

The University of Texas at San Antonio

**STRATEGIC PLAN FOR RESEARCH**

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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. This involves the creation of new knowledge and new perspective and creative activity through research. Our research will also assist the community in identifying solutions to the pressing issues of today. 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 and graduate 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.

Given this vision, we have redesigned the framework for research (see [Research Enhancement Plan](#)).

### *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 targeted seed funding programs to promote innovative ideas and collaborative projects; and
- expansion of support for graduate students in targeted areas and to promote diversity 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 grown by more than 50% 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, Texas Biomedical Research Institute (TX BioMed) and various military installations in San Antonio. Critical senior-level faculty appointments in cyber security, biomedical engineering, infectious diseases,

nanoscale physics, and energy and environment are facilitating 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 an innovative program at UTSA. As a result, disclosures, patents and other IP metrics are growing exponentially. UTSA signed a multimillion dollar licensing contract and Sponsored Research Agreement with *Merck Pharmaceuticals* for vaccine development that formed the foundation for the San Antonio Vaccine Center, spanning UTSA, UTHSCSA, and TX BioMed. Based on new awards received in the past year, we had \$78 million in sponsored programs for FY2011-12. With this growth in research activity, there is increasing opportunity and funding for student participation in research at all levels. The growth in this area has led to the newly formed office of Undergraduate Research within the Office of the Vice President for Research.

### *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 and merit based award 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 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, which presently has approximately 900 students, and the university's Quality Enhancement Plan. Nearly 50% of the Honors College students are engaged in thesis or research-related activities, and plans are to increase this proportion to 70%. The university's Quality Enhancement Plan, the Quantitative Literacy Program, has been launched to improve the quantitative skills of all UTSA baccalaureate graduates. Moreover, UTSA 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*. For example, B.S. degrees in Computer Engineering, Biomedical Engineering, Biochemistry, and Public Health and a dual degree leading to a B.S. in Nutrition and Dietetics and Master of Dietetic Science, have been added recently to our list of degree offerings.

Additionally, the university has embarked on an ambitious project to improve the academic success of undergraduates, which is described in the [Four-Year Graduation Rate Improvement Plan](#). One of the main components of this plan is the Freshman Focus Initiative designed to introduce freshmen to the academy, to improve the overall undergraduate experience at the university, and to better prepare undergraduates to be involved in research and other scholarly experiences through community engagement.

#### *IV. Plan for Doctoral Programs*

*Existing Doctoral Programs:* UTSA’s 24 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 regionally, nationally and internationally. 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. 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: Ph.D. in Higher Education, Civil Engineering, and Math. Table 1 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.

**Table 1: Planned New Ph.D. Programs** (all proposals are currently under development)

<b>Strategic Area(s)</b>	<b>Degree</b>	<b>Program Title</b>
Energy; Security; Sustainability	Ph.D.	Civil Engineering
Energy	Ph.D.	Built Environment
Health; Human & Social Development	Ph.D.	Health and Kinesiology
Human & Social Development	Ph.D.	Education Administration
Health; Human & Social Development	Ph.D.	Sociology
Human & Social Development Security; Energy; Sustainability	Ph.D.	Mathematics
	Ph.D.	Materials Nanotechnology

## *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 targeted 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; Texas Biomedical Research Institute; CPS-Energy; San Antonio Water System; San Antonio Military and Medical Center and other 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
- attract experienced researchers from other premier institutions

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 on 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 pursuing several strategies:

- planning for new facilities is based on the 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.

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. The UTSA Libraries' materials budget has increased from \$4.3 million in FY2007 to \$5.8 million in FY2012. During this period, the Libraries have expended over \$2 million to acquire primary source and core research materials in all formats to support new doctoral, Master's, and bachelor's programs.

### *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, engineering and in business, and its increasing visibility regionally as a school of first choice for students, suggests that those efforts are meeting with success.

We have a centralized marketing plan that was derived from a study of attitudes and awareness completed in 2008-09 which 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. First of all these efforts is branding of UTSA's first capital campaign.

UTSA has achieved international research visibility in many areas including the following: Cyber security, infectious diseases, nanoscale physics, finance and marketing, bioengineering, energy and sustainability, sculpture, sociology of religion, urban and regional planning, historic preservation, education of diverse learners, wellness and nutrition, criminal justice and demography. Integral to all of these issues of national visibility is the great synergy gained with our external research partners and collaborators. One manifestation of this growing visibility is UTSA's listing the past two years among the top 400 universities in the world by The Times Higher Education World University Rankings. UTSA's ranking in this list is greatly enhanced by citations to faculty publications.

## UTSA Strategic Plan for Research 2012

UTSA is committed to achieving premier research status as a minority-serving institution and, to that end, has 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 one of the largest of the UT System academic institutions with outstanding growth in research (e.g. 54% increase in research expenditures over the past 5 years). 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 will have a total student enrollment of more than 30,000 in 2016, with a projected 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), Texas Biomedical Research Institute (TX Biomed), the UT Health Science Center in San Antonio (UTHSCSA), and the Center for Military Medicine (San Antonio Military Medical Center-SAMMC), among others.

