

The University of Texas at San Antonio

STRATEGIC PLAN FOR RESEARCH

Submitted to the Texas Higher Education Coordinating Board

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Executive Summary

I. Vision Statement

It is UTSA's vision to be a premier public research university, providing access to educational excellence and preparing citizen leaders in the global environment. Through a comprehensive strategic planning process, the university has identified five multidisciplinary areas in which we intend to excel in academics and research: **health, security, energy and environment, human and social development, and sustainability**. When UTSA achieves its goals and objectives, it will reflect a stronger focus on research activities, a greater proportion of its students enrolled in graduate programs, an internationally recognized faculty, and a talented, diverse undergraduate student body. The university will be recognized for achieving its mission of providing access and excellence by embracing multicultural traditions, as a leader for intellectual and creative resources, and as a catalyst for socioeconomic development for Texas, the nation and the world.

II. Plan to Increase Research Funding and Productivity

Our multi-faceted strategy for increasing external funding comprises the following components:

- selective hiring of senior (“established”) faculty, followed by entry-level faculty appointments to achieve critical mass in targeted areas;
- creation of multidisciplinary institutes to focus activity in the five areas of emphasis and facilitate “center of excellence” funding from federal, state, and private sources;
- development of partnerships with well-established educational, research and governmental entities in the local region;
- utilization of seed funding programs to promote innovative ideas and collaborative projects; and
- expansion of support for graduate students in targeted areas as a means of enhancing the quality of our graduate programs, attracting high quality faculty, and supporting both our research and our instructional missions.

External research funding and expenditures have approximately doubled over the past five years and this growth is projected to continue. The largest research programs are in the biological and other life sciences, followed by engineering and the physical sciences. Crucial to the growth of our funded research portfolio has been the development of successful partnerships with the UT Health Science Center in San Antonio, Southwest Research Institute, and various military installations in San Antonio. Critical recent senior-level faculty appointments in cyber security, biomedical engineering, infectious diseases, nanoscale physics, and energy and environment should facilitate the ongoing leadership of those disciplines in funded research at UTSA.

Additional strong developments at UTSA include the commercialization of intellectual property and entrepreneurship through a partnership with UTHSC-SA, UT Brownsville and UT Pan American. As a result, disclosures, patents and other IP metrics are doubling annually and UTSA recently signed a multimillion dollar licensing contract and Sponsored Research Agreement with *Merck Pharmaceuticals* for vaccine development. Based on new awards received in the past

year, we now project \$51 million in research expenditures and \$75 million in sponsored programs for FY2010-11. With this growth in research activity, there is increasing opportunity and funding for student participation in research at all levels.

III. Plan to Improve Undergraduate Education

To achieve its objectives to become a premier research university, UTSA must attract top quality undergraduate students to its degree programs. We are employing several strategies to enhance the distinction and diversity of our incoming freshman class by:

- updating our enrollment management plan to raise admissions standards, increase access through partnerships with community colleges, improve college readiness among local high school graduates, increase funding for merit-based scholarships, and engage in aggressive recruitment of talented students;
- increasing our support mechanisms for enrolled students, including mandatory advising, improving academic support services, and targeting financial aid to improve student persistence; and
- addressing known student success indicators by increasing the proportion of student credit hours taught by full-time regular faculty, increasing on-campus housing, and engaging students in more on-campus co-curricular and extracurricular activities.

Among the key performance indicators we wish to address through these efforts are:

- the percentage of incoming freshman graduating high school in the top quartile;
- the proportion of graduate students in our student population;
- the first- to second-year persistence and four- and six-year graduation rates;
- the ratio of FTE students to student headcount; and
- the number of baccalaureate graduates pursuing advanced degree programs and achieving special post-graduate fellowships.

Among the programs designed to enhance the quality of our undergraduate educational experience are the Honors College (now over 800 students), various programs aimed at encouraging students to participate in research activities, and the university's Quality Enhancement Plan to increase quantitative literacy (under review by the Southern Association of Colleges and Schools as part of the institutional accreditation process). UTSA also continues to add new undergraduate degree programs to its inventory to meet the needs of our students and the demands of the critical fields identified in *Closing the Gaps by 2015*. These include B.S. degrees in Computer Engineering and Biomedical Engineering.

IV. Plan for Doctoral Programs

Existing Doctoral Programs: UTSA's 21 existing doctoral programs share important strengths that contribute to the near-term and long-range plans of the institution, and are reflected in the recent growth of the doctoral student enrollment, doctoral publications, and placement of graduates in postgraduate professional positions. To further strengthen those programs, the

university has prioritized the allocation of additional funding to support graduate students, has formalized a comprehensive program review process that periodically reviews all degree programs in a given discipline using external experts, and is developing more aggressive recruitment activities to attract high quality applicants. Each program must identify aspirant programs at other universities as a means of developing suitable target metrics for their performance.

New Doctoral Programs: UTSA is developing additional doctoral programs that complement the five areas of UTSA's research excellence identified in our Strategic Plan (Health, Security, Energy and Environment, Human and Social Development, and Sustainability). Regional needs and impact are of critical importance as new programs are designed and developed. Programs currently under development that contribute to regional needs include: Ed.D. in Child and Adolescent Development; Ph.D. in Psychology; Ph.D. in Economics; Ph.D. in Mechanical Engineering; and Ph.D. in Translational Sciences.

V. Plan for Faculty and Student Development

A number of strategies are being implemented to allow faculty to become more innovative, productive, and efficient, including:

- setting appropriate work-load expectations;
- providing greater recognition of research accomplishments;
- awarding seed grants for high-risk collaborative research proposals;
- expanding core facilities for research; and
- supporting mentoring programs for new faculty.

The university is also taking several steps to assist faculty in achieving national recognition by nominating them for national awards and boards, assisting them with organizing major disciplinary meetings, and providing travel funding to conferences to present research results.

An important strategy for the university as it facilitates the development of its faculty and students are through the establishment of research partnerships with well-established educational, research, and governmental institutions. UTSA has been very active in this area, spawning productive partnerships with various UT System institutions; Southwest Research Institute; Southwest Foundation for Biomedical Research Foundation; CPS-Energy; San Antonio Water System; and local military and governmental institutions.

To facilitate faculty recruitment and retention, UTSA is implementing a number of strategies, including:

- recruiting top scholars to seed targeted programs, often with the aid of critical institutional research partners, then following up with multiple junior faculty appointments to develop critical mass;
- combining attractive recruitment packages with a welcoming academic and community environment; and
- orienting our recruiting process to complete offers early in the recruitment cycle and to target states/institutions hardest hit by the economic recession.

Similarly, UTSA plans to utilize several initiatives to increase the number and prestige of undergraduate students, offering additional competitive merit scholarships, providing training grants, raising funds to provide graduate fellowships, and providing support for students to compete for major national and international scholarships (e.g. Rhodes). There are also a number of strategies centered around enhancing opportunities for students from diverse backgrounds.

VI. Other Resources

To ensure that its physical plant keeps pace with its expanding academic and research activities, UTSA is implementing several strategies:

- planning for new facilities is based on a recently completed campus master plan which charts the physical development of the university;
- prioritizing for near-term new construction, as well as renovation of current facilities, to address critical needs; and
- optimizing the usage of existing space through rigorous planning, assessment, and reallocation.

Given that UTSA has the largest “adjusted deficit” of all the seven emerging research universities (approximately 1 million square feet), it will be critical to garner state and local governmental support, as well as private philanthropic support, for new facilities.

Mirroring the steady increases in student enrollments and research expenditures, critical planning for the university’s library includes an expansion of the space available for student use, an increase in library materials budget, and an increased emphasis on providing important academic and research services through the library. As a result, the UTSA libraries’ materials budget has increased from \$3.7 million to \$5 million and the library has expended over \$1.5 million to acquire core research materials between FY2004 and FY2009.

VII. National Visibility

UTSA is actively working to increase its visibility nationally through effective marketing strategies and through development of nationally competitive programs. The university’s success at garnering national recognition for its production of Hispanic graduates in the sciences and in business, and its increasing visibility regionally as a school of first choice for students, suggests that those efforts are beginning to meet with success.

During the 2008-09 academic year, the first comprehensive research study of attitudes and awareness regarding UTSA was performed. The results of this study were used to develop a centralized marketing plan that coordinates UTSA’s messaging for student recruitment and university branding. The three central operational goals that are currently being implemented are to establish consistent brand standards for UTSA, to integrate and improve internet media and the websites of UTSA, and to improve the utility, maintenance, and tracking of all of the UTSA contact databases.

We believe that UTSA's established research visibility in the life sciences and as a leading producer of Hispanic baccalaureates will soon be joined in national visibility by our activities in cyber security, bioengineering, international finance and economics, neuroscience, energy and sustainability, and nanoscale physics. Integral to all of these issues of national visibility is the great synergy gained with our external research partners and collaborators.

UTSA Strategic Plan for Research 2010

UTSA is committed to achieving premier research status as a minority-serving institution and, to that end, has recently published its strategic plan, [UTSA 2016: A Shared Vision](#), and its [strategic implementation plan](#), both of which outline in detail the steps the institution will take in the coming years to accomplish this goal. In this Strategic Plan report, we review the priorities, strategies, and tactics outlined in those institutional documents, and illustrate ways that we are already aligning our resources toward realizing that vision.

I. Vision Statement

A. Targeted status

It is UTSA's vision to be a premier public research university, providing access to educational excellence and preparing citizen leaders in the global environment. As we move toward this targeted status of becoming a premier (Tier 1) research university, UTSA is building the foundational blocks necessary for our success. Our recent strategic planning process has identified five multidisciplinary areas in which we intend to excel in academics and research. These include: health, security, energy and environment, human and social development, and sustainability. The president has charged the provost and vice president for research (VPR) to selectively enhance these areas through the hiring of top faculty, developing selective graduate programs, increasing support for graduate students and developing research infrastructure.

When UTSA achieves the goals and objectives outlined in [UTSA 2016: A Shared Vision](#), it will be an institution embracing core values of integrity, excellence, inclusiveness, respect, collaboration and innovation. The university will be recognized for achieving its mission of providing access and excellence by embracing multicultural traditions, as a leader for intellectual and creative resources, and as a catalyst for socioeconomic development for Texas, the nation and the world.

B. Expansion of mission

This plan is the natural extension of the institution's existing mission that has been evolving for the past ten years. During the past decade, UTSA has grown from a modest, undergraduate, commuter campus to an emerging research university. UTSA is now the second largest of the UT System academic institutions with outstanding growth in research (e.g. 34% increase in research expenditures in '09; a doubling over the past 5 years) and its graduate programs 18% increase in Ph.D. enrollment in the Fall 2009). The strategies and tactics for reaching these targeted goals have been carefully developed and are presented in detail in [UTSA 2016: A Shared Vision](#).

As a reflection of this expanded mission, the university anticipates growing to a total student enrollment of 30,000 by 2016, with one-sixth of that population enrolled in graduate degree programs. We have also set strategic targets for our research productivity, our faculty composition, and our physical plant in both the near-term (2016) and the long-term. Achieving these latter metrics will, of course, be dependent upon the total resources available.

