



**THE UNIVERSITY OF TEXAS SYSTEM
BOARD OF REGENTS**

**April 2, 2002
Meeting**

Academic Affairs Committee



**Academic Affairs Committee
THE UNIVERSITY OF TEXAS SYSTEM
BOARD OF REGENTS
Agenda**

April 2, 2002

8:30 a.m.- 10:00 a.m.

Effie and Wofford Cain Conference Center
8th Floor, The Seay Biomedical Building
U. T. Southwestern Medical Center - Dallas
Dallas, Texas

- 8:30 a.m. 1. **Welcome and Opening Remarks** *Chairman Krier*
- 8:35 a.m. 2. **May Board of Regents' Meeting Agenda Items**
- a. U. T. El Paso: Doctor of Philosophy in Rhetoric and Composition [Action Item]
(See Tab 2a) *Dr. Natalicio*
- b. U. T. San Antonio/U. T. Health Science Center-San Antonio: Doctor of Philosophy in Biomedical Engineering [Action Item]
(See Tab 2b) *Dr. Romo*
- c. U. T. Dallas: Doctor of Executive Leadership [Action Item]
(See Tab 2c) *Dr. Jenifer*
- d. U. T. Dallas: *Dr. Jenifer*
- Doctor of Philosophy in Computer Engineering
 - Doctor of Philosophy in Software Engineering
 - Doctor of Philosophy in Telecommunications Engineering
- [Action Item]
(See Tab 2d)

- e. U. T. Arlington: Brick Repairs – Pickard Hall and the College of Business Administration – Reduce Total Project Cost and Transfer Funds to Add New Project to Capital Improvement Program [Information Item] *Mr. Sanders*
 - f. U. T. El Paso: Seamon Hall Renovation Add to Capital Improvement Program [Information Item] *Mr. Sanders*
 - g. U. T. Permian Basin: Student Housing Phase II – Add to Capital Improvement Program [Information Item] *Mr. Sanders*
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- 9:10 a.m. 3. **Review of Institution-Specific Excellence Statements as Part of Long Term Planning** (See Tab 3) *Chairman Krier And Presidents*
 - 9:20 a.m. 4. **Report on Preparation of the New Texas Assessment of Knowledge and Skills (TAKS) Test by the Texas Education Agency** *Dr. Sharpe*
 - 9:30 a.m. 5. **Development of Plans to Increase Accessibility to Teacher Certification Courses by U. T. System Academic Components** *Dr. Sharpe*
 - 9:35 a.m. 6. **Institutional Accountability Portfolios** *Dr. Kerker*
 - 9:40 a.m. 7. **Report on UT TeleCampus Operations** (See Tab 7) *Dr. Hardy*
 - 9:50 a.m. 8. **Discussion of U. T. Austin’s Freshman Admissions Policy** *Dr. Faulkner*
 - 10:00 a.m. 9. **Adjourn** *Chairman Krier*

The University of Texas at El Paso
Ph.D. in Rhetoric and Composition

The University of Texas at El Paso proposes a Ph.D. in Rhetoric and Composition to be administered by the Department of English.

With the anticipated rapid growth and increasing diversity of Texas higher education, education institutions will need to recruit faculty who are prepared to teach not only effective writing but also new types of communication skills in complex multicultural contexts. Similarly, industry and the public sector will require the services of professionals who are trained to meet the new communication challenges created by increasingly global and diverse societies and rapid developments in information technology. The proposed program will draw on UTEP's unique border environment and state-of-the-art communications technology to meet these varied challenges.

Program Description

The program will consist of 45-51 credit hours beyond the Master's level and will provide students with knowledge in rhetorical history, writing pedagogy (the teaching of writing), writing in cultural contexts, and computer-mediated writing. Students will choose to concentrate in workplace writing, the teaching of writing, or literary studies.

It is anticipated that the majority of graduates from the program will teach in Texas higher education institutions. In addition, it is also anticipated that the program will increase the number of Hispanics receiving doctorates and entering the teaching profession.

Program Quality

Faculty in Rhetoric and Composition at UTEP have achieved national recognition for the quality of their research and publication. Twelve English Department faculty will be available to teach the program's core courses, with an additional fourteen faculty teaching in the concentration areas. Elective courses will be taught by faculty from English, Communication, Linguistics, and Teacher Education. Two new faculty will be hired by the English Department with specialties in rhetoric of the Americas and community learning.

The border location of UTEP will provide students unique opportunities to examine intercultural rhetoric as it actually happens. In addition, the institution's cutting-edge development of computer technology for teaching and communication will provide students both access to and training in the latest technologies for research, teaching, and writing.

Cost

Estimated expenditures for the first five years of the program are \$842,000. The largest anticipated expenditures will be \$400,000 for two new faculty at the Associate/Full Professor level and \$336,000 for Teaching Assistants. The institution will commit \$538,000 of existing resources in addition to \$304,000 in formula funding to finance the first five years of the program.

The University of Texas at San Antonio
and The University of Texas Health Science Center at San Antonio
Ph.D. in Biomedical Engineering

In recent years there has been dynamic growth throughout the world, the nation, and Texas in the areas of biotechnology and bioengineering. Consequently, there is a critical need for more trained professionals who can sustain the growth into the foreseeable future.

Biomedicine provides a critical link in developing new approaches to prevention, diagnosis, and treatment of human disease; patient rehabilitation; and for improving public health. The proposed program, jointly administered by The University of Texas at San Antonio (UTSA) and The University of Texas Health Science Center at San Antonio (UTHSCSA), is designed to support the development of this emerging field. The program will train professionals in the use of biomedical engineering approaches to the investigation of diagnosis and prevention of human disease. The scientific interactions and cooperation between the biomedical engineering and clinical scientists of the two institutions will offer students the opportunity to develop into well-rounded competitive biomedical engineering professionals. Because both biomedical engineering and clinical scientists will participate in the education and training of each student, the graduates from this program will be uniquely trained in the fundamental sciences and engineering related to medicine.

Program Description

The Dean of the Graduate School of Biomedical Sciences at UTHSCSA and the Dean of Graduate Studies at UTSA will have overall responsibility for the proposed program. A committee, comprised of a Program Director and six faculty (three from each institution), will oversee and implement the policies of the program including curriculum development and review; faculty appointments and reviews; and student admissions.

The educational objectives of the proposed program are to:

- Produce doctoral-level graduates in Biomedical Engineering who have a unique combination of both clinical and engineering training;
- Prepare leaders in bioengineering-related fields for industry, academia, and government;
- Support both institutions' missions to encourage minority participation in advanced scientific study; and
- Produce scientists and engineers that will significantly benefit biotechnology in San Antonio, Texas, and the nation.

The proposed program will require students to complete a minimum of 81 semester credit hours. In addition, students will be required to complete at least four rotations of six weeks each through the various laboratories associated with the program to assist students in deciding upon their area of research concentration (Biomaterials, Biomechanics, or Bioelectronics and Bio-imaging).

Program Quality

The core faculty for the proposed program will consist of 17 tenured/tenure-track professors, nine from UTHSCSA and six from UTSA. These faculty currently offer post-baccalaureate instruction in five schools (Medical, Dental, Graduate School of Biomedical Sciences, Allied Health, and Nursing) within UTHSCSA and two colleges (Engineering and Science) with UTSA. Four additional core faculty, appointed jointly between UTHSCSA and UTSA, will be hired during the first three years of the program. An additional twelve faculty, currently offering graduate-level instruction in related disciplines, will also provide support for the program.

Program Cost

The anticipated cost of the proposed program for the first five years is approximately \$7 million. Costs associated with the program are for new faculty, staffing, graduate assistantships, and equipment. Both institutions will re-allocate existing resources to fund the initial years of the program. It is anticipated that the program will become self-sufficient beginning in the fourth year, with revenues coming from state formula funding and sponsored research grants.

The University of Texas at Dallas
Doctor of Executive Leadership (EL.D.)

The University of Texas at Dallas proposes to establish a Doctor of Executive Leadership (EL.D.) program.

The proposed Doctor of Executive Leadership is designed to develop leaders for the renewal and improvement of public, non-profit, and healthcare organizations. The proposed program will provide advanced professional education for current and future executives interested in meeting the leadership challenges of a rapidly changing global society. The objectives of the program are to:

- Provide students with the theoretical foundations and research-based knowledge necessary for executive leadership;
- Foster the integration and application of knowledge from multiple disciplines to enhance organizational performance; and
- Provide students with field-based organizational change and improvement experiences as a means of identifying, learning, and implementing best practices of executive leadership in specific settings.

Program Description

The proposed Executive Leadership degree is an interdisciplinary program administered by the School of Social Sciences. The School of Social Sciences has a strong tradition of interdisciplinary education and research, with faculty expertise including economics, public administration, political science, and public policy. The proposed program continues the interdisciplinary tradition of the School's Master of Public Affairs and the Ph.D. in Political Economy programs by combining theories and models from across the social sciences. The proposed program is unique in that it also incorporates significant course work from the School of Management.

The 90-hour, three-year doctoral program will combine innovative and traditional methods of educational delivery and emphasize the integration and application of theory to practice. A field-based organizational improvement experience is a critical component of the proposed degree. Each student will be required to complete an internship under the direction of an accomplished executive. This structured, on-the-job experience is designed to enhance the student's ability to apply theories and concepts learned in the classroom to real world settings.

Program Quality

Faculty in the School of Social Sciences engage in significant research and publication. All faculty who will supervise students in the proposed program have records of research accomplishments, publication, graduate supervision, and professional service in the political science area.

Program Cost

Initial program cost for the proposed degree are minimal. No new faculty will be required. All but five of the foundation and core courses are currently taught. No new infrastructure or library resources are required. The total cost of the proposed program over the first five years is \$372,000 with only \$76,040 need for the first two years. Existing institutional funds will be provided for support of the first two years of the program. State formula funding of \$818,480 is expected for years three through five.

The University of Texas at Dallas
Ph.D. in Computer Engineering
Ph.D. in Software Engineering
Ph.D. in Telecommunications Engineering

The University of Texas at Dallas proposes to establish Ph.D. programs in Computer Engineering, Software Engineering, and Telecommunications Engineering.

In addition to four Ph.D. programs in areas of Engineering and Computer Science, UT Dallas offers two interdisciplinary Master's of Science degrees in the areas of Computer Engineering and Telecommunications Engineering. The success of the interdisciplinary Master's level programs has demonstrated the need for more advanced research based programs to provide leaders in engineering and technology for continued economic development in the region served by UT Dallas and in the state as a whole. The proposed new Ph.D. programs are intended to build on the success of the Master's level programs and to produce more highly qualified engineers and high technology workers; to attract more federal research funding; and to help close the gap between the number of engineering and high technology graduates and the number of top quality faculty available to teach and cultivate would-be practitioners in both academe and industry.

Program Descriptions

Computer Engineering:

The proposed Computer Engineering program is designed to train engineers who are knowledgeable and skilled in the area of complex computer hardware and software systems. The proposed program is highly interdisciplinary, with an emphasis on original research in the areas of high performance and complex hardware and highly reliable and time critical software systems.

