

New Mexico Tech Strategic Plan 2006-2011

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A Message from the President:

The New Mexico Tech Strategic Plan for 2006-2011 has now become the living document that the university will turn to in formulating its future. As we developed and now implement this strategic plan, it has become all too apparent that this plan would have never have been realized had it not been for the critical involvement and input from a number of campus constituencies. I thank you all for articulating the vision and providing the framework for this important document.

In developing this current plan, we hope to successfully position New Mexico Tech at the forefront of science and engineering education and research. The high aspirations we have set herein for this university's expectations, however, are not set in stone. We instead recognize that for this strategic plan to be truly useful, it must be a constantly evolving document—a road map for a future that is certain to be filled with extraordinary changes.

There were many great ideas which resulted from the campus-wide effort to establish goals and operational strategies, but, realistically, it would be impossible to achieve all of them within the financial and human resources constraints imposed on the university. Therefore, it fell upon the members of the steering committee to decide what of all that had been imagined could indeed be achieved.

Now, we are all called to focus our attention and efforts on the execution of our plans. We must also continue to bring into being the lofty goals set for this institution, by drawing on our established resources and garnering support from new partners.

While the schedule is demanding, we cannot delay in moving our strategic plan toward fruition and putting it into action. Let us all strive to fully realize the exciting opportunities that lie ahead.

Sincerely,

Daniel H. López

Introduction

New Mexico Tech's 2006-2011 Strategic Plan is the product of an intensive effort of six separate committees composed of students, faculty, staff, and administrators representing the core of the New Mexico Tech campus. The goals and recommendations in this Strategic Plan are based on extensive data analysis and in-depth assessments of fundamental issues facing the Institute as it completes the first decade of the twenty-first century.

Tech's planning process was guided by general taskings and important issues identified in the *2004 North Central Association of Colleges and Schools Self-Study Report*, the *Accreditation Board of Engineering and Technology, Inc., Report*, and recommendations from faculty, students, and administrators. Based on this guidance, the committees developed data-driven recommendations that in turn provided the rationale for the Strategic Plan's goals. [See the *Reports of the Strategic Planning Committees*, July 1, 2005]

The goals and recommendations in this document are organized under five categories with common strategic objectives:

- *NEW MEXICO TECH WILL ENHANCE ACADEMIC EXCELLENCE AND STUDENT SUCCESS.*
- *NEW MEXICO TECH WILL IMPROVE ENROLLMENT MANAGEMENT.*
- *NEW MEXICO TECH WILL BALANCE GROWTH OF RESEARCH, TECHNOLOGY, AND TRAINING PROGRAMS.*
- *NEW MEXICO TECH WILL BUILD INSTITUTIONAL CAPACITY AND INFRASTRUCTURE.*
- *NEW MEXICO TECH WILL IMPROVE COMMUNICATION, MARKETING, AND OUTREACH.*

Additionally, each goal identifies implementation actions, metrics for reaching goals, and responsibility for assuring implementation. The successful implementation of goals will require a fully-engaged Tech community (students, staff, faculty, and administration).

In summary, New Mexico Tech is a unique New Mexico research institution that stands at a crossroads in determining its future, and Tech's 2006-2011 Strategic Plan will be the roadmap that will guide New Mexico Tech to its destination.

OUR MISSION

New Mexico Tech is an institute of higher learning that serves the diverse population of New Mexico by integrating education, research, public service, and economic development through emphasis on science, engineering, and natural resources. Its mission is multi-fold:

- 1) helping students learn creative approaches to addressing complex issues;
- 2) acknowledging state and national diversity of students and developing an inclusive learning environment;
- 3) creating and communicating knowledge; and
- 4) solving technical and scientific problems.

INSTITUTIONAL VALUES

The people who comprise the community that is New Mexico Tech are guided by certain values as they perform their daily tasks. More than mere rules or operating procedures, our institutional values are qualitative and idealistic. They are our most fundamental touchstones that measure the worth of what we do.

They are: creative excellence, integrity, collegiality, service, leadership, and commitment to economic prosperity and technological development.

Creativity

Creativity is possible in virtually all endeavors. It calls for curiosity, adaptability, and resourcefulness. It requires imagination and often diligence. But whether the task is being performed by a carpenter, a secretary, a graduate student, or a regent, creativity is an expected part of this value.

Excellence

Excellence speaks for itself. New Mexico Tech is known for the high quality of its education and research, but we aspire to a new level of excellence in which the whole is greater than the sum of its parts. At this new level, we expect that creative excellence will be rewarded at New Mexico Tech.

Integrity

Integrity is honored as a fundamental value at New Mexico Tech. Dishonesty, cheating, and plagiarism have no place in a respected institution of higher education. But real integrity goes further than these negatives; integrity means having the courage to defend the truth, to act fairly and honestly in all our endeavors, and to be responsible citizens of the community.