II. Plan to Increase Research Funding and Productivity

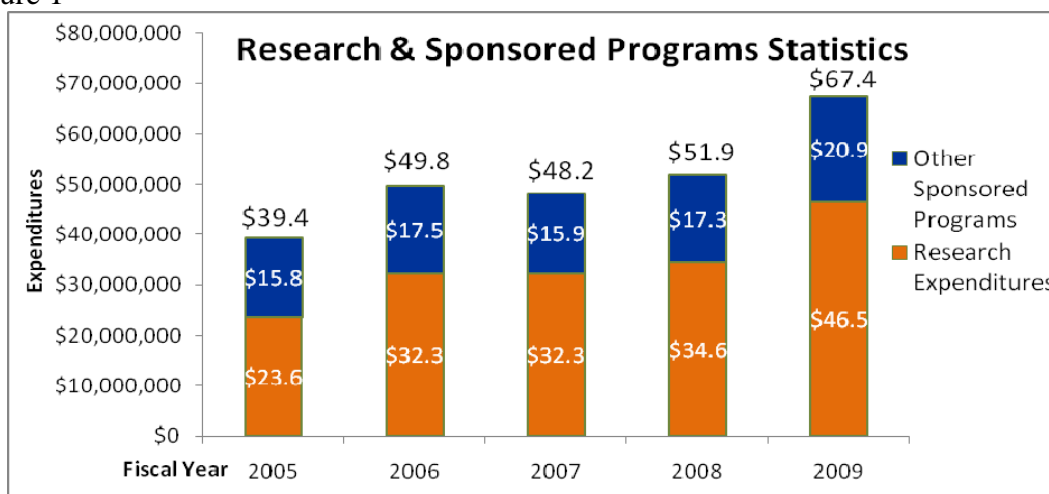
A. External funding

Our strategy for increasing external funding embraces the following components:

- selective hiring of senior (“established”) faculty, followed by entry-level faculty appointments to achieve critical mass in targeted areas;
- creation of multidisciplinary institutes to focus activity in the five areas of emphasis and facilitate “center of excellence” funding from federal, state, and private sources; and
- development of partnerships with well-established research and governmental entities in the local area, including Southwest Research Institute (SwRI), Southwest Foundation for Biomedical Research (SFBR), the UT Health Science Center in San Antonio (UTHSCSA), and the Center for Military Medicine (Brook Army Medical Center– BAMC), among others.

As one measure of the efficacy of these approaches, research expenditures were \$46.5 million (\$67 million total sponsored program expenditures) in 2009, and figure 1 shows that research expenditures have approximately doubled over the past five years. This is the greatest rate of growth of all the seven emerging research universities. A similar growth is seen in total restricted research expenditures (164% for UTSA vs. an average of 144% for the other 6 institutions). This growth in research expenditures is projected to continue based on data for new research awards and philanthropic activity in the past six months.

Figure 1



As seen in Table 1 and Appendix A, the largest research programs at UTSA are in the “Biological and Other Life Sciences.” With expenditures of \$17.9 million, UTSA leads all of the emerging research universities in the State and ranks behind only UT-Austin and Texas A&M in this area. Engineering provides the second largest area of research expenditures (Table 1). The College of Engineering is relatively new (established 2000) and is still adding graduate programs, faculty and facilities. It is the fastest growing component of UTSA with an increase of approximately 300% in research expenditures in the past four years. It is anticipated that it will grow from its current level of 18% of research expenditures to approximately 30%, typical of Tier 1 schools. The Physical Sciences is third in research expenditures and is expected to show major growth from new partnerships with Southwest Research Institute (SwRI) and new leadership in Energy and Physics (see later).

Table 1

THECB Survey of Research Expenditures 2009 - UTSA							
	Federal	State		Institution Controlled	Private		Total
		Appropriated	Contracts/ Grants		Profit	Non-Profit	
Agricultural Sciences	0	0	0	0	0	0	0
Biological & Other Life Sciences	13,885,302	2,502,012	43,201	557,139	103,511	835,899	17,927,064
Computer Science	1,273,330	198,615	0	120,329	0	79,717	1,671,991
Engineering	3,218,948	2,153,550	451,289	1,314,761	575,906	468,341	8,182,795
Environmental Sciences	178,477	191,485	83,355	1,659	33,491	58,043	546,510
Mathematical Sciences	115,409	99,352	0	4,711	0	2,187	221,659
Medical Sciences	0	0	0	0	0	0	0
Physical Sciences	2,611,624	1,904,576	39,169	154,037	190,178	409,185	5,308,769
Psychology	201,776	53,269	0	12,719	0	0	267,764
Social Sciences	994,917	1,100,461	604,961	122,661	0	241,338	3,064,338
Other Sciences not listed above	3,630,680	1,725	947,466	80,814	0	0	4,660,685
Arts & Humanities	96,541	855,993	495,941	160,203	172,351	165,712	1,946,751
Business Administration	205,774	1,115,219	0	20,769	0	77,864	1,419,626
Education	553,345	581,678	28,591	68,635	1,745	69,541	1,303,535
Law	0	0	0	0	0	0	0
Other Non-Science Activities	0	0	0	0	0	0	0
TOTAL Expend. For Conduct of R&D	26,966,123	10,757,935	2,693,973	2,618,437	1,077,192	2,407,827	46,521,487

It is anticipated that Health and Human Services and especially the NIH will continue as the major source of research support (Appendix A). For example, UTSA's *South Texas Center for Emerging Infectious Diseases* (STCEID) will continue to be a major strength of life science research and is developing a center for vaccine research. The *Center for Research and Training in the Sciences* (CRTS) will continue to lead minority research programs. The *San Antonio Life Science Institute* (SALSI) provides targeted stimulus for growth of collaborative research programs in the life sciences between UTSA and UTHSCSA (see below).

Another major source of funding is the Department of Defense and Homeland Security, which support a significant level of research in information and cyber security headed by UTSA's *Institute for Cyber Security*. With new opportunities for additional partnerships with the military (e.g. 24th Airborne Cyber Security Headquarters), Southwest Research Institute (SwRI), and private industry, it is expected that research support in information security will continue to increase.

Expanded research support is expected from the National Science Foundation and the Department of Energy. This is in part due to our hiring of a new world-class senior research leader and team to head the *Institute for Conventional, Alternate, and Renewable Energy* (ICARE). This growth is, in part, due to new collaborations with SwRI, the CPS-Energy, San Antonio Water System (SAWS), etc. (see Section V.C. *Collaboration and Partnerships*) This increase will also result from new leadership and senior recruiting in physics and nanotechnology.

Commercialization of intellectual property and entrepreneurship are beginning to play a significant role in UTSA's research portfolio. Funding from the Department of Commerce and the Small Business Administration are growing, and proof of concept (POC) funds from State (Ignition Funds) and local (*POC-SPARC* and Road Runner POC funds) sources are catalyzing development and commercialization of UTSA's discoveries. For example, UTSA recently signed a multimillion dollar licensing contract and Sponsored Research Agreement (SRA) with *Merck Pharmaceuticals* for development of a vaccine for *Chlamydia*.

UTSA's highly successful strategy of seeding collaborative projects will be continued and expanded as resources allow. For example, SALSI funds used to seed collaborations between UTSA and UTHSCSA have resulted in spin-off extramural grants with funding almost twice that of the seed funding. Similar collaborative seed projects have been established both within the university (e.g. *Collaboration Research Seed Grant Program*) and with other external partners (e.g. SwRI and SFBR).

The federal stimulus program (ARRA) is also playing a new, though temporary, role in supporting research. As of January 2010, UTSA has been awarded approximately \$14 million in ARRA funds for research. These projects are expected to seed new programs and collaborations that will continue to be funded after the stimulus program is discontinued. UTSA's strategic research focus on Health, Energy, Sustainability and Cyber Security are highly consistent with the new targeted priorities of the federal government. Based on the above considerations, targets

of \$51 million in research expenditures and \$75 million in sponsored programs are projected for FY2010-11.

Monitoring of research funding and progress is conducted by the Office of Sponsored Programs (OSP) which reports to the Office of the VPR. Principal investigators (PI's), deans and department chairs receive grant expenditure reports quarterly. In addition, the Office of the VPR provides monthly evaluations of research progress at the President's Council, Provost's Council (deans), meetings of the associate deans for research, and meetings of the research center and institute directors. In concert with the Office of Grants and Contract Accounting, the VPR issues the Annual Research Expenditures Reports.

Research centers and institutes are evaluated annually by an external review committee which visits the campus and reviews written and oral reports from each center or institute. The committee files a written evaluation to the VPR which is also used by the deans and provost to evaluate these units. These data are used in allocations of resources to these units. Progress metrics include:

- Research expenditures (Total and Federal);
- Establishment and growth of centers and institutes in strategic areas;
- International and national research awards to faculty (National Academy, Nobel, etc);
- Number of publications and quality (e.g. impact scores);
- Supervision and recognition of Ph.D./graduate students and post doctoral fellows;
- Doctorates awarded;
- Postdoctoral appointees;
- SAT scores;
- National Merit and Achievement Scholars;
- Development of intellectual property and commercialization;
- National Centers/Hubs of Research Excellence;
- Program project and training grants;
- Annual giving and endowments; and
- National research rankings.

Comparisons with national peers are continually conducted as the institution competes with the six other emerging research universities in the State. The annual report of Research Expenditures from the Texas Higher Education Coordinating Board (THECB) compares research activity of UTSA with all other universities in Texas as well as the Health Science Centers. In our Strategic Plan, we have identified a set of public universities without medical schools as aspirational peers for the purposes of setting performance goals (see Section IV.D. *Comparisons with National Peers*). In addition, research metrics of The Center (The Top American Research Universities) Annual Report from the Lombardi Program on Measuring University Performance are used as indicated in the following sections.

B. Targeted Research Priorities

The development of targeted research programs of excellence is critical to UTSA’s trajectory toward Tier 1 status. Our strategies for developing research foci for the institution include:

- developing a limited number of interdisciplinary research areas of critical importance to San Antonio and South Texas through our strategic planning process;
- limiting special opportunity hires of senior faculty to these areas of focus;
- providing seed funding to encourage innovative and collaborative projects in these areas;
- prioritizing the development of centers/institutes and of graduate programs in disciplines related to the targeted research areas; and
- improving our research support infrastructure and employing partnerships with external entities to provide optimal support for faculty research efforts.

The institutional strategic plan [*UTSA 2016: A Shared Vision*](#) has identified the following five targeted research priorities with established or emerging national recognition:

- *Health;*
- *Security;*
- *Energy and Environment;*
- *Human and Social Development; and*
- *Sustainability.*

Each of these areas is comprised of multidisciplinary efforts involving faculty from many or all of the colleges. In each case, a dean or a series of deans are identified as “champions.” Multidisciplinary research centers and institutes lead these research efforts (Table 2).

