The University of Texas at El Paso

Building a National Research University By Successfully Serving its Region

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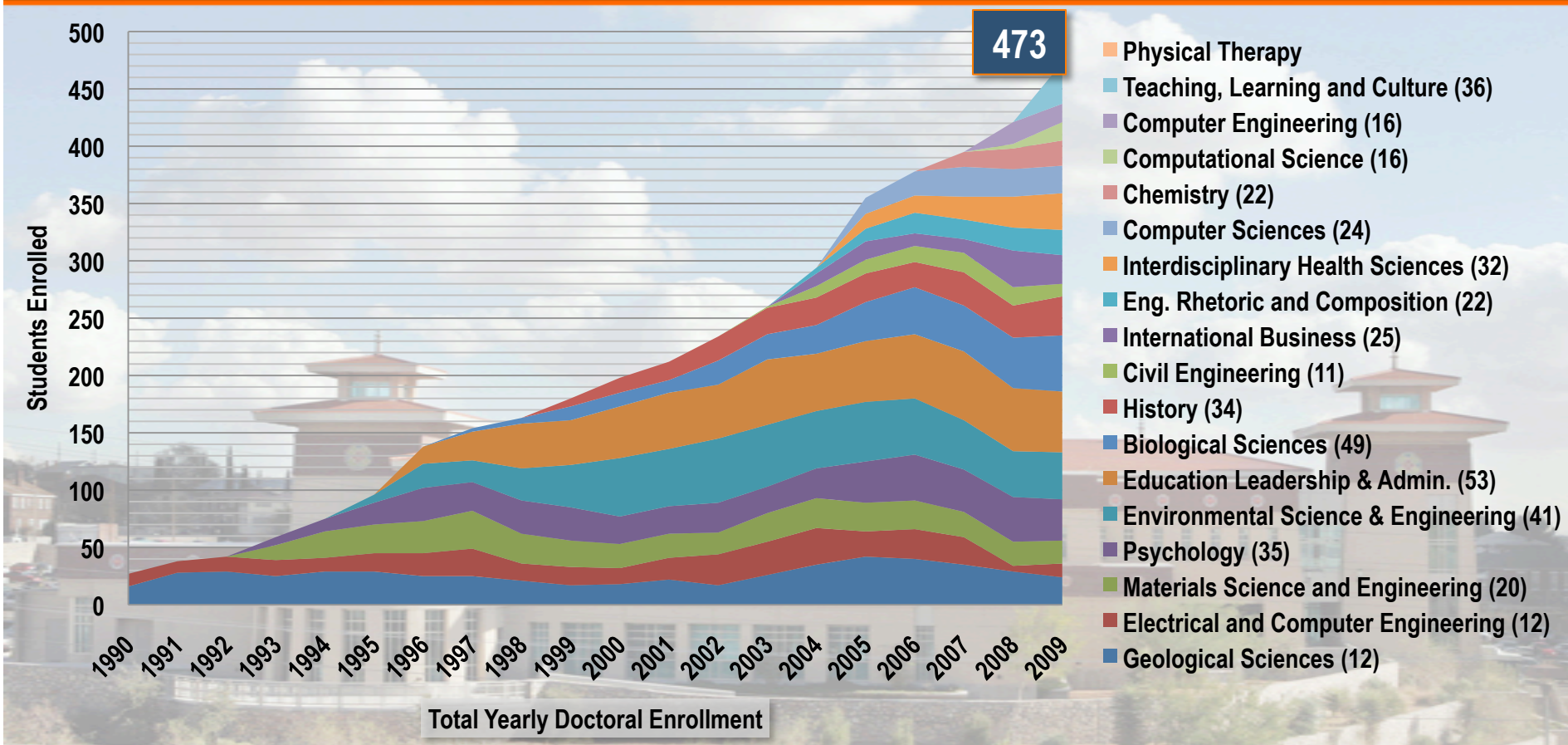
August 19, 2010

UTEP's National Research University Goals

- **Annual expenditure of at least $100 million in externally funded research, according to commonly accepted national standards; and**
- **Annual graduation of approximately 200 doctoral degrees.**

UTEP Doctoral Enrollment Growth



Source: UTEP Center for Institutional Evaluation, Research and Planning

Growth in Total Research Expenditures
Fiscal Years 1991-2009

Source: Office of Research and Sponsored Projects
* Reported to NSF, Science Resources Statistics (SRS), Jan. 2010

