

The University of Texas at Dallas
Compact with The University of Texas System
FY 2006 through FY 2007

I. Introduction: Institution Mission and Goals

The mission of The University of Texas at Dallas is to provide Texas and the nation with the benefits of educational and research programs of the highest quality. These programs address the multi-dimensional needs of a dynamic, modern society driven by the development, diffusion, understanding and management of advanced technology.

The strategic intent of the university is to be a nationally recognized top-tier university sculpted within a model of focused excellence. The university emphasizes education and research in engineering, the sciences, technology and management while maintaining programs of focused excellence in other academic areas. Within the context of this mission, the goals of the university are as follows:

- To provide able, ambitious students with a high-quality, cost-effective education that combines the nurturing environment of a liberal arts college with the intellectual rigor and depth of a major research university.
- To discover new knowledge and to create new art that enriches civilization at large and contributes significantly to economic and social programs.
- To enhance the productivity of business and government with strategically designed, responsively executed programs of research, service and education.

The university intends to achieve these objectives by investing in excellent students and faculty, building upon its core programs, policies and operations and enhancing institutional character and excellence in education. The university is committed to enhancing the quality of its students' learning experiences and its employees' work environment. The university intends to expand and intensify partnerships and relations with business, governmental and educational neighbors and actively pursue external support of and funding for the ambitious academic and service programs integral to its mission.

The university will serve its multiple constituencies (students, industry, and community) in an ethical, attentive and efficient manner with the highest standards of community service. The University of Texas at Dallas strives to set an example as a public higher education institution. When the public thinks of The University of Texas at Dallas, it is our desire to be recognized as one of Texas' premier universities and an excellent investment in the future of the state.

The University of Texas at Dallas' compact with the citizens of Texas is to sustain the course that has brought the university to the nationally emergent position that it now has. This pledge is made in the context that over 33 percent of the Texas gross state product is produced in the university's service area, and that the future economic viability of Texas hinges on the development of nationally prominent research oriented universities that can drive economic development and provide Texas' students with top-tier education—now essentially capped at UT Austin and Texas A&M. The university's compact with the citizens is to seize our opportunities and overcome the challenges that face the university in the coming years.

II. Major Ongoing Priorities and Initiatives

The University's strategy is to focus on the new knowledge bases that will drive the 21st century and the new Texas economy and provide students with an excellent education. The strategy is aligned with the needs of North Texas industry, the needs of the new Texas economy, and with demographic change in the university's service area. For the continued vibrancy of the emerging new economy, highly educated employees are required. Over its history, UTD has concentrated its resources to meet these requirements.

The major ongoing priorities noted last year remain unchanged. In addition, the university is initiating the reaffirmation process with regard to accreditation by the Southern Association of Colleges and Schools (SACS) under the new presidential leadership of Dr. David E. Daniel.

1. Allocate existing resources to preserve quality in teaching and research programs.

Objective: UTD's dominating priority for the next year is to reallocate existing resources for FY 05 and FY 06 to minimize the damage to our teaching and research programs that occurred as a consequence of the 10 percent reduction in the university's aggregate funding per weighted student credit hour (WSCH) in the last biennium. The university needs to extract maximum efficiency from academic and non-academic budgets.

Strategies:

- Examine and streamline curriculum and class scheduling without sacrificing student access and timely degree completion.
- Increase the percentage of semester credit hours taught by tenured and tenure-track faculty by increasing the numbers of tenured and tenure track faculty and reducing the reliance on part-time lecturers.
- Examine the totality of university activities to identify activities in all areas for reduction and reallocate funding to teaching and research.

Resources: There has been a massive resource shift from state, research funded and teaching formula funded appropriations to tuition and fees with the net result being a constriction of financial resources. At the same time, university enrollments and semester credit hour production are increasing, as are the research needs that are drivers of the new Texas economy. The financing reality is that significant resource reallocation must occur for at least the short term.

Progress Measures:

- With regard to the strategy of curriculum, two measures of progress will be the number of class offerings rescheduled and the volume of programmatic streamlining. Between fall 2003 and fall 2004, the number of organized classes grew by only 4 percent in spite of enrollment growth. The growth of organized sections occurred in lower division and at the master's level. Lower division courses grew by 4.7 percent and masters courses grew by 12 percent. At the upper division and doctoral levels there was virtually no growth in sections, which reflects the redirection of resources. In terms of rescheduling courses, the university significantly shifted lower division coursework from the evening to the day with a 13 percent reduction in lower division evening courses and a 10 percent increase in day sections. At the master's level, there was a 2 percent reduction in evening sections and 45 percent increase in day sections, which reflect the shift to full-time masters programs.
- In addition, we will measure the number of course offerings reduced while maintaining course quality, enrollments, and student quality. As noted above, the university experienced only a modest growth in course sections. However, there was a considerable shift in the scheduling and timing of courses. The number of sections taught Monday-Wednesday-Friday doubled and the number of exclusive courses taught on Fridays increased 21 percent, which reflects not only a more efficient utilization of facilities but also a more robust menu of choices for students.
- We will measure the percentage of semester credit hours generated by tenured and tenure-track faculty and the relative research productivity of the faculty. The number of courses offered by the faculty that are tenured or on tenure-track increased 7.4 percent and the percentage of semester credit hours generated increased by 5.6 percent. This is in contrast with the increase in SCH taught by non-tenure track faculty (+1.3%). Total research expenditures between FY 03 and FY 04 increased 8.3 percent to over \$36 million while restricted R&D increased over 17 percent to \$22.4 million.¹

¹ These data come from the Annual Financial Statements, Office of the Controller, The University of Texas at Dallas.

Restricted research expenditures increased from \$58,305 per tenured and tenure-track faculty to \$66,159 from 03 to 04.² Federal R&D funds account for 78 percent of the total expenditures.

Major Obstacles: There is a continuing lag in adding adequate, aggregate space to match our growth in research funding and activity. In addition, the available research space in many productive fields is dated and in need of immediate renovation. The lack of adequate research space causes a lag in the onset of research projects and also places the university at a disadvantage when competing for specific projects. In many research fields, reallocation of specialized laboratory space is not a viable option because that space would require extensive renovations. A similar situation exists for many of the older teaching facilities, which are in a deteriorated state and technologically out-of-date.