Table 2: Research Institutes and Centers

Institute / Center	Strategic Areas
San Antonio Life Sciences Institute	Health; Human & Social Dev.
Center for Research and Training in the Sciences	Health; Human & Social Dev.
South Texas Center for Emerging Infectious Diseases	Health; Security
UTSA Neurosciences Institute	Health
San Antonio Institute for Cellular and Molecular Primatology	Health
Institute for Conventional, Alternative and Renewable Energy	Energy; Sustainability
Institute for Cyber Security	Security
Center for Water Research	Sustainability; Energy
Center for Advanced Manufacturing and Lean Systems	Sustainability; Energy
Center for Archeological Research	Sustainability; Human & Social Dev
Center for High Performance Computing and Software	Security; Health; Energy
Institute for Demographic and Socioeconomic Research	Human & Social Dev.
Bank of America Child and Adolescent Policy Research Institute	Human & Social Dev.; Health

Details and missions of the centers and institutes can be found at <http://vpr.utsa.edu/centers.php>

UTSA will continue to focus its resources and efforts by limiting special opportunity hires to these areas. As we actively recruit senior faculty, we use special opportunity hires for those who can contribute in meaningful and substantive ways toward the advancement of these five areas. For example, in the current year, we are pursuing high-level senior hires in sociology of religion and family (human and social development), energy sciences and engineering (energy and environment), medicinal chemistry, neurosciences, stem cell and vaccine research (health), and information security (security). We are also selectively investing in the development of graduate programs and students, by prioritizing the development of new graduate degree programs in these areas and closely-related disciplines (see Section IV.A. *New Doctoral Programs: Areas of Emphasis*). Part of our prioritization strategy includes increasing graduate student support. In this manner, we support teaching, research, and graduate education all at once, and build a solid foundation for excellence in these five areas.

The institution allocates resources in accordance to the strategic research foci (see also Section II.C. *Allocation of Resources*). This not only includes choice of areas of hiring of new faculty but also the distribution of internal resources and research space. An example of this is the distribution of resources from the SALSII. This program, established by the Texas Legislature, provides \$8 million for the current biennium for collaborative research between UTSA and the UTHSCSA. Joint grants of up to \$750,000 are awarded to targeted areas of: Medicinal Chemistry, Bioengineering, Health Disparities, Neurosciences and Regenerative Medicine. Similarly, we are actively developing our Energy/Sustainability initiative through partnerships with SwRI, CPS-Energy, and San Antonio Water System, and the *Energy Research Alliance of San Antonio*. UTSA recently recruited a world-class leader to head this program (see [recent news story](#)). With the completion last fall of the new Applied Engineering and Technology Building, the university is able to provide excellent new space for these efforts.

Another priority is to strengthen UTSA's research infrastructure. A formal program for research space evaluation and allocation has been developed (Section VI.A. *Research Facilities*). Laboratory animal facilities are slated for AAALAC accreditation in the next year. On-line electronic submission of proposals, effort reporting, and on-line research compliance (Click Commerce) have been implemented. In the case of Click Commerce, UTSA provided the initial test site for a UT System-wide rollout of this compliance software package.

Similarly, development of intellectual property is a priority. UTSA's Commercialization Council includes the South Texas Technology Management (STTM) program with experienced staffing and resources. Through this shared resource with UTHSCSA and UT System, new funds are available for taking discoveries to the proof-of-concept stage. UTSA is seeing record numbers of invention disclosures, patents filed, patents awarded and licenses. UTSA has also opened the *New Venture Incubator* (NVI), with spin-off companies in the Biotechnology, Sciences and Engineering Building.

C. Allocation of Resources

To focus the university's resources on achieving its strategic goals, UTSA has formed a Strategic Resource Planning Council (SRPC), co-chaired by the provost and the vice president for

business affairs, whose members are the vice-presidents, the deans, and representatives from the faculty, staff, and students. This council reviews budget allocation requests and provides recommendations to the president based upon the alignment of those requests with strategic goals and objectives. Each year, the SRPC assesses the university's progress toward meeting its goals as indicated by several key performance metrics and reviews the work plans of the various academic and administrative support units. With this mechanism in place, UTSA can ensure that it is implementing its strategic plan effectively and efficiently.

A key priority in our budgeting exercise is investment in the success of our faculty and students. To this end, last year we added more than 50 new tenured/tenure track faculty, invested \$4.5 million in state-appropriated incentive funding in equipment and instrumentation, expanded our library space and the services it provides on the main campus, added more than \$5 million of support for graduate assistantships, and migrated to paperless processes in a number of areas to improve efficiency.

Moving forward, to accommodate growth and the strategic objectives outlined in *UTSA 2016*, our [implementation plan](#), approximately \$11 million yearly is required solely for faculty recruitment. The largest single item is the startup packages (i.e. equipment) needed for new faculty, especially in the sciences and engineering. Funding allocated from development funds, research excellence funds from the UT System, STARS funding, Research Development Funds, and F&A funds are all utilized. Strategies such as leveraging salaries from external grants and salary savings generated from vacant positions are used to fund new faculty hires.

A major allocation of resources is targeted at seeding collaborative research. Four million dollars (SALSI) is allocated from UTSA and matched by UTHSCSA for collaborative research programs. Each year approximately \$250,000 is allocated to fund internal seed grant programs (Collaborative Research Seed Grant Program, and the Tenure-Track Awards Program. These programs have, over the past three years resulted in greater than three-fold return on investment. This year we will allocate \$100,000 toward a new collaborative seed program with Southwest Research Institute (SwRI).

To improve and enhance UTSA's research infrastructure, we allocate approximately \$575,000 from F&A recovery and other sources towards salaries and professional development for departmental research administrators dispersed throughout the research community. These positions reside in various departments, colleges, centers and institutes to provide support for research faculty.

Approximately \$675,000 is dedicated to complete the full implementation of Click Commerce, to include additional modules for Institutional Animal Care and Use Program (IACUC), Laboratory Animal Resources Center animal billing, Institutional Biosafety Committee (IBC), and the Institutional Review Board (IRB). Funding from Research Development Funds and reallocation of institutional resources provide this support.

We allocate \$465,215 annually for the South Texas Technology Management (STTM) program to continue its mission of providing comprehensive and integrated technology transfer and

development services to stimulate and capitalize UTSA's intellectual property portfolio. \$75,000 is allocated for proof of concept proposals to accelerate research commercialization (POC-SPARC).

Space is one of the key constraints impacting our ability to expand the research enterprise, as outlined in our [strategic implementation plan](#). The status and policies and procedures for allocation of research space are detailed in Section VI.A. *Research Facilities*.

D. Student Participation

With recent growth in faculty and facilities, there is increasing need to provide opportunities for student participation in research at both the undergraduate and graduate levels. We are in the process of implementing a number of strategies to increase student participation in research, including:

- increasing funding available for graduate assistantships;
- creation of an undergraduate research institute to expand student participation in research;
- providing special funding to support summer undergraduate research activities;
- modifying our curricula to encourage more students to engage in signature experiences, including research, study abroad, internships, community service, and so forth; and
- increasing recognition for student achievement in research.

Among some of our current activities that illustrate these priorities, the Honors College is establishing an Undergraduate Research Institute (see below) supported with scholarships and fellowships. The growth of the graduate enrollment is a result of the efforts to increase graduate student research opportunities and will be further stimulated by a recent gift that will provide \$5 million in graduate fellowships in Business and in Engineering. At the same time, increased research grant funding provides support for these students to work as research assistants (RA's).

Last year the provost initiated a summer research program which provides stipends to students to work on research projects with faculty mentors across the 10-week summer session. The graduate student organizations hold a student research conference in the spring to showcase student research, and many of the colleges also hold student research conferences.

The university is also working with younger students to stimulate their interest in research prior to coming to college. UTSA's Interactive Technology Experience Center (iTEC) reaches out to K-12 students in various forms including holding robotics camps (400 students) and the GEAR Robotics Competition (up to 125 teams). iTEC also makes available scanning microscopy facilities and rapid prototyping machines for K-12 students to use on the UTSA campus. UTSA is partnering with Dean Kamen's FIRST organization to host the regional competition for the [FIRST](#) FRC Robotics Competition for high school students in 2011.

III. Plan to Improve Undergraduate Education

A. Strengthening the quality of undergraduate education

One of the necessary components of UTSA's journey towards Tier 1 status is its ability to attract talented undergraduate students who will successfully achieve their educational goals. At the same time, it is our express intent to honor our founding "access" mission to ensure that UTSA is educating a diverse student population and providing educational opportunities to the historically underserved population of San Antonio and South Texas. In this way, we hope to fulfill both the state's need for additional top-tier research universities, as well as the goals for closing the gaps in educational attainment.

1. Goals for top 10% and top 25% of high school class rank among entering freshman:

The entering 2009 class of new freshmen is comprised of 36% students from the top quartile (25%) of their high school class, with 10.1% coming from the top 10% of their high school class. These results have been achieved with no special targeting of high-achieving high school graduates—in other words, this can be considered a baseline for our entering class on which we can build using targeted recruitment efforts. At the same time, 28.7% of our entering freshmen qualify for admission despite coming from the lower half of their high school graduating class.

We are initiating several focused strategies to increase the percentage of top quartile and top 10% students, and to lower, if not completely eliminate, those from the bottom half of their high school classes. These strategies include:

- **Adjusting our admissions criteria** over the next several years to gradually eliminate those students from the lower half of their high school graduating classes from direct admission to UTSA. The first step will be taken this spring when we eliminate CAP admissions from the lower half, and we expect to raise SAT/ACT scores required for regular admission among students who graduate lower than the top quartile from their high schools in 2011. We may also begin utilizing a more holistic admissions process utilizing a combination of criteria that our research indicates correlates strongly with student academic success.
- **Increasing merit-based scholarships** as an inducement to enroll top quartile and top 10% applicants. This year we will begin by offering approximately 1,000 students each a \$1000 merit scholarship. A recent study performed by Noel-Levitz of our student enrollment trends suggests that this will enable us to improve our capture rate of students in the two highest categories of academic achievement, as determined by a weighted combination of high school rank (60%) and standardized test scores (40%). Over time, we will increase the amount of scholarship aid offered to highly qualified applicants to specifically target top 10% students with four-year full tuition scholarships and merit scholars with four-year awards that will also cover room and board costs. The initial stages of this effort will be funded by an estate gift received by the university last fall, and additional fund raising is planned for augmentation of our recruitment program.

- **Direct recruiting by academic units** to attract top scholars through personal recruitment efforts. Until this year, academic units were not utilized very heavily in undergraduate recruitment; however, this is changing. Under the provost's direction, all colleges are now involved in direct correspondence with applicants who indicate an interest in a particular academic discipline or field, and many are prepared to offer endowed scholarships to enhance recruitment success. We are now purchasing student lists from SAT and ACT so as to identify highly qualified potential applicants from our region and contact them. We are also encouraging faculty to visit local area schools to reach out to more students and interest them in UTSA's academic programs. Finally, we have developed several special summer programs for K-12 students for which there will now be a more intentional recruitment component to interest top students in attending UTSA when they graduate from high school.
- **Setting goals for student recruitment** to motivate our efforts to shape our enrollment in effective ways. Over the next five years, we will increase the percentage of our entering freshman graduating from high school in the top quartile of their class from 36% to 56%, or an increase by 4% each year over the previous year. During the next five years, we will increase the percentage of incoming students ranking in the top 10% of their high school class from 10% to 15%, with an ultimate long-term goal of enrolling an entering class with 35% of freshman graduating in the top 10% from high school. Finally, we currently enroll a student body comprised of 53% students from under-represented groups, primarily Latino and African American. Through our recruitment efforts, we wish to maintain and even increase this percentage while improving the academic quality of our student population. In addition, we are working to change the proportions of undergraduate and graduate enrollments with a goal of having graduate student enrollment at 15% of the total student body of 30,000 by 2016.

