

II. Teaching, Research, and Health Care Excellence

Values

- Pursuing excellence and innovation in the discovery, dissemination, integration, and application of knowledge for the benefit of the individual and of society.
- Providing high-quality educational programs, informed by research and clinical practice, to its undergraduate, graduate, and professional students.
- Providing leadership, as well as scholarship, in health-related, academic, and professional fields.

Goals

- Exceed national and international benchmarks in research and education in academic, professional, and health care fields.
- Excel in the diagnosis, treatment, and prevention of disease and in health promotion.
- Integrate new discoveries with existing knowledge in outstanding educational programs to impart to students competencies, compassion, and the ability to engage in lifelong learning.
- Integrate new discoveries with existing knowledge to provide excellent and compassionate patient care.

Priorities

- Increase success in securing sponsored funding.
- Recruit and retain a dedicated and diverse faculty and staff of the highest caliber, characterized by integrity, credibility, and competency, and recognized for exemplary performance, productivity, and vision.
- Enhance academic programs and create new programs as needed regionally or in the state for continued excellence.

System Research Funding Trends 2000-2004

Table II-1

**Total U. T. System Research and Research-Related Expenditures
2000-2004**

	(\$ in millions)				
FY	2000	2001	2002	2003	2004
Academic	\$368.3	\$405.2	\$459.9	\$480.9	\$495.0
Health-Related	676.0	758.7	896.8	970.7	1,046.5
Total	\$1,044.3	\$1,163.9	\$1,356.7	\$1,451.6	\$1,541.5

Source: "Survey of Research Expenditures," Texas Higher Education Coordinating Board

- In FY 2004, U. T. System health-related and academic institutions together generated research and research-related expenditures totaling over \$1.5 billion. In the period from FY 2000 to FY 2004, this total has increased by 48 percent, and reflects an average annual increase of 11 percent.
- Health-related institutions generate approximately two-thirds of total U. T. System research and research-related expenditures.