UT System STARs Program
Return on Investment: Research Grants

	UTA	U. T. Austin	UTD	UTEP	UTSA	Total
Competitive STARs Awarded	$ 6,180,562	$ 15,445,000	$ 3,500,000	$ 5,734,438	$ 2,990,000	$ 33,850,000
Institutional Match	1,100,000	7,370,276	1,500,000	1,197,000	930,850	12,098,126
Total Investment	**$ 7,280,562**	**$ 22,815,276**	**$ 5,000,000**	**$ 6,931,438**	**$ 3,920,850**	**$ 45,948,126**
Research Grants Since Award	$20,562,731	$189,620,147	$13,026,000	$62,744,846	$15,236,442	$301,190,166
Net Return on Investment	**$13,282,169**	**$166,804,871**	**$ 8,026,000**	**$55,813,408**	**$11,315,592**	**$255,242,040**

TRIP Summary

Total Gifts for Endowments *(Chairs and Professorships; Graduate Fellowships)*	**$ 1,950,000**
Total for Current Purposes *(Research Equipment and Centers)*	**$ 2,200,000**
Total Gifts	**$ 4,150,000**
Total TRIP Match *(Graduate Fellowships, Research Laboratories)*	**$ 2,950,000**
Total Gifts and TRIP Match	**$ 7,100,000**

THE UNIVERSITY OF TEXAS AT EL PASO
STRATEGIC PLAN FOR RESEARCH

MARCH 18, 2010

Executive Summary

UTEP's long-standing commitment over the last two decades has been to reject the traditional choice between access and excellence that characterized U.S. higher education in the twentieth century and to insist upon the joint attainment and continuing enhancement of both access and excellence.

That means, in its simplest form, that we must be a research university in order to fully serve the people of our region now and in the future. We must reflect our 21st century demographic, and we must bring to our region the pinnacle of excellence in public higher education – that is, the full capacity, breadth, innovation, and regional impact of a national research university.

UTEP's quest remains what it has been: to become the first national research university in the United States that serves a 21st century demographic. Our 21st century demographic is the predominantly Mexican-American population of West Texas along with the Hispanic populations of Texas as a whole and the United States. UTEP President Diana Natalicio recently characterized our challenge as follows:

> "In Texas—and indeed across the U.S.—higher education is locked in a traditional model better suited to the mid-20th century America than today. Demographics have shifted dramatically, driven largely by the rapid growth of the Hispanic population, and it's time to recognize that low-income and minority students have every right to expect the same level of educational excellence experienced by their peers in more affluent settings. Texas' future prosperity resides in these undereducated segments of our

population. We literally cannot succeed without setting high expectations for them and fully developing their talents.

UTEP's responsibility to its students and to the State of Texas is to demonstrate that a commitment to both access and excellence—to both "Closing the Gaps" and "Tier One" goals—can and must be achieved. We have been highly successful over the past 20 years in building research and doctoral program capacity while maintaining our strong access commitment to first-generation, low-income and mostly Hispanic students, who also happen to be highly talented. We intend to continue to build on that success to achieve our Tier One goal, for and with the UTEP students we serve, not in spite of them. They—and Texas—should expect nothing less."

-- *The Texas Tribune, January 19, 2010*

UTEP can bring to Texas the first national research university to fully serve its 21st century demographic. What does that mean? Why are there so few candidates for this goal? The answers lie in the fact that it takes a long period of sustained commitment to build a university that can keep up with the changes in the characteristics of the populations it serves: in its region, in its state, and nationally. It takes an equally long time to lay the foundations to build a research university: adding doctoral programs, recruiting and supporting graduate students of exceptional talent, including those from its own undergraduate body, and recruiting and supporting faculty whose research, scholarship and creative activity are of national caliber and distinction. Few institutions have embarked upon those long journeys at the same time; fewer still have stayed the course.

Over the last five years, UTEP has produced steady increases in undergraduate enrollment (up 13% from fall 2003 through fall 2009) and spectacular increases in undergraduate degrees awarded (up 71% over the same time period). Even more important for State and national policy priorities, UTEP increased the enrollment of Hispanic students by even more than its total population (Hispanics up 19% from fall 2003 through fall 2009 compared to 13% overall), and most important of all, its increase in degrees awarded to Hispanics (up 80% compared to 71% overall).