2. Goals for student retention rates:

There is generally a strong correlation between the quality of the entering freshman class and student retention rates. We have already seen an increase in our fall-to-spring retention following the most recent change in admissions criteria. At present our freshman-to-sophomore retention rate among non-CAP students is 65.7%; including CAP students, it is about 56%. Following the sophomore year, we lose about another third of our remaining students, so that only 48% of our initial first-time full-time (non-CAP) freshman cohort remains enrolled at UTSA into the third year of study.

As we adjust our admissions criteria and selectively enroll an entering class of higher achieving students, we expect our freshman-to-sophomore retention rate to increase over the next five years to 75%, with a long-term goal of 85-90%. Our retention rate to the third year of study should likewise see improvement over the next five years from 46% now to 58% with a long-term goal of 75%.

Among the specific measures that we will be employing to improve student retention rates are:

- enhancing the quality and frequency of academic advising, with several points at which advising will be mandatory to keep students on track for a degree;
- enhancing the accessibility of student academic support services by co-locating them on the main level of the university library;
- initiating an “early-warning” system whereby faculty provide reports at mid-term when first-year and second-year students are struggling in their classes;
- expanding available tutoring services, especially for demanding majors in the sciences and engineering;
- increasing the number of faculty to reduce the student-FTE-to-faculty-FTE ratio from 24.1 to less than 20;
- increasing the percentage of student credit hours taught by full-time regular faculty from 70% to 85% by 2016; and
- increasing on-campus housing (construction of a new residence hall over the next three years) and employment opportunities for students.

3. Goals for graduation rates:

As with retention rates, it is generally true that student six-year graduation rates generally correlate with the quality of the entering freshman class, and in particular, with the percentage of freshman who graduate within the top quartile of their high school class. As a result, we expect our six-year graduation rate to roughly mirror the percentage of top-quartile students in our entering classes as we adjust admissions standards and apply more aggressive recruiting. This means that the six-year graduation rate for the 2009 entering cohort will likely be 36% \pm 2%, but it should increase to 52-56% for the 2015 entering cohort. In the long-term, the six-year graduation rate should achieve top-tier public university levels of 80-85%.

Four-year graduation rates are more difficult to project because they are much more dependent upon the socio-economic status of the student population, and UTSA currently serves a population 40% of whose families make \$40,000 or less annually. These rates are also more sensitive to whether or not a student’s parents have any higher education experience, and 47% of UTSA’s student population is comprised of first-generation college students. For this reason, our goals for four-year graduation rates are more conservative and we envision an increase from the current 9% to 12% for the 2009 entering cohort, 15-20% for the 2015 entering cohort, and 25-30% in the long-term.

We have initiated several strategies to improve our student success indicators, among them:

- Supplemental Instruction (SI): This includes academic support program that provides peer-facilitated collaborative learning study sessions for courses with high D, F, and W grades. The Supplemental Instruction program has experienced significant growth, effectively increasing the scale of the program to serve more than 9,500 students each year. The SI program currently provides collaborative learning academic support to students enrolled in more than 150 classes each semester.
- Late Intervention: The award winning *Late Intervention* effort (2009 THECB Star Award recipient for contributions towards Texas’ *Closing the Gaps* goals) provides

outreach to fifth-year students who began their college education with UTSA as full-time, degree-seeking, fall-entering freshmen. During the 2008-2009 academic-year, 82.5% of the Late Intervention participants (students from the entering cohort of 2003) graduated within the six-year timeframe. A comparable group of students who did not participate graduated at a rate of 44.9%.

To meet these goals, UTSA is employing the following interwoven strategies to enhance the distinction and diversity of its incoming freshman class and provide a higher quality educational experience:

- updating our enrollment management plan to target high-achieving high school students and ensure our incoming freshmen are “college-ready”:
 - adjust admissions standards based on criteria taken from student success data for various high school achievement indicators;
 - develop partnerships with local community colleges to provide alternative access for students to a baccalaureate degree;
 - develop partnerships with local school districts to bolster college-readiness among high school graduates;
 - increase funding for merit-based scholarships; and
 - increasingly employ academic units in active recruitment activities at both the undergraduate and graduate levels;
- increasing our support mechanisms for enrolled students to improve student success outcomes through:
 - requiring mandatory advising at various stages of a student’s studies;
 - co-locating academic support services in the library to provide more effective access to them;
 - enhancing academic support for science and engineering students at early stages of their studies to increase the persistence rate;
 - increasing on-campus employment opportunities; and
 - targeting financial aid specifically to boost student retention;
- increasing the proportion of student credit hours taught by full-time regular faculty and lowering the ratio of FTE students to FTE faculty;
- increasing on-campus student housing opportunities; and
- utilizing student cohorts, co-curricular and extracurricular activities to build common experiences and greater student community cohesiveness.

The university is presently engaged in updating its enrollment management plan to incorporate these strategies. Among the key performance indicators we wish to address through this new plan will be:

- increase the percentage of incoming freshman graduating high school in the top quartile;
- increase the proportion of graduate students in our student population;
- enhance the first- to second-year persistence and four- and six-year graduation rates;

- increase the ratio of FTE students to student headcount (i.e. decrease the number of part-time undergraduate students); and
- increase the number of graduates pursuing advanced degree programs and achieving special post-graduate fellowships, including Rhodes, Marshall, Truman, Fulbright, and other scholarships.

As our student recruitment strategies are in the early implementation stages, there are fewer examples we can point to that demonstrates the success of our efforts. However, since implementing higher admissions standards in the Fall 2009, we have seen an increase in our first-to second-semester persistence to 92.4%, the highest since the university began measuring this statistic. We have also realized a noticeable increase in undergraduate student enrollment despite a small decline in the number of new incoming students (combined freshman and transfer), suggesting that overall student retention rates are improving.

To complement our efforts in student recruitment and retention, UTSA is also engaged in enriching the undergraduate experience through a variety of signature experience opportunities (e.g. College of Liberal and Fine Art and its Student Research Conference). The Honors College is developing an Undergraduate Research Institute focusing on recruiting and mentoring undergraduate students in pursuing research-based careers. This Institute allows students to major or concentrate their studies in a variety of subject and content areas. Faculty mentor students through work in their laboratories and research projects. Students engaged in this program are given internship, travel and publishing opportunities. While housed in the Honors College, admission to the Institute's program is open to all undergraduates.

The Undergraduate Research Institute's programmatic focus is to:

- assist in recruiting undergraduate students interested in research careers;
- provide research, internship and mentoring opportunities;
- provide undergraduate research award competition;
- recruit faculty, staff, graduate students, and postdoctoral fellows for the institute;
- assist Institute students in preparing for graduate school;
- develop seamless pathways between UTSA's undergraduate and graduate programs;
- prepare students for careers in research from an interdisciplinary perspective;
- seek funding for research, travel, and publishing.

Several colleges are also encouraging participation in signature experiences that supplement classroom-based education. The College of Architecture is now requiring its majors to participate in one signature educational experience which can be satisfied by participation in one of the following activities: a long-term study abroad program, a community-based design/build project, or an internship in a local business. The Colleges of Business, of Education and Human Development, and of Public Policy similarly provide a wealth of opportunities for students to participate in internships and outreach activities with local businesses, educational institutions, and community and governmental organizations, respectively.

B. Increasing baccalaureate degrees awarded in the fields identified in *Closing the Gaps by 2015*.

Among the strategies that UTSA is implementing to increase the number of baccalaureate degrees awarded in critical fields are:

- employing our academic units to actively recruit high achievement students in science and engineering fields in an effort to retain them in the state for their higher education;
- adding \$1 million in merit scholarships to enroll talented students;
- providing additional academic support for science and engineering majors in the early stages of their studies to aid persistence in these fields and increasing the frequency of mandatory advising to keep students on track for graduation;
- increasing undergraduate research opportunities in these areas, as outlined above;
- providing summer research opportunities to stimulate interest in technical fields;
- collaborating with community colleges to provide a more seamless transition to UTSA for transfer students; and
- helping students near completion to finish their degrees in a timely manner through our Graduation Initiative.

To highlight the last of these points, the university's Graduate Initiative Office has identified barriers to students' graduation and has made recommendations to remove those barriers. It has instituted programs such as the Late Intervention Program that provides outreach to fifth-year, freshman cohort students. Retention and Graduation Analysts work one-on-one with program participants, encouraging them to earn their degrees within 6-years and provide the Graduation Incentive Award, a financial grant, as an incentive.

This successful program was a 2009 recipient of the Texas Higher Education Coordinating Board's Star Award. The Graduation Initiative recently launched its *Welcome Back Program*, a stop-out recovery program focused on identifying former UTSA students who were close to achieving their undergraduate degree and inviting them to return to the institution to do so. Using a case-managed approach and a small, \$1,000 financial grant, a Retention and Graduation Analyst works with participants to help them navigate university procedures and policies and achieve their goal of graduation with baccalaureate degrees.

Moreover, the university has instituted a policy that requires each student to visit an academic advisor prior to earning 45 semester credit hours to receive an individualized semester-by-semester degree plan giving the student a "roadmap" to graduation. Also, students are required to visit an academic advisor prior to earning 90 semester credit hours to receive a pre-graduation audit to ensure that they are on track toward graduation. The purpose of these policies is to reduce the time to graduation for our undergraduates.

The university also continues to add new undergraduate degree programs to its inventory to meet the needs of our students and the demands of the critical fields identified in *Closing the Gaps by 2015*.

- The Department of Electrical and Computer Engineering has received approval to offer a Bachelor of Science degree in Computer Engineering beginning Fall 2010; and
- The Biomedical Engineering Department currently offers M.S. and Ph.D. degrees. It is seeking to launch a baccalaureate program in the next two years.

IV. Plan for Doctoral Programs

Existing Doctoral Programs

A. Summary

The doctoral programs that UTSA has introduced in the last ten years have been developed to support and enhance the institution's existing research strengths and strategic plans for growth. Each program contributes to UTSA's goal of attaining premier research university status. UTSA's 21 existing doctoral programs share many important strengths that contribute to the near-term and long-range plans of the institution:

- Doctoral student enrollment is increasing (up over 18% between Fall 2008 and 2009). This is consistent with UTSA's strategic goal of increasing graduate student enrollment. This suggests that our doctoral programs are developing a regional and national reputation, and that UTSA is becoming an institution of first choice for a growing number of doctoral students.
- Doctoral students authored or co-authored 1,172 publications and conference presentations during the last three years.
- Students who graduate from UTSA's doctoral programs are successfully employed in academic and nonacademic positions relevant to their respective field of study.
- Doctoral programs are maximizing partnerships that strengthen their ties to the community. For instance, Doctor of Educational Leadership students and Doctor of Philosophy in Counselor Education and Supervision students participate in internships in community schools and agencies, and many are employed by community organizations. Similarly, the Ph.D. in Business with a concentration in Information Systems places many of its students in internships and jobs in the growing IT and cyber community in San Antonio. Southwest Research Institute (SwRI) relies on UTSA as its primary source of scientists and engineers.
- UTSA is committed to hiring high caliber faculty members who are research-active with distinguished publications and impressive records of securing external funding. Over the past three years, UTSA has hired 144 new faculty committed to continuing this trend.
- UTSA provides the infrastructure to support existing and planned doctoral programs, including the updating and expansion of IT and library resources, laboratory facilities, and support for developing, submitting, and managing external grants.
- UTSA offers unique doctoral programs that provide students opportunities to gain training from both UTSA faculty and faculty from partner institutions, such as the Biomedical Engineering Ph.D. program, offered in partnership with the UTHSCSA and

the Physics Ph.D. program, offered in partnership with SwRI. UTSA also offers some unique doctoral programs, such as the Ph.D. in Applied Demography that provides students from a variety of academic backgrounds with the opportunity to develop skills that will provide them with the ability to provide expertise and leadership in demographic research.