Software Engineering:

The proposed Software Engineering program is based on the strong and expanding demand for leaders in software engineering by local industry, the even greater demand for software engineering researchers and faculty by universities in Texas and the nation, and the initiation of licensing for software engineers by the state. The proposed program curriculum will provide students with a solid background in computer science as well as training in core areas of software engineering.

Telecommunications Engineering

The proposed Telecommunications Engineering program will replace the currently authorized Ph.D. in Electrical Engineering with Major in Telecommunications that is administered by the Department of Electrical Engineering. The proposed program will be an interdisciplinary program jointly administered by the Departments of Electrical and Computer Engineering. The program is designed to produce telecommunications engineers who are ready to design future generations of telecommunications systems.

Program Quality

Faculty from the Eric Jonsson School of Engineering and Computer Science will offer the courses for all three of the proposed programs. In FY2000, the Jonsson School received over \$4.4 million in external funding, approximately \$73,000 per tenured or tenure-track faculty. In addition, during that same year the Electrical Engineering and Computer Science faculty published 125 journal articles. The Jonsson School currently offers Ph.D. degrees in Computer Science, Electrical Engineering, Electrical Engineering with Major in Microelectronics, and Electrical Engineering with Major in Telecommunications. The same faculty who teach and supervise students in these existing programs will also teach and supervise students in the proposed programs.

Graduates from these programs are expected to be employed by high technology companies in the UT Dallas region and the nation as well as by institutions of higher education in Texas and the nation.

Program Costs

Minimal costs are associated with the proposed programs. All three programs are expected to be self-supporting during the third year. Initial costs will be covered from reallocation of institutional funds. The relatively low costs arise from the fact that required courses are already in place in the Jonsson School; no new faculty beyond those who will be added due to growth of existing programs will be required; library resources, necessary equipment, and laboratories are in place; and expansion of the building housing the Jonsson School is underway and expected to be completed by Fall 2002.

Institution-Specific Excellence Statements

**The University of Texas System
Office of Academic Affairs**

**Board of Regents
Academic Affairs Committee Meeting
April 2, 2002**

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AREAS OF ACADEMIC EXCELLENCE
AT
U. T. ARLINGTON

The enhancement of existing areas of excellence and the development of new areas of excellence at U. T. Arlington will be guided by the following assumptions:

- (1) Areas of excellence should be consistent with the University's mission and the education markets we serve.
- (2) In order to provide maximum incentive for faculty and staff, excellence should be approached from an inclusionary perspective. Over an extended period of time, selected academic programs should have the opportunity to earn the support required to attain excellence.
- (3) Resources to support excellence will be limited; therefore, the University must be selective in targeting areas of excellence.
- (4) Academic programs targeted for excellence should be related in order to facilitate program development synergy.

Areas of Excellence

U. T. Arlington's initial focus in the enhancement and development of academic excellence will be in selected areas of engineering and science. Special emphasis will be focused on Computer Science Engineering, Electrical Engineering, High Energy Physics, and Chemistry. The objective will be excellence in both degree programs and their related research areas. An overview of related engineering and science research areas is provided in the enclosed research activities summary.

Selected secondary potential areas of excellence will receive increased emphasis and support. These areas include the University's Distance Education Program, Honors College, and Nursing.

Overview: Research Activities

Nanotechnology and Nanoscience

Nanotechnology is the development of nanoscale electronic devices and systems. Nanotechnology research at UTA covers a wide range of topics in nanoelectronics and nanoscience including solar cells and thermophotovoltaic devices, photochemical processing in silicon CMOS fabrication, nanolithography by differential surface reactivity, silicon and germanium light-emitting devices, molecular-beam epitaxy, semiconductor processing, conductive polymers and nanostructure materials.

Micro-Electronics

Improvement of current electronic packaging and development of new methods is the goal of research conducted in this area. Current projects include improvement of the multichip board for a supercomputer, heat sink improvement for a telecommunication base station, and understanding the effect of thermomechanical/mechanical stresses on electrical performance.

Electro-Optics

Research using expertise in electro-optics, integrated optics, fiber optics, nonlinear optics in inorganic and organic anisotropic materials, and analysis of anisotropic waveguides and devices enhances the development and efficiency of fiber optic systems and cable design.

High Energy Physics

This research attempts to understand the underlying physics of the standard model of elementary particles found in nature. Since the top quark was identified a few years ago, the remaining part of the standard model to be found is the Higgs boson. Search for this particle will be done with the Fermilab hadron and LEP II electron positron collider experimental groups. Recent Super Kamiokande experiments in Japan strongly suggest that neutrinos do not have mass requiring revision of this part of the standard elementary particles model. Collaboration in the MINOS experiment will address this deficiency.

Molecular Recognition

Supramolecular structures possess the basic properties of living systems such as recognition, selection, self-assembly, and self-replication. Exploration of the design and use of large synthetic molecules to form very specific complexes with selected protein molecules that will allow for detailed surface structural analysis of these molecules in solution and will provide a first glimpse of true solution-state structural images of protein surfaces and interfaces. Extension of this research leads the way to highly specific sensor design envisioned to

recognize unnatural (mutated) proteins and DNA responsible for a variety of diseases, long before symptoms arise.

Budgetary Implications

U. T. Arlington will supplement HB 1839 excellence fund expenditures on areas of excellence by: reallocation of faculty lines; additional faculty research start-up funds; additional graduate research assistant lines; additional equipment funds; facilities renovation funds; new construction funds; and financial support of area of excellence enrichment programs including faculty and staff professional development.

Centers for Excellence
The University of Texas at Brownsville and Texas Southmost College
February 22, 2002

Concept Papers:

Center for Education and Research on the Biology of Disease and Aging (CERBDA)
Center for Workforce Development and Degree Completion
(CWD²)
Center for Culture and Communication
(CCC)
South Texas Center for Computational Science
(STCCC)

**+Concept papers for the four centers above are being advanced now
on the basis of documented progress already made in these areas,
sustainability, and existing talent and leadership.**

I. Center for Education and Research on the Biology of Disease and Aging (CERBDA)

Create a center for excellence for biomedical research to address urgent health and welfare needs of a region with unique social, environmental, and demographic characteristics.

Need for CERBDA: The improvement of life conditions in the Lower Rio Grande region of South Texas requires the development of research centers and academic programs that address, through investigation and public education, major health issues and disorders that affect a region with the fastest-growing population in the country.

Our community faces disproportionately difficult health challenges: diseases such as diabetes, obesity, cancer, vascular and Alzheimer's diseases that have, in many cases, higher prevalence in Hispanics than in other populations and a much higher incidence in South Texas, where much of the population is Hispanic. In addition, the growing elderly population presents its own challenges: thousands of senior citizens are moving permanently to South Texas for retirement or health reasons, and many more thousands of "winter Texans" make this region their home for part of the year. Finally, our border communities should be prepared for emergence of diseases that are either fairly unknown or that may reemerge in a more threatening form either spontaneously or from malicious manipulation of biological or chemical agents.

Present Status: UTB/TSC made a major effort toward establishing the foundation for future education and research in areas that are critical to the region. The building of a new Life and Health Science Building (LHS), the partnerships with area hospitals, the University of Texas at Houston School of Public Health (HSPH) and the Regional Academic Health Center, the creation of new master's degree programs in Biology and Public Health Nursing, are all indicators of the institutional commitment. The institution has also recruited faculty with research experience and a proven record of federal research projects in biomedicine.

Mission: The mission of CERBDA at the University of Texas at Brownsville (UTB) will be to encourage and foster research and education in diverse fields of biology and medicine, with special emphasis on disease and aging. Clinical research will be performed in collaboration with associated hospitals. The center researchers, most of whom will be also affiliated with academic departments at UTB, will provide training for graduate and undergraduate students, with a special emphasis on minority research opportunities.

Research and Training Programs: The institute will hire faculty personnel with expertise in basic and clinical research areas loosely or tightly related to the major health issues and disorders that affect the fast growing elderly and Hispanic population. Starting funds will be required to attract investigators. Program funding will be maintained and expanded by successful competition at federal, private foundation, and industrial levels. The institute will develop a Ph.D. program in biology of disease with emphasis in the major health issues and disorders that affect the fast growing population of our region. Other doctorate programs in biomedicine and biotechnology will be added in agreement with careful studies of the region.

II. Center For Workforce Development and Degree Completion (CWD²)

Center to develop and implement operative solutions to the education roadblocks inherent in the existing non-credit and AAS degree system.

Challenge: Low income Hispanics select non-credit and AAS programs because they provide the most rapid path to a better paying job. This situation is evidenced by the fact that South Texas Community College, Texas Southmost College and Texas State Technical College produce one third of the total workforce certificate and AAS degree graduates in the state. It is difficult for most of these graduates to complete a bachelor's degree if they are required to start over because of the additional time and money constraints.

UTB/TSC is uniquely positioned to address this urgent issue. Alone among the institutions in the University of Texas System, this institution grants workforce certificate and AAS degrees.

Proposal: UTB/TSC is proposing to develop operative solutions to the education roadblocks inherent in the existing non-credit and AAS degree system by forming a Center for Workforce Development and Degree Completion (WDDC). The WDDC will focus on creating solutions in the following three areas.

1. No Barrier Program Links-The Center will package non-credit workforce training programs as blocks of competencies, which will be accepted into AAS credit programs. Each AAS program will be directly linked to a Bachelor of Applied Technology Degree (BAT) program where full credit is awarded for the technical hours completed.
2. Workforce Entry and Customized Training-The WDDC will initiate applied research to determine how to improve upon the preparation of adult workforce trainees for entry employment and on the upgrading of existing employees' skills, which integrate English as a second language, foundation skills, and technical skills.
3. International Student Preparation-the WDDC will develop training programs to assist foreign educated students who qualify for H1-B visas for positions which are going unfilled in the Rio Grande Valley and which impact economic development (i.e. medical specialists, software developers).

III. Center for Culture and Communication (CCC)

A center to serve as a focus for regional, national, and international convergence of activity in teaching, scholarship and service

Background: As the state and nation adjust to population changes in which minorities approach or become the majority, the need for understanding of culture and communication in a diverse world becomes critical. UTB/TSC, with about 90 percent Hispanic students in the interdependent border communities of Brownsville, Texas, and Matamoros, Tamaulipas, Mexico, leads in addressing cultural and communication issues.

The UTB/TSC School of Business prepares U.S. and Mexican managers of Maquiladoras, or twin plants, through its MBA program and its Diplomado de Administracion de Empresas (Executive Management Certificate). In addition, hundreds of Mexican Nationals commute annually to UTB/TSC to learn English in The Language Institute, which is one block from the Gateway International Bridge.

UTB/TSC has Memoranda of Understanding with the *Sistema de Institutos Tecnologicos de Mexico*, covering more than one million students, and with several institutions in the State of Durango. It is in the process of entering into similar agreements with other institutions such as the Universidad de Guanajuato, to facilitate greater participation in student and faculty exchange programs.