Figure II-1

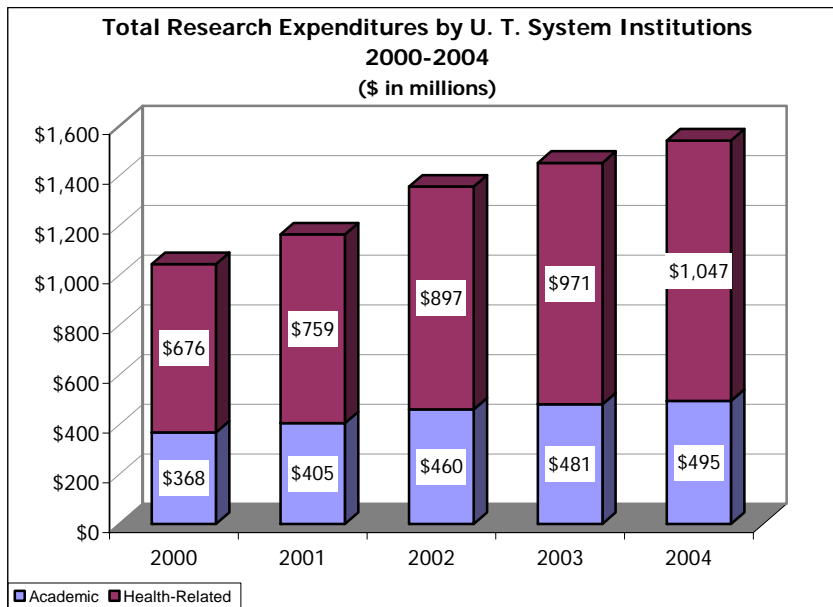
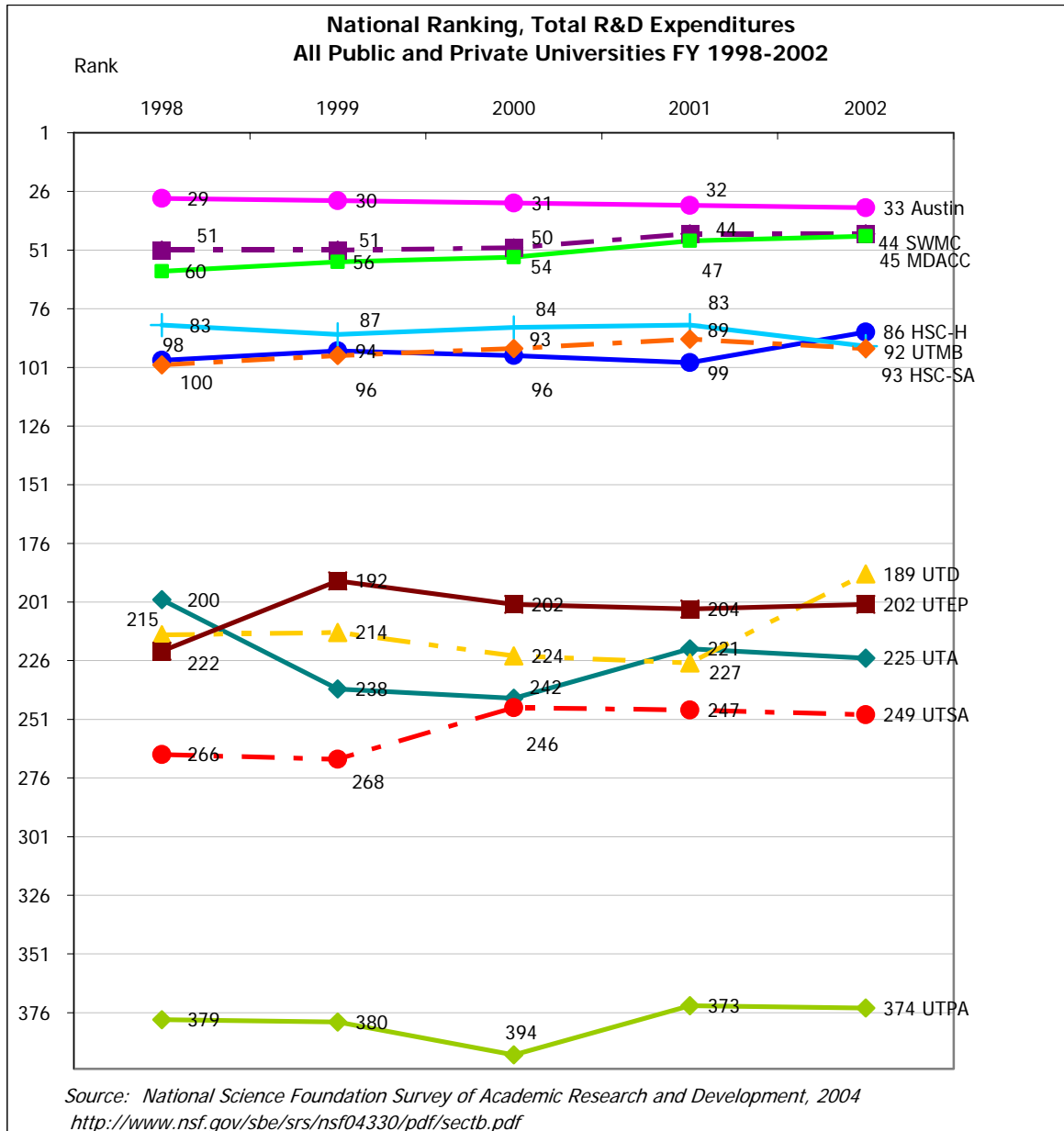


Figure II-2



- U. T. System institutions rank highly in terms of total research and development expenditures. The most recent ranking, based on an annual National Science Foundation Survey, covered the period through FY 2002, and included 617 public and private research universities.
- For the period FY 1998 to FY 2002, the total R&D expenditures of three U. T. System institutions (Austin, Southwestern Medical Center, and M. D. Anderson Cancer Center) have been in the top 50 public and private universities. These achievements contributed to the position of Texas universities which collectively ranked third in the nation for federal research and development funding in 2002.
- Three U. T. System institutions have been in the top 51 to 100 (U. T. Health Science Center-Houston, U. T. Medical Branch, and U. T. Health Science Center-San Antonio).

- Four U. T. System academic institutions (U. T. Dallas, U. T. El Paso, U. T. Arlington, and U. T. San Antonio) have been in the top 204 to 250; and one (U. T. Pan American) has been in the top 375.
- Within Texas, several U. T. System institutions were at the top of rankings in terms of research and research-related expenses in 2003.