As one measure of the efficacy of these approaches, research expenditures were \$54 million (\$78 million total sponsored program expenditures) in 2012, and figure 1 shows that research expenditures have grown by 54% over the past five years.

**Figure 1. Research and Sponsored Programs Statistics**

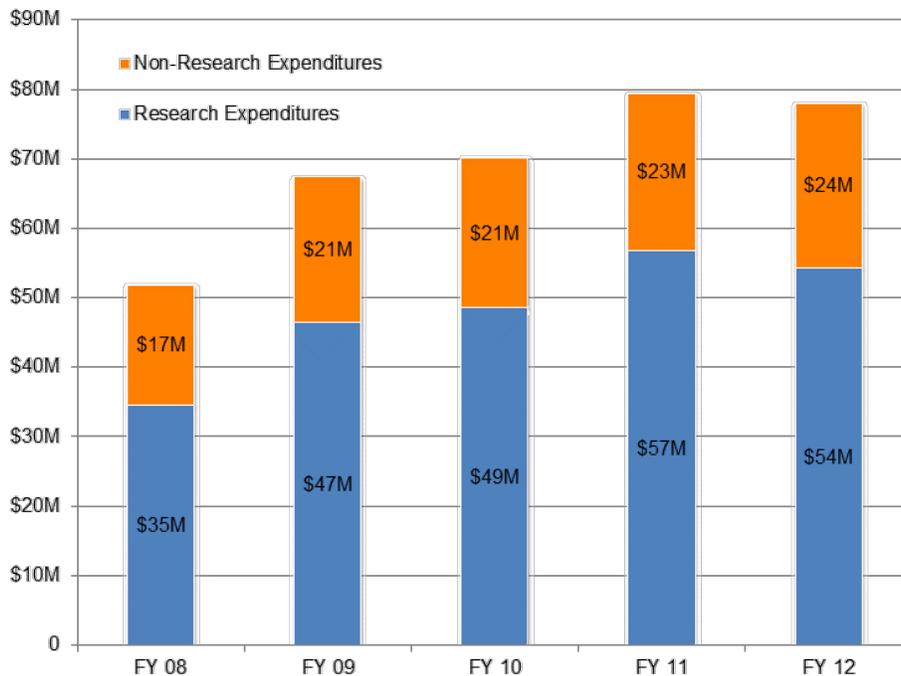


Table 2 displays the distribution of external funding among the university's disciplines. The largest research programs at UTSA are in the "Biological and Other Life Sciences," with expenditures of \$18.9 million followed by Engineering. The College of Engineering is relatively new (established 2000) 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. 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) and medicinal chemistry.

**Table 2 Research Expenditures for UTSA FY2011-12**

THECB Survey of Research Expenditures FY 2011-12 for UTSA							
	Federal	State		Institution Controlled	Private		Total
		Appropriated	Contracts/ Grants		Profit	Non-Profit	
Agric. Sciences	0	0	0	0	0	0	0
Biological and Other Life Sciences	14,477,079	2,006,912	0	1,453,108	58,014	878,253	18,873,366
Computer Science	1,819,164	120,381	0	214,575		107,151	2,261,271
Engineering	5,091,315	1,742,270	1,989,848	1,996,170	83,143	894,337	11,797,083
Environmental Sciences	196,815	30,280	6,151	22,017	0	8,957	264,220
Mathematical Sciences	87,164	7,829	0	13,443	0	0	108,436
Medical Sci.	0	0	0	0	0	0	0
Physical Sciences	2,855,089	451,052	164,636	1,090,426	131,112	874,575	5,566,890
Psychology	127,525	8,744		41,430		88,504	266,203
Social Sciences	578,812	1,396,585	670,488	360,728	192,793	166,296	3,365,702
Other Sciences not class. above	3,725,473	109,787	389,320	353,612		589	4,578,781
Arts and Humanities	38,336	283,237		73,294		37,205	432,072
Business Administration	71,207	689,966		625,942	151,809	519,163	2,058,087
Education	3,603,605	682,732	46,713	233,826	4,288	251,885	4,823,049
Law	0	0	0	0	0	0	0
<b>Total Expend. by Funding Source</b>	<b>32,671,584</b>	<b>7,529,775</b>	<b>3,267,156</b>	<b>6,478,571</b>	<b>621,159</b>	<b>3,826,915</b>	<b>54,395,160</b>

It is anticipated that Health and Human Services and especially the NIH will continue as the major source of research support. For example, UTSA's *South Texas Center for Emerging Infectious Diseases* (STCEID) will continue to be a major strength of life science research and has developed 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).

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 *Texas Sustainable Energy Research Institute* (TSERI). 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 signed a multimillion dollar licensing contract and Sponsored Research Agreement (SRA) with *Merck Pharmaceuticals* for development of a vaccine for *Chlamydia*.

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 (see [UTSA 2016: A Shared Vision](#))— these include
  - *Health,*
  - *Security,*
  - *Energy and Environment,*
  - *Human and Social Development, and*
  - *Sustainability;*
- focus special opportunity hires of senior faculty to these areas;

- providing targeted 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.