2. Protect enrollment gains, access, and student quality achieved over the last decade as part of moving toward a “first tier” institution.

Objective: Within the context of available financial resources, protect and enhance student quality and access to excellent education. Continue significant but controlled growth in freshman enrollment and diversity while maintaining academic qualifications at their current high levels.

Strategies:

- Sustain the freshmen recruitment, retention, and diversity initiatives with a consistent focus on maintaining a highly talented and qualified student body.
- Sustain academic excellence through merit-based scholarship programs.
- Synergistically combine forms of merit and need-based financial aid.
- Continue to focus resources in areas of core competency to the university and areas with transdisciplinary importance that will provide students with career opportunities in the new Texas economy (e.g., audiology and hearing science, brain science, neuroscience, nanotechnology, materials science, bioinformatics, biomedical engineering and imaging science, digital art and technology, management science, and socially relevant social science programs).
- During the 2005-06 academic year, work with students, UT System Administration, and key political leaders to restore UTD funding per WSCH to at least the level of 2001-2003.
- Continue to examine with students, faculty, and key stakeholders the funding mix between state appropriations and tuition/fees to enable quality growth.

Resources: The resource shift from state (research funded and teaching formula funded) appropriations to tuition and fees poses a unique challenge. Both enrollment of excellent students and semester credit hour production are increasing while resources available are constricting. The university has achieved and will continue to achieve its participation objectives to “close the gaps.” Because of the focused, but not narrow, range of university programs, efforts can be concentrated at producing graduates who will drive the new Texas economy. Even with a vigorous increase in gifts, the financing reality is that resources have to be reallocated. The university deferred the purchases of business and student information systems and deferred the hiring of back-up personnel in critical non-academic support areas. Some budgets in non-academic areas have been frozen and new resources have been reallocated to academic areas. Furthermore, it is clear that without reestablishing the resource base of the university (as discussed above), some areas may have to be compromised.

Progress Measures:

- Increases in freshmen enrollment and diversity while sustaining student quality as measured by competitive achievement tests. According to the Office of Undergraduate Education, the fall 2004 freshman class (including the summer enrollees) numbered 1,265 students whose average SAT score was 1239. This can be compared to the fall 2003 class of 1,200 students with an average SAT of

² Tenured and Tenure-track faculty is based on the CBM008, excluding senior administrators, who have tenure, above the level of Dean.

1225. The fall 2004 class contained 38 National Merit Scholars. The fall 2004 class was comprised of students who self-identified as 9 percent Hispanic, 6 percent African-American, 21 percent Asian American, 60 percent Anglo, and 4 percent other. Current fall 2005 admissions data indicate that the university will enroll approximately 1,300 new freshmen (+3% over 2004) with an average SAT of 1240. Eleven percent of these students self-identify as Hispanic, 6 percent African American, 23 percent Asian American, 57 percent Anglo, and 3 percent other.

- Increase in six-year graduation rates and decreases in time-to-degree for transfer students. The university's six-year graduation rate for the 1997 cohort, according to the THECB,³ was 62.9 percent, fourth highest for public universities. The five-year rate for the 1998 cohort is 57.2 percent, which is the third highest in the state.
- Increases in enrollment and majors in core programs of the university. Between fall 2003 and fall 2004, enrollments in the sciences increased dramatically. Biology increased 8.5 percent, Chemistry 13.4 percent, and Bio-chemistry 71.2 percent. Neuroscience and Cognitive Science increased 37.8 percent, Audiology increased 17.9 percent, Physics increased 14.3 percent, and Mathematics and Statistics 48 percent. In spite of the economic downturn, electrical engineering experienced a 1.8 percent rise in majors; however, the downturn continues to drag on computer science, which experienced a 20 percent decline in majors.

Major Obstacles: The merit and need-based funds needed to recruit and enable students to complete degrees in a timely fashion lag behind real needs. An additional challenge stems from the shifting economics and demographics of technologically oriented graduate students. The continued economic churn has led to a flattening in applications and hence enrollments of professionally oriented masters students.

3. Sustain the university's progress over the last decade in moving toward a first tier institution in terms of programs, research, and faculty quality.

Objective: Within the fiscal context protect the fruits of UTD's progress during the last ten years while simultaneously initiating the enhancements of our engineering, brain and behavioral sciences, and physical science programs. Key achievements of the last decade that must be protected include:

- Sustaining the rapid growth in externally funded research programs;
- Continued enhancement of current collaborative programs with UT Southwestern and UT Arlington, particularly in the areas of imaging science, brain health, neuroscience, and nanotechnology; and
- Consolidating major strategic initiatives such as those in audiology and hearing science, brain science, digital art and technology, materials science, management science, neuroscience, nanotechnology, and socially relevant graduate social science programs.

Strategies:

- Sustain the current research thrusts in our centers of excellence (Disease-Centric Science and Technology, Advance Materials and Instrumentation, and Information Transmission and Processing) while also encouraging focused initiatives in other related areas (e.g., arts and technology, digital forensics).
- Continue to implement targeted faculty hiring in university core competency areas and research areas with transdisciplinary importance (e.g., neuroscience, nanotechnology, materials science, bioinformatics, biomedical engineering and imaging science).

Resources: The resource shift from state (research funded and teaching formula funded) appropriations to tuition and fees poses a unique challenge. The university has achieved great success in boosting its externally generated R&D funds as part of the excellence effort to "close the gaps." The university's efforts are aimed at producing research that will drive the new Texas economy. Furthermore,

³ <http://www.theccb.state.tx.us/AccountabilitySystem/UnivMeasRank.xls>

it is clear that without establishing the resource and infrastructure base of the university (as discussed above), some areas of progress will have to be compromised.

Progress Measures:

- Increases in externally funded research and development. Using Standards and Accounting Methods (SAM) data submitted to the Texas Higher Education Coordinating Board (THECB), the university's FY 04 R&D expenditures were \$22.4 million. FY 05 data submitted to the THECB using the same SAM for the university indicate expenditures of \$37.3 million or an increase of 66 percent.
- Increases in the depth and range of collaborative efforts with sister UT institutions in areas of core competence. The university collaborates with UT Southwestern Medical Center in the Metroplex Imaging Center and is attempting to collaborate with UT Arlington in the areas of materials science and engineering. UTD is collaborating with UT Southwestern in the area of biomedical engineering.
- Targeted faculty hiring in areas of concentration. Twenty new faculty in engineering and the sciences have been hired for fall 2005. Additional offers are pending.
- Development of funds for endowed research professorships.
- Stabilization of the oscillations in graduate enrollments in light of shifting local, regional, and global economic and political conditions, and student demographics in areas of concentration. Overall graduate admissions have increased 4 percent over last year.