Table II-2

**Top Texas Public Institutions in Research and Research-Related Expenditures
FY 2003**

Texas A&M	1*
U. T. Austin	2
U. T. M. D. Anderson Cancer Center	3
U. T. Southwestern Medical Center	4
U. T. Health Science Center-Houston	5
U. T. Medical Branch at Galveston	6
U. T. Health Science Center-San Antonio	7
University of Houston	8
Texas Tech University	9
Texas A&M University Health Science Center	10
U. T. Dallas	11
U. T. El Paso	12

*Expenditures reported include Texas A&M Extension Services

Source: "Research Expenditures, September 1, 2002- August 31, 2003," THECB report, April 2004.

Research Funding Trends: U. T. Academic Institutions 2000-2004

- In FY 2004, U. T. academic institutions' research and research-related expenditures totaled \$495 million, a 2.9 percent increase over the previous year. Between 2000 and 2004, research and research-related expenditures have averaged an 8.5 percent annual increase.
- Among Texas institutions, U. T. Austin ranked second in research and development expenditures in FY 2003. These expenditures comprised 23 percent of the total of Texas public institution research and research-related expenditures in 2003 of \$2.17 billion.

Table II-3

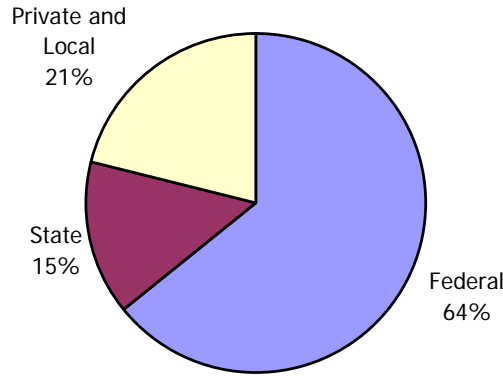
Research Expenditures by Source 2004

	U. T. Academic Institutions				
	Federal	State	Private	Local	Total
Arlington	\$11,093,256	\$7,935,643	\$3,290,228	\$98,003	\$22,417,130
Austin	249,014,154	43,796,627	58,027,020	31,553,970	382,391,771
Brownsville/TSC	2,889,894	--	136,831	246,601	3,273,326
Dallas	15,733,571	9,113,937	5,058,974	1,368,108	31,274,590
El Paso	22,232,318	7,286,141	1,801,285	747,991	32,067,735
Pan American	2,666,191	1,295,175	305,846	42,050	4,309,262
Permian Basin	1,215,420	461,624	62,442	156,078	1,895,564
San Antonio	11,705,185	3,133,453	865,812	812,007	16,516,457
Tyler	585,874	124,499	157,291	26,370	894,034
Total	\$317,135,863	\$73,147,099	\$69,705,729	\$35,051,178	\$495,039,869

Source: "Survey of Research Expenditures," Texas Higher Education Coordinating Board

Figure II-3

Sources of Research Support 2004



- The federal government provides the majority of research and research-related funding – 64 percent.
- Private and local sources together provide the next largest proportion – 21 percent.
- Fifteen percent of research funds expended in 2004 came from state sources.

Sponsored Revenue

- Sponsored revenue is a more comprehensive measure of an institution's overall success in securing funding to support research, public service, training, and other activities.
- From 2000 to 2004, sponsored revenue has increased by 48 percent at U. T. System academic institutions.

Table II-4
Sponsored Revenue -- U. T. Academic Institutions
FY 2000-2004
(\$ in thousands)

	FY 00	FY 01	FY 02	FY 03	FY 04
Arlington	\$29,335	\$28,285	\$33,812	\$38,347	\$41,516
Austin	287,107	294,052	356,624	369,278	383,632
Brownsville/TSC	47,337	56,888	59,308	59,448	67,575
Dallas	17,995	15,717	25,412	25,563	50,559
El Paso	49,503	50,457	64,340	68,710	73,454
Pan American	27,990	31,773	48,605	56,699	56,898
Permian Basin	3,384	3,831	4,274	4,699	5,063
San Antonio	33,250	31,912	42,053	53,798	56,832
Tyler	4,817	5,555	4,517	5,393	6,802
Total Academic	\$500,718	\$518,470	\$638,945	\$681,935	\$742,331

Source: "Survey of Research Expenditures," Texas Higher Education Coordinating Board

Table II-5

**Sponsored Revenue -- U. T. Academic Institutions
by Source, FY 2004**

(\$ in thousands)