UTSA's strategy to promote interdisciplinary and multidisciplinary research is facilitated in part through the creation and support of research centers and institutes. These entities are evaluated on a four-year cycle by an external review committee which visits the campus annually and reviews written and oral reports from each center or institute. The committee files a written evaluation to the Deans Research Council, which is also reviewed by the VP for Research and the provost. These data are used to assess the continuing viability of these units and identify any extraordinary resource needs. 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 in related disciplines;
- 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.

Table 3 (following page) provides a listing of the current university research centers and institutes, and identifies the strategic area(s) of emphasis that each addresses.

In addition to the use of multidisciplinary centers and institutes, UTSA also stimulates research in these focus areas through an active set of seed grant programs. The university is presently in the process of assessing our seed grant programs and re-aligning them, as indicated, to better support the growth of faculty research activity and external funding success.

An important component of the seed grant program is to promote external collaborations among UTSA faculty and collaborators at other institutions. For example, SALSU funds used to seed collaborations between UTSA and UTHSC-SA have resulted in spin-off extramural grants with funding almost twice that of the seed funding. Similar collaborative seed projects have been established with other external partners (*e.g.* SwRI and TX Biomed).

**Table 3: Research Institutes and Centers**

Institute / Center	Strategic Areas
San Antonio Life Sciences Institute (SALSI)	Health; Human & Social Dev.
Center for Research and Training in the Sciences	Health; Human & Social Dev.
Institute for Health Disparities Research	Health; Human & Social Dev.
Simulation Visualization and Real Time Prediction	Health; Human & Social Dev.
South Texas Center for Emerging Infectious Diseases	Health; Security
UTSA Neurosciences Institute	Health
San Antonio Cellular Therapeutics Institute	Health
Center for Innovation and Drug Discovery	Health
Texas Sustainable Energy Research Institute	Energy; Sustainability
Institute for Cyber Security	Security
Center for Infrastructure Assurance and Security	Security
Center for Education and Research in Information and Infrastructure Security	Security
Center for Water Research	Sustainability; Energy
Water Institute of Texas	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
Center for Cultural Sustainability	Human & Social Dev.
Institute for Demographic and Socioeconomic Research	Human & Social Dev.
Center for Research and Policy in Education	Human & Social Dev.
Center for Urban and Regional Planning 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://research.utsa.edu/Research\\_Centers.php](http://research.utsa.edu/Research_Centers.php)

As we actively recruit senior faculty to lead UTSA in these five focus areas, we utilize a special opportunity hiring process to target those who can contribute in meaningful and substantive ways toward the advancement of our objectives. For example, in the current year, we are pursuing high-level senior hires in both chemistry (a \$4.2 million endowed Welch chair) and in the neurosciences. 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 SALSI. This program, established by the Texas Legislature, has provided more than \$10 million over the past four years for collaborative research between

UTSA and the UTHSCSA. Joint grants of up to \$750,000 were 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 has recruited a world-class leader to head this program.

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 have achieved AAALAC accreditation. 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.

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 on campus.

### *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 include 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. This year we are recruiting 66 new tenured/tenure track faculty across all colleges, though the vast majority of these are replacements for faculty who have left the university the new faculty are enhancing our research capabilities. The university has also made allocations of incentive funding to increase equipment and instrumentation, expand our library space and the services it provides on the main campus, add more than \$5 million of support for graduate assistantships, and migrate 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 and materials) needed to launch the research programs of 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 will all be utilized. Strategies such as leveraging salaries from external grants and salary savings generated from vacant positions will also be employed to fund new faculty hires.

A major allocation of resources is targeted at seeding collaborative research, as described in section *B* above. This includes \$750,000 for joint projects under SALSII which is allocated from UTSA for collaborative research programs. Each year about \$500,00 in university resources are 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 increase our allocation toward a collaborative seed program with Southwest Research Institute (SwRI) to \$150,000.

To facilitate and enhance UTSA's external funding and research support, the university has decentralized its sponsored project infrastructure to create several distributed Research Service Centers (RSCs) located in the colleges. The RSCs are supported through F&A recovery and other university sources.

We have completed 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). However, we have recently committed to additional investment in the software to enhance reporting for new conflict of interest and conflict of commitment requirements of the U.T. System. Funding from Research Development Funds and reallocation of institutional resources provide this support.

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

#### *D. Student Participation*

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

- increasing funding available for graduate assistantships;
- appointing a Director of Undergraduate Research (currently underway);
- providing special funding to support summer undergraduate research activities;
- modifying our major 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.

The growth of graduate student enrollment is a result of the efforts to increase graduate student research opportunities and has been stimulated by an important gift that has provided \$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).

In 2009, 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. Each college holds a student research conference in the spring to showcase student research, and many of the colleges also send graduate students to present their research at regional and national research conferences. UTSA has also implemented a process for awarding Graduate Student Research Awards, which will be awarded for the first time in Spring 2013.