Major Obstacles: The funds needed to recruit talented faculty in high-demand research areas lag behind real opportunities. The university is committed to increasing the number of endowed, research-oriented professorships in areas of core relevance. This is particularly salient to the rapid enhancement of engineering and physical science promised as the university's share of the multiparty agreement that convinced Texas Instruments to locate its new \$3 billion wafer fabrication plant in Richardson, Texas, nearby the campus. The university will need to successfully mount a significant capital campaign to support these areas. In terms of infrastructure, there is a continuing lag in adding adequate, aggregate space to match our growth in research funding and activity. In addition, the available research space in many productive fields are dated and in need of immediate renovation.

An additional challenge stems from the shifting economics and demographics of technologically oriented graduate students. The economic churn and global uncertainties have led to a flattening in applications and hence enrollments of professionally oriented masters students.

4. Enhance research, graduate education and technology-driven economic development.

Objective: Initiate rapid enhancements of the university's engineering and physical science programs that constitute UTD's share of the multiparty agreement that convinced Texas Instruments to locate its new \$3 billion wafer fabrication plant in Richardson, close to the UTD campus.

Strategies:

- UTD is committed to an aggressive program of targeted hiring in the areas of engineering, physics, chemistry, mathematical and computational science, biomedical engineering, molecular biology, and neuroscience. The phased development of these faculties includes a UTD commitment to the development and implementation of a major fund raising effort to create up to forty endowed professorships for the areas targeted above as well as additional hiring of research oriented faculty of the appropriate high qualifications. UTD purchased an off campus facility and is renovating existing science facilities in order that new researchers can be added and existing researchers can be provided the needed space to perform their functions.
- Secondly, the university is constructing a new 200,000 square foot research facility for Engineering and Natural Sciences with completion sometime around mid-2006.

Progress Measures:

- The rapidity with which the university can fully fund and fill the research positions is a critical measure of progress. Our critical challenge during the next 18 months is therefore to recruit engineering and science faculty of the appropriate high qualifications and to identify the required additional faculty salary funding. Over 44 percent of all new tenured and tenure-track hires from fall 2004 to fall 2005 are in targeted areas. Forty-seven percent of these new hires are in engineering and computer science, 37 percent in the natural sciences, and the remainder in behavioral and brain science. Seventy-five percent of the outstanding offers to new faculty are in engineering, computer science, or physics.
- The funding of the capital investments is materializing. Funding committed for equipment and start-up costs for new research programs is adequate for the next several years. With the arrival of President David E. Daniel, UTD has entered a strategic planning process that includes a communications and development plan to enhance endowment aimed at research professorships.
- We will measure the increase in external research funding in relevant research areas. As noted above, using SAM data submitted to the THECB, the university's FY 04 R&D expenditures were \$22.4 million. FY 05 data submitted to the THECB using the same SAM for the university indicate expenditures of \$37.3 million or an increase of 66 percent.
- Increases in the national rankings of the university in federal R&D and elevation of UTD's Jonsson School of Engineering in national rankings.
- In terms of infrastructure, acquisition of new research space and completion of required renovations and the planning and construction of the new research facility for Engineering and Natural Sciences are significant measures of progress. Construction of the new science research building proceeds on pace. UTD purchased and improved the Waterview Science and Technology Center, which expands the campus across Waterview Parkway, and provides research space while the renovations of the Founders building continues.

Major Obstacles: While UTD has been provided with a very enviable opportunity, it also has a tremendous challenge in addressing the logistical obstacles and financial demands posed. This is especially so in the current climate of resource shifting and constriction. As noted above, the first step is to purchase a facility and then make timely renovations once the building is attained. Secondly, while not a major obstacle, the planning, coordination, and construction of the new research facility for Engineering and Natural Sciences will be challenging given the time frame involved.

While perhaps not a major obstacle, the renovation of the old science facility is logistically difficult. Practically, there is a need to vacate faculty and staff from the building in order to gut it and rebuild the interior into the needed facilities. However, much of the important federally funded ongoing research at the university is taking place in this building and, in addition, important laboratory teaching space is housed in this building. Even though much of this space is no longer adequate, there must be immediate replacement space available. Simultaneously, the university needs to continue to hire additional highly qualified and research productive faculty and equip their labs. Accomplishing such a significant renovation project efficiently and optimally will be challenging. However, the additional research space that will result will adequately address near-term needs for additional space. Funding committed for equipment and start-up costs for new research programs is also sufficient for the next several years.

III. Future Initiatives of High Strategic Importance

As the recent report from the Washington Advisory Group noted, UTD must continue to address its structural issues and resource needs over the next decade. The university must double the size of its research faculty and increase the external funding efficiencies of current faculty. UTD must also improve the quality of its graduate students and expand its partnerships with UTSWMC and UTA.⁴ Thus, UTD's

⁴ Washington Advisory Group, pg. 52.

future initiatives of high strategic importance are bounded by and remain unchanged from those of the present.

As the Washington Advisory Group noted, the university “has been given a five year fundraising head start in its march towards Tier 1 status with Project Emmitt.”⁵ Thus, the dominant initiative for the 2007-2009 biennium will be the fulfillment of most of the commitments of the Engineering and Science Research Enhancement Initiative, “Project Emmitt.” The university must increase in numbers of faculty members and graduate students in these areas. Importantly, UTD is also committed to a major capital campaign with a five-year goal of \$100 million. The major focus for the campaign is the creation of endowed chairs and graduate fellowships that are crucial to the recruitment of excellent, research active faculty and students that achievement of our goals requires.