Collegiality

New Mexico Tech is a place where people care about each other. That sense of caring we call collegiality. It means being open with others, sharing with them, and collaborating with them for the good of the Institution. Collegiality also means mentoring: acting as a guide and advisor to a colleague, a student, a fellow staff member. It means caring about the community—the campus community, the community of Socorro, the larger community of the State of New Mexico. And collegiality means valuing diversity, realizing that persons of a race or gender or ethnicity or nationality different from our own have importance both because they are human and because their experiences are different from ours and are therefore valuable.

Service

As a community of learners, New Mexico Tech also acknowledges a responsibility to serving society, especially since learning helps meet not only individual needs but also those of the larger community. Service is a source of motivation and inspiration to those who practice it, reflecting both a capacity for relating to others, as well as deep-seated concern for the quality of human life. The social benefits of service are further fulfilled through the expansion of knowledge by teaching, scientific investigation, technology transfer, and economic development.

Leadership

New Mexico Tech has been, is, and will continue to be at the forefront of science and engineering research and education. Creating an open environment which also develops and fosters tomorrow's leaders in those and other fields is of paramount importance. Leadership involves moving everyone toward a shared perception of our university's vision, mission, and outcomes, toward a common understanding of where New Mexico Tech is now and where it should be heading, and toward an increased commitment to those ends. By engaging, enabling, and empowering others throughout the university, members at all levels and in a variety of areas can take on the leadership roles. Strong, effective leadership is best exemplified not through methods of control, but through positive influence.

Economic Prosperity and Technological Development

New Mexico Tech brings its academic and research resources to bear on key issues in promoting regional and state economic prosperity and technology development. In addition to preparing the workforce of tomorrow through academic rigor and practical research experience, the university provides strategic support, technical assistance, technology transfer, and development and implementation of bold new research initiatives, enabling technologies, and training programs to bolster both public and private sector success and competitiveness. Furthermore, New Mexico Tech is committed to integrating diversity into all facets of its work, since the intrinsic value of understanding and respecting similarities and differences among all groups is central to

fully achieving the university's comprehensive academic, research, and outreach goals and objectives.

Institute-Wide Undergraduate Student Learning Objectives

New Mexico Tech has established the following learning objectives for its undergraduate students and continuously assesses whether its students meet these objectives.

1. New Mexico Tech students will gain expertise in their chosen field of study.
2. New Mexico Tech students enrolled in bachelor of science programs will gain competence in science and mathematics by developing analytical and quantitative skills.
3. New Mexico Tech students will be able to communicate to different audiences in multiple forms.
4. New Mexico Tech students will gain an appreciation of their role as citizens in diverse human societies and cultures.
5. New Mexico Tech students will learn responsible values and ethics in their professional and personal lives.
6. New Mexico Tech students will learn to be life-long learners who reason well and can evaluate and apply information learned.

GOAL I. NEW MEXICO TECH WILL ENHANCE ACADEMIC EXCELLENCE AND STUDENT SUCCESS.

Strategy A: Create a strong student development and retention program

Metrics:

1. Increase 6-year graduation rate to 50 percent and first year retention to 80 percent. A fully developed retention plan will be in place and in operation by June 2007.
2. Develop and implement a New Mexico Tech “Gradual Start” academic program for entering freshmen.
3. Restructure first-year experience program. Integrate first year courses such as the First Year Experience and English 111 and make the program mandatory for all first-year students.
4. Develop a training program for faculty advisors by January 2007.
5. Develop a plan to better coordinate student social and cultural activities.
6. Develop a comprehensive facility plan that will enhance the quality of student life.

Oversight: VPAA, VPSUR

Strategy B. Re-align resources to support increased enrollments and research opportunities

Metrics:

1. Introduce zero-based budgeting strategy with respect to academic departments.
2. Continue realignment of existing resources for academic departments and press for additional resources as they are generated.
3. Research centers and institutes will develop plans to integrate students into their activities
4. Research centers and institutes will establish numbers of student worker positions they have available.
5. Research centers and institutes will establish a methodology to make information on job opportunities available to the student body.

Oversight: VPAA, VPAF, VP Research, Division Directors

Strategy C: Develop a plan for growth and support of Distance Education.

Metrics: Initiate market study of workforce educational needs and implement new courses and programs in response to the study.

Oversight: VPAA

Strategy D: Foster institutional change that focuses on student learning and innovative teaching.

Metrics: Establish and expand Center for Innovative Teaching and Learning (CITL) to involve 50 percent of faculty by 2010.

Oversight: VPAA

Strategy F: Establish a Bachelor's degree program

Metrics: Define market niches, define curriculum and seek appropriate approvals and certification for identified new Bachelor's program by Fall 2009.

Oversight: VPAA

GOAL II. NEW MEXICO TECH WILL IMPROVE ENROLLMENT MANAGEMENT

Strategy A: Improve recruiting for undergraduate and graduate students

Metrics:

1. Target a total enrollment goal of 2500, at a proposed undergraduate to graduate ratio of 3:1. Increase scholarship package proportionally.
2. Develop an integrated plan for recruiting both graduate and undergraduate students.