The university is also working with younger students to stimulate their interest in research and creative activity 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 (800 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 has partnered with Dean Kamen's FIRST organization to host the regional competition for the [FIRST](#) Robotics Competition for high school students in San Antonio and is now the largest regional completion in the nation. Since 2005, UTSA has managed the ExxonMobil Texas Science and Engineering Fair

### *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, retain, and graduate talented undergraduate students who will successfully achieve their educational goals. At the same time, UTSA is committed to providing access to high-quality educational opportunities to a diverse student population representative of 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 2012 class of new freshmen is comprised of 50% students from the top quartile (25%) of their high school class, with 12% coming from the top 10% of their high school class. This represents a substantial enhancement relative to the entering freshman class of only a few years ago for which less than a third came from the top quartile of their high school class.

We are initiating several new focused strategies to increase the percentage of top quartile and top 10% students, and to essentially eliminate, those from the bottom half of their high school classes. These strategies include:

- **Adjusting our admissions standards** 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. UTSA plans to terminate its participation in the U.T. Austin Coordinated Admission Program (CAP) following this year's admissions cycle. In this program, students who do not qualify for direct admission to U.T. are provided guaranteed admission as a transfer upon completing 30 credit hours at another U.T. institution with a GPA of 3.0 or greater. In addition, UTSA now utilizes a more holistic admissions process for student outside the top quartile of their high school class. This process focuses on 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. UTSA is allocating \$500,000 toward "Top Scholar" grants that will be extended to applicants in the top 5% of their high school class with SAT scores above 1400. In addition, the university is realigning its financial aid resources to support the recruitment of students in the top quartile of their high school classes and emphasizing the solicitation of merit-based scholarships through its capital fund raising campaign. Part of this effort is funded by a large estate gift received by the university in 2009, and a recent expansion of UTSA's participation in the Terry Scholar program.
- **Direct recruiting by academic units** to attract top scholars through personal recruitment efforts. Until recently, academic units were not utilized very extensively in undergraduate recruitment; however, this is changing. 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. UTSA is now purchasing student lists from SAT and ACT to identify highly qualified potential applicants from our region and contact them. Faculty are also encouraged to visit local area schools to reach out to more students and interest them in UTSA's academic programs. Finally, the university has developed over time 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 10 years, UTSA's goal is to increase the percentage of entering freshman graduating from high school in the top quartile of their class from 50% to 85%, or an average increase of 5% each year over the previous year. During the next 10 years, the goal is to increase the percentage of incoming students ranking in the top 10% of their high school class from 12% to 35%. Finally, UTSA enrolls a student body comprised of 53% students from under-represented groups, primarily Latino and African American. Through our recruitment efforts, the university wishes to maintain and even increase this percentage while improving the academic quality of our student population. As the percentage of top quartile students has increased the past couple of years, the proportion of Latino students in the entering class has increased from 44% to 48%. Finally, UTSA is gradually changing the proportions of undergraduate and graduate enrollments with a goal of having graduate student enrollment at 18% of the total student body of 30,600 by 2021.

## 2. Goals for student retention rates:

There is generally a strong correlation between the quality of the entering freshman class and student retention rates. UTSA has already seen an increase in the fall-to-spring retention following the most recent change in admissions criteria. At present the freshman-to-sophomore retention rate among non-CAP students is 70%; including CAP students, it is about 60%. 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, the freshman-to-sophomore retention rate is expected to increase over the next five years to 85%. The retention rate to the third year of study should likewise improve over the next several years to over 75%.

Among the specific initiative used 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 prior to 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 (a new residence hall has been added over the next three years and close by apartments has been added at every faster rate) 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 ~60% 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 the university envisions an increase from the current 12% for the 2009 entering cohort, to 15-20% for the 2015 entering cohort, and to 30-35% in the long-term.

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 issues of retention and completion are the focus of UTSA's [\*Four-Year Graduation Rate Improvement Plan\*](#). Some of the initiatives described in that plan include:

- **Freshman Focus initiative**— Beginning in the fall of 2014, all entering freshmen will be admitted to UTSA through University College, where they will have access to enhanced advising and career counseling as they choose a major field of study. New students will be organized into cohorts of 25, each mentored by an upperclass student. Students will also have a more highly prescribed first semester curriculum which will

include a course in Academic Inquiry and will compel them to complete their core writing and math requirements as quickly as possible upon enrollment at UTSA.