This same period will see completion and occupancy of a major new facility for experimental research in engineering and science and a renovation of Founders Hall that will address urgent space needs for student services and undergraduate laboratory instruction. Concurrently, older classrooms should be renovated and outfitted with modern instructional equipment and a general enhancement of the functionality and appearance of the campus completed. Fundamentally, the bundle of opportunities and challenges for the entire next five years are substantially the same ones that the university faces now. The university must establish a funding base that is adequate to build the faculty, student body and the university in the 21st century milieu that is Texas. Thus, the three major initiatives of high strategic importance are:

1. Fulfill the commitments of the Engineering and Science Research Enhancement Initiative.

Objectives: There are three interrelated commitments. First, the university is committed to increase the numbers of faculty members and graduate students in engineering, physical sciences, and technology. Secondly, the university is committed to a major capital campaign with a five-year goal of \$100 million that is directed to the creation of endowed chairs and graduate fellowships in engineering and the physical sciences. Third, the university is committed to the completion and occupancy of a major new facility for experimental research in engineering and science and a renovation of Founders Hall.

Strategies:

- As noted earlier, UTD is committed to and will, as a strategy, stay committed to an aggressive program of enhancing the numbers and quality of faculty, through targeted hiring of faculty members and targeted recruitment of graduate students in the areas of engineering, physics, chemistry, mathematical and computational science, biomedical engineering, molecular biology, and neuroscience.
- Secondly, as called for in the Washington Advisory Group’s report, the university will build on its research strengths in advanced materials and instrumentation and information technology.
- Third, it will also expand engineering programs that “underpin Project Emmitt.”⁶
- Fourth, it will expand underpinning programs in the schools of Natural Sciences and Mathematics and Behavioral and Brain Sciences.
- Fifth, the university will leverage research and programmatic collaborations (e.g., biomedical engineering, applied organic chemistry, nanotechnology) with area institutions.
- Sixth, the university will critically reexamine current resource commitments and explore all available means to enhance its resource base to accomplish its objectives.

Progress Measures:

- The rapidity with which the university can fully fund and fill the research positions is a critical measure of progress. Our critical challenge will be to recruit engineering and science faculty of the appropriate high qualifications and to identify the required additional faculty salary funding. Even with optimal

⁵ *Ibid.*

⁶ *Op. cit.*, pg. 53.

facilities and funding packages, recruitment of 20 active research faculty (with junior faculty and post-docs, graduate students, etc.), per year will be an enormous undertaking in the current fiscal environment.⁷

- We will measure the increase in external research funding in relevant research areas.
- Progress can be measured in the increases in the national rankings of the university in federal R&D and the elevation of UTD's Jonsson School of Engineering in national rankings.
- In terms of infrastructure, completion of required renovations and the planning and construction of the new research facility for Engineering and Natural Sciences are significant measures of progress.
- The success of the capital campaign will be measured by the number of endowed chairs and graduate fellowships created and by the total contributions made toward the university's goal.

Major Obstacles: Achievement levels in sources of funds other than tuition/fees and state funding is currently inadequate to be of significant help to the university in meeting its commitments to the Engineering and Science Research Enhancement Initiative. Furthermore, the dilution of the weighted semester credit hour formula funding for a tuition form of funding poses new challenges for science and engineering oriented universities. Weighted funding formulas explicitly recognized the differential costs associated with science, health science, and engineering preparation and instruction. The funding formulas provided a state assisted base to ensure adequate supplies of new scientists to fuel the technological developments necessary in a brain-based economy. These costs cannot be shifted to students on the basis of a uniform cost per credit hour because the differential tuition rates necessary would create effective barriers to entry into scientific and engineering careers for many young people. Moreover, passing on to students the true costs of instruction is myopic and competitively unsound. Texas and the nation have extremely critical needs for scientists and engineers. Thus, the university must, during the time it solves its funding base issues, also aggressively recruit engineering and science faculty of the appropriate high qualifications and to identify the required additional faculty salary funding. Needless to say, this will be tricky.

2. Continue a strategy of controlled growth as a means to sustain academic excellence, further enhance the student experience, and meet ambitious graduation rates in engineering and science.

Objectives: UTD's objective is controlled enrollment expansion while maintaining the approximately 60 percent undergraduate to 40 percent graduate mix and the highest academic standards. Significantly improve the quality of UTD's graduate students.⁸ Enhance student diversity and increase retention and graduation rates. Expand degree profile and depth within the core competencies of the university.

Strategies:

- Continue expansion but at a controlled pace (4-5% per year) that preserves the current student-faculty ratio and aims to lower it toward a goal of 17/1. To do so, the university will commit to a higher growth rate in faculty in targeted areas, which will enhance both the pedagogical objectives and research objectives of the university.
- The university will streamline its academic offerings by engaging in critical path analysis of all of its academic degree programs. It will teach approximately 1,550 sections or classes per semester at optimal times for timely degree completion which directly contribute to 40 baccalaureate degree programs, 42 master's degree programs, and 21 doctoral degree programs.
- The university will expand degree programs in its focal areas, especially programs beneficial to the physical and economic well being of Texas citizens.
- The university will plan and tightly direct institutional resources toward fulfilling the university educational and research missions, while sustaining access to and retention in academic programs for students and staff.

⁷ Op. cit., pg 54.

⁸ Op. Cit, pg. 56.

Progress Measures:

- Progress will be measured by the targeted hiring of faculty in areas of focused excellence, enrollments in these areas, and improvements in retention and graduation rates.
- The university's progress in sustaining the excellence of its students and increasing university diversity will be measured.
- The student-to-faculty ratio, particularly in critical areas for the university, will be measured.
- While it may not be possible in some non-core academic areas to significantly reduce the student-to-faculty ratio, the university will aim to make significant progress in its core areas. We will monitor the number of course sections and their timing to ensure that students can graduate in a timely fashion.

Resources: At the university's current level of full-time equivalent (FTE) students⁹ and FTE faculty, the university is, right now, 90 faculty members short. Thus, while the university is committed to a 4 percent per academic year student growth rate (or almost 15,300 by fall 2006), it must also be committed to a higher growth rate in faculty, especially if both the pedagogical objectives and research objectives of the university are not to be compromised.

