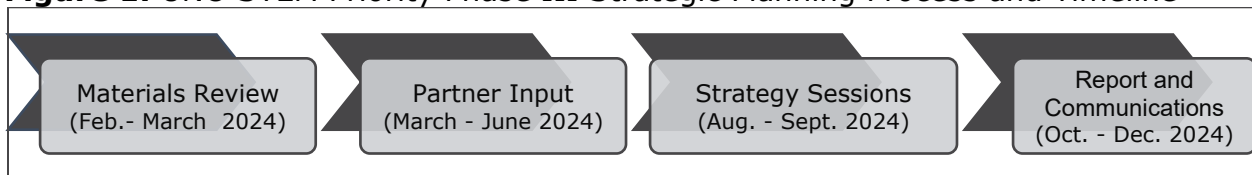
Priority FOUR: Effectively measure and communicate campus and community STEM impacts.

- 4.01 Regularly share STEM programming information and outcomes to a broad campus and community audience.
- 4.02 Elevate opportunities among key audiences to build engagement and advance STEM priorities and programs.
- 4.03 Assess and refine STEM programs and initiatives to align with strategic priorities and ensure high-quality and effectiveness.

STRATEGIC PLANNING PROCESS AND METHODS

Steps and activities for the UNO STEM Priority Phase III strategic planning process included a review of relevant materials; collecting input from faculty, university leadership, students, and current and potential STEM initiative partners; a series of facilitated strategic planning workshops with UNO STEM leaders; identification of metrics to track progress on the plan and initial action steps. The strategic plan was reviewed and approved by UNO’s STEM advisors, leaders, and deans.

Figure 1. UNO STEM Priority Phase III Strategic Planning Process and Timeline



Materials Review

Key points and content from the materials review are documented in a separate report titled *UNO STEM Priority Strategic Planning: Materials Review* (July 29, 2024). The materials were leveraged by UNO STEM leaders to inform the creation of the UNO STEM Priority Phase III strategic plan. The report illuminates potential STEM focus areas and highlights possibilities for framing the strategic plan itself to ensure its utility and helpfulness. A series of questions and prompts were posed to help accelerate thinking around the strategic priorities, partnerships, and possibilities for UNO's STEM Priority for the next five years.

Partner Input: In-Depth Interviews and Focus Groups

Results from input provided by UNO faculty and staff members, students, leaders, and community partners are documented in a separate report titled *UNO STEM Priority Strategic Planning: Summary of Input from In-Depth and Focus Group Interviews* (July 29, 2024). The report includes key themes and deidentified quotes from participants. Ideas and input were gathered via interviews conducted during the spring 2024 semester. The input was gathered for the purpose of including perspectives from an array of groups to inform the development of the strategic plan. Feedback was gathered via four one-on-one in-depth interviews and five focus groups. The one-on-one in-depth interviews were conducted virtually via Zoom with UNO and community leaders. Two focus groups were conducted virtually via Zoom with UNO faculty members, representing an array of colleges and departments, and the deans from the colleges of Information Science and Technology; Education, Health, and Human Sciences; and Arts and Sciences. Three additional focus groups were conducted in-person on UNO's campus with faculty members, Omaha-area community partners, and current students.

Partner Input: Department Leaders

Input provided by UNO department leaders is documented in a separate report titled *UNO STEM Priority Strategic Planning Department Leader Input* (July 29, 2024). The summary reflects ideas and input gathered via an online form developed for UNO department leaders in the Summer of 2024. The form was distributed via email to thirty-six department leaders, and twelve leaders responded to the invitation to participate. Participation was completely voluntary and anonymous, and no incentives were provided. CRCS designed the form in partnership with the Research Director of the UNO STEM TRAIL Center and respondents provided input on the strengths, challenges, and future potential strategic focus areas for the UNO STEM Priority to help inform the next five-year strategic plan. The form was available from June 11—July 8, 2024.

Strategy Sessions

In the fall of 2024, STEM leaders participated in a series of four facilitated workshops that focused on the following activities: review and discussion of the data and feedback from the strategic planning materials review, interviews, and department leader input; development of strategic priorities and corresponding objectives; refinement of the priorities and objectives; and identification of metrics for tracking progress on the objectives.

CONCLUSION

The UNO STEM Priority Phase III Strategic Plan will serve as a pathway for STEM leaders for the next five years. The four priorities of building STEM engagement campuswide, expanding interdisciplinary collaboration in STEM research and infrastructure, maximizing STEM networks, and measuring and communicating impacts will enable ongoing and new ways to accomplish the mission of the STEM Priority to improve quality of life on campus and in the community. The plan's four priorities with fourteen corresponding objectives will also facilitate advancement of the University of Nebraska at Omaha's four strategic pillars of educating all learners, pragmatic research and discovery, community engagement, development, and partnerships, and workforce development. The strategic plan will enable continued STEM growth and success for UNO's students, faculty, staff members, the greater Omaha metropolitan area, and beyond.

ABOUT THE CONTRIBUTORS

The UNO STEM Priority Phase III Strategic Plan reflects the contributions of many campus and community members. Much gratitude is extended to the fifty-six faculty members, department heads, administrators, students, and community partners who contributed their input and expertise to inform the development of the strategic plan. UNO STEM TRAIL Center leaders — Dr. Christopher Moore, Center Director and Department of Physics Chair, and Dr. Tracie Reding, Research Director — initiated and supported the strategic planning process and will lead the operationalizing of and tracking progress on the plan through the next five years.

Five UNO math, math education, and computer science students participated in a focus group interview to provide input on their experiences and opportunities for the future of STEM at UNO.