- **Online resources for student communication and advising**— UTSA is developing and/or purchasing multiple software packages that will provide students 24-hour access to advising and degree planning tools.
- **Curriculum streamlining**— All departments are presently studying their major curricula and assessing course prerequisites and curriculum structure to eliminate unnecessary obstacles to student progress.
- **Course availability and scheduling**— The university is studying its course scheduling practices and proposing modifications that would increase students' ability to schedule the classes needed to progress through the curriculum. This effort is constrained by the limitations in available classroom space and the already-high utilization of those spaces.
- **Alternative course delivery**— UTSA is undertaking a comprehensive initiative to examine effective ways of delivering courses, particularly those that must accommodate large numbers of students. Strategies include the expanded use of classroom technology, the development of online and hybrid delivery courses, and the widespread adoption of instructional techniques pioneered by UTSA's best teachers.
- **Summer school expansion**— UTSA has increased its investment in summer school the past couple of years as a means of helping students gain access to high demand courses.
- **Early alert system**— Student success can be greatly aided through academic and financial early alerts that trigger intervention to address emerging problems. UTSA is examining a number of software platforms that may serve this purpose.
- **Policies and incentives**— UTSA is reviewing its enrollment policies and next year will offer special financial incentives to encourage students to complete their degrees in four years. The university is examining policies concerning course withdrawal and repeat enrollment and their role in encouraging steady progress toward degree completion.
- **On-campus employment**— UTSA currently supplements the federal work-study program by \$1.4 million each year to provide more on-campus work opportunities for students. The university seeks to expand on-campus work opportunities further as a means of enhancing student success.

In coordination with the *Four-Year Graduation Rate Improvement Plan*, the *UTSA Advising Plan*, and the *Emerging Research University Business Plan*, the university has recently updated 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. A university wide office of Undergraduate Research is currently being developed through the Office of the VP for Research. This office will focus on mentoring undergraduate students interested in pursuing research and research-based careers. The focus of this office will be to:

- assist in university wide efforts in recruiting students interested in research and research based careers
- provide research, internship and faculty mentoring opportunities
- develop undergraduate research award competitions
- assist students in preparing students 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 undergraduate research travel, and publishing opportunities

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 \$500,000 in merit scholarships to enroll talented students and expanding our participation in the Terry Scholar program;
- 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; and
- collaborating with community colleges to provide a more seamless transition to UTSA for transfer students.

## *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 24 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 6% between Fall 2011 and 2012). 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 2,226 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 86 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 and Translational Sciences Ph.D. programs, offered in partnership with the UTHSCSA and the Physics and Mechanical Engineering Ph.D. programs, offered in partnership with SwRI. The Physics and Educational Leadership doctoral programs have also been extended to other U.T. institutions, including U.T. Brownsville and U.T. Permian Basin, respectively. 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. The university has developed strong pipelines from other institutions in the UT System, and target prospective applicants in the South Texas Region.

UTSA plans to continue and expand on these successes by increasing our efforts to recruit nationally and internationally, and committing additional resources to do this. The university recognizes the need to increase the 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 of Engineering. It is also ranked third nationally for providing opportunities for minority students to earn M.B.A degrees, and UTSA's Ph.D. in English program was honored by Excellencia in Education as one of America's top programs in increasing graduate degree completion among Latinos. 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. One action we have to support this effort is implementing the Provost's Summer Research Program, which provides a diverse group UTSA students and students from regional universities with the opportunity to spend several weeks during the summer working on a research project with a faculty mentor. A second action is the introduction of Minority Recruitment Scholarships, which doctoral programs may use to increase the diversity of their class of entering students.

The university recognizes the need to increase graduate fellowship funding in an effort to make competitive offers to students from diverse backgrounds., One strategy UTSA is utilizing is to have academic colleges partner with the Office of University Advancement to secure more philanthropic 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. In Spring, 2012, Minority recruitment Scholarships were introduced for the purpose of assisting programs in their efforts to recruit excellent minority 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). UTSA is the host and a platinum sponsor for the Fall 2013 SACNAS conference.

In addition, many of the colleges have initiated efforts to increase diversity. For instance, the Colleges of Business and of Sciences have 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 funds to provide Presidential Dissertation Fellowships to students conducting dissertation research. This year, the university allocated funds to award Graduate Student Teaching Awards to students who have excelled in the area of research, and Graduate Student Professional Development Awards for the purpose of helping fund student travel to professional conferences.

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. Four years ago, UTSA 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 severe 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

UTSA continues to work to reduce time to degree and to increase retention rates. We currently have a number of activities that were implemented to meet this goal, such as

requiring annual doctoral progress reports from each program, and offering a series of student success workshops and other services. In addition, UTSA is in the process of implementing several initiatives designed to reduce time to degree and to increase retention rates, in response to the action items that the Chancellor has asked U.T. System institutions to address in his Framework for Excellence. These initiatives include:

- Ensuring that UTSA's academic program review process adheres to the requirements of Texas Administrative Code, Part 1, Chapter 5, Subchapter C, Rule 5.52. As part of this initiative, UTSA will, beginning in Fall, 2012, follow THECB's seven-year cycle for academic program reviews, will submit the outcomes of each program review to THECB and the UT System no later than 90 days after the conclusion of each review, and will verify annually to the UT System's Office of Academic Affairs that UTSA is complying with THECB's review schedule.
- Starting with the 2012-13 academic year, all doctoral programs are reviewed to provide written annual feedback to students about their progress. Each evaluation includes the student's written acknowledgement that the feedback has been received, and any written comments that the student wishes to include, are submitted to the appropriate College Dean's office and to the Graduate School. Action plans for students who are not making good progress are submitted, along with follow-up reports that describe the results of the initiation of those action plans.
- Beginning in Spring, 2012, each doctoral program at UTSA developed a *Milestones Agreement Form* for its students, based on the version of this form that was developed by a task force of U.T. System Graduate Deans and approved by the UT System. The core faculty of each doctoral program, in collaboration with the administrators responsible for each doctoral program, began the process of making additions to the form so that it accurately describes the expectations for students and faculty advisors in their program and provides an accurate, program-specific timeline for reaching each milestone. Programs will introduce these forms to entering doctoral students in Fall, 2012. Students will be required to meet with their faculty advisor to discuss the information included in the form, and the student and advisor will be required to return a signed copy of the form to the doctoral program chair by the end of the student's first semester in the program. UTSA's existing Doctoral Progress reports will be modified so that the each year, the reports provide an accurate description that each students has made toward meeting the expectations included in the *Milestones Agreement Form*.
- UTSA will make available the *MyEDU* career resources that are being developed once they are completed so that students can utilize it as a resource for career and salary information. Until this component of *MyEDU* is completed for graduate students, UTSA will use alternative sources of data, such as annual salary data for professors, as reported by the *Chronicle of Higher Education*, whenever possible.
- Beginning in Fall, 2012, continuous enrollment is now required for all doctoral students.

#### *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. The list of aspirant institutions was revised in the summer of 2012 as part of the goal-setting exercise of the U.T. System, associated with the *Chancellor's Framework for Advancing Excellence*.

**Table 4: National Aspirants**

<b>Short-term aspirants:</b> <ul style="list-style-type: none"><li>• Arizona State University</li><li>• Georgia State University</li><li>• University of California, Riverside</li><li>• University of Connecticut</li><li>• University of Central Florida</li><li>• University of Oklahoma</li></ul>	<b>Long-term aspirants:</b> <ul style="list-style-type: none"><li>• University of California, Santa Barbara</li><li>• University of Colorado, Boulder</li><li>• Rutgers University</li><li>• University of Oregon</li></ul>
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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 emphasis as identified above and introduced 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.

##### *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 U.T. System administration, and the revised review process is outlined in Section 2.39 of UTSA's Handbook of Operating Procedures (Appendix A).

UTSA has a program review process in which all degree 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:

- **Ph.D. in Higher Education Administration**, designed to address closing the gaps in educational attainment needs. Progress will be measured by the number of graduate student dissertations that contribute knowledge to improving the effectiveness of leaders who will train the next generation of teachers and P-16 educational administrators.
- **Ph.D. in Mathematics**, designed to address closing the gaps in educational attainment needs. Progress will be measured by the number of graduate student dissertations that contribute knowledge to improving the effectiveness of math education in K-16.
- **Ph.D. in Health and Kinesiology**, designed to contribute to the military's efforts to centralize care for 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 Materials Nanotechnology**, designed to contribute to the region's development as a leader in the fields of energy use and security. Progress will be measured by the number of graduate student dissertation that address problems designed to add to our knowledge in the fields of energy and security and by the number of program graduates who are employed in organizations related to energy or security after graduation.

## *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 processes at all levels of review;
- awarding targeted seed grants for high-risk collaborative research proposals, as well as opportunities for off-campus collaborators and developmental leave 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, Materials, 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 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.

Finally, the Offices of the Provost and the VPR are currently engaged in collaboratively planning a Faculty Resource/Development Center to be housed in the university library that will provide a range of support services for faculty. These services will cover both instructional and research development needs, and will house seed grant programs to assist faculty with their professional growth.

### *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 (UTHSC-SA):** 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, and 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 (\$1.5 million for the current biennium) toward funding of collaborative research between UTSA and UTHSC-SA.
- **UT Brownsville:** UTSA offers a collaborative doctoral program with UT Brownsville in Physics, and is developing collaborations 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 accepts 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 admitted 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, have developed 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, and Chemistry. UTSA and SwRI collaborate to offer Ph.D's in Mechanical Engineering and Physics.

- **Texas Biomedical Research Institute:** With its Biomedical Safety Level 4 (BSL4) facilities for containment of pathogens and its non-human primate center, TBRI is collaborating with UTSA's *South Texas Center for Emerging Infectious Diseases*. UTSA has initiated and formed a three-way partnership with TBRI and UTHSC-SA for the joint development of the San Antonio Vaccine Center.
- **CPS-Energy (CPSE) and San Antonio Water System (SAWS):** UTSA's *Texas Sustainable Energy Research Institute* includes not only SwRI, but the local providers of power (CPS-Energy) and water (SAWS). These partners work closely with UTSA's Texas Sustainable Energy Research Institute (TSERI) 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, - 59<sup>th</sup> Medical Wing; CRADAs with Lackland AFB, 688<sup>th</sup> 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 SAMMC. UTSA collaborates with several military organizations to train students in the Ph.D. in Psychology Program.
- **Governments, Public Agencies, 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 TSERI. 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 (ICS) and Center for Information Assurance and Security (CIAS). The university also works with public school districts, community agencies, health and wellness clinics, and mental health clinics on a variety of research projects that also serve its public outreach mission.