B. Quality Control

UTSA has no doctoral programs with low graduation rates or that do not meet other standards of excellence. There are no plans to close or consolidate any of the existing doctoral programs. However, the university is considering broadening the scope of some of its existing programs to serve a larger base of students and faculty research interests. This will enable the accumulation of a greater “critical mass” of appropriate expertise among our faculty (by drawing on a broader base of faculty), and lessen the pressure to add new doctoral programs that could have low enrollment issues.

C. Quality Enhancement

Most of UTSA’s doctoral programs have been implemented within the last ten years and are therefore still growing and establishing their reputations and visibility. Although they are making excellent progress, there remain areas that need to be addressed if we are to become nationally prominent. In order to enhance the quality of these programs, our strategies include addressing the issues highlighted in the following sub-sections.

1. Recruiting

UTSA strives to attract the best and brightest students. The Graduate School and the academic colleges are partnering to recruit highly qualified undergraduate and masters’ students. We have developed strong pipelines from other institutions in the UT System, such as UT Brownsville and UT Permian Basin, and target prospective applicants in the South Texas Region.

We plan to continue and expand on these successes by increasing our efforts to recruit nationally and internationally, and committing additional resources to do this. We recognize the need to increase our yield rates among national and international applicants, and are devoting more resources to making competitive offers to the best students from these applicant pools.

2. Diversity

UTSA is ranked third nationally in the training of Hispanic STEM graduates thanks to the efforts of the Colleges of Science and Engineering. This provides a great potential source of diverse students for our graduate programs. Although the diversity of the students in UTSA’s doctoral programs is above (and in many cases significantly above) national

averages for the specific field, we are committed to further enhancing the diversity of our student population. To do this, we are increasing efforts to recruit UTSA undergraduate and graduate students, and to strengthen our pipelines with regional institutions of higher education.

We recognize the need for increased graduate fellowship funding to allow us to make competitive offers to students from diverse backgrounds. One strategy we are utilizing to address this is to have academic colleges partner with our Office of University Advancement to secure more external donations that can be used for the purpose of increasing the diversity of our doctoral student population.

A second strategy is to increase the amount of grant funding that is targeted for support of minority graduate students. Yet another strategy is to increase recruitment at events that have a large minority student population attendance, such as Society for Advancement of Chicanos/Latinos and Native Americans in Science (SACNAS). In addition, many of the colleges have initiated efforts to increase diversity. For instance, the College of Sciences has created a position of Associate Dean for Diversity; and the College of Business has assisted each department to develop a diversity plan for recruitment and is participating in a project designed to increase minority student participation in doctoral programs in business.

At the university level, the provost has formed a Diversity Advisory Board to provide guidance and advice concerning a number of diversity issues, including recruitment of faculty and students, but also dealing with the campus environment, the curriculum, and other factors that contribute to a thriving multicultural environment.

3. Student Support

The strategies outlined above are also being utilized to increase funding to support students through stipends, work opportunities, and student travel to conferences. For instance, the president allocates a major percentage of the funds earned through the Presidential Scholarship Dinner to providing Presidential Dissertation Fellowships to students conducting dissertation research. This year, the president also allocated \$30,000 Presidential Recognition Scholarships to graduate students who have excelled in the areas of teaching, research, and/or service to their discipline.

The university has also initiated programs to assist with graduate student development as teachers. Part of the graduate student orientation program now includes workshops to develop sound instructional practices and all teaching assistants are now required to undergo training through our Teaching and Learning Center. Two years ago, the provost launched the University Teaching Fellows program which provides enhanced teacher development training and a special stipend to a select number of graduate students across the university. These University Teaching Fellows play an important role in developing new teaching methods, assisting both faculty and fellow teaching assistants, and in raising the quality of undergraduate education.

4. Space

UTSA has grown at a pace that has caused a space shortage (see Section VI.A. *Research Facilities*). The administration is committed to ensuring that doctoral programs have sufficient space for faculty and student research, and for other activities that support students' academic progress. Major new research facilities have recently been added and are detailed below.

5. Retention and Graduation

Although time to degree and retention rates at UTSA are consistent with national averages, our goal is to reduce time to degree and to increase retention rates. For several years, we have required each doctoral program to document student progress on a yearly basis through a doctoral progress report, which is submitted to their academic college and the Graduate School. Follow-up information is obtained about students who are identified as not making satisfactory progress; and, programs are required to report what actions were taken to assist each identified student.

In addition, each year, the university increases the number of workshops and other services provided for the purpose of enhancing graduate student success and increasing retention. The Graduate School has added the staff position of Assistant Director of Graduate Student Recruitment and Retention who devotes approximately 80% of his time to monitoring graduate student retention and working collaboratively with other campus units to provide and coordinate the offerings of retention services.

D. Comparisons with National Peers

As part of the implementation process of the [Strategic Plan](#), UTSA has selected a number of aspirant universities to gauge our progress toward Tier 1 status. The aspirant institutions are a group of medium-to-large public universities without medical schools in large metropolitan areas whose key performance characteristics are currently higher than UTSA's. Those institutions whose performance might be reached within the time frame of the current Strategic Plan (2016) comprise the near-term aspirants. Conversely, long-term aspirants represent a group of institutions whose performance levels might be reached by UTSA in a somewhat longer timeframe.

Table 3: National Aspirants

Short-term aspirants: <ul style="list-style-type: none">• Arizona State University• University of California, Riverside• University of Connecticut• University of Central Florida• University of Oklahoma	Long-term aspirants: <ul style="list-style-type: none">• University of California, Santa Barbara• University of Colorado, Boulder• Rutgers University• The University of Texas at Austin
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Each of the doctoral programs developed an additional list of specific aspirant list of universities which the doctoral programs administered in their units will be benchmarked.

New Doctoral Programs

A. Areas of Emphasis

UTSA plans to develop doctoral programs that complement and are consistent with the five areas of UTSA’s research excellence as identified in our institution’s Strategic Plan (health, security, energy and environment, human and social development, and sustainability). Adding doctoral programs that complement these areas will help to attract and maintain top-caliber faculty researchers who will contribute to our strategic goals, and will provide students with opportunities to work on cutting edge research projects with faculty mentors who are leaders in their respective fields. Table 4 below displays a list of programs that are being planned or that are under review by UTSA, the UT System, or the Texas Higher Education Coordinating Board, as well as the strategic areas of research excellence that each will complement.

B. Assessment

For over two decades, UTSA has conducted rigorous, periodic reviews of all graduate programs and all reviews involve external evaluators. Recently, revisions were made to this process in accordance with changes suggested by the UT System administration, and the revised review process is outlined in Section 2.39 of UTSA’s Handbook of Operating Procedures (Appendix B).

Table 4: Planned New Ph.D. Programs

Strategic Area(s)	Degree	Program under Development	Status
Energy; Security; Sustainability	Ph.D.	Mechanical Engineering ¹	Under review by THECB
Health; Security; Human & Social Development	Ph.D.	Psychology ²	Revision for CB in progress
Sustainability; Human & Social Development	Ph.D.	Economics	Final draft in preparation for submission to UT System
Health; Human & Social Development	Ph.D.	Child Development	Revision to THECB in progress
Health; Human & Social Development	Ph.D.	Translational Science ³	Proposal under development

1. Planned in collaboration with the Southwest Research Institute.

2. Planned in collaboration with UTHSCSA and the Center for Military Medicine at Brook Army Medical Center,

3. Joint program with UTHSCSA, UT School of Public Health, Houston, and UT Austin College of Pharmacy.

Beginning in the 2009-10 academic year, UTSA adopted a review process where all programs in a specific discipline are reviewed simultaneously by external review teams. Follow-up meetings are conducted one year after each review, for the purpose of determining the degree of progress that a reviewed discipline has made toward addressing suggestions/recommendations from the review. If the provost and vice-provost and dean of Graduate Studies determine that adequate progress has not been made, the discipline must submit an action plan, and progress will be followed each year until adequate progress has been made.

C. Regional Impact

In addition to complementing one or more of the five areas of identified collaborative research excellence, UTSA's planned doctoral programs are designed to meet specific regional needs. Examples of programs that are intended to provide students with skills that can contribute to regional needs include:

- Ed.D. in Child and Adolescent Development, designed to address Closing the Gaps in Educational Attainment needs. Progress will be measured by the number of graduate student dissertations that address problems designed to contribute to closing the gaps, as well as by the number of program graduates who are employed in Texas working on issues directly or indirectly related to improving children's academic success.
- Ph.D. in Psychology, designed to contribute to the military's effort to centralize care designed to address the health-related needs of military personnel, veterans, and their family members in San Antonio. Progress will be measured by the number of graduate student dissertations that address problems designed to address health-related needs of the target population and by the number of program graduates who are employed in positions that include conducting research and related activities addressing military health-related needs.
- Ph.D. In Economics, designed to contribute to positive economic growth in South Texas Region. Progress will be measured by the number of graduate students placed in internships in organizations that contribute to the economy of South Texas, the number of graduate student dissertations that address problems that affect economic development in South Texas, and the number of graduates who are employed in organizations that contribute to the economy in South Texas.

V. Plan for Faculty and Student Development

A. Faculty Research

As UTSA moves toward Tier 1 status, it is essential that the university work toward optimizing the environment of research productivity. A number of strategies are being implemented to allow faculty to become more innovative, productive, and efficient, including:

- increasing creative innovation by establishing new work-load expectations that encourage more effort for research and creative activities;
- providing greater recognition of research accomplishments through the promotion and tenure and annual evaluation process at all levels of review;
- awarding seed grants for high-risk collaborative research proposals, as well as opportunities for off-campus collaborators and sabbatical opportunities are also being encouraged to allow faculty to develop new research skills and creative opportunities;
- expanding core facilities for research (e.g. Microscopy, Imaging, and Proteomics/Genomics Centers) to allow faculty to increase collaborations;

- supporting mentoring programs for new faculty through institutional research programs for Hispanic serving institutions (e.g. RCMI); and
- implementing an expanded and integrated program on the Responsible Conduct of Research (RCR), which will involve not only students, but technicians, postdoctoral fellows and faculty.