UTB/TSC has faculty that reflect cultural diversity. Forty-three percent of the members of the faculty are minorities, including 38 percent Hispanic. At least twenty different countries are represented among the faculty. International students are from Mexico and 18 other countries.

Concept: A Center for Culture and Communication at UTB/TSC will create a regional, national and international convergence of activity in teaching, scholarship and service from a wide array of academic disciplines.

Potential sources of funding for a Center for Culture and Communication are the U.S. Department of Education, U.S. Department of Commerce, National Endowment for the Arts, private foundations, and entities that encourage Hispanic-serving institutions and education for language minorities.

IV. South Texas Center for Computational Science (STCCC)

Create a collaborative center to develop and promote research excellence in computational sciences in the Texas-Mexico border region.

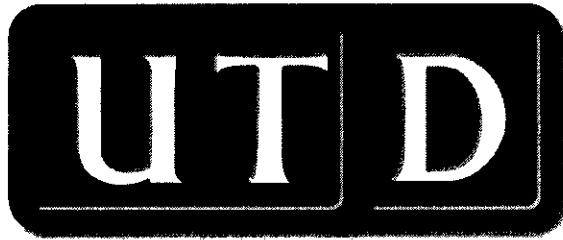
Background: Baccalaureate programs in Physics, Chemistry, and Computer Sciences were started at UTB/TSC in 1996. The Physics Department faculty has attracted close to \$4 million from funding sources ranging from NASA and the NSF to the Kellogg Foundation and is involved in work ranging from the detection of gravitational waves to partnering with parents in the colonias in the pursuit of better science educational opportunities for all.

The material below is part of the executive summary from a proposal recently submitted to the National Science Foundation, a proposal with endorsement of top physical scientists from around the world.

Proposal: The center would be a collaborative center to develop and promote research excellence in computational sciences in the Texas-Mexico border region. This collaborative proposal, led by The University of Texas at Brownsville and The University of Texas Pan American, will also include participation from the Instituto Tecnológico de Monterrey (ITESM) from Monterrey, Mexico, The University of Texas at El Paso, The University of Texas at Dallas and The University of Texas at Arlington, as well as leading scientists from around the world.

This center will expand existing research activities at UTB and UTPA, and will lead to the establishment of a joint doctoral program in computational science.

Focus Groups: The STCCS will comprise four focus groups, computational quantum chemistry (in particular molecular modeling), gravitational physics (gravitational wave data analysis and numerical relativity), high-energy physics (particle collider data analysis), and remote sensing and image processing. These groups represent areas of existing expertise at UTB and UTPA. The center will directly support fourteen scientists and a number of postdoctoral fellows and graduate students at UTB and UTPA. It will also facilitate the hiring of new faculty and sponsor expert visitors to the center from around the world to bolster and expand upon existing strengths.



**THE UNIVERSITY OF TEXAS
AT DALLAS**

**CONCENTRATIONS OF
EXCELLENCE**

October 18, 2001

(UPDATED)

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Concentrations of Excellence

U.T. Dallas is an institution focused on excellence in research and education. Its mission and programs concentrate on “the multidimensional needs of a dynamic modern society driven by the development, diffusion, understanding and management of advanced technology.”¹ The university is pledged to “emphasize education and research in science and technology and in leadership and management, while maintaining concurrent programs of focused excellence in other fundamental fields of art and knowledge.”²

The 20th century birthed three significant events that will shape the 21st. First, we are in the age of the smart machine where vast amounts of knowledge allowing machines to sense and adapt is embedded in the tiniest chips. Secondly, we are in the midst of a new revolutionary speed-of-light information society enabling human communication and enterprise on a planetary scale. And third, there is coupled with these two events, social and demographic change never before seen on Earth that is shifting geopolitical priorities and redefining the biological vectors of human interaction.

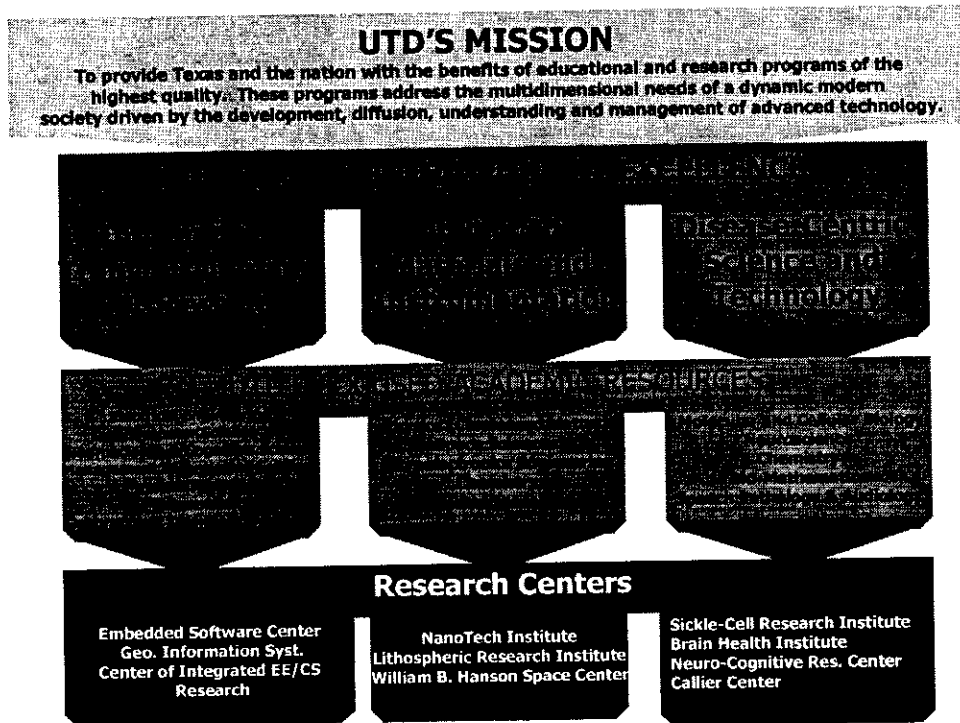
U.T. Dallas intends to be at the forefront. New concentrations of knowledge and technology are emerging and converging, crossing and collapsing traditionally conceived boundaries. The university’s concentrations of excellence represent strategic commitments to making the new Texas a national leader in economic and intellectual capital.

Research and Education at U.T. Dallas are designed to achieve the university’s objectives and mission. The focusing of resources in three concentrations (Information Transmission and Processing, Advanced Materials and Instrumentation, and Disease-Centric Science and Technology) is strategic. It is based on our core competencies and history, an objective appraisal of our resources, and a deep understanding of the competitive research environment. It is forward looking and, furthermore, it builds on strategic linkages with UTSWMC and with private industries vital to the new Texas. Figure One (following page) depicts these areas; academic resources that are relevant to the concentrations and the activities and programs explicitly funded using HB 1839 funds.

¹ The University of Texas at Dallas, Strategic Plan

² Ibid, p.3.

FIGURE ONE.



Information Transmission and Processing (ITP) encompasses the research and development necessary to sustain and drive forward the "Information Age," in which global connectivity, ultra-high bandwidth, and massive data acquisition, storage and processing dominate science, education, commerce, business, national defense and indeed all aspects of the present and future world.

Examples of research and development at U.T. Dallas include wireless networks, optical switches, embedded software, ultra-reliable software, information processing standards and security, digital processing of images, information acquired from the space sciences applied to social and economic issues, and the technology of ultra-high transmission rates and storage capacities of data.

Advanced Materials and Instrumentation (AMI) involves the scientifically guided manipulation of matter, down to the molecular level ("Nanotechnology") to create uniquely effective materials and devices that can dramatically improve the cost-effectiveness and efficacy of current manufacturing and create totally new technologies that will fuel economic advances with minimum energy costs and environmental impacts.

Examples of research and development at U.T. Dallas include innovative techniques for geophysical exploration, sophisticated devices for measuring space phenomena that effect terrestrial communications, manufacturing ultra-miniaturized electronic devices, specialized filters and catalysts, exotic surface coatings, and development of a variety of techniques for manipulating matter at the molecular level (Nanotechnology) and the exploitation of the devices and materials that result from these manipulations.

Disease-Centric Science and Technology (DCST) encompasses research, development and service in neuroscience, cognitive science, audiology, bio-mathematics, chemistry and molecular and cell biology that lead to research, development and implementation of cutting-edge devices and treatment for specific major illnesses and disabilities.

Examples of research and development at U.T. Dallas include the molecular and cell biology of Sickle-Cell disease, the chemistry of more effective contrast agents for medical imaging, the understanding, treatment and cure of age-related illnesses (e.g., Alzheimer's and "shaken-baby" syndrome), the diagnosis and treatment of hearing impairments and speech impediments, the application of computer science and engineering to brain imaging science, and research on futuristic subjects such as artificial muscles.

Performance Measurement

U.T. Dallas will measure its progress on the basis of multiple criteria. First, we will measure the degree to which areas of concentration raise the levels of research funding and the degree to which new avenues of research of vital importance to Texas and the nation can be added to our arsenal of competencies. Secondly, we will measure our graduate degree output. We will especially monitor our production of PhD graduates and our production of Masters degree students in areas critical to the Texas economy. We will also, where appropriate, increase the number of programs critical to the needs of Texas. Third, we will measure the degree to which we can grow with quality in both our undergraduate and graduate enrollments especially those that are directly tied to our areas of concentration.

Budgetary Implications

As noted earlier, U. T. Dallas is a focused institution with a deep history and a strategic focus in the sciences and technology. U.T. Dallas already devotes 60 percent of its academic resources to its core areas, which is significantly more than other public universities, and which enhance this resource base in its FY2003 and next biennium budgets.

In terms of research activity, currently, over 88%, as measured by awards, is in areas within our concentrations of excellence. Twenty percent of the commitments are in ITP and this area shows considerable promise, and 38 percent are in AMI –an area that sustains research and instrumentation breakthroughs especially in areas of basic matter manipulation (Nanotechnology). Thirty percent is in DCST where extremely exciting, cutting-edge work is being done in genomics among other areas.

In terms of facilities, the new expansion of the Engineering and Computer School is scheduled to open this summer. In addition, we have begun over \$3 million in construction on Nanotechnology, Sickle Cell laboratories and Animal Care facilities.

Concluding Observations

“Using...centers of excellence to create...institutions of the first choice is a 30 year strategy distinguished by multiple benefits. Implementing this strategy will simultaneously provide increased instructional capacity and the research excellence required to accomplish the goal of greatly expanding research activity.”- *Service to Texas in the New Century A Long Range Plan for The University of Texas System*³

U.T. Dallas' excellence concentrations are vital to the smart machine, the information age and sweeping bio-demographic changes. The combination of nanodevices with audiology has created new technologies allowing those who have never heard to hear. Understanding information processing and storage in humans at the molecular level enables both possible cures for disease of aging and construction of machines that are, after all, extensions of the humans who create them. U.T. Dallas is at the convergence of the significant vectors of the 21st century. The area around the university has one of the highest concentrations of technology companies in the world – and the second-largest headcount of knowledge workers outside Silicon Valley. It is where the world's voice and data networks are being conceived, developed, built and implemented. Through its focus on excellence, the university will enable new research and new opportunities for the next generation of Texans.