Oversight: VPAA and VPSUR

Strategy B: Plan and work toward a goal of 30 percent Hispanic undergraduate student population by 2015.

Metric: Meet criteria to be certified as an Hispanic serving university by 2010.

Oversight: VPSUR, VPAA

Strategy C: Continue to build Master of Science Teaching Program and make it more useful as a pipeline for New Mexico high school students to enter Tech. Continue to emphasize Distance Education outreach and recruitment.

Metrics: Continue growth to enrollment of 200 in MST program and then re-evaluate the target.

Oversight: VPAA

Strategy D: New Mexico Tech must take a lead role in promoting the notion that the best service to the citizens of New Mexico is the push for excellence in science and engineering education.

Metrics: Develop an integrated, well-publicized K-16 effort, evaluated annually.

Oversight: VPAA, VPSUR

GOAL III. NEW MEXICO TECH WILL BALANCE GROWTH OF RESEARCH, TECHNOLOGY, AND TRAINING PROGRAMS.

Strategy A: Develop a strategic plan to balance financial support to research enterprises.

Metrics:

1. Introduce zero-based budgeting strategy for research organizations and enterprises.
2. Monitor annually.
3. Continue realignment of existing resources in support of the strategic plan.

Oversight: VPAF

Strategy B: Develop a plan to evolve Skeen Library to meet the needs of the future.

Metrics:

1. Plan Capital Campaign for Skeen Library.
2. Reduce library research costs by establishing cooperative agreements with other libraries, reducing duplication on campus, eliminating underused journals, and other measures.
3. Establish Open Access Server at Skeen Library for publishing and providing access to research by Tech community and explore ways to more efficiently supply library services.
4. Request funding for libraries from Department of Higher Education in accordance with Skeen Library Plan by 2006.

Oversight: VPAA, VPAF

Strategy C: Increase interdisciplinary research and teaching initiatives.

Metrics:

1. Establish joint funding, teaching, and degree programs.
2. Develop 5-year interdisciplinary plan.
3. Focus on and expand research efforts of both academic departments and research centers to include some of these five evolving research areas:
 - 3.1. Alternative and renewable energy.
 - 3.2. Water resources.
 - 3.3. Application and management of digital information.
 - 3.4. Nanotechnology and nanomaterials.
 - 3.5. Optical science and engineering.

Oversight: VPAA, VP Research, Division Directors

Strategy D: Implement financial reporting systems to support R&D functions.

Metrics: Fully implement Banner system so that researchers are able to access financial reports on a timely basis by August 2006.

Oversight: VPAF, VP Research

GOAL IV. NEW MEXICO TECH WILL BUILD INSTITUTIONAL CAPACITY AND INFRASTRUCTURE.

Strategy A: Enhance campus-wide computing facilities by creating a wireless network.

Metric: Implement wireless network by 2007.

Oversight: Will include VPAA , VPAF

Strategy B: Expand facilities and infrastructure to accommodate enrollment and research growth.

Metrics:

1. Request planning funding from Legislature for a Wellness Center by 2007.
2. Establish a plan to improve and expand residence halls to fit enrollment growth and to accommodate student demand.
3. Create a plan to expand and reallocate campus facilities to accommodate growth in research and teaching activities.

Oversight: All Cabinet members

Strategy C: Encourage the development of intellectual property and spin-off companies to enhance research and student support.

Metrics: Create an institute-wide comprehensive plan to further develop the Research Park, spin-off companies, and other incentives.

Oversight: VP Research, VPAA, Division Directors

Strategy D: Improve management of resources

Metrics

1. Actively recruit and retain top-quality faculty and staff.
2. Implement actions to achieve regionally competitive compensation.
3. Improve employee benefits options.
4. Plan for support staff that will meet the needs of growth.
5. Develop plan for career development of employees.
6. Explore other incentives.
7. Monitor progress annually.

Oversight: VPAA, VPAF, VPSUR

GOAL V. NEW MEXICO TECH WILL IMPROVE COMMUNICATION, MARKETING, AND OUTREACH.

**Strategy A: Improve communication within campus community.
Reevaluate mission of internal communication tools.**

Metrics:

1. Develop an action plan for systemic ways to further support and encourage open and multi-lateral communication among students, staff, faculty, and administration.
2. Create a formal policy for the establishment of priorities for fundraising campus-wide.

Oversight: Cabinet, Faculty Senate, Student Senates (GSA and SA)

Strategy B: Improve external outreach and strategic alliances.

Metric: Develop a comprehensive marketing and outreach plan which shall include state and local entities on an annual basis.

Oversight: President's Cabinet

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Jim McLain, Facilities Management
Leyla Sedillo, Budget
Carol Yee, Dean of Students
Peter Kelly, Graduate Student Association

Strategic Plan Publication

Editors

Kathleen Hedges, Office for Advancement,
editor and writer
Liz Bustamante, PRRC, technical information
assistant

Design

Edie Steinhoff, Office for Advancement, graphic
artist