UTSA has implemented electronic submission of grants, time and effort reporting, and electronic management of research compliance. This currently covers issuers of conflict of interest, but is being expanded to cover IRB, IACUC, IBC and Export Control. These automated services will decrease effort and turnaround time for faculty and increase efficiency and accuracy. Similarly, the VPR website has become an indispensable one stop shop with quick links making grant proposal preparations, submissions, and management much more efficient. A 24/7 assistance research hotline has been implemented.

B. Faculty Recognition

To be a premier institution, it is essential that the faculty be recognized as the leaders in their disciplines. In addition to the efforts made to increase our national visibility, detailed in Section VII, several steps are being taken to assist faculty in achieving national recognition. These include

- nomination of faculty
 - to serve on national research review panels (e.g. NIH Study Sections),
 - as members of research policy making committees/groups;
 - for national and international research awards and recognition such as the National Academies;
- assisting faculty in organizing and chairing major national and international research conferences and meetings; and
- providing funding for junior faculty to attend conferences and meet with other leaders in their areas of research.

In-house seminars, symposia and national/international conferences at UTSA also provide excellent opportunities to profile our faculty and research facilities. Research achievement awards are given to faculty by each college.

C. Collaborations and Partnerships

Educational and research collaborations and partnerships are central to broadening and strengthening the opportunities for research and graduate education, and UTSA has arguably some of the best opportunities for research partnerships in Texas. Some examples of external research partnerships which are playing a major role in UTSA's effort toward becoming a premier research university include:

- **University of Texas Health Science Center at San Antonio (UTHSCSA):** The San Antonio Life Science Institute (SALSI) has become a model for

collaborations between universities and medical schools. Joint graduate programs (e.g. biomedical engineering, applied statistics, neurosciences) and multidisciplinary research programs e.g. aging, health care disparities, medicinal chemistry, regenerative medicine, Vaccine Center) are already established and are expanding. SALSI commits all its funding (\$8 million for the biennium) toward funding of collaborative research between UTSA and UTHSCSA.

- **UT Brownsville:** UTSA offers a collaborative doctoral program with UT Brownsville in Physics and is developing two further collaborative programs in Cell and Molecular Biology and Neurobiology. UTSA offers doctoral programs to UTB resident students, and UTSA students can take and transfer UTB courses that satisfy the requirements of their respective doctoral program. A 10-week summer program at UTSA has also been developed to identify and mentor students from UTB who are matriculating to graduate studies at UTSA.
- **UT Permian Basin:** UTSA has developed a similar agreement with UT Permian Basin to offer the Doctor of Educational Leadership on that campus. This program has just begun with its first cohort of students in the Spring 2010 semester.
- **UTHSC Houston:** The College of Business and the College of Public Policy are collaborating with the UTHSC School of Public Health, Houston, to offer both a dual MBA/MPH degree and a dual Ph.D./MPH degree, with the Ph.D. In Applied Demography.
- **UT Austin:** UTSA and UTHSCSA are collaborating with counterparts, the UT Austin College of Pharmacy and UT School of Public Health, to develop a joint Ph.D. program in Translational Science.
- **Southwest Research Institute (SwRI):** With an annual research budget approaching \$600 million, SwRI has become a world leader in research in the physical sciences and engineering and a major partner with UTSA. Initial joint research and education programs in Physics/Astrophysics are being expanded into areas of Mechanical Engineering, Energy, Chemistry and Chemical Engineering.
- **Southwest Foundation for Biomedical Research (SFBR):** With its Biomedical Safety Level 4 (BSL4) facilities for containment of pathogens and its non-human primate center, SFBR is collaborating with UTSA's *South Texas Center for Emerging Infectious Diseases*. UTSA has initiated a three-way partnership with SFBR and UTHSCSA for the joint development of the San Antonio Vaccine Center.
- **CPS-Energy (CPSE) and San Antonio Water System (SAWS):** UTSA's *Institute for Conventional, Alternate and Renewable Energy (ICARE)* includes not only SwRI, but the local providers of power (CPS-Energy) and water (SAWS). These partners work closely with ICARE in developing strategic and tactical plans for meeting the energy needs of South Texas.
- **Military:** The military in San Antonio offers unique collaborations in research. These include; the Army Ft Sam Houston, and Air Force (Randolph, Lackland, and Brooks AFBs). UTSA has MOUs with Lackland AFB and Ft Sam Houston, - 59th Medical Wing; CRADAs with Lackland AFB, 688th Info Operations Wing; and partnerships with the Center for the Intrepid and the VA Audie L. Murphy

Hospital in rehabilitation efforts; clearances for special projects and MOUs with Joint Information Operations Warfare Command and the Information Operations Center at Lackland AFB. These collaborations are currently focused primarily on Security and Health. In addition, collaborations in regenerative and rehabilitation medicine (e.g. regeneration of long bones in wounded warriors) are being explored with the Institute of Surgical Research at BAMC.

- **Governments and Industry:** UTSA is expanding a number of contracts and research programs with local governments and industries (e.g. in the Health, Energy, and Security programs). For example, *BioMed San Antonio* links UTSA to the health industry of the community and assists in developing collaborations with pharmaceutical and medical device industry. The Chambers of Commerce, Mayor's Office and city and county governments are major partners in the energy programs being spearheaded by UTSA's *ICARE*. State and city governments and local companies such as Rackspace and the Denim Group, partner in information security headed by UTSA's *Institute for Cyber Security*.
- **South Texas Technology Transfer Management (STTM):** This partnership allows UTSA's discoveries to be commercialized and moved to the marketplace. The program integrates all intellectual property from UTSA, UTHSCSA, UT Brownsville, UT Pan-American and several private and public entities. This commercialization partnership offers a robust IP portfolio, full services, and resources to incubate and accelerate discoveries from UTSA to the marketplace.

D. New Faculty

Recruiting and retaining top faculty is a priority for becoming a premier research university. This past year we appointed 53 new tenured/tenure track faculty members, most of whom we recruited from prominent research universities, and nearly half coming from underrepresented groups. The provost, VPR and the deans employ a number of strategies to recruit top-tier faculty to our campus. These include:

- **Recruit world-class leaders:** UTSA has recently recruited world-class leaders in the life sciences, cyber security, physics, and energy. In the coming years we will focus efforts on medicinal chemistry, energy and vaccinology.
- **Utilize research partners to help recruit:** The use of research partners such as SwRI, UTHSCSA, and SFBR markedly enhances the opportunity to recruit top research faculty, especially in engineering and the sciences. Faculty search committees, which include members from our research partners, broaden our scope of candidates and enhance the potential to hire.
- **Establish attractive recruitment packages:** In order to recruit established leaders in the sciences and engineering, it is necessary to put together multi-million dollar recruitment packages. This has been facilitated by our research partnerships and by leveraging UTSA funds with support from the UT System (e.g. STARS program) and the State of Texas (e.g. Emerging Technology Fund).
- **Create an environment for faculty success:** Part of recruiting high quality faculty is demonstrating that UTSA has the infrastructure to support their success.

We have worked hard to ensure that our research facilities, especially in the sciences and engineering, are top-notch. Part of what we “sell” to faculty candidates is the opportunity for research collaboration with the community (see above), the quality of life, low cost of living in San Antonio, and the relatively healthy Texas economy.

- **Recruit from states hard hit by the national economy:** We have asked the deans to look especially at potential senior hires from states known to be experiencing furloughs and other higher education cost-savings measures that may make Texas and UTSA more attractive.
- **Accelerate the faculty recruiting schedule to make earlier appointments:** Our goal in recruiting top faculty is to complete the search process and make offers early in the recruitment cycle. This enhances the opportunity to select from the best quality and most diverse candidates on the faculty job market.
- **Utilize a mixture of junior and senior appointments:** As we focus on our areas of excellence in which to grow faculty expertise and quality, we seek active senior faculty who have experience to “seed” the effort. Ideally, we are looking for faculty who want to engage in program-building, and who will serve as models and mentors for younger faculty. We follow these appointments with several junior-level faculty appointments, with a special effort to recruit from top-tier graduate programs.

E. Student Awards

UTSA has already implemented several initiatives to increase the number and prestige of undergraduate student competitive awards— these are outlined below.

1. Merit Scholarships for Undergraduates

The *University Excellence Fund* makes available presidential scholarships to colleges to award to undergraduates who have demonstrated high academic achievement. Moreover, with the support of many generous donors, several of the colleges also offer a variety of competitive and prestigious scholarships. In addition, the Honors College offers several competitive and prestigious awards, such as the Terry Scholarship and the Peter T. Flawn Presidential Honors Scholarship. New Undergraduate Research Awards are also given by the Honors College Undergraduate Research Institute.

2. Student Training Grants

The university has procured several grants that provide training and financial support for students in critical areas identified by *Closing the Gaps*. These include the Minority Access to Research Careers (MARC), Undergraduate Student Training in Academic Research (U*STAR) program, the Minority Biomedical Research Support (MBRS), the Research Initiative for Scientific Enhancement (RISE) program, the Hispanic Leadership program in Agriculture and the Environment, the McNair Scholars program, and the Louis Stokes Alliance for Minority Participation (LSAMP) program. The RISE program also supports doctoral students.

3. *National Scholarships and Fellowships*

The Honors College has created a position of Assistant Director for National Scholarships and Fellowships. This individual works with students who are candidates for prestigious awards such as Ford Foundation Fellowships, Rhodes Scholarships, Barry M. Goldwater Scholarships, Harry S. Truman Fellowships, and National Science Foundation Graduate Fellowships. This position is already having a positive impact as UTSA was the only school in its region to have two students as finalists for the Rhodes Scholarship this year.

4. *Graduate Scholarships and Fellowships*

Beginning in 2006, the Graduate School began receiving funds from the President's Scholarship Fund to award as *Presidential Dissertation Fellowships*. These fellowships are designed to assist doctoral students who are in the final stages of dissertation work and who are recognized for their excellent academic performance and the high quality of their research. These awards are very competitive, and the quality of applicants is high.

In Spring 2009, the Graduate School began to offer Presidential Recognition Scholarships to graduate students who are recognized for excellence in research productivity, teaching performance, or service to their discipline. The Graduate School also offers the Beldon Scholarship to an excellent entering Ph.D. student each year. Through increased donor activity, we intend to continue to increase the number of institutional scholarships and fellowships awarded to graduate students.

Beginning in 2008-09, the Teaching and Learning Center implemented the University Teaching Fellows' Program that provides one year of support for graduate students in focusing on excellence in teaching and in conducting research designed to improve teaching and learning. The Teaching and Learning Center also began in 2009 to award competitive awards to graduate teaching assistants who were recognized for their teaching excellence.

5. *Scholarships in Critical Areas*

The College of Sciences has established and directed a number of outreach programs for recruiting and promoting students. These include the regional and state Exxon Science Fair and Junior Academy of Sciences. This year they added the New Horizons to Foster Females in Sciences and hosted the Science Math Coaches events totaling over 2500 students from all over Texas.

In addition to scholarships and fellowships, there are available many positions as graduate research assistants that are funded through university, college, department, or grant funds. As the number of externally grant-funded faculty awards continues to increase, the number of positions that are funded through grants will continue to increase as well.