³ Service to Texas in the New Century A Long Range Plan for The University of Texas System, p.13.

THE UNIVERSITY OF TEXAS AT EL PASO

MODEL OF EXCELLENCE AND EQUITY

UTEP's Model of Excellence

The University of Texas at El Paso (UTEP) recognizes that it is in the forefront of creating a new model of excellence in higher education. We are committed to changing the stereotype of urban and minority institutions, which have sometimes been praised as models for access and equity, but seldom, simultaneously, for academic and research excellence. UTEP rejects the traditional assumption that universities that aspire to excellence in research and graduate programs cannot also foster undergraduate education access to students from a wide range of backgrounds. We believe that a vibrant, broad-based graduate education and research enterprise can enrich the educational experience of undergraduate students. Moreover, we know that by involving undergraduates in research, we identify and nurture talent that might otherwise be overlooked and ensure that our students not only have opportunities in fields where they have historically been under-represented, but that they become leaders in those fields.

We intend to demonstrate that excellence can be built within an equity context, without sacrificing the values upon which the institution's commitment to access rests. We know that underrepresented minorities, as individuals and collectively, can compete successfully if they are provided enriched opportunities for both undergraduate and graduate education. And we know, too, that building excellence within an equity context can be done, because UTEP has already made great strides in doing it. The National Science Foundation recognized our success, when UTEP was designated, together with only five other minority-majority universities in the U.S., as a Model Institution for Excellence.

During the past ten years, UTEP has worked aggressively to build excellence on a variety of fronts. We have increased the number of doctoral programs from one to ten. We have increased annual research expenditures from \$4 million in 1989 to \$30 million in 2001, ranking fourth among Texas public universities. At the same time, we ranked second among all U.S. universities for the production of Hispanic baccalaureate graduates, whose quality is affirmed by the competition among companies and professional schools to recruit them; and, we have received national recognition for the quality of our academic programs and outreach to the region we serve.

Rationale

We believe that traditional higher education has become increasingly mismatched to the needs of Texas and the U.S. The rapid growth and the increasing diversity of urban populations require new models of public higher education that respond to the needs of the future professional workforce and the challenges of global competitiveness. This society can no longer abide the achievement gaps between affluent and low-income (mostly minority) youth, because it is the latter who will determine our success or failure as a nation. We can no longer afford to concentrate resources to achieve excellence in public higher education at a small number of traditional universities, while denying similar resources to the institutions that are best positioned to educate a majority of future workforce participants.

By clinging to its largely rural and mono-cultural past, and to its traditional models of excellence and exclusion, public higher education in Texas and across the country has failed to respond to society's needs. The Texas Higher Education Coordinating Board's recent report, Closing the Gaps, attests to the challenges that face this state, if we hope to continue to be productive and prosperous. Public higher education must re-engineer and reorganize itself to invest its resources in building excellence at institutions located in large urban areas where the future workforce will be concentrated. Through its aggressive pursuit of external funding, and its success in securing it, UTEP has taken a lead in demonstrating the viability of this new model, which builds excellence on a foundation of access and equity.

Benefits to the El Paso Region

The per capita income and educational achievement data for El Paso are sobering by any measure. This community has suffered, and will continue to suffer, the consequences of having promoted itself for far too long as a low-skill, low-wage opportunity for business and industry. In today's global economy, even lower wage settings have emerged, and El Pasoans' jobs have migrated to Guatemala and Sri Lanka. El Pasoans are undereducated and under-prepared to rebound from these setbacks and become competitive in today's economy. If we do not begin today to ensure that El Paso commits to far higher expectations and higher educational achievement of its people, and if we do not set higher standards for the kind of jobs that we intend to offer to residents of this region, we will be faced with the downward spiral of a Third World economy and the poor quality of life that accompanies it. A major university, with strong research and doctoral programs—and a reputation for excellence AND access—is critical to this community's future human and economic development.

Benefits to the State of Texas

Texas' per capita income lags significantly behind the national average. Texas lags behind its peer states in the number of students who graduate with baccalaureate degrees. Texas' population is fast-growing and increasingly diverse; nine of ten new Texans will be minorities, and 7 of the 9 will be Hispanic. Educational attainment among minorities in Texas lags seriously behind that of their Anglo counterparts. Connecting these data points, a picture emerges of a state that is headed in the wrong direction in terms of both its human and economic development, a state whose future will be determined by its failure to invest in its human potential.

If Texas hopes to be competitive with other large states and expects to be able to participate successfully in the global economy, it must begin to do a far better job than it has in the past in educating the fastest growing segment of its population: Hispanics. And, the commitment must go far beyond mere access. Hispanics must have the same opportunities for a quality education, from pre-Kindergarten through graduate school, as has been provided to more affluent, typically Anglo, citizens of this state. Large urban universities in Texas, like UTEP, are especially well positioned to provide these quality educational opportunities. They are huge public assets that have been notably under-capitalized and under-utilized. The time is long overdue for Texas to recognize and invest in these important assets and the large undereducated populations that they attempt to serve.

UTEP's Mission

The University of Texas at El Paso is dedicated to teaching and to the creation, interpretation, application, and dissemination of knowledge. UTEP prepares its students to meet lifelong

intellectual, ethical, and career challenges through quality educational programs, excellence in research and in scholarly and artistic production, and innovative student programs and services, which are created by responsive faculty, students, staff, and administrators.

As a component of the University of Texas System, UTEP accepts as its mandate the provision of higher education to the residents of El Paso and the surrounding region. Because of the international and multicultural characteristics of this region, the University provides its students and faculty with distinctive opportunities for learning, teaching, research, artistic endeavors, cultural experiences, and service.

Strategies

1. Enhance students' academic success, K-20. UTEP is located in a large metropolitan area characterized by low educational attainment and declining per capita income against both state and national averages. It draws 85% of its students from El Paso County schools, and prepares an estimated 60% of the teachers in those schools. Within this context, UTEP recognized more than ten years ago that it had a responsibility to take a lead in mobilizing all of the educational resources in this community to:

- Foster academic success and high standards in public schools in this region;
- Ensure that a growing number of K-12 students complete a college preparatory curriculum in high school and make a successful transition to post-secondary education;
- Create a supportive context at UTEP for student success leading to a baccalaureate degree; and
- Make available high quality graduate and professional degree programs.

UTEP has worked hard on all of these fronts during the past ten years, supported largely by federal and foundation grants, and the recently completed Legacy Campaign.

- The El Paso Collaborative for Academic Excellence, a partnership between UTEP, area school districts, and other local organizations, has already succeeded in demonstrating major gains in K-12 student achievement in this region. Most importantly, it has reduced the local achievement gap between Hispanic children and their Anglo counterparts by raising expectations for all children and by investing intellectual and financial resources in under-performing schools.
- To ensure that higher education is affordable to more residents of this region, UTEP has successfully increased the number and size of scholarship awards through more aggressive fund-raising, and has expanded its efforts to inform students and their parents about the many financial aid opportunities available to them, including the Texas Grants program.
- To foster greater student retention and success in completing a baccalaureate degree, UTEP has established a University College, which includes an Entering Student Program designed to bridge transition from high school or community college to the university. Improvements in first-to-second year student retention indicate that this program is achieving its goals.
- To provide residents of this region with access to high quality graduate and professional education opportunities, UTEP has developed a broad range of health professions programs, as well as nine new doctoral programs in areas that capitalize on institutional strengths and respond to regional needs, e.g., environmental science and engineering, and pathobiology.

These important efforts to effect systemic change in educational aspirations, expectations, and standards across the K-20 spectrum in this region will continue to be UTEP's highest priority in the years ahead.

2. Increase Capital Funding. The single greatest constraint on UTEP's development during the past 12 years has been a lack of capital funding, not only for renovation and construction of facilities but for the acquisition of technology and library materials. There are huge disparities in capital funding between institutions supported by the PUF, including UTEP, and those receiving capital support through the legislatively appropriated Higher Education Assistance Fund (HEAF). In UTEP's case, more than 16,000 students receive less from the PUF each year than the 3,000 students enrolled at Sul Ross State University receive annually from the HEAF. UTEP continues to explore all possible alternative funding sources to meet its capital needs, including federal and foundation grants and special item appropriations from the Legislature. However, such efforts exact an opportunity cost as the need for capital funding regularly displaces academic/research enhancements and student support when external funding requests are prepared. Addressing this capital funding disparity is the most difficult challenge facing UTEP at this time.

3. Continue research and graduate program development. Graduate programs are a key to creating a full range of opportunities for residents of this region, and they also play a role in UTEP's overall academic quality. To ensure such quality, UTEP must attract and retain outstanding faculty who set high expectations and standards for their students and who exemplify the same high standards in their professional achievements. Such faculty members seek an institutional climate that offers both opportunities to work with graduate students, especially at the doctoral level, and an infrastructure that supports their research goals. Although UTEP has made considerable progress during the past ten years on both graduate program and research fronts, gaining designation as a Graduate/Research-Intensive University in the Carnegie classification, considerable work remains to be done. An important aspect of such development is the identification of a Center of Excellence, which can sharpen the focus of graduate and research programs and leverage the investments made in them.

Center of Excellence in U.S.-Mexico Border Research and Education

As the University responds to the challenge contained in The University of Texas System's long-range plan, Service to Texas in the New Century (2000), to build a nationally recognized Center of Excellence, UTEP's clear statement of institutional mission and its close and sustained ties to the surrounding region serve as a solid foundation. During the past ten years UTEP has developed a substantial multi-disciplinary research and graduate education capacity relating to the special opportunities and challenges of our U.S.-Mexico border location. We believe that many of our academic and research programs are likely to become more nationally competitive during the next 30 years, but we also believe that UTEP will be best known for its cross-cutting, multi-disciplinary work in the area of U.S.-Mexico border research and education. Drawing together the knowledge and skills of diverse disciplinary perspectives, and focusing future institutional investments in it as a designated Center of Excellence, will enable UTEP to capitalize on its historic strengths and substantially leverage its current assets.

UTEP is confident that it can be ranked as one of the Top 20 centers of excellence in the United States for expertise, academic programs, and research activity related to the U.S.-Mexico border

region within the next ten years, and one of the Top 10 such centers within 20 years. As the relationship between the United States and Mexico becomes both closer and more complex, and as the Mexican-American population of the United States increases in both size and civic participation, this center of excellence will become more strategic for Texas and more visible nationally and internationally.

Consistent with the University's mission, the proposed Center of Excellence will be built on UTEP's long-standing and successful efforts to respond to the needs of the region that it serves. It will leverage UTEP's location on the U.S.-Mexico border, the expertise of faculty members in a broad range of disciplines across the campus, and the increasingly prominent leadership roles of its alumni in both countries. The enhanced focus given to UTEP's broad-based cluster of programs and activities will reaffirm its regional mission and continue to raise its national recognition.

