

A strategic roadmap for
the UNM School of Engineering

Our path forward

2024-2028



PHOTO BY UNM ENGINEERING STAFF MEMBER ALISA SADILEK

Introduction

One of the first pieces of feedback I received on my listening tour in April 2023 was a concern about empty strategic planning efforts that fail to reach fruition — due to turnover, a lack of buy-in, or a shift in focus away from implementation and accountability. Strategic vision setting involves a major investment of time and resources from a variety of stakeholders. It means a lot of listening, a lot of analyzing and a lot of organization. And that is all before any action is taken to achieve identified goals.

With this in mind, what we strive to do with this planning effort is to move as swiftly as possible to action. Here, we present our direction and framework, providing a mission, vision and clear goals and objectives. We will turn immediately to developing detailed measurable objectives and performance indicators, assigning specific tasks to team members with clear deadlines and metrics. Implementation will be integrated with our regular operations to make sure that tasks are on track and progress is being made.

This plan represents the beginning of our strategic journey, one that will grow and change as we do. When I first considered joining UNM, I was inspired to see that the university had recently launched a strategic framework, UNM 2040, and that framework helped me see that UNM was a place I would like to be. Now that I am a leader at UNM, setting a collective vision and creating a strategic journey for our School was one of the first things I wanted to focus on as dean. Thank you to all who have participated in this process. I hope you are as excited as I am to begin this historic journey with me.



A handwritten signature in black ink that reads "Donna Riley". The signature is fluid and cursive, with the first name "Donna" and the last name "Riley" clearly distinguishable.

Donna Riley

Jim and Ellen King Dean of Engineering and Computing

Our process

Beginning in spring 2023, Dean Donna Riley conducted a series of listening sessions with faculty, staff, students, alumni and other key stakeholders. That listening tour produced a situation analysis that identified and clarified the School's strengths and opportunities.

At the August 2023 leadership retreat, our strategic direction was the main topic discussed, producing some foundational ideas that we used to form draft mission and vision statements, and begin developing our framework. As we went along, a small steering committee was formed to guide our strategic planning process, elicit feedback to shape the draft mission and vision, and facilitate our "Goal Gathering" in November 2023, as well as produce a draft of the strategic roadmap that we used to seek feedback.

Throughout the fall, the steering committee led the development and administration of feedback surveys sent to faculty, staff and students, as well as a variety of meetings with departments, leadership and student groups to generate feedback and ideas, including a "Coffee with the Dean" series. So far this year (2024), our work has been rolled out to the School of Engineering External Leadership Board in addition to School leadership (deans and directors). There undoubtedly will be continued additions and revisions in the coming months, as will there be additional details, tasks and timelines added to ensure that our plan is one that is living and growing with us, not filed away and forgotten.



Our Strategic Roadmap Committee

Donna Riley, Jim and Ellen King Dean of Engineering and Computing

April Davidson, Academic Operations Officer, School of Engineering

Kim Delker, Marketing Manager, School of Engineering

Gabriel López, Interim Chair, Department of Chemical and Biological Engineering

Kate Williams, Senior Employee and Organizational Development Consultant,
Division of Human Resources



Davidson



Delker



López



Williams

Vision

The School of Engineering is a vanguard for inclusive excellence, where everyone belongs, thrives, and shines. Through research, learning, and innovation, we serve the land and its people, designing solutions — including products, systems, and infrastructure — that transform lives and communities in New Mexico and beyond.

Mission

The School of Engineering provides accessible pathways and experiential learning opportunities to prepare a diverse, imaginative, and responsible engineering, computer science, and construction management workforce.

We conduct research with global impact that fosters healthy, resilient, and secure communities.

We leverage excellence across disciplines on our flagship campus and creative partnerships with government, industry, and local communities to realize impact, enhance economic development, and improve quality of life.



Situational analysis of UNM Engineering

Strengths

- A shared sentiment that education transforms lives and communities.
- Proximity and strong relationships with nearby national laboratories.
- Ambitious faculty, impactful research.
- Strong staff rapport.
- There are many models of generosity/service in the School (e.g., Gerald May).
- High alumni support and engagement.
- Engineering Student Success Center.
- Diverse student body, diverse K-12 and community college pathways into UNM.

Weaknesses

- Lack of shared vision, mission and overarching strategy.
- Scarcity mindset.
- “Island” mentality.
- Lack of respect for staff.
- Culture of non-compliance with policy and process.
- Inconsistent recognition of the importance of diversity, equity and inclusion in achieving excellence.
- Lack of diversity among faculty, graduate students.

Opportunities

- University’s UNM 2040 plan creates a vision for all schools and colleges to follow.
- A plan for growth in the School of Engineering: 20% by 2028.
- Chair, faculty and staff development.
- Many student success initiatives in progress or planned.
- Great potential and opportunities for Interdisciplinarity leadership.

Threats

- UNM has a high dependence on state funding.
- New Mexico has a high economic dependence on oil and gas, federal funding.
- K-12 system in New Mexico is weak in many communities, meaning that students come to UNM unprepared.
- Crime in the Albuquerque area, impacting campus safety.

GOAL ONE:

Improve Student Success Pathways

OBJECTIVES:

1. Enhance our student support structure by

integrating across teams. This involves all in the School who interact with students, including advisors, faculty, and support staff. In the coming years, this will involve seamless integration across gateway courses.