F. Student Diversity

UTSA has developed an aggressive program for the recruitment and graduation of doctoral students who will contribute to the state's goals of diversity in Closing the Gaps. Specifically, four strategies have been developed and implemented. The summary below outlines these strategies. The specific tactics employed, the progress made in the past year and the resources utilized are detailed in Appendix C. All of these are continually assessed for their effectiveness:

- enhance and expand programs with other institutions to recruit a diverse population of students;
- provide expanded support for academic colleges and offices across campus in recruitment targeting underrepresented populations;
- enhance the Graduate School pipeline programs to recruit talented UTSA undergraduates; and
- facilitate graduate programs to nontraditional students at times and locations more accessible to them.

VI. Other Resources

A. Research Facilities

UTSA's strategy for enhancing its research facilities includes several complementary dimensions:

- a recently completed master plan outlines the future physical development of each of the institution's various campuses, including a projection for needed research space as the university grows to a student enrollment of 35,000 and increases its funded research program beyond \$100 million in annual expenditures;
- the university has set priorities for the near-term development of new facilities, as well as the renovation and adaptive re-use of existing facilities, including:
 - the construction of an Experimental Science Instructional Building and associated renovation of spaces presently housing functions that would move to the new building;
 - the development of expanded library facilities to enable the expansion of the university's collection in support of research activities;
 - the development of a graphics arts and design facility downtown to accommodate growth in our College of Architecture;
 - the construction of an office complex that will free up space in academic buildings and allow for faculty and graduate program expansion;
 - the renovation of spaces that will facilitate the consolidation of academic units currently fragmented across campus; and
- the Office of Space Planning optimizes research space usage on campus through rigorous planning, assessment, and reallocation.

The THECB Academic Space Projection Model for January 7, 2010, showed UTSA with an “adjusted deficit” of 1,047,212 square feet. This is the largest space deficit of all the seven emerging research universities in the state (the average of the other six is 593,863 square feet). While space continues to be a concern, UTSA is fortunate in having benefited from the recent construction of excellent research facilities which include the Biotechnology, Sciences and Engineering Building (2006), the Tobin Research Laboratories (2004), and the Applied Engineering and Technology Building (2010). This latest building provides an additional 145,000 square feet for the delivery of STEM courses, teaching and research laboratories, and faculty and graduate student offices and provides essential growth space in areas such as energy, physics and nanotechnology. Altogether these new research facilities have provided a positive selling point for attracting new research faculty.

A research space allocation system is in the process of being developed and implemented. In this process, a three-year average of funded research and research personnel is quantified for each space. Values for dollar per square foot are then compared with national averages for each discipline. These values are used at the levels of the chairman, dean, and provost to reallocate space for programs that are expanding or contracting.

Because of the recent growth, research administrative offices are currently situated in a variety of locations. In order to increase efficiency and provide a one-stop-shop for faculty, we are constructing a multi-function office complex which is expected to be completed by Summer 2011 at a cost of approximately \$15.25 million (paid from institutional funds). This office complex will comprise 75,000 square feet, and a portion of this space will house central offices for the Office of Sponsored Programs including research compliance, pre- and post-awards and grants and contracts accounting.

Also, UTSA is renovating an existing building on the west side of the Main Campus to develop a sculpture and ceramics facility. This project (approximately \$3.1 million) will provide a highly needed facility for students and faculty. Renovations to three science facilities (Science Building, Life Sciences Lab and Physical Science Lab) will upgrade facilities for physics, chemistry and biology labs. These renovations (\$23.9 million) are being funded by a combination of PUF Funding and Revenue Finance System bond proceeds.

Leased space (University Heights, 57,419 square feet) houses multiple support functions including Human Resources, Grants & Contracts, Accounting, Legal Affairs, Budget, Management Reporting, Controller, Asset Management, Payroll, Travel and Disbursements, Communications, Auditing and Consulting, Art Curator, Office of Information Technology, Telephone Services, Registrar SIS, Undergraduate Studies. Leased space also includes Lockhill-Selma (approx. 9,000 square feet) that houses the Center for Infrastructure Assurance and Security which is a part of the Institute for Cyber Security. The South Texas Technology Management (STTM) Technology Transfer Office is also housed off-campus in a leased space (San Antonio Technology Center, 4,074 square feet).

B. Library Resources

Mirroring the steady increases in student enrollments and research expenditures, the UTSA libraries' materials budget has increased from \$3.7 million in FY2004 to \$5 million in FY2009. During this period, the libraries have expended over \$1.5 million to acquire primary source and core research materials in all formats to support six new doctoral programs and six new Master's programs, as well as fifteen graduate programs that are under development. Librarians work closely with departmental faculty to establish the level of collections necessary for each new program and the libraries purchase the materials necessary for full program support.

In response to the increasing research focus of the university, the libraries have realigned subject specialist librarians to more closely match their assigned areas of collecting expertise. Subject specialist librarians purchase books, journals and databases in support of university degree programs and research. The UTSA libraries employ 32 librarians and archivists, all holding accredited graduate degrees.

In addition to providing reference and instruction services, the librarians constantly monitor the academic publishing environment and purchase content for university programs, adding more than 30,000 volumes each year. The UTSA libraries house over 1,279,564 volumes, over 41,000 periodical and serial titles, and more than 54,000 audiovisual items. The libraries' consortial partnerships with other UT System and Texas academic libraries leverage collective purchasing and lending power, particularly for research-level collections. Collaborative purchasing partnerships with other departments on campus, such as the Office of Sponsored Programs and the College of Business, allow the libraries to provide access to high-demand, costly materials including data sets that are of vital importance to upper-level researchers. Membership in prestigious organizations such as the Center for Research Libraries further extends the libraries' ability to provide access to research collections.

The UTSA Archives and Special Collections serve as repositories for the university's primary source materials, including manuscripts, rare books, and university records. The UTSA libraries provide effective access to additional print and non-print items through an interlibrary loan service. In addition, the libraries provide graduate student-only study spaces for both quiet and collaborative study.

C. Graduate Student Support

Graduate student support comes from a variety of sources (e.g. see also Section V.E. *Student Awards*). The university has allocated funds to support graduate students in their first two years, but it is expected that Ph.D. students in their last portion of their research training will largely be supported as research assistants from research grants and contracts.

Specifically, the university has established and is increasing the following funds to support graduate students for the targeted doctoral programs identified in the Strategic Plan:

- University Graduate Student funds increased from \$6.1 million in FY 2008 to \$7.4 million in FY 2009;
- Student funding from other sources increased from \$1.6 million in FY 2008 to \$2.2 million in FY 2009;
- Valero Energy Corp. funding \$5,000,000 to support graduate fellowships in College of Engineering and College of Business; and
- Academic Affairs is working closely with University Advancement to raise more donor funds to support graduate students through a comprehensive fund raising campaign.

VII. National Visibility

In 2008, UTSA hired a Director of Marketing to develop and implement a marketing plan to increase regional and national visibility and reputation. During the 2008-09 academic year, the first comprehensive research study of attitudes and awareness regarding UTSA was performed. The results of this study were used to develop a centralized marketing plan that would coordinate UTSA external communication messaging for undergraduate and graduate student recruitment and university branding. This marketing plan supports all aspects of UTSA's vision, mission, and core values, as articulated in its Strategic Plan. The three central operational goals that are currently being implemented are:

- to establish consistent brand standards for UTSA in all communication activities;
- to integrate and improve internet media and the websites of UTSA in all marketing communication; and
- to improve the utility, maintenance, and tracking integration of all of the UTSA contact databases.

The three central communication goals that are currently being implemented are:

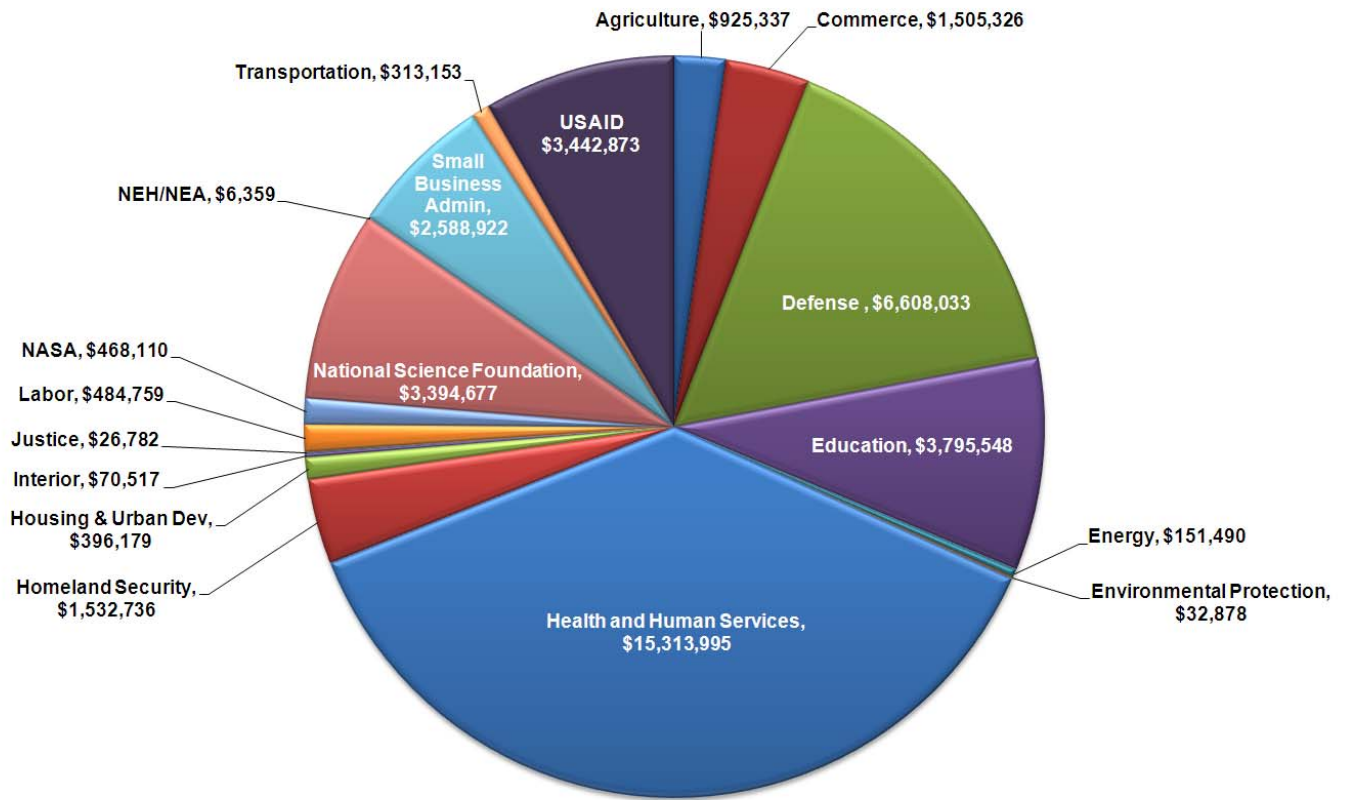
- to create awareness and support for the UTSA Capital Campaign;
- to promote UTSA academics, improving both recruitment and retention efforts; and
- to increase public awareness and positive feeling about UTSA.