The demographics of UTEP's student population also support this Center of Excellence designation. UTEP's current enrollment of 1700 Mexican students represents approximately 15% of all Mexican nationals enrolled in all U.S. colleges and universities. The presence of this significant number of Mexican students on the UTEP campus and the long-term relationships that are developed as a result of their ties to this University and their fellow students create a highly favorable climate for a focus on U.S.-Mexico border research and education. Moreover, as the largest university in the United States with a Mexican-American majority student body, UTEP has developed expertise and received national recognition as a model for creating educational opportunities for Latinos, who are significantly under-represented in U.S. higher education.

UTEP has a broad range of interrelated and mutually reinforcing academic programs and research centers that can play a significant role in the proposed U.S.-Mexico Border Research and Education Center of Excellence. Among the many academic programs that strongly support the designation of such a center of excellence at UTEP are: the Ph.D. program in environmental science and engineering, which focuses its attention on environmental issues along the U.S.-Mexico border; the Ph.D. degree in History, with a specialization in U.S.-Mexico borderlands; and the Ph.D. in biological sciences, whose focus on pathobiology relates to diseases of particular prevalence along the border. Programs currently being developed include a Ph.D. in Business with a focus on U.S.-Mexico economic and trade issues and a Ph.D. in Civil Engineering with emphasis on regional infrastructure.

A number of interdisciplinary research centers at UTEP dedicated to study of various aspects of the U.S.-Mexico border region will contribute to the proposed Center of Excellence.

- The Center for Environmental Resource Management oversees a portfolio of \$10 million in research grants, most of which relate to environmental challenges of the U.S.-Mexico border region, ranging from studies of the region's water resources, to restoration of the riparian habitat along the Rio Grande.
- The Pan American Center for Earth and Environmental Studies, funded primarily by NASA, applies remote sensing technology to natural resource and environmental issues in the southwestern U.S. and northern Mexico.
- The Institute for Policy and Economic Development brings faculty and students together to conduct research on such topics as international trade and commerce, public policy and

legal studies, economic forecasting and analysis, urban and regional planning, and international management.

- The Center for Inter-American and Border Studies, established in 1960, conducts programs and activities related to the U.S.-Mexico border region, ranging from fine arts to demographic studies.
- The Border Biomedical Research Center and related initiatives bring basic researchers in the College of Science and clinical faculty in the College of Health Sciences together to pursue biomedical and health science research, with a special focus on diseases and health challenges that are prevalent on the U.S.-Mexico border.
- The Center for International Manufacturing focuses its work on issues relating to global manufacturing, as particularly manifested in the maquiladora industry along the U.S.-Mexico border.
- The Paso al Norte Immigration History Museum and Study Center is a major new project that builds on UTEP's extensive archival collections and the work of the Oral History Institute to create an "Ellis Island of the Southwest" in El Paso, extending to immigrants across the southern border the same recognition that is given to those who came to the U.S. from Europe. With the changing demographics of the U.S. population, this commemoration of the dreams and aspirations of immigrants from the south, and their many contributions to the development of this society, is long overdue.

The broad range of UTEP's academic programs, research and outreach initiatives focused on the U.S.-Mexico border; the institution's experience in building interdisciplinary partnerships; and its strong and sustained ties to the region it serves, support the designation of a U.S.-Mexico Border Research and Education Center of Excellence. Formal designation of this Center of Excellence in U.S.-Mexico Border Research and Education, and additional investment in it, will enable UTEP to build on its many accomplishments to achieve a high level of national recognition.

Center of Excellence Funding

During the past decade, the University of Texas at El Paso has targeted institutional investments across the campus toward academic and research programs relating to the U.S.-Mexico border region. Considerable progress has been achieved in shifting the focus of individual departments, research centers and colleges -- and of collaborative efforts among them -- to reinforce this cross-cutting U.S.-Mexico border theme.

Although we are certainly proud of our accomplishments in building a reputation for excellence in U.S.-Mexico border education and research during the past ten years, much work remains to be done to achieve the national stature that we seek. We intend to use Excellence Funds from the State Legislature and other available funding to build on our initial—and very modest— institutional investments, and to strengthen UTEP's infrastructure in a variety of areas that will lead us toward higher national ranking. Investments will be made in such areas as: cutting-edge technology applied to both education and research, including serving as an Internet 2 gateway to Mexico; library materials, especially electronic databases and archives relating to the region; faculty recruitment and retention in strategic multi-disciplinary program areas; increased doctoral program capacity, including support for graduate students; research infrastructure, including reconfiguration of facilities and acquisition of laboratory instrumentation; and matching funds for nationally competitive grants.

The University of Texas-Pan American Enhancing the Borderlands

The Vision for the University of Texas-Pan American is:

The University of Texas-Pan American will be a first-class doctoral university and the educational leader for South Texas, addressing the expanding needs of a multicultural, metropolitan area by offering a broad spectrum of undergraduate, graduate, and a professional degree programs, by maximizing access opportunities for qualified applicants, and by pursuing research and providing professional services that emphasize the economic development, educational advancement, health improvement, environmental protection, and cultural confluence of the international borderland.

Dr. Miguel A. Nevarez has worked with the University Community to develop three goals, which encompass this vision and direct university focus on these three major efforts for the institution during the next 10 years.

These goals are: Improve Student Access and Success/ Aligned with State "Closing the Gaps" Goals

Become a state leader in the preparation and production of public school teachers

Become the research (Doctoral/Research II) university for South Texas

Improving Student Access and Success

The first is a continuation of the initiative we have had for several years now and is our primary focus at the undergraduate level. We began the initiative with the intentions of encouraging and enabling greater participation in higher education and of increasing retention and graduation rates. Our long-range goal is to raise the education attainment level in South Texas to at least the state average and to bring to the region those benefits that accrue to a more educated citizenry—higher employment rates, higher per capita income, better health, and better lives. Improving student access and success has been a top priority and will continue to be a priority for this institution. If we are to hope to move toward status as a regional research university, we will have to have a more solid undergraduate base to build upon. Therefore, we will continue and intensify our efforts in the Initiative. We will continue to develop and take advantage of the synergy stemming from the establishment of the new Division of Enrollment and Student Services. We will continue our outreach efforts intended to encourage and enable

more public school students to aspire to and prepare for higher education. We have to get more Valley students through high school if we hope to get more of them into the college pipeline. We will continue to promote and reward taking a rigorous curriculum in high school and efforts to gain college credit before graduating from high school in order to increase the academic preparedness of students. We will continue to recruit top performing students and find financial assistance to enable them to attend UT Pan American. We will continue to improve students' chances for successful transition to college through enhancements in new student orientation and initial academic advisement and through the development of an effective college success course. We will improve retention through full implementation of the University Retention Advisement Program and through full activation of the automated degree audit capability of our Student Information System. We will continue to review our curriculum to determine where student stumbling blocks may be and how we can improve the effectiveness of those gatekeeper courses while maintaining high expectations and standards. We will take full advantage of new assets like the Student Union and Bronc Village to enhance campus life and create greater student attachment to the institution. We will continue to work with our students to help them stay on track and on schedule and avoid the stopouts that impede their progress toward degrees. We have promised state and system officials that our retention and graduation rates are going to improve and we intend to keep those promises.

Being a State Leader in Teacher Preparation and Production

Our second major goal is built on our success as a producer of public school teachers. UT Pan American already leads the state in the number of teachers produced and has been recognized statewide for our field-based teacher preparation program, but we also want to lead the state in the quality of teachers produced. We want to excel in the preparation and production of highly qualified and committed public school teachers in order to serve the educational needs of our region and to improve the quality of the education students get before they come to us. Not only will attainment of this goal help the state address its own goals of greater participation and success, but it will also speak to the recommendation that each institution identify areas of excellence to emphasize. To accomplish this goal, we must recognize that it takes the whole University to prepare a teacher effectively. It is **not** the responsibility of the College of Education; it is the responsibility of all of us. Therefore, we have called upon all colleges, all departments, and all support operations to make teacher preparation a major priority. This means encouraging bright students to consider careers in teaching; it is a noble profession. It also means re-educating ourselves about the new standards for Texas educators, standards that will delineate what beginning educators should know and be able to do. These standards will form the basis for

new ExCET exams. It means learning that the state is also revising the levels and areas of teacher certification, replacing the old levels of elementary and secondary with three levels—EC-4, 4-8, and 8-12--- and changing certification areas as well. We must educate ourselves about the **TEKS**, the Texas Essential Knowledge and Skills set that form the required curriculum for Texas public school students. We must review our courses to determine if we are providing prospective teachers with the knowledge they will need to be effective educators, with the content they need to excel on the ExCET. We are asking all academic departments with teacher certification options to team up with faculty in the College of Education to make sure that we are doing the best possible job of preparing public school teachers. It is an investment in our own future. The better job we do of preparing schoolteachers, the better students we will get to work with in the future.

Becoming the Doctoral/Research University for South Texas

Our third overarching goal is to become the doctoral/ research university for South Texas. This goal will build upon the success of the first two; it focuses more on the graduate level, but it will impact all aspects of the institution. We intend to reach Doctoral/Research II status in the next ten years and to have centers of research excellence that earn national and international recognition. We believe that our service region is one of the state's major population centers that deserve to be served by a research institution. In order to reach this goal, we will continue to develop new graduate programs to expand higher education opportunities in the South Texas region, we will work to make professional programs more readily accessible, and we will increase the research and scholarship capacity and productivity that are vital to the success of strong graduate and professional programs. We will identify areas of excellence, areas of institutional distinction, with special emphasis on matters of regional significance. We will focus special institutional attention on supporting and developing these areas of excellence through the establishment of research centers, through encouragement of collaborative efforts, and through deliberate recruitment and hiring of faculty who are or can be state and national leaders in these selected areas. We believe if we concentrate our efforts on some selected areas of expertise and if we can demonstrate how research in these areas will benefit the region we serve, we will be more successful in securing the external funding so necessary to achieve the level of excellence we aspire to.

Institutional Support for Areas of Excellence

The University of Texas-Pan American received little support from HB 1839 to support our efforts to create "Centers of Excellence" (\$98,993.) The University has made a significant internal financial commitment to developing our "Centers of Excellence." From either Institutional Enhancement Funds, or grants (federal,

state, and private), the institution will provide approximately \$1.9 million to Access and Success initiatives, \$1.1 million to Teaching Excellence, and \$2.3 million to Research initiatives.

THE UNIVERSITY OF TEXAS OF THE PERMIAN BASIN

CENTERS OF EXCELLENCE

The University of Texas of the Permian Basin is proceeding with its strategic visioning and planning process. This process involves a review of the mission statement in the 2001-2003 period. While the strategic planning process will impact U.T. Permian Basin's vision for excellence, the present articulation will also impact planning for the future.

The University of Texas of the Permian Basin envisions serving as a beacon for West Texas. The University is West Texas' university, and it serves the citizens of the whole state. Grounded in West Texas, U.T. Permian Basin must reach beyond its region to be a university of the first choice.