Major Obstacles: The decline in state funding, which began in the 1980s, has shifted revenue from weighted formula funding to tuition based funding. The weighted formula recognized the higher costs associated with nation-critical engineering and science education. Recent shifts in funding have diluted the impact of this formula. The university's mission, programs, and student mix pose unique challenges under this reality. The resources needed to hire and retain faculty and train students in research and scientifically intensive fields will be ongoing. Practically, university funding (income) originates from a delimited number of sources. The historical trends of declining federal and state support will be most difficult to reverse. Concurrently, there are limits to which the costs of high quality education can be shifted to families and students without restricting access with serious consequences for Texas and American society. The deep discounting available to richly endowed private institutions is not an option for the university. The cost-shifting to families and students at some point will change the landscape of higher education. At the same time, the knowledge explosion makes it more expensive to educate citizens in market critical skills. The university will need to sustain a tight focus on its programmatic intentions.

IV. Other Critical Issues Related to Institutional Priorities**A. Impact of Initiatives**

The mission and strategic intent of the university is to be a research-oriented university with focused areas of excellence in contrast to a large, diffuse, comprehensive megaversity on one hand, and a technological institute on the other. The university does not aim to be narrow and fixed in convention; rather it intends to be agile and sustain its high fidelity to the emerging scientific, technological, managerial, and social trends that affect society.

Growth in Enrollment

Enrollment planning for the university on a controlled growth model (a modest 4 to 5% per academic year) indicates that enrollment will be over 20,000 in less than ten years. A top priority, as the university grows, is to sustain access for a highly talented and qualified student body and increase campus diversity within the design limits of the university's mission and strategic intent. During the same time frame, research-planning calls for externally funded research to, at least, exceed \$70 million per year. How these expansions in access and enrollment and research are to be accomplished, at least for the short term, in a financially constricted environment will be challenging.

⁹ Based on the commonly used standard of undergraduates taking 15 semester credit hours, master's students taking 12 SCH and doctoral students 9 SCH.

The university's rapid growth in enrollment (36%) during the last five years has stretched the university's human resources and facilities. The ratio of students-to-faculty has risen, as has class size. Most importantly, the student-to-faculty ratio in engineering and computer science has risen. While the university's intent is to lower the student-to-faculty ratio progressively toward 17/1,¹⁰ the next 18-36 months will test the university greatly. Over the next ten years, to meet the pedagogical goal of 17/1, the university will need to have an FTE faculty of 1150-1200 as compared to a current faculty FTE of 496. As noted earlier, to meet community expectations in graduation rates in engineering and science and levels of research output, the university must commit to a controlled student growth rate and an even higher growth rate in faculty especially if both the pedagogical objectives and research objectives of the university are not to be compromised.

Growth in Research and Research Funding

With the increase in research awards at the university, facilities and other infrastructure needs are also on the rise. Support staff in Contracts and Grants Accounting will be stretched beyond their capacity to manage pre-award and post-award issues. In addition, there are increasing bio-safety, lab safety, and EPA compliance issues that demand new policies and procedures and monitoring by our small Environmental Health and Safety staff. Laboratory space is currently limited and the demand for new labs and renovations to existing labs will increase. Managing these issues will be critical to achieving the expectations of the larger business and economic community that is the university's constituency.

Library

Library acquisitions (books, periodicals, electronic subscriptions) are in adequate equilibrium with UTD's programmatic breadth and depth and enrollment. Funding for acquisitions will scale with enrollment, since a student fee supports this vital component of library operations. Shelf space and study space have fallen behind materials and enrollment growth, however. Plans for relocation of Information Resources and Student Affairs from the Library to renovated space elsewhere on campus will solve these capacity problems, but capital funding for renovations of the vacated space in the amount of \$4 million will be required. When these renovations are completed, the McDermott Library will be in good shape to serve a growing UTD for the next ten years at least.

Infrastructure Needs to Support Growth

As the University's enrollment continues to climb, attention must be focused on the infrastructure needs to support the growth. Managing the increase in the university's infrastructure and facilities accordingly will be a major focus for the university over the next five years. Generally, the campus utilities and infrastructure are at capacity, and expansion of the thermal energy plan, utility lines, roads, and buildings is necessary to achieve the university's goals. The UT System Board of Regents at its November 12, 2003, meeting approved the new Campus Master Plan. The Plan targets certain goals such as:

- Accommodating a doubling of the present enrollment by 2027 and allowing for future growth beyond that time,
- Incorporating DART and City of Richardson transportation planning,
- Providing for transformation of existing housing,
- Expanding the open space and landscaping, and
- Developing visibility to the community on all sides.

Given the dynamic growth of the student body, identifying funding to construct the first phase of the campus loop road to alleviate the horrendous traffic problems in the campus interior is one of the first

¹⁰ Georgia Tech has a student to faculty ratio of 14/1, and UC Santa Barbara is 17/1. See The University of Texas System, Board of Regents, Accountability and Performance Report, 2003-2004, Section V. Institution Profiles.

priorities. The campus loop road, when completed, will enhance the campus malls for pedestrian traffic and better control vehicular traffic.

The Student Activity Center will significantly expand in size and functionality with construction that will occur in the coming year. Activity Center fees will fund this addition. The Activity Center construction has been completed; however, at current rates of use and with the expansion of the student body, the current facility will become obsolete within the next three to five years.

Additional student housing is scheduled for construction in the coming year. The resulting buildings (constructed by August 2004) will house 216 additional UTD students, but demand for on-campus housing will not abate. Students also desire a new leasing center (construction underway), which will enhance resident services and provide opportunities for utilization of the current facility (perhaps a convenience store function as has been requested by UTD students).

Parking has become a serious issue. A parking garage will be constructed in the next few years to alleviate the parking capacity challenges experienced due to the campus enrollment growth. The garage is planned to be built near the School of Management and Bookstore buildings at the south end of the campus and will house 550-600 vehicles. Parking permit fees will provide funding.

Renovations must occur in academic buildings across the campus in the coming years in order to provide the improvements in technology necessary for many of the University classrooms and labs. Lecture halls in the older buildings are in need of fundamental renovations to allow students and instructors to use the technological advances made in instructional tools. In addition, laboratory equipment, writing surfaces, and carpeting, will need replacement.

External relations and university advancement

Given its young age and history, the university has historically had to rely on corporate gifts more so than is typical of older, more established universities. With the engineering and science initiative, and with the university's growth, there will be a need for a new continuing capital campaign. The university will need to improve its attractiveness to alumni, community leaders, philanthropists, and corporations. Increasing external, non-governmental, support will be a high priority. Every avenue for strengthening UTD in this area must be creatively pursued. A greater involvement of academic faculty and administrators will be essential in this effort.