UTSA's established research visibility in the life sciences is clearly projected to continue to increase as is its pre-eminence in research and training of Hispanic students. Important emerging areas of national visibility include cyber security, bioengineering, international finance and economics, neuroscience, energy and sustainability, and nanoscale physics. Increased research collaborations with the military will expand beyond these already established (e.g. information and cyber security) to include military medicine, advanced diagnostics, robotics, vaccines, tissue engineering and regenerative medicine. UTSA has the opportunity to become a major partner with the military in these areas.

The multidisciplinary approach of UTSA's centers and institutes will bring colleges such as Public Policy, Architecture, Business, Education and Liberal and Fine Arts into collaborative research and educational programs dealing with sustainability, energy, and social and human development. Integral to all of these issues of national visibility is the great synergy gained with our external research partners and collaborators.

Appendix A

2009 Expenditures by Federal Agency



Appendix B

From UTSA Handbook of Operating Procedures (HOP)

2.39 Academic Program Review

I. Purpose

The University of Texas at San Antonio provides quality programs to students in each of its academic disciplines. Quality programs result from careful, collaborative self-study and reflection by the faculty in each of the disciplines and appropriate stewardship by university administrators.

II. Policy

- A. All department programs shall undergo periodic academic program review.
- B. Reviews shall be conducted by a panel of external reviewers representing expertise in the academic discipline of the programs under scrutiny.
- C. The frequency of program review shall not be more than ten years between successive reviews.
- D. Units subject to periodic specialized accreditation reviews may use those reviews to satisfy this requirement.
- E. Reviews shall be based on organizational units (for example, departments) and shall integrate reviews of all degree programs offered through those units. Exceptions include
 1. Interdisciplinary programs involving multiple departments
 2. Instances where specialized accreditation only reviews the undergraduate or graduate programs (e.g. ABET only reviews undergraduate programs). In this event, the department or college shall separately schedule a complementary review for programs not covered by specialized accreditation.
- F. The vice provost for accountability and institutional effectiveness shall maintain a general schedule of program reviews and will notify the dean, department chair and other appropriate individuals (e.g. program director) no less than eight months in advance of an upcoming review.
- G. The provost's office shall maintain a set of guidelines specifying the process by which external reviews take place. Said guidelines will be made publicly available on the provost's web site.

Provost Guidelines

Process for Academic Program Review

Review Process and Timeline

A Department shall be notified at least eight months in advance that a program review has been scheduled. Upon notification, the program shall implement the following process.

Appendix B (cont)

- A. The review team and its chair shall be established six months in advance of the review.
- B. The Office of the Vice Provost for Accountability and Institutional Effectiveness shall oversee the arrangements for the review visit.
- C. The department shall assemble its self-study materials (see Self-Study Document below) for posting online at least one month in advance of the review team visit and shall notify the reviewers how to access the materials.
- D. Review visits shall typically extend over two days and include the following meetings:
 - 1. an initial meeting on the first day attended by the provost, vice provost for accountability and institutional effectiveness (AIE), vice provost for undergraduate studies (US), dean, and vice provost for the graduate school (GS) with the review team;
 - 2. meetings with department faculty;
 - 3. meetings with students of the department, including both undergraduate and graduates students where appropriate;
 - 4. a meeting with the dean;
 - 5. a meeting with vice provost GS, dean and Graduate Council representatives, when appropriate;
 - 6. other meetings as requested by the review team in advance;
 - 7. unscheduled time for the review team to formulate initial recommendations
 - 8. an exit interview with the provost, vice provost for accountability and institutional effectiveness, vice provost for undergraduate studies, dean, and vice provost for graduate studies.
- E. The review team shall submit a written report of their review as soon as is feasible following the completion of the review visit

Self-Study Document

Departments undergoing a program review shall prepare a set of materials to aid external reviewers in their task of reviewing the strengths, weaknesses, challenges, and opportunities of the unit.

- A. The preparation of materials for a program review should be an inclusive process, involving all faculty to the extent possible.
- B. The materials should include, but need not be limited to, the following:
 - 1. the unit's strategic plan
 - 2. documentation of expected learning outcomes for each of the department's degree programs (described in the department assessment plans and course syllabi)
 - 3. documentation of assessment of student learning outcomes for each degree program

Appendix B (cont)

4. a summary of research productivity, as compiled from FAIR
 5. curriculum vitae for all continuing faculty
 6. program enrollment information
 7. a brief summary statement (no more than ten pages)
- C. Specialized accreditation processes may require other materials in addition to those listed here.
- D. The department's self-study materials shall be posted online for the external reviewers to access at least one month in advance of the reviewers' visit. Printed copies of the strategic plan and the summary statement shall be sent to each reviewer at the time the materials are posted.
- E. A hard copy of or electronic access to all of the materials shall be made available to the chair of the review team during the visit.

External Reviewers

The external reviewers should be senior faculty members at institutions equivalent to the university's aspirant institutions. Whenever possible, the reviewers should be eminent scholars and academic leaders who have achieved national prominence.

- A. Choice of reviewers
1. A department shall propose a list of suitable reviewers to the college dean at least six months in advance of a scheduled review.
 2. The dean shall select a subset of no more than three reviewers from the list provided by the department.
 3. The dean may also choose to add up to two members not on the department list, but the total number of reviewers should not exceed five.
 4. The dean should identify alternate reviewers in the event one or more of the reviewers chosen is unable to commit to the review.
 5. The dean shall consult with the provost and the vice provost GS before finalizing the list of reviewers and alternates.
- B. Once the set of reviewers is finalized, the dean and department chair shall consult to appoint a chair for the review team from among the reviewers.

Review Response

The report of the external reviewers, as well as the response of the department, college, graduate school, and university will be documented in writing.

- A. Following the submission of the written report, the department shall prepare a written response to the review team recommendations and submit that response to the dean.
- B. The dean shall review the unit response and prepare a written recommendation for the provost.
- C. If the review includes graduate programs, the Graduate Council shall review the reviewers' report and prepare a written response to any recommendations involving graduate studies in the unit and submit that response to the vice provost GS.
- D. The vice provost GS and dean shall meet with the provost to discuss the review and their respective recommendations.

Appendix B (cont)

- E. The provost shall meet with the department chair, department's graduate advisor of record (GAR), dean, vice provost GS, and vice provost AIE to discuss the outcome of the review and formulate the final response. For those programs housed at the downtown campus, the vice provost for the Downtown Campus shall also participate in the discussion.
- F. The provost shall provide a written final response to the department indicating any actions the university will take in response to the external review.
- G. One year after issuing the final response, the provost shall meet with the department chair, GAR, dean, vice provost GS, and the vice provost for the Downtown Campus (when appropriate) to review progress in responding to the external review.

Appendix C

Strategy for Student Diversity

Strategy 1: Enhance programs with other institutions to recruit a diverse population of students

Tactic 1: Annual Lone Star Graduate Diversity Colloquium to assist underrepresented Texas undergraduate students to apply and attend a graduate program at UTSA

- Cost: Total cost to host at UTSA \$2525
- Results: 293 registrations, 215 attendees, 293 inquiries

Tactic 2: Graduate School Summer Research Mentor program targeted students at UT Brownsville. This is a 10 week program in which the students work with UTSA faculty.

- Cost: \$200,000
- Results: 15 students participate, 4 applied

Tactic 3: Graduate School information sessions in South Texas (Brownsville, McAllen, Laredo and Corpus Christi) to recruit diverse graduate students.

- Costs: \$10,851; FY09-10 \$5869
- Results: 317 registered, 170 attended, 20 applications started, and 49 applied

Tactic 4: The Graduate School traveled to and made recruiting presentations at UT-Brownsville, UT Pan American and UT Arlington

- Cost: \$539
- Results: 3 information sessions, 75 prospects, and 10 applicants

Tactic 5: Increased contacts with Hispanic Leadership Fund, McNair, Lambda Theta Nu Sorority, and SACNAS

- Cost: Staff time and mail outs
- Results: 5 events and 1119 prospects

Strategy 2: Provide expanded support for academic colleges and offices across campus in recruitment targeting underrepresented populations

Tactic 1: Hired an additional recruiter (July 2009)

- Cost: \$30,000
- Results: 24 additional information sessions hosted, 201 additional walk-in's, 2700 additional phone calls, and 6750 emails answered

Strategy 3: Enhance Graduate School pipeline programs to recruit talented UTSA undergraduates

Tactic 1: Hosted information sessions and events geared for talented UTSA juniors and seniors

- Cost: \$602 for facilities, \$840 for mail out
- Results: 15 events, 252 attended

Appendix C (cont)

Tactic 2: Financial aid outreach specialists attend events, orientation and presentations with the Graduate School

- Cost: Financial Aid funds Outreach Specialists to work with us
- Results: 22 events, reached out to 680 students at these events

Strategy 4: Facilitate graduate programs to nontraditional students at times and locations more accessible to them

Tactic 1: Majority of our M.S. courses in evenings & weekends.

- Cost: None
- Results: 2 new Master's programs offer evening and weekend courses; 43 of the 48 Master's programs offer courses evenings & weekends

Tactic 2: Offer distance learning programs such as the online M.B.A., courses in the Management of Technology Program offered off-site, and the doctoral program in Educational Leadership being offered to cohorts in Permian Basin and the Wintergarten area.

- Cost: Academic college resources
- Results: 2 current and 1 additional distance learning option

Appendix D

ABBREVIATIONS

AAALAC	Association for Assessment and Accreditation of Laboratory Animal Care International
AIA	Accountability and Institutional Effectiveness
ARRA	American Recovery and Reinvestment Act 2009
BAMC	Brooke Army Medical Hospital (San Antonio, TX)
BSL	Biosafety Level
CAP	Coordinated Admission Program
CPS	CPS Energy
CRADAs	Cooperative Research and Development Agreement between a private company and a government agency
CRTS	Center for Research and Training in the Sciences
IACUC	Institutional Animal Care and Use Committee
IBC	Institutional Biosafety Committee
ICARE	Institute for Conventional, Alternative and Renewable Energy
iTEC	Interactive Technology Experience Center
IRB	Institutional Review Board For Protection of Human Subjects
GAR	Graduate Advisor of Record
GS	Graduate School
LSAMP	Louis Stokes Alliance for Minority Participation
MARC	Minority Access to Research Careers
MBRS	Minority Biomedical Research Support
MOU	Memorandum of Understanding
NIH	National Institutes of Health

OSP	Office of Sponsored Programs
PI	Principal Investigator
POC	Proof of Concept grant program
PUF	Permanent University Funds
RCMI	Research Centers in Minority (Serving) Institutions
RCR	Responsible Conduct of Research
RISE	Research Initiative for Scientific Enhancement
SALSI	San Antonio Life Sciences Institute
SACNAS	Society for Advancement of Chicanos/Latinos and Native Americans in Science
SAWS	San Antonio Water System
SFBR	Southwest Foundation for Biomedical Research
SPARC	Short Proposals to Accelerate Research Commercialization
SRPC	Strategic Resource Planning Council
SRA	Sponsored Research Agreement
STARS	Science and Technology Acquisition and Retention
STCEID	South Texas Center for Emerging Infectious Diseases
STEM	Science, Technology, Engineering, Math
STTM	South Texas Technology Management
SwRI	Southwest Research Institute
THECB	Texas Higher Education Coordinating Board
US	Undergraduate Studies
U*STAR	Undergraduate Student Training in Academic Research
VPR	Vice President for Research