Four programmatic emphases are identified to shape excellence. Public leadership, energy, education and distance education can be centers of excellence that will serve West Texas and the entire state.

PUBLIC LEADERSHIP

The John Ben Shepperd Public Leadership Institute at The University of Texas of the Permian Basin is the only public leadership institute of its kind in Texas, providing training in leadership all over the state. As of Fall 2001, it offers the state's only baccalaureate program in public leadership. In addition, the Institute offers annual leadership training for young professionals, leadership training for communities, teachers and high school students. The young professionals leadership program is most often presented in Austin, so the participants can work and interact with state leaders on an informal basis.

Texas and the nation face enormous challenges in developing leadership and commitment to public service among communities and individuals. The leadership required to take this country through the War on Terrorism and the loss of confidence in the integrity and intentions of some public leaders sets a new standard for public leadership. Recognizing this need, a proposal for a Masters in Leadership/Public Administration is under development.

Presently, the Texas Legislature funds the John Ben Shepperd Public Leadership Institute. Additional sources of funding for expansion of the Institute's activities are being sought from Federal and private sources.

ENERGY

The University of Texas of the Permian Basin seeks to become recognized as a center for research and education regarding the energy sector. U.T. Permian Basin is located in the richest area of the petroleum and natural gas industry in Texas. With 75 percent of Texas' petroleum production in the Permian Basin and approximately 20 percent of the nation's oil reserves, the Permian Basin is a natural laboratory for the exploration and production of energy. In addition to petroleum, the Permian Basin has major wind power generation facilities and potential for thermal, solar and other energy producing technologies. This focus will require the cooperation of Geology, Chemistry, History, business and other disciplines in the university. The Center for

Energy and Economic Diversification provides a natural foundation for the development of this center of excellence.

A degree program in industrial technology, with a focus on the energy industry will be sought in the immediate future. Supported by external funds during an initial start-up period, the program will serve the industries that support the production of oil and gas and other manufacturing operations.

In research, the Center for Energy and Economic Diversification will be undertaking a number of research programs that will serve the exploration needs of the oil industry, while at the same time beginning to explore alternative energy possibilities for this region.

EDUCATION

The University of Texas of the Permian Basin is a major provider of teachers in West Texas. While by almost every measure, the School of Education exceeds expectations in the quality of the teacher produced; U.T. Permian Basin will explore every feasible alternative for providing convenient and effective means for delivering teacher education to West Texas. The University of Texas of the Permian Basin wishes to be known as a university of the first choice for teacher education.

U.T. Permian Basin is a Hispanic serving institution. The Hispanic population in West Texas needs additional, creative avenues for dealing with the problems of living and learning in two cultures and two languages. The bi-lingual program at the university is recognized throughout the state and region for its success in preparing bi-lingual teachers. Bi-lingual education is a direction in education that needs to be strengthened.

In addition to bi-lingual education, educational leadership is a potential area for U.T. Permian Basin excellence. There is increasing demand for educational leadership in the public schools. A natural synergy exists between the John Ben Shepperd Public Leadership Institute, and its programs for expanding and enhancing public leadership, and the need for public school leadership. The University is exploring the need for doctoral preparation in education.

DISTANCE LEARNING

The University of Texas of the Permian Basin serves students in the 30 county, 54,000 square mile region of West Texas. The total population of this vast region is almost 400,000, over half of which live in the Odessa/Midland SMSA. Through the use of interactive video and the World Wide Web, U.T. Permian Basin can and, in many program areas, is serving students who reside far from the campus. The World Wide Web also affords the University the opportunity to serve students all across Texas and well beyond its borders. The REACH Program Center is the heart of the University's distance learning and instructional development effort. The vision guiding the REACH Program Center is to improve the quality of learning opportunities for U.T. Permian Basin students wherever they may be. As the result of the REACH Program Center work, U.T. Permian Basin is one of the most active U.T. components in distance education.

The REACH Program Center builds quality programs through partnership. It is the focal point of a regional partnership, which includes the Region 18 ESC and its 34 ISD's, Midland and Howard Colleges, and Angelo State and Sul Ross State Universities. During the past four years, the REACH Program Center has supported U.T. Permian Basin faculty in the development of more than 60

courses now available over the World Wide Web. About one-third of these courses are offered through the U.T. TeleCampus, making the University a major partner in the U.T. TeleCampus programs. In August of 2001, U.T. Permian Basin was honored with the U.T. TeleCampus Commitment to Excellence Award. In addition, a U.T. Permian Basin student won the U.T. TeleCampus award as student of the year. The University is clearly already a leader in distance education activities within the U.T. System.

As technologies change and the demand for computer based instruction increases, the REACH Program Center will work to assist faculty in identifying the effective pedagogical tools for distance learning and expanding programs. Through these efforts U.T. Permian Basin seeks to become a nationally recognized leader in the field of distance learning.

**Excellence at UTSA:
Towards an Inclusive Urban Research University**

UTSA will create a new model for an urban research university. This model will have two key elements:

1. Outstanding research in focus areas that meet regional needs – **Knowledge and Information Systems, Applied Life Sciences, and Multicultural Organizations**

- Research and doctoral programs in these areas will be mutually reinforcing
- The programs will attract significant external funding
- The programs will attract nationally recognized scholars
- The university will develop the intellectual climate and infrastructure needed to support nationally recognized research in these areas

2. A commitment to serve the citizens of the urban area. This includes

- A strong commitment to *student success*, with a focus on student support programs that are nationally recognized for their excellence
- Inclusive rather than exclusive admissions, with a focus on the priorities outlined in *Closing the Gaps*
- A commitment to creating an educational pipeline that helps the students of South Texas move in a seamless fashion from high school to college to graduate and professional school
- Engagement with the K-12 educational system and community colleges
- A strong commitment to the diversity of both the student body and the faculty
- Engagement with the local community in scholarship and research in areas of focus (we believe that research on many local issues related to the focus areas will have national and international implications).

Current Foci of Excellence

1. UTSA is currently developing excellence in **Knowledge and Information Systems**.

This focus is supported by the following doctoral programs, centers, and partnerships:

- Ph.D. in Neurobiology
- Ph.D. in Computer Science

- Ph.D. in Electrical Engineering (Signals and Systems Engineering) approved by the Texas Higher Education Coordinating Board, January 2002
- Ph.D. in Business (Information Systems) approved by the Texas Higher Education Coordinating Board, January 2002
- The Center for Infrastructure Assurance and Security (CIAS) – a partnership with the US Air Force (recently funded for \$2.5 million through the Homeland Defense budget)

2. UTSA is currently developing excellence in **Applied Life Sciences**. This focus is supported by the following doctoral programs, centers, and partnerships:

- Ph.D. in Neurobiology
- Ph.D. in Cell and Molecular Biology, awaiting approval from the University of Texas Board of Regents
- Ph.D. in Environmental Science and Engineering, awaiting approval from the University of Texas Board of Regents
- Ph.D. in Biomedical Engineering with UTHSCSA, awaiting approval from the University of Texas Board of Regents
- Cajal Neuroscience Research Center (funded by the National Institutes of Health for \$5.1 million)
- Bioprocess Support Training Facility – a partnership with Brooks Air Force Base (recently funded for \$2.7 million through the Department of Defense budget)

3. UTSA is currently developing excellence in **Multicultural Organizations**. This focus is supported by the following doctoral and masters programs:

- Ph.D. in Culture, Literacy, and Language
- Ed.D. in Educational Leadership
- Master of Science in Justice Policy
- Ph.D. in English (with a focus on Latino/a Studies), awaiting approval by the Texas Higher Education Coordinating Board

4. UTSA is currently developing excellence in distinctive **Student Success Programs** for first generation students who have not benefited from strong high school programs.

These programs currently include

- Learning Communities for freshmen
- Freshman Seminars
- College Advising Centers
- Tomás Rivera Center for Student Success
- Honors College (being implemented)

Progress Toward Achieving Excellence in the Designated Areas

1. Progress toward establishing a focus of excellence in **Knowledge and Information Systems** includes the following:

- Approval of doctoral programs in Electrical Engineering and Business by the Texas Higher Education Coordinating Board, January 2002, with implementation scheduled for September 2002
- An allocation of \$2.5 million to UTSA in the Homeland Defense budget to establish a Center for Information Assurance and Security that will operate cooperatively with the United States Air Force
- Designation of UTSA as a National Center for Excellence in Information Assurance (this makes UTSA eligible to compete for \$878 million in federal funds over the next five years)
- Additional external funding of \$1.2 to departments contributing to the research efforts in knowledge and information security
- Reallocation of internal funds to hire four new faculty members in FY 02 to support this effort

2. Progress toward establishing a focus of excellence in **Applied Life Sciences** includes the following:

- Allocation of \$2.7 million in the Department of Defense budget to UTSA and Brooks Air Force Base for establishing a bioprocessing research and training facility

- Additional external funding of \$7.9 million to departments contributing to research in applied life sciences
- UTSA's Life Sciences Department's achievement of a ranking of 22nd nationally (among more than 250 biology departments) in funding from the National Institutes of Health
- Submission of doctoral programs in Cell and Molecular Biology, Biomedical Engineering, Environmental Science and Engineering, and Music Psychology to the University of Texas System for approval
- Reallocation of internal funds to hire seven new faculty members in FY 02 to support this effort

3. Progress toward establishing a focus of excellence in **Multicultural Organizations** includes

- Implementation of the doctoral program in Culture, Literacy, and Language
- Submission of the doctoral program in English (Latino/a studies focus) to the Texas Higher Education Coordinating Board for approval
- External funding of \$1.9 million to departments contributing to research on the behavior of multicultural organizations
- Reallocation of internal funds to hire eight new faculty members to support this effort

4. Progress toward achieving a focus of excellence in **Student Success** programs for first-generation college students

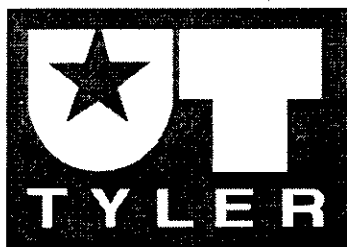
- Establishment of 33 Learning Communities serving 662 freshmen
- Title V funding of \$2.1 million to support the Learning Communities
- Reallocation of \$1.7 million in internal funds to hire 30 new advisors to bring the student advisor ratio at UTSA to 400:1
- Increase in UTSA's retention rate of 5% since 1998 -- it now is at 64%; the retention rate for students in learning communities is 71%; the retention rate for students expressing an intent to earn a degree is 74%
- Establishment of student support programs for freshman scholarship students (the retention rates of these students was formerly less than 50%; it now ranges from 80 to 96%)

Budgetary Implications

The funding provided by H. B. 1839 has been allocated to support initiatives in **Knowledge and Information Systems** and in **Applied Life Sciences**.