Access to enrollment has been matched by excellence in teaching and learning, as shown by the degrees awarded. Excellence is also a function of the research, scholarship and creative activity produced by the faculty and students of the University. UTEP's research performance has been no less impressive. Research on the UTEP campus has increased steadily over the past 20 years, with growth in annual research expenditures from under $5 million in FY 1989 to almost $60 million in FY 2009.

This growth in research performance has been fueled by extraordinary investments by the State of Texas and the University of Texas System – in the last five years more than $250 million in UTEP's infrastructure, primarily facilities to support the University's Science, Technology, Engineering, and Mathematics research and educational programs. Included in this investment are the recently opened Bioscience Research Building and new buildings being constructed for the Departments of Chemistry and Computer Sciences and for the College of Health Sciences and the School of Nursing.

UTEP's progress during the past 20 years has clearly demonstrated its capacity to become a national research university. UTEP's federal research expenditures rank second only to UT Austin among UT System universities and second only to the University of Houston among the other emerging Tier One institutions. UTEP also excels in private giving, ranking first by a wide margin among the emerging Texas Tier One universities in the UT System. UTEP will celebrate its Centennial in 2014, and will incorporate the quest to become a national research university into both the commemoration of this major institutional milestone and the fundraising associated with it. The University has already initiated the quiet phase of this Centennial capital campaign whose goal is expected to be $200 million and whose focus will be on securing funding for endowed faculty chairs and professorships, endowed graduate fellowships, undergraduate merit scholarships, and other investments to continue building the University's excellence.

UTEP's strategic planning for research is based on four groups of objectives that deal with performance, growth, quality assurance, and efficiency gains. For each objective, quantitative outcomes have been determined and developed for the next decade.

Performance: First, UTEP's strategic planning for research identified the following two as key performance objectives:

- annual expenditure of at least $100 million in externally funded research, according to commonly accepted national standards; and
- annual graduation of approximately 200 doctoral degrees.

Growth: Second, in order to achieve those outcomes, UTEP will have to grow in a number of critical dimensions, four of which have been identified as growth objectives. UTEP will increase its number of research-active faculty who are nationally competitive in acquisition of external funding and who will serve as the core faculty mentors and dissertation directors for doctoral students. UTEP is an emerging research university, and many of our doctoral programs are still within their first decade of operation. The University has yet to build out its full complement of PhD programs, and we have developed plans to grow current core faculty in strategically identified new areas of potential national distinction. New faculty and new doctoral programs will require significant increases in resources, including continuing growth at all programmatic levels as UTEP strives to meet the educational needs of a large and historically under-served population. More students, more research, and more academic programs will all demand facilities, both new and renovated. These considerations will drive the following four supporting growth objectives:

- increase the number of tenured and tenure-track faculty from 508 to 720 by 2020;
- increase the number of PhD programs to 40 by 2020;
- increase student enrollment from 21,000 to 29,500 by 2020; and
- increase the provision of research, instructional, and associated support space by 3.2 M gross square feet (GSF) by 2020.

Quality Assurance: Third, UTEP's strategic plan monitors the quality of the educational experience for UTEP students by tracking two critical quality assurance objectives that indicate the access of students to faculty teachers and mentors:

- maintain the overall University student/faculty ratio at approximately 21:1 and
- maintain the number of doctoral students per tenured/tenure-track faculty member at less than 3:1.

These ratios have been set within the range of values at our aspirational peer institutions and those at leading national research universities in Texas.

Efficiency: Fourth, our analyses show that our past growth has been accomplished in part by efficiency gains over the last 5-10 years. Our models for increased performance in funded research and in graduation of doctoral students both build in continued incremental efficiency gains in the following measures and associated efficiency objectives:

- increased annual dollar volume of sponsored research per tenured/tenure-track faculty member at a rate higher than the rate of inflation; and
- reduction in time to doctoral degree after completion of coursework.

If UTEP maintains its best practices in growth of enrollment, faculty, program development and research productivity, if there are modest incremental efficiency gains, and if the Centennial Campaign successfully achieves its funding goal in 2014, the outcomes derived from the models project that UTEP will be able to achieve its primary performance benchmarks of $100 million in externally funded research and 200 PhD graduates per year within 7-8 years, or approximately by 2017-18. With increased System, state, federal and/or private investment, the models project that UTEP will be able to achieve more aggressive and strategic research and doctoral program growth that will permit earlier attainment of the Tier One benchmarks.