Information Technology

The university currently utilizes SCT's Plus product for its campus-wide administrative systems (Financial, Human Resources, Payroll and Student systems). As enrollment has grown, the SCT product is reaching its capacity to meet the University's growing information technology needs. While a committee has been formed to determine an appropriate replacement for the legacy system and a decision target date of April or May 2004 has been set, it has become clear that given the current fiscal environment, the university will not be able to proceed until the funding base for the university has been stabilized. It is estimated that the project cost will be \$5 to \$7 million. Funding for this project will come from dedicated student fees over a five to seven year period. Implementation of the project currently was scheduled to begin in September 2004 with a go-live date for the financial system of September 2005 and for human resources/payroll system of January 2006. The student system would be implemented in stages over a 2-year period between 2006 and 2007. Implementation of this project will not be possible without additional staff in component areas: Information Resources, Controller's Office, Procurement Management, Budget Office, Human Resources, Payroll, Records, Admissions, Financial Aid, and Bursar. Given the financial constrictions the university faces in the next 12-18 months, it is not clear how adequate staffing funds will be available.

Financial and Market Issues

Funding of operations at a per capita level competitive with the median funding of the nation's leading 100 research universities is essential if UTD is to be able to contribute the educational, research, and economic benefits that Texas vitally needs from research institutions of high caliber. The Higher Education Funding Formula does not provide this level of support to any public Texas university. The shortfall, relative to national standards, is at least 30 percent.¹¹ At the university's current level of operations, this amounts to an annual budget shortfall of approximately \$15 million.

The university and the state, for the long term, will have to address this resource issue. There are several possible income streams. First, additional income from recovery of indirect costs on an expanded funded research base is not a practical solution to this problem, since such an expansion would inevitably correlate with an expanded base of operational obligations and a consequent limit on the gain in per capita funding. Second, an expanded base of private support is not a viable solution short of a truly exceptional and highly improbable windfall. A \$500 million increment in endowment would be required to yield income at the current unmet need of \$15 million. In addition, further growth in enrollment and faculty numbers will proportionately reduce the value of endowment income in terms of per capita operational funding. Third, the remaining possible sources of the additional revenue are some innovative form of local supplemental funding and/or significantly higher tuition and fees charged to students. These require legislative action. Unless the appropriations picture changes dramatically and reverses its almost two-decade trend, only higher tuition is a practical possibility in the near term.

B. Use of New Tuition Revenue for New Faculty Positions

Twenty faculty searches are underway in 2004-05 and forty are planned for 2005-06. Fields of focus for 2004-05 were:

- Behavioral and Brain Science, in the specialties of neuroscience and speech communication disorders (four new faculty were hired);
- Physics and Chemistry, in the specialties of Space Science and Materials Science (five new faculty were hired and three offers are outstanding);
- Management, in the specialties of Accounting and Information Systems (two new faculty were hired in accounting, three in finance and economics);
- Electrical Engineering, in the specialties of Systems Security, Materials Science, Biomedical Engineering, and Analog and Digital Processing (five new faculty were hired); and
- Computer Science, in the specialties of Natural Language Processing and Graphical Design and Animation (six new faculty were hired and two offers are outstanding).

These searches all address current core competencies of UTD and active and prospective areas of collaboration with UT Arlington and UT Southwestern.

For 2005-06, approximately twice as many searches are planned, with an even greater emphasis of Project Emmitt goals, principally in terms of strengthening the Jonsson School in its current areas of excellence and, complementarily, consistent with the WAG recommendations, of broadening its areas of expertise to Biomedical Engineering, Chemical Engineering, and Mechanical Engineering.

V. System and State Priorities

UTD Collaborations

The university has meaningful and productive collaborations with UT Southwestern Medical Center and with other UT institutions. The principle collaborations with UTSWMC are: Cochlear Implant Program;

¹¹ The shift in funding from the weighted SCH formula to a great reliance on fixed tuition has a doubly diluting impact on funding of engineering and the sciences especially at the graduate levels.

Brain Plasticity research; Sickle Cell Disease research; Advanced Brain Mapping; Medical Imaging research; Molecular and Cell Biology and Biochemistry research; and an MBA in Medical Management specifically designed for practicing physicians. In addition, UTD and UTSWMC are developing a joint Ph.D. program in Clinical Psychology

UTD is also a main partner in SPRING (Strategic Partnership for Research in Nanotechnology), which is a program where scientists from four universities – UT Austin, UT Dallas, Rice University and UT Arlington – and the Materials and Manufacturing Directorate of the Air Force Research Laboratory at Wright Patterson Air Force Base in Dayton, Ohio, initiated a Nanotechnology research and development excellence program. A "spin-off" collaboration was also initiated by the inclusion of two UT System campuses near the border: UT Brownsville and UT Pan American. This project is called NANO@BORDER.

UTD (with UT Arlington) is working on research collaborations with Sandia National Laboratories.

The Erik Jonsson School's Digital Forensics and Emergency Preparedness Institute (in collaboration with Greater Dallas Crime Commission) works with the National White Collar Crime Center to develop, teach, and implement solutions to the rapidly growing Homeland Security problems in cyber-crime, information assurance, and emergency preparedness.

VI. Compact Development Process

The university's consultative process was a one in which all the academic Deans and all Directors of major business and student services units were asked to examine their ongoing priorities and initiatives within the framework of the university's mission. The President has directed the Vice-Presidents to develop their own strategic plans, consistent with the mission and long-range intentions of the university and ensure that their line directors and their staff had opportunities for participation. Each major unit is examining its short- and long-term priorities and critical issues and will describe actions they believe are necessary to achieve stated objectives. Academic deans were explicitly instructed to engage their faculty in the process of school compact and strategic plan development. This extensive process is ongoing and will be completed this fall. The President meets with various faculty and staff committees involved, with the academic senate to discuss the compact and the strategic planning processes. The Office of Strategic Planning has posted the compact on its website for faculty, staff, and students to view and to provide feedback.