#### *D. New Faculty*

Recruiting and retaining top faculty is a priority for becoming a premier research university. This past year we appointed 32 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. We are recruiting world-class leaders in areas of excellence. 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 TBRI, UTHSC-SA, and SwRI 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 U.T. 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 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.
- **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.

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 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 NSF Graduate Fellowships.

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 Fall, 2012, the Graduate School began to offer Graduate Student Professional Development Awards to help support graduate students' travel to conferences for the purpose of presenting a research paper or product. In Spring 2013, the Graduate School began to offer Graduate Student Teaching Awards to graduate students who are recognized for excellence in teaching performance, Graduate Student Research Awards, to students who are recognized for their research productivity. The Graduate School also offers the Beldon Scholarship to an excellent entering Ph.D. student each year and Minority Recruitment Scholarships to excellent entering Ph.D. students who are from a group underrepresented in their area of study. 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 TAs 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. The university offers scholarships in critical areas to help students.

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 B. 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 of 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:

- the university's 2009 campus 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 stabilizes at a student enrollment of ~31,000 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 the UTSA College of Architecture Advanced Fabrication and Construction/Sustainable Materials/Assemblies Testing laboratory at the Downtown Campus
- 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.

While space continues to be a major 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 chair, 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, the 75,000 square foot Plaza Norte Building, a multi-function office complex completed in 2011 at a cost of approximately \$15.25 million (paid from institutional funds), houses central offices for the VP for Research, as well as several components of the Provost's Office, ROTC programs, and the Writing Program.

Also, UTSA has renovated an existing building on the west side of the Main Campus to develop a sculpture and ceramics facility. This project (approximately \$3.1 million) provided a highly needed facility for students and faculty. Renovations to three science facilities (Science Building, Life Sciences Lab and Physical Science Lab) upgraded facilities for physics, chemistry and biology labs. These renovations (\$23.9 million) were funded by a combination of PUF Funding and Revenue Finance System bond proceeds. In the same area is the River Science Research Facility established to model the streams found in the Texas hill country

A North Paseo Building is under construction on-campus adjacent to the Plaza Norte Building to accommodate the departments in the leased space at University Heights (57,419 square feet). Departments include 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.

### *B. Library Resources*

Mirroring the steady increases in student enrollments and research expenditures, the UTSA Libraries' materials budget has increased from \$4.3 million in FY2007 to \$5.8 million in FY2012. During this period, the Libraries have expended over \$2 million to acquire primary source and core research materials in all formats to support new doctoral, Master's, and bachelor's programs. Subject specialist librarians work closely with departmental faculty to establish the level of collections necessary to fully support each new program, as well as faculty research.

The Libraries purchase materials in all formats, including books and e-books, e-journals, streaming media, and databases. Quick and easy access to additional materials is facilitated through interlibrary loans and a *Get It For Me* retrieval service, streamlining the process for faculty and students through direct delivery of books and articles. The Libraries also participate in the TexShare reciprocal borrowing system, hosted by the Texas State Library and Archives Commission, which enables UTSA students, faculty, and staff to borrow books from academic libraries throughout the state.

The Libraries employ 35 librarians and archivists who hold accredited graduate degrees, as well as three instructional designers and two instructional technologists. Librarians, instructional designers and instructional technologists support faculty in on several levels. Not only do they assist with course redesign, but also with developing students' critical thinking skills by collaborating on assignments that support students' ability to find, evaluate and use information.

In addition to providing information and instruction services, librarians monitor the academic publishing environment and ensure access to appropriate materials for university programs, adding more than 60,000 print and electronic volumes each year. The Libraries house over 1,774,000 volumes, over 70,000 periodical and serial titles, and nearly 68,000 multimedia 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, high-cost materials, including datasets that are of vital importance to upper-level researchers.

Membership in prestigious organizations such as the Center for Research Libraries and the OCLC Research Partnership further extends the Libraries' ability to provide access to research collections. Recognized as the nation's first bookless library on a university campus when

opened in 2010, the Applied Engineering and Technology (AET) Library caters to the research needs of students in STEM majors. Spaces in this satellite library encourage teamwork, communications and problem solving – skills integral to the success of today’s professional engineers and scientists – and librarians with expertise in STEM resources are available for reference and research consultations.

The UTSA Libraries’ Special Collections serves as a repository for the university’s primary source materials, including manuscripts, rare books, historic photographs, and university archives. Strengths of the collection include San Antonio history, urban development and architecture, regional authors, Mexican cookery, women and women’s history, and the Texas-Mexico border region. Recent acquisitions include the congressional papers of former U.S. Representative Charlie Gonzalez, and the organizational records of the San Antonio River Authority.

A Faculty Resource/Development Center—a collaborative effort between the UTSA Libraries, the Vice Provost for Academic and Faculty Support and the Assistant Vice President for Research Support—will open in 2014. The Faculty Center will provide a collaborative framework for coordinating planning and leveraging resources for faculty development activities. 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 \$10.3 million in FY 2012;
- 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.
- The university will increase stipend amounts for students in five doctoral programs in Fall, 2013, for the purpose of increasing the programs’ ability to compete for outstanding students.