While a national research university necessarily exemplifies academic, scholarly, and artistic excellence in all areas of its endeavors, a key part of the strategic plan for research identifies a limited number of priorities in which the University's pursuit of externally sponsored research will be focused. By their very nature opportunistic and flexible, the following research priorities are ones in which UTEP already has achieved national distinction and which also seem particularly promising for future growth:

- **Health & Biomedical Sciences and Engineering** - Addressing key border health issues and Hispanic health disparities by understanding complex living systems and defining new biomedical technologies and therapies.

- **Energy & Environment** – Studying the impact of environmental change and the shrinking supplies of water, energy, and other resources regionally in the Chihuahuan Desert and globally, to provide solutions that sustain and improve the quality of life.
- **Education for the 21st Century Demographic** – Conducting rigorous educational research to improve teaching, prepare students from diverse populations to become innovative and productive members of a global society, and develop policy.
- **National Defense and Border Security** - Meeting the needs of agencies responsible for the protection, safety and fostering of future economic integration opportunities along the U.S.-Mexico border.
- **Global Enterprise & Border Studies** – Researching the causes and consequences of globalization to inform academia, practitioners, and policy groups and to advance understanding of globalization on the border, in the Western Hemisphere, and in the world.

In addition, research at UTEP is strengthened by a number of cross-cutting themes that link and synergize work across and between the priority areas:

- **Cyberinfrastructure and Collaborative Environments** - Creating innovative Cyberinfrastructure to cultivate education and research collaborations within and across disciplines.
- **Emerging Technologies: Information Technology, Biotechnology & Nanotechnology** – Developing innovative methods and technologies to advance research in areas of regional, state, and national need.
- **U.S. – Mexico and Latin America: Social and Behavioral Issues** – Leading the nation in studies that require multidisciplinary expertise on Mexico and Latin America, multi-cultural communities, and language and cultural issues in border environments.

All research universities have points of distinction and areas of emphasis upon which they plan to build. All will hire superb faculty and develop programs that will bring them national and international recognition. So will UTEP. But what makes UTEP unique in this endeavor is the essential role played by our student demographic, for our region, for Texas, and for the U.S.

UTEP's commitment to becoming the first national research university serving a 21st century demographic started with the fundamental principle that talent is everywhere and that all talent should have an equitable opportunity to be realized, to be taken as far as it can go. The gene pool of the million people in El Paso is as rich in brilliance, creativity, diligence, and tenacity as the gene pool of any other million Texans. Its people are not, however, blessed with equal financial resources or job opportunities. It is the responsibility of education to tackle that.

When the El Paso Collaborative for Academic Excellence was launched twenty years ago, it recognized the essential continuity and coherence of the K-16, and later PreK-16, continuum. At the time UTEP was limited to a single doctoral program, in geological sciences. Aspiration and ambition for west Texas did not extend into doctoral education and research.

The question then might be shaped as follows: if UTEP had not had the support of the LULAC/MALDEF lawsuit and had remained restricted to that single doctoral program, would Texas be better off today? It is our responsibility to ensure that the shortsightedness that prevailed until 1990 not be replicated in 2010 – and that's a real danger if the same assumptions that have historically excluded Hispanics and squandered the talent assets they represent for the rest of the State are allowed to persist.

UTEP has already demonstrated its capacity to become an emerging Texas Tier One university and is well positioned now to become a national research university by achieving and enhancing excellence (through its growth in graduates, in doctoral programs, and in research, scholarship and creative work) while at the same time expanding access. UTEP did not do it by changing the student populations it served – by changing the inputs, the raw material – because that was never the problem. The problem that UTEP recognized and tackled head-on was the under-estimation of that "raw material" and the misunderstanding of its promise. That's why this Tier One opportunity and this Strategic Plan for Research are not a new vision for us – they are simply a continuation of the journey, an extension of educational opportunity to the highest level we can go.

On the basis of the last twenty years, UTEP has the confidence that it will complete that journey with and for these students, not in spite of them.

For Texas, what does this mean? Closing the Gaps has shown that achieving equity in access and excellence is a long, hard process. It took UTEP twenty years to close its gap with its community. What happens to UTEP in the next decade will play a very large part in the national visibility of the Tier One and national research university effort in Texas. If UTEP is not sustained and advanced, if our performance fails, then the Tier One project in Texas will be sadly labeled, "Not for Hispanics." But if UTEP emerges successfully as a recognized national research university, as we are confident that we will, then Texas will have achieved something no other state has done or even has on its agenda – it will have developed the first national research university serving a 21st century demographic.