In addition to H. B. 1839 funding, UTSA has made an institutional commitment of support that includes:

- Reallocated internal funds to hire nine new faculty for FY03 to support research in **Knowledge and Information Systems**
- Reallocated internal funds to hire ten new faculty for FY03 to support research in **Applied Life Sciences**
- Reallocated internal funds to hire ten new faculty for FY03 to support research in **Multicultural Organizations**
- Plans to reallocate an additional \$1.2 million in internal funds to support **Student Success** efforts in FY03



The University of Texas at Tyler

Planning for Excellence

February 22, 2001



The University of Texas at Tyler
Planning for Excellence

New Millennium Vision: A Strategic Plan

In order to make rational decisions about the future, The University of Texas at Tyler undertook an extensive strategic planning process in 1999. That process examined the environment for higher education in East Texas and beyond, assessed the strengths and weaknesses of the institution, and resulted in a new vision and realigned mission with ten-year goals for the University.

U. T. Tyler's strategic planning process was comprehensive and inclusive. After the faculty developed a basic draft planning document, university leadership formed a *Commission on the Future of the University* that included civic, business, and educational leaders from Tyler and all across East Texas, as well as U. T. System representatives.

Next, a Strategic Planning Team, comprised of U. T. Tyler faculty, staff, students and administrators crafted a university strategic plan building on the work of the Commission. The resulting document, the *New Millennium Vision*, is U. T. Tyler's guiding plan for the next decade. That plan, which is widely accepted within the University and the community, describes an outstanding vision of U. T. Tyler in the future that is coupled with a very credible plan of action. The *New Millennium Vision* describes the transformation of U. T. Tyler from a two-year, upper-level and graduate teaching institution into a comprehensive, four-year regional university of high quality. Consistent with *Service to Texas in the New Century: A Long Range Plan for the University of Texas System*, a vision was articulated:

"U. T. Tyler will be nationally recognized for its excellent programs in the professions and in the humanities, arts, and sciences. Guided by an outstanding and supportive faculty, its graduates will be known for the quality of their knowledge and for their integrity, leadership ability, communication skill, technological competence, and global awareness."

Ten-year goals associated with this new vision describe the development of a distinctive, lower division core curriculum; an emphasis on professional programs underpinned by a strong liberal arts core; the engagement of students in the learning process and the development of special student attributes and skills (integrity, leadership ability, communication skills, technological competence, global understanding); the addition of select professional and doctoral programs; the enhancement of faculty research; making the U. T. Tyler campus a beautiful campus of choice; serving the communities of East Texas and promoting their economic growth; and doubling enrollment within the decade.

Excellence Themes and Centers of Excellence

A relatively new university cannot be all things to all people and become a truly excellent institution. To make a difference and gain national prominence, a university must focus its resources where it has a comparative advantage. While remaining open to change and being ready to take advantage of new opportunities that may come along in the future, the University has identified three themes of excellence resulting from its

comparative advantages. These themes of excellence build upon the University's current strengths and call upon resources available in the local community. They also recognize and incorporate future trends, markets, and growth opportunities nationwide or worldwide.

1. Health and Aging Studies

A demographic revolution is changing the face of the entire nation. Texas and East Texas can serve as fertile grounds for research and service efforts to understand and deal with problems associated with the aging of the baby boom generation—soon to be the retired generation; the increase in young Hispanics; and the growing number of underinsured. All of these rapidly growing groups need health care services. U. T. Tyler has strong programs studying osteoporosis and rural health care delivery and very strong nursing programs.

U. T. Tyler is a leader in using interactive television technology to reach people throughout East Texas. U. T. Tyler will continue to provide well-prepared rural health care nursing and allied health professionals and university outreach activities. An ever-expanding need for health care facilities that are well staffed and economically sound provides the University the opportunity to focus multidisciplinary research and academic programs in collaboration with The University of Texas at Tyler Health Center and the other three major hospital systems that make Smith and Gregg Counties the health care hub for East Texas. Because of large area lakes and these medical centers, this region also has become a major retirement area. U. T. Tyler research and academic programs can address a number of the challenges associated with these trends.

2. School Educational Effectiveness: Research in Leadership and in Mathematics and Science Teaching

The Texas Higher Education Coordinating Board and The University of Texas System Board of Regents, through their "Closing the Gaps" initiative, have acknowledged the imperative of increasing higher education participation rates. Nowhere is this need more pressing than in East Texas. University participation rates in East Texas lag behind those in the state (including South Texas) and the nation. Increasing the number of East Texans who earn college degrees is a complex task that must be addressed throughout the K-16 system. Working with East Texas school districts, U. T. Tyler will systemically address this need with a program of initiatives that will be conducted through centers of excellence within the University.

Through the Center for the Professional Development of Teachers (CPDT), the University's innovative field-based academic educator preparation programs will continue to provide well-educated classroom teachers for the region's schools. Preparation of initially certified teachers will also occur through post-baccalaureate individualized certification programs and through the Master of Arts in Teaching degree for individuals who already hold a bachelor's degree in some other field. The University will continue to build on the strengths of close collaboration with elementary and secondary teachers in the field in the preparation of these teachers. The Advisory

Council for the CPDT, representing colleges within the University and public school teachers and administrators, will ensure standards of excellence in teacher preparation.

Leaders of K-12 schools, specifically principals, hold the key to needed change in how schools approach education. Academic preparation programs for principals and superintendents will continue to provide well-educated leaders for the region's schools and districts. U. T. Tyler's new Southwest Educational Leadership Academy has focused on the continuing development of the practicing school principal. The Academy will add a major research effort to study the effectiveness of principals and superintendents: What makes a great school leader? What can education programs do to turn out change-oriented leaders? What leadership and management skills and tools can be transferred from industry to education? Through the Academy, principals will continue to be given the opportunity to develop the leadership skills necessary to effect change in school operational structure and student academic success. The Academy will bring in principals and superintendents from Texas and beyond to work with those in East Texas in a "cross pollination" effort to ensure genuine school reform for student academic success. Early childhood development centers, as well as elementary and secondary schools, will be part of this broad initiative.

Major academic areas of concern for "closing the gaps" in East Texas are language, mathematics and scientific literacy. The U. T. Tyler Literacy Center, in its first year of operation, is an initiative to address regional student performance in these areas. With quality educator preparation programs in place to certify teachers in these fields, the focus of the Literacy Center is to work with schools and agencies in the region to enhance literacy. The Literacy Center, in conjunction with the Southwest Leadership Academy, is currently finalizing plans to work with pre-school early childhood directors and teachers for structuring their curriculum and providing training for teaching the curriculum. Articulation between early childhood centers and elementary schools will be facilitated to ensure that increasing numbers of students entering kindergarten have the appropriate foundation in language literacy and numeracy. Research studies on changes in leadership practices, the curriculum, teaching practices, student achievement and school readiness are planned.

U. T. Tyler will emphasize mathematics and science education through the Southwest Research Initiative for Math and Science Education. The University is committing its Celia and Sam Roosth Endowed Chair in the effort to develop innovative models to prepare teaching professionals who will enhance science and mathematics achievement in elementary and secondary schools. Successful programs will be developed and implemented with focus on recruiting and retaining math and science teachers; establishing collaborative relationships among U. T. Tyler, public school districts in our service region, area community colleges and local business and industry to reform and enhance science and math teacher preparation; enhancing in-service training and support for science and math teachers (e.g., employing the award-winning Texas-based Infinity Project); and redesigning math and science education curriculum at the college level. At U. T. Tyler, mathematicians, scientists, engineers, psychologists, business and education professionals will work closely together to positively impact the science and math teacher workforce and to work with teachers and administrators to significantly increase student interest and improve student achievement in science and math. U. T. Tyler has traditional strengths in educational

research and in the study of educational administration, as well as strong ties to area school districts. U. T. Tyler can make a difference.

3. Regional Development

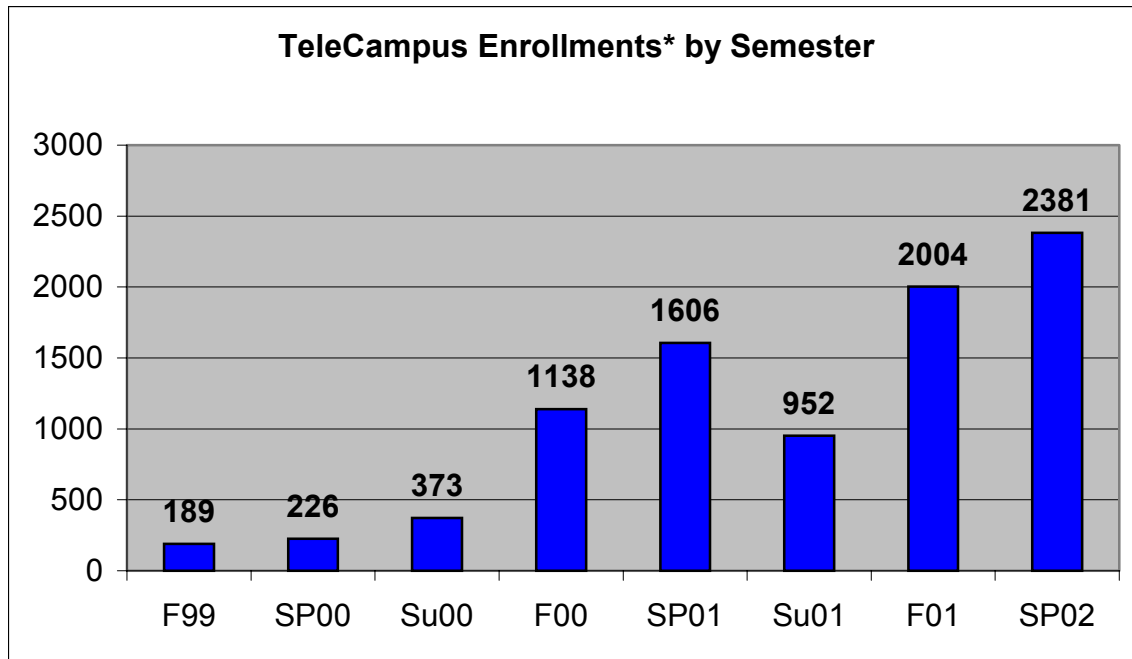
The possibility of enhancing the economic development of small cities in relatively rural areas requires significant study. Many of these cities, outside an hour's drive, but inside two hours driving time of major cities, are dying or barely surviving. Cities within East Texas can serve as models for research and demonstration projects that U. T. Tyler can undertake. Success in these areas will require the development of professional managers for small and medium size businesses, the application of cutting edge information technologies, and the education of Hispanic, African-American, and minority entrepreneurs. Again, U. T. Tyler is already developing expertise in those needs.

U. T. Tyler will build upon its fledgling efforts in several areas: small and medium size enterprise development, information technology excellence, and our Hispanic business research program. Additionally, an engineering test instrument design program and control systems center are in the developmental stages in the College of Engineering and Computer Science. Those two programs expect to build on, and accelerate, Tyler's increasing prominence as a top-fifteen growth city (among middle sized cities according to the Wall Street Journal) in high-tech software and machinery development.