## *VII. National Visibility*

In 2012, UTSA hired a Chief Communications Officer to 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, medicinal chemistry, 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

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 A (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
  - 4. a summary of research productivity, as compiled from FAIR

## Appendix A (cont)

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 A (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 B

### **Strategy for Student Diversity**

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

Tactic 1: Submit an Alliance for Graduate Education and the Professoriate (AGEP) grant proposal to NSF in partnership with UT Arlington and UT Dallas.

- Cost: No cost to write the grant
- Results: Grant proposals are being reviewed by NSF

Tactic 2: Applied for and received an Alliance for Graduate Education and the Professoriate (AGEP) planning grant from NSF (\$150,000 from 2011-2013) in partnership with UT Arlington and UT Dallas.

- Cost: No cost to write the grant
- Results: Funded three meetings and other activities that allowed faculty from participating institutions to work together to develop collaborative strategies for building pipelines for students from comprehensive institutions to doctoral institutions that were included in the full grant proposal.

Tactic 3: Students from institutions in South Texas were recruited for Provost's Summer Research Program. This is a program that provides students with the opportunity to work with a UTSA faculty member on research during the summer and also provides a seminar designed to optimize participating students' professional development.

- Cost: \$50,933.38 in Summer, 2012
- Results: 11 students were funded, including students from UT Brownsville and Texas A & M International; 3 have applied to graduate programs at UTSA

Tactic 4: Continue to participate in the Annual Lone Star Graduate Diversity Colloquium to assist underrepresented Texas undergraduate students to apply and attend a graduate program at UTSA.

- Cost: \$612.00 for Spring, 2013, colloquium
- Results: 37 students from UTSA registered for the event, which was hosted by UNT; 35 students who attended the event inquired about graduate programs contacted the UTSA recruiters with inquiries about our graduate programs.

Tactic 5: Continue to work with UTB to increase diversity of doctoral students in the area of Physics and to offer doctoral education to students in the South Texas region.

- Cost: Administrative costs and cost of travel to UTB 1-2 times a year
- Results: The two institutions are working together to ensure that there is a diverse population of students registered at UTB.

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

## **Appendix B (cont)**

Tactic 1: Continue to work with programs to develop recruitment strategies that are directed at increasing diversity of students in the programs.

- Cost: Cost is staff time
- Results: Approximately 2 meetings a month with representatives of specific programs to develop recruiting plans.

Tactic 2: Work on cross-campus team to provide assistance with the activities involved in hosting the SACNAS conference in San Antonio in 2013.

- Cost: Cost is staff time
- Results: Will be reported after the SACNAS conference

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

Tactic 1: Recruit talented students from UTSA to participate in Provost's Summer Research Program (see Strategy 1; Tactic 3).

Tactic 2: Hosted information sessions and events to recruit UTSA juniors and seniors who have been identified as high-achieving.

- Cost: Approximately \$1500
- Results: 12 events; approximately 366 attendees

Tactic 3: Financial aid outreach specialists attend recruiting events and new student orientation with the Graduate School staff members.

- Cost: Staff time
- Results: 115 events with approximately 2,233 students attending

### **Strategy 4: Offer graduate programs to nontraditional students at times and locations more accessible to them**

Tactic 1: The majority of UTSA's master's courses are offered during evenings or weekends

- Cost: Standard operating costs for course offerings
- Results: Master's students who work or have other responsibilities during the standard working day are not prohibited from taking courses/earning a master's degree.

Tactic 2: Develop more online and hybrid courses

- Cost: Cost is staff and faculty time
- Results: This initiative is in progress

## Appendix C

### **ABBREVIATIONS**

<b>AAALAC</b>	Association for Assessment and Accreditation of Laboratory Animal Care International
<b>AIA</b>	Accountability and Institutional Effectiveness
<b>ARRA</b>	American Recovery and Reinvestment Act 2009
<b>BSL</b>	Biosafety Level
<b>CAP</b>	Coordinated Admission Program
<b>CPS</b>	CPS Energy
<b>CRADAs</b>	Cooperative Research and Development Agreement between a private company and a government agency
<b>CRTS</b>	Center for Research and Training in the Sciences
<b>IACUC</b>	Institutional Animal Care and Use Committee
<b>IBC</b>	Institutional Biosafety Committee
<b>TSERI</b>	Texas Sustainable Energy Research Institute
<b>iTEC</b>	Interactive Technology Experience Center
<b>IRB</b>	Institutional Review Board For Protection of Human Subjects
<b>GAR</b>	Graduate Advisor of Record
<b>GS</b>	Graduate School
<b>LSAMP</b>	Louis Stokes Alliance for Minority Participation
<b>MARC</b>	Minority Access to Research Careers
<b>MBRS</b>	Minority Biomedical Research Support
<b>MOU</b>	Memorandum of Understanding
<b>NIH</b>	National Institutes of Health
<b>OSP</b>	Office of Sponsored Programs

## Appendix C (cont)

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