VII. System Contributions

- Support for state funding (Governmental Relations, Academic Affairs)
- Facilities expansion (Facilities Planning and Construction)
- Research infrastructure development (Academic Affairs)
- Development (to create 40 new endowed chairs and capital campaign) (External Relations and Development)

VIII. Appendices

A. Budget Summary

**The University of Texas at Dallas
Operating Budget
Fiscal Year Ending August 31, 2005**

| | FY 2004 Adjusted Budget | FY 2005 Operating Budget | Budget Increases (Decreases) From 2004 to 2005 | |
|--|-------------------------------|--------------------------------|---|---------------|
| | | | Amount | Percent |
| Operating Revenues: | | | | |
| Tuition and Fees | \$ 76,214,987 | 94,293,843 | 18,078,856 | 23.7% |
| Federal Sponsored Programs | 17,218,659 | 24,443,984 | 7,225,325 | 42.0% |
| State Sponsored Programs | 2,879,588 | 6,608,237 | 3,728,649 | 129.5% |
| Local and Private Sponsored Programs | 5,405,556 | 4,372,152 | (1,033,404) | -19.1% |
| Net Sales and Services of Educational Activities | 5,284,210 | 6,617,265 | 1,333,055 | 25.2% |
| Net Sales and Services of Hospital and Clinics | - | - | - | - |
| Net Professional Fees | - | - | - | - |
| Net Auxiliary Enterprises | 4,450,100 | 5,553,100 | 1,103,000 | 24.8% |
| Other Operating Revenues | 1,673,425 | 2,174,991 | 501,566 | 30.0% |
| Total Operating Revenues | 113,126,525 | 144,063,572 | 30,937,047 | 27.3% |
| Operating Expenses: | | | | |
| Instruction | 74,537,270 | 82,450,638 | 7,913,368 | 10.6% |
| Academic Support | 18,730,407 | 19,059,366 | 328,959 | 1.8% |
| Research | 30,329,177 | 40,759,564 | 10,430,387 | 34.4% |
| Public Service | 3,131,353 | 4,659,039 | 1,527,686 | 48.8% |
| Hospitals and Clinics | - | - | - | - |
| Institutional Support | 16,304,709 | 17,325,093 | 1,020,384 | 6.3% |
| Student Services | 6,329,904 | 7,606,075 | 1,276,171 | 20.2% |
| Operations and Maintenance of Plant | 12,191,172 | 13,039,858 | 848,686 | 7.0% |
| Scholarships and Fellowships | 16,180,224 | 28,723,766 | 12,543,542 | 77.5% |
| Auxiliary Enterprises | 10,827,081 | 11,846,519 | 1,019,438 | 9.4% |
| Total Operating Expenses | 188,561,297 | 225,469,918 | 36,908,621 | 19.6% |
| Operating Surplus/Deficit | (75,434,772) | (81,406,346) | (5,971,574) | 7.9% |
| Nonoperating Revenues (Expenses): | | | | |
| State Appropriations & HEAF | 65,124,869 | 65,390,384 | 265,515 | 0.4% |
| Gifts in Support of Operations | 2,386,709 | 3,443,405 | 1,056,696 | 44.3% |
| Net Investment Income | 8,478,420 | 7,831,236 | (647,184) | -7.6% |
| Other Non-Operating Revenue | - | - | - | - |
| Other Non-Operating (Expenses) | - | - | - | - |
| Net Non-Operating Revenue/(Expenses) | 75,989,998 | 76,665,025 | 675,027 | 0.9% |
| Transfers and Other: | | | | |
| AUF Transfers Received | - | - | - | - |
| AUF Transfers (Made) | - | - | - | - |
| Transfers From (To) Unexpended Plant | - | - | - | - |
| Transfers for Debt Service | (5,387,104) | (6,311,169) | (924,065) | 17.2% |
| Other Additions and Transfers | 3,187,264 | 7,695,461 | 4,508,197 | 141.4% |
| Other Deductions and Transfers | (3,385,264) | (7,916,461) | (4,531,197) | 133.9% |
| Total Transfers and Other | (5,585,104) | (6,532,169) | (947,065) | 17.0% |
| Surplus/(Deficit) | \$ (5,029,878) | (11,273,490) | (6,243,612) | 124.1% |
| Total Revenues | \$ 189,116,523 | 220,728,597 | 31,612,074 | 16.7% |
| Total Expenses and Debt Service Transfers | (193,948,401) | (231,781,087) | (37,832,686) | 19.5% |
| Surplus (Deficit) | \$ (4,831,878) | (11,052,490) | (6,220,612) | |

Note: Operating Budget Highlights with a glossary of terms are included on Page 1.

The FY 05 budget is known to close approximation, barring dramatic unforeseen circumstances. State appropriations are known, enrollment projections appear to be well founded, and tuition and fee rates are fixed. The levels of external research funding and private giving are unlikely to change enough to affect aggregate funding of annual unrestricted operations significantly, either positively or negatively. In this context, the FY 05 budget cannot fund any enhancements of teaching or research unless funds that can be reallocated are reallocated from other components of the university. The academic funding shortfall relative to what is needed to reestablish the FY 01 level of support per SCH is approximately \$10 million, and this does not address shortages in areas that provide core functions that support teaching and research.

Of this amount, \$2 million is required to cover the operating deficit of FY 04 and \$8 million is needed to address the impact of three years of significant increases in enrollment combined with decreased funding for instruction, instructional support, and research. The funding needed to bring the number of Teaching Assistants per SCH back up to its 2001 level is \$750,000. Departmental operations budgets have lagged behind enrollment growth even more, and require an aggregate increment of \$1 million. Engineering and Science faculty additions necessary to keep the Engineering and Science Research Enhancement Initiative on its projected track will cost \$1.7 million. Concurrently, faculty attrition in the tenure ranks over the last several years in other teaching units will require \$1.1 million to repair. These instructional costs amount to \$4.55 million.

Maintaining and enhancing still further the university's current high levels of academic achievement and racial and geographic diversity in our undergraduate student body will require supplementary investments in the merit scholarship program, as our enrollment continues to increase in line with the university's commitment to *Closing the Gaps*. At next year's tuition and fee levels, maintaining the same percentage of the freshman class on merit scholarships as the class size increases will require an added \$700,000.