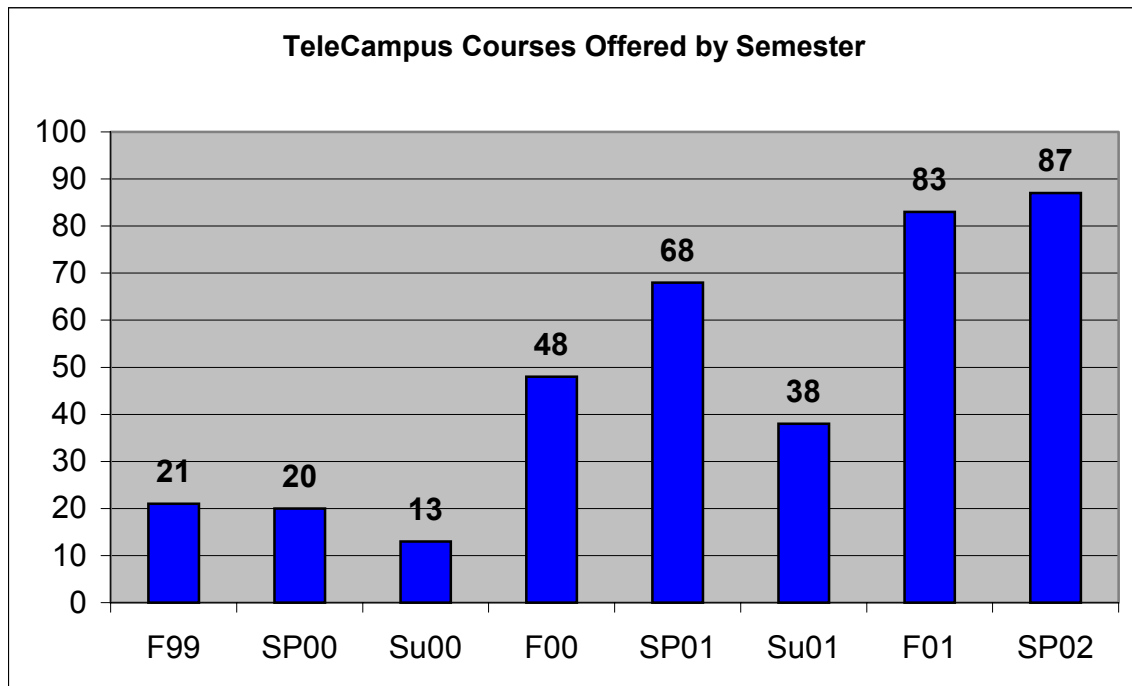
The excellence themes are consistent with the mission and competencies of U. T. Tyler. They are aligned with the needs of East Texas and structured to provide economic and social benefits to the area, and designed to enhance both undergraduate and graduate research and education. Importantly, the themes are interdisciplinary so as to encourage excellence in all colleges and departments across campus. It is along the lines of the interdisciplinary themes that the University can identify and build related centers of excellence.



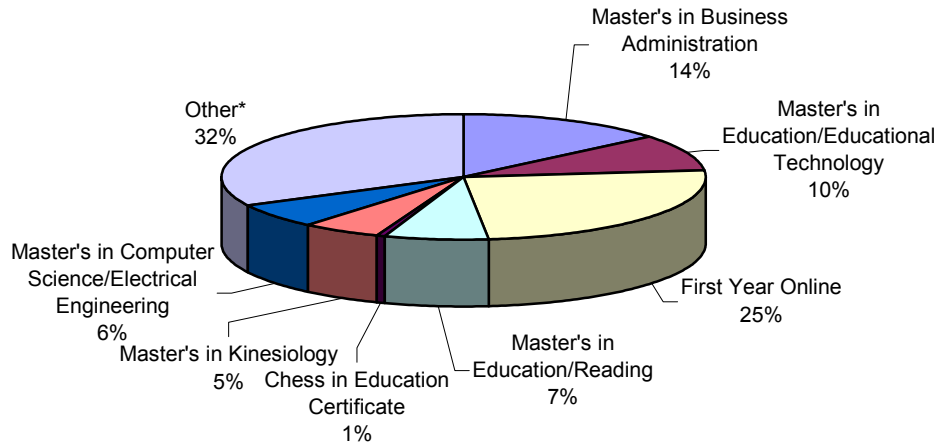
UT TeleCampus Update in Charts and Graphs April 2, 2002



* Enrollments: the sum of the number of students enrolled in each course offered.
(Example: 1 student taking 3 courses = 3 enrollments)

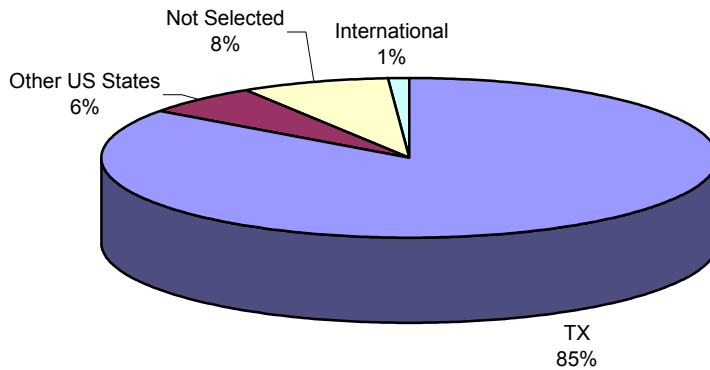


Spring 2002 Enrollments by Degree/Certificate Program

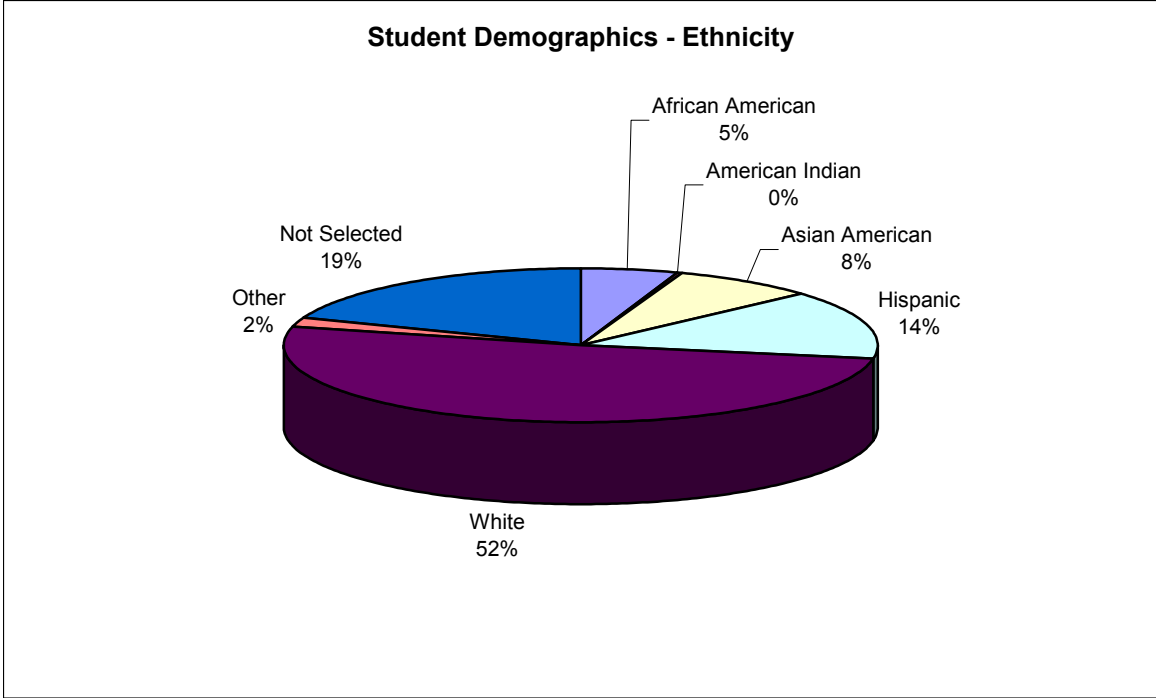


* Enrollments in courses that are not offered as part of a TeleCampus degree/certificate program.

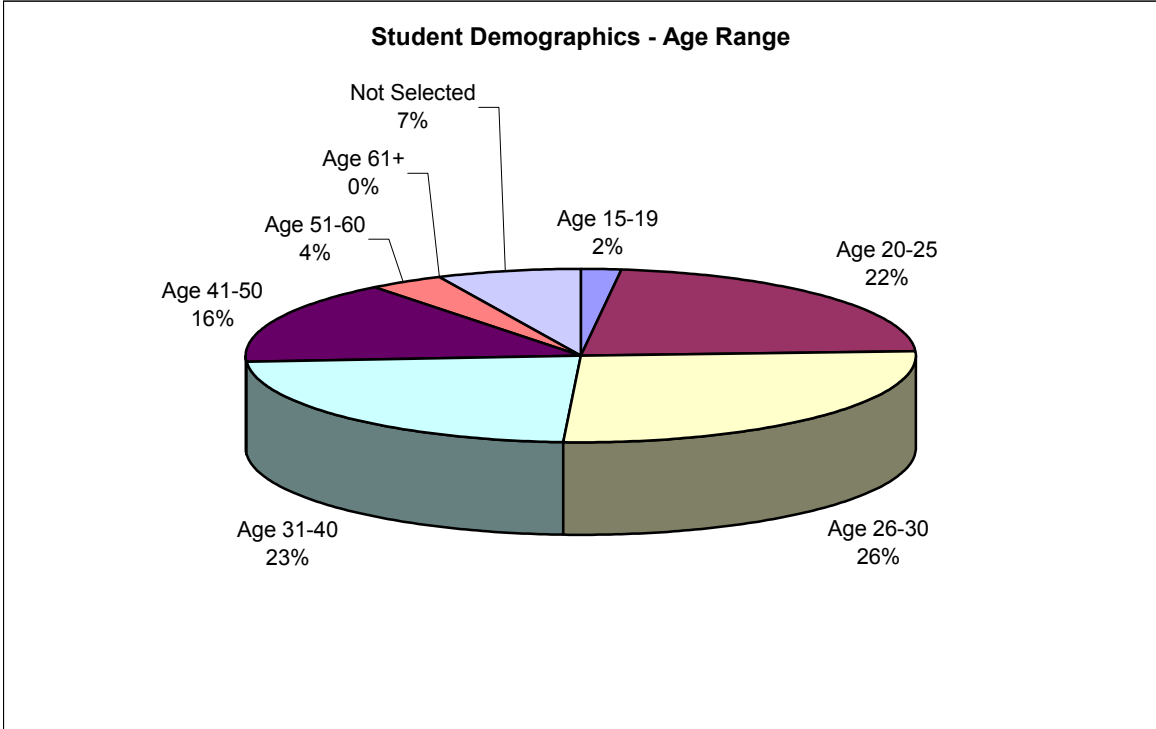
Student Demographics - Residency



Data based on student surveys



Data based on student surveys



Data based on student surveys