2. Motivate and equip faculty to implement proven practices

for student success. This involves expertise of the dean's key staff.

3. Provide high-impact course

environments from day one, incorporating experiential and community-engaged opportunities for every student every semester.

4. Design a common, meaningful first-year experience or pre-major experience for all School of Engineering students.

This is a continuous process, beginning immediately. The end goal, by 2028, is to establish a first-year engineering program in UNM Engineering that will greatly boost student retention and success.

5. Reimagine curriculum pathways, especially math pathways, critical degree paths, and recovery courses, to increase retention and reduce time to degree.

This is a multi-faceted effort that involves all faculty and staff who interact with students.



GOAL TWO: Develop Faculty and Staff

OBJECTIVES:

1. Highlight, prioritize, and reward well-being (both physical and mental) to ensure optimal personal and professional performance. This effort is led by managers, who periodically review holistic well-being with staff and faculty as well as share already-existing resources available to campus.

2. Connect people to mission and develop capacities to achieve the mission, by incorporating this plan in performance review and recognition processes.

This has begun with the 2024 performance review cycle and will involve all managers and employees. Additionally, the dean will schedule periodic School-wide updates on the strategic path progress with faculty and staff, revising the path as needed.

3. Appreciate, retain, mentor, and compensate talent as fully and equitably as possible. This is a continuous effort, which began in the 2024 performance review cycle and will be led by managers at all levels in the School.



GOAL THREE:

Build a Culture of Equity and Inclusive Excellence

OBJECTIVES:

1. Cultivate a culture of community, respect, civility, and belonging. This has begun, with department chair training, with follow-up implementation supported by the associate dean for faculty affairs in collaboration with the provost's office.

2. Review and develop policies, processes, and practices supporting accountability for equity.

3. Enhance equity in student success by sharing student success data, strengthening ties between the Engineering Student Success Center, advising staff and faculty.

The goal is to motivate and equip faculty to deploy proven equity-enhancing practices in their teaching, mentoring, and research.



GOAL FOUR:

Grow Research and Innovation

OBJECTIVES:

1. Increase the number and success of large, collaborative proposals and UNM's leadership of large, multi-institutional proposals. This effort is being directed by the associate dean for research and innovation, who will provide strategic leadership on metrics for faculty in the proposal process.

2. Restructure Category 2 centers to align with faculty strengths and national priorities, provide support resources to a broader group, and balance new investments with sustaining success. This effort began in fall 2023, with further communication in spring 2024 by the associate dean for research, providing direction of strategic research priorities for the School and how research centers can be optimized as part of a process to maximize research activity.

3. Strengthen activities, support, tracking, reward structure and recognition related to entrepreneurship, innovation, community-engaged research and economic development. The associate dean for research and innovation is leading this effort and will include partners from UNM Rainforest Innovations, corporate partners and engaged faculty.

4. Broaden the diversity, sponsor base and funding mechanisms for School of Engineering research awards.

5. Create a support system that enables UNM Engineering to conduct research in a safe and secure manner.



GOAL FIVE:

Develop and Expand Partnerships

OBJECTIVES:

- 1.** Improve pathways to UNM by strengthening community college and K-12 partnerships.
- 2.** Develop partnerships for community engagement, public service and the arts in New Mexico.
- 3.** Grow strategic partnerships with Industry, government labs, and the entrepreneurship and economic development ecosystem in the state.
- 4.** Strengthen on-campus partnerships (e.g., with the Global Education Office, Athletics, interdisciplinary programs, other colleges and schools around campus).



GOAL SIX: Grow and Manage Resources



OBJECTIVES:

- 1. Grow the School of Engineering by 20% over the next five years by increasing the number of faculty, staff, and students, advancing New Mexico's technical workforce and economic development.**
- 2. Optimize the use of existing resources by aligning transparent allocation of resources and incentives with School of Engineering goals and priorities.** This includes analyses of physical space, equipment, Facilities and Administration funds, financial reserves, and building/equipment repair and maintenance costs and schedules.
- 3. Build a culture of philanthropy in the School of Engineering by continuing to develop our donor base.** Led by the directors of development, they will guide department and center directors in working with donors and alumni to invigorate existing supporters and cultivate new supporters, including faculty and staff.

UNM Indigenous Peoples' Land and Territory Acknowledgement



Founded in 1889, the University of New Mexico sits on the traditional homelands of the Pueblo of Sandia. The original peoples of New Mexico - Pueblo, Navajo, and Apache - since time immemorial, have deep connections to the land and have made significant contributions to the broader community statewide. We honor the land itself and those who remain stewards of this land throughout the generations and also acknowledge our committed relationship to Indigenous peoples.

We gratefully recognize our history.

Next steps and continuous improvement

Our strategic roadmap process is a large undertaking for the School of Engineering. What is presented here is the result of several months of research, listening and observation. It is meant to be a framework, a guide, that will serve as the backbone of a more detailed plan that will include specific tasks, metrics, duties, and timelines.

This is meant to be a living, changing document, so we will revise, edit and improve it periodically, based on the priorities of the School and the University, and in response to changing needs in the state and indeed, the world.

We thank all of our stakeholders — students, faculty, staff, parents, donors, alumni, corporate, government, and community partners, and many more — for being a part of this important and groundbreaking process.



We are looking forward to working with you in the months and years to come. Thank you for your continued support!