University leaders and administrators who participated in interviews to inform the development of the strategic plan include Dr. Neal Grandgenett, Dean of the College of Education, Health & Human Sciences; Dr. Melanie Bloom, Dean of the College of Arts & Sciences; Dr. Martha Garcia-Murillo, Dean of the College of Information Science & Technology; Dr. Phil He, Sr. Vice Chancellor for Academic Affairs; and Dr. Terry Haack, Executive Director, Metropolitan Omaha Educational Consortium.

Faculty members who participated in one or more focus group interviews to inform the development of the UNO STEM strategic plan include Dr. Brian Dorn, Assoc. Dean, College of Information Science & Technology; Scott Tarry, Assoc. Dean, College of Public Affairs and Community Service; Josh Nichol-Caddy, Technology Commercialization Director, Nebraska Business Development Center; Dr. Kelly Gomez-Johnson, Department Chair, College of Education, Health & Human Sciences; Dr. Paula Jakopovic, Asst. Professor, College of Education, Health & Human Sciences; Erin Dahl, Director, Aim for the Stars; Dr. Claudia Rauter, Assoc. Professor, College of Arts & Sciences; Dr. Michael Matthews, Professor, College of Arts & Sciences; Dr. Dhundy (Kiran) Bastola, Graduate Program Chair, College of Information Science & Technology; Dr. Amelia Lanier, College of Arts & Sciences; Krista Testin, Planetarium Coordinator; Dr. Nicole Infante, Professor, College of Arts

& Sciences; Dr. Susan Eldridge, Professor, College of Business Administration; Sara Woods, Chief Engagement Officer; Dr. Nikita Imani, Professor, College of Arts & Sciences; Dr. Suzanne Sollars, Professor and Dir. Neuroscience, College of Arts & Sciences; Dr. Roopa Venkatesh, Professor and Director, School of Accounting, College of Business Administration; Dr. Derrick Anthony Nero, Assoc. Professor, College of Education, Health & Human Sciences; Dr. Alfredo Perez, Assoc. Professor, Graduate Program Chair, College of Information Science & Technology; and Dr. Paul W. Denton, Assoc. Professor, College of Arts & Sciences.

Community members who participated in an interview to inform the development of the UNO STEM strategic plan include Wendy Boyer, Executive Director, Peter Kiewit Foundation; Pam Petersen, STEM Director, Metropolitan Community College; William Calderon, PE, Olsson; Nicole Shives, Assoc. Professor, Clarkson College; Todd Shackelford, HDR, Inc. and Industry Fellow; Melanie Olson, Coordinator of Secondary Programs, Millard Public Schools; Laurel Oetken, Executive Director, Tech Nebraska; Rob Trebilcock, Sr. Mgr., Public Affairs, Cox Communications; Carla Rizzo, CEO, Completely Kids; Dr. Rachael Arens, Director, College and Career Academies and Pathways at Westview High School; and Julie Sigmon, Executive Director, Omaha STEM Ecosystem.

UNO STEM leaders who participated in strategic planning sessions included Dr. Kelly Gomez-Johnson; Dr. Christopher Moore; Nikae Perkinson, Lecturer, College of Arts & Sciences; Dr. Tracie Reding; Dr. Alfredo Perez; and Dr. Paul W. Denton.

UNO STEM leaders invited to provide a final review and feedback of the strategic plan include Dr. Paul W. Denton; Dr. Kelly Gomez Johnson; Dr. Brian Dorn; Nikae Perkinson; Dr. Claudia Rauter; Dr. Michael Matthews; Dr. Derrick Nero; Dr. Neal Grandgenett; Dr. Martha Garcia-Murillo; Dr. Alfredo Perez; and Dr. Melanie Bloom.

ABOUT THE UNO STEM PRIORITY

Since the initial launch of the STEM Priority at the University of Nebraska at Omaha in 2012, the effort to advance science, technology, engineering, and mathematics (STEM) on the UNO campus and across the region has been a collaborative journey among UNO students, staff, faculty, and administrators, as well as community partners across the Omaha metropolitan area. The STEM Priority has implemented and completed two strategic planning phases to advance the mission of the STEM Priority. The third phase of the UNO STEM Priority will be implemented in January of 2025 with strategic objectives and corresponding goals achieved by January 1, 2030. Development and implementation of the Phase III UNO STEM Strategic Plan will have the continued operational and infrastructure support of the STEM TRAIL Center.

ABOUT CALDERON RESEARCH AND CONSULTING SERVICES

Valerie J. Calderon, Ph.D., is Principal Consultant at CRCS. She served as facilitator for the UNO STEM Priority Phase III strategic planning process. She brings more than sixteen years of management and research consulting experience to client engagements, helping leaders get answers to their most pressing questions and creating thriving places for people to learn, serve, and work. She has designed and implemented strategic planning, employee engagement, strengths-based leadership development, program evaluation, and other mixed methods research initiatives, including nationally representative studies for public release on issues related to education and the workforce for hundreds of local, national, and global organizations. Valerie has published content for both popular and peer-reviewed journals. She serves as an external member of the Institutional Review Board at Gallup, Inc. in Washington, DC, is an advisory council member for the department of education at the College of St. Mary, and is currently the President of the Board of Directors for Refugee Women Rising, based in Omaha, NE. She previously served twelve years as an elected member and officer of the Bennington Public Schools Board of Education in Bennington, NE (2011–2022). Valerie earned a B.A. in Zoology from Miami University and an M.Div. and Ph.D. from Southwestern Seminary. To learn more about Valerie and peruse her publications, review her LinkedIn profile [here](#).