While we have gained a significant number of new, state-of-the-art classrooms, the majority of the rooms in which we teach students are quite shabby and lack modern instructional equipment. A multi-year program to bring these facilities up to current standards will require \$1.8 million per year. Finally, our ability to support and stimulate more research productivity has been stifled for lack of seed funding, as we have strived to maintain instructional productivity in the face of funding decreases. We need to recreate a fund for research start-ups and new initiatives at the level of \$1 million per year.

The ability to reallocate even a fraction of this needed \$10 million will be extremely difficult since almost all elements of the university have been operating on lean budgets for several years. Hence it is only realistic to contemplate that we will enter FY 06 with much of this agenda still unfulfilled. In FY 06 and following years, we plan on enrollment growth at the rate of 4 to 5 percent annually. In order to keep pace with this growth and an assumed inflation rate of 3 percent, academic operations will require annual increases at the level of \$4 million just to maintain constant funding per unit of effort. In addition, the Engineering and Science Research Enhancement Initiative commitments will require incrementing the budget by an additional \$2 million each year for three more years.

B. Statistical Profile

UT Dallas

| <i>fall</i> | 2000 | 2001 | 2002 | 2003 | 2004 |
|-------------------------------------|--------|--------|--------|--------|--------|
| Undergraduate headcount | 7,807 | 9,009 | 9,482 | 9,523 | 9,782 |
| Graduate and professional headcount | 3,138 | 3,446 | 3,747 | 4,195 | 4,310 |
| Total enrollment | 10,945 | 12,455 | 13,229 | 13,718 | 14,092 |

| <i>yr of matriculation</i> | 1999 | 2000 | 2001 | 2002 | 2003 |
|----------------------------|-------|-------|-------|-------|-------|
| 1st year persistence | 77.7% | 78.0% | 79.4% | 83.8% | 80.0% |

| <i>yr of matriculation</i> | 1995 | 1996 | 1997 | 1998 | 1999 |
|----------------------------|-------|-------|-------|-------|-------|
| 4-year graduation rate | 32.0% | 30.3% | 31.7% | 37.7% | 29.6% |
| 5-year graduation rate | 48.3% | 46.0% | 51.5% | 50.9% | |
| 6-year graduation rate | 55.2% | 51.8% | 56.2% | 55.9% | |

| <i>academic year</i> | 99-00 | 00-01 | 01-02 | 02-03 | 03-04 |
|-------------------------------|-------|-------|-------|-------|-------|
| Baccalaureate degrees awarded | 1,303 | 1,386 | 1,537 | 1,605 | 1,823 |
| Master's degrees | 1,077 | 1,129 | 1,172 | 1,299 | 1,363 |
| Doctorate degrees | 64 | 69 | 58 | 70 | 50 |
| Professional degrees | 0 | 0 | 0 | 0 | 4 |

| <i>fall</i> | 2000 | 2001 | 2002 | 2003 | 2004 |
|---------------------------------------|-------|------|------|------|-------|
| All instructional staff | 596 | 655 | 716 | 743 | 774 |
| Classified employees | 1,084 | 813 | 858 | 875 | 906 |
| Administrative/professional employees | 388 | 507 | 577 | 591 | 600 |
| Student employees | 52 | 426 | 888 | 981 | 1,051 |

| <i>academic year</i> | 99-00 | 00-01 | 01-02 | 02-03 | 03-04 |
|---------------------------------|---------|---------|---------|---------|---------|
| FTE student / FTE faculty ratio | 19 to 1 | 20 to 1 | 22 to 1 | 22 to 1 | 21 to 1 |

| <i>fiscal year</i> | 2000 | 2001 | 2002 | 2003 | 2004 |
|-------------------------------|-------------|-------------|--------------|--------------|--------------|
| Federal research expenditures | \$7,049,617 | \$8,781,295 | \$11,815,490 | \$14,432,841 | \$15,733,571 |

| <i>fiscal year</i> | 2000 | 2001 | 2002 | 2003 | 2004 |
|--|----------|----------|----------|----------|----------|
| Revenue/FTE student (nearest thousand) | \$14,000 | \$15,000 | \$13,000 | \$13,000 | \$13,000 |

| <i>as of</i> | 8/31/99 | | | | 8/31/04 |
|-----------------------|---------------|--|--|--|---------------|
| Endowment total value | \$136,778,000 | | | | \$195,714,000 |

- Over the five-year period, 1999-2003, enrollment for the university grew 36 percent, from 10,101 to 13,718 as certified by the Texas Higher Education Coordinating Board.
- In 1999, 41.8 percent of the student body was either post-baccalaureate, masters or doctoral students and the remainder, 58.2 percent, were undergraduates. By fall 2003, the percentage of students who enrolled as post-baccalaureate, masters or doctoral students dropped to 37.9 percent with a consequent rise in the undergraduate (and residential) population.
- The fall 2003 retention rate for the university was 84 percent and the six-year graduation rate was 56 percent.
- Forty-three percent of all degrees the university awarded were in Science, Engineering and Technology. This is twice the average for all other doctoral granting institutions in the state. UTD is a focused, but not narrow, university.
- Last year, the university conferred 2,974 degrees. Bachelor of Arts degrees comprised only 554 or 18.6 percent of the total. Bachelor of Science degrees numbered 1,051 or 35.3 percent of the total. The relative percentage of B.S. to B.A. degrees is an indication of the unique thrust of the university in comparison to other UT components. Master's degrees numbered 1,299 and of these, 68 percent were Masters of Science. The university awarded 70 doctoral degrees.
- In the fall 2003 the university had 486 FTE Faculty.¹² Of these 416 were full time faculty, and of these 308 were tenured or tenure-track. The university's staff FTE was 1,213.¹³
- The university's instructional expenditures per FTE student for fall 2003 was \$10,464.¹⁴
- As of August 31, 2004, the market value of the university's total endowment was \$195,714,000.
- The university's Office of Strategic Planning and Analysis provides additional university data on its website: http://www.utdallas.edu/ospa/enrollment_stats/index.htm.

¹² Calculated using the CUPA formula, which counts all part-time faculty as equal to 1/3 full time faculty.

¹³ Staff FTE formula based on IPEDS. There were 987 full time staff and 678 part-time staff in the fall, 2003.

¹⁴ Based on the university's annual financial report and FTE as reported to Peterson's Survey of Undergraduate Institutions, fiscal year 2003.