	Federal	State	Local	Private	Total
Arlington	\$31,093	\$6,605	\$249	\$3,569	\$41,516
Austin	287,971	38,800	2,240	54,621	383,632
Brownsville/TSC	28,594	2,090	36,101	790	67,575
Dallas	22,157	24,674	586	3,142	50,559
El Paso	59,942	8,416	918	4,178	73,454
Pan American	44,052	11,110	18	1,718	56,898
Permian Basin	4,533	424	27	79	5,063
San Antonio	47,499	7,411	476	1,446	56,832
Tyler	4,824	1,586	9	383	6,802
Total	\$530,665	\$101,116	\$40,624	\$69,926	\$742,331

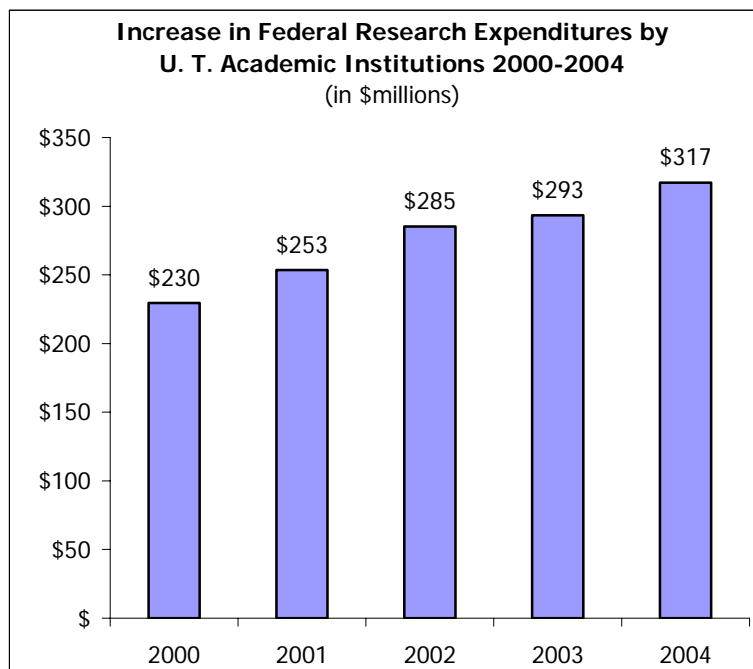
Source: Exhibit B of Annual Financial Report

- Federal funding is the primary source of sponsored revenue to U. T. System academic institutions.

Federal Research Expenditures

- Federal research expenditures are considered a national benchmark to measure institutional research success.

Figure II-4



- From 2000 to 2004, federal research expenditures for all academic institutions increased by 38 percent.
- Continued increases in these funds are critical to the success of the academic institutions in the U. T. System.
- These expenditures increased over the past year at every U. T. academic institution, with greater than 100 percent increases at U. T. Brownsville/Texas Southmost College, U. T. Permian Basin, and U. T. Tyler.

Table II-6

Federal Research Expenditures by U. T. Academic Institutions

FY	2000	2001	2002	2003	2004	% Change FY 03-04	% Change FY 00-04
Arlington	\$5,242,897	\$9,224,210	\$7,923,657	\$7,993,576	\$11,093,256	38.8%	111.6%
Austin	185,190,446	202,440,085	235,436,101	240,537,689	249,014,154	3.5	34.5
Brownsville/TSC	241,980	602,856	896,646	1,011,353	2,889,894	185.7	1,094.3
Dallas	7,049,617	8,781,295	11,815,490	14,432,841	15,733,571	9.0	123.2
El Paso	22,972,030	22,872,682	19,796,441	17,022,000	22,232,318	30.6	-3.2
Pan American	1,149,325	1,324,426	1,394,780	1,895,223	2,666,191	40.7	132.0
Permian Basin	233,075	147,629	138,194	166,777	1,215,420	628.8	421.5
San Antonio	7,421,650	8,032,790	7,641,990	10,049,314	11,705,185	16.5	57.7
Tyler	63,307	66,827	67,617	174,362	585,874	236.0	825.4
Total	\$229,564,327	\$253,492,800	\$285,110,916	\$293,283,135	\$317,135,863	8.1%	38.1%

Source: "Survey of Research Expenditures," Texas Higher Education Coordinating Board

State Appropriated Research Funds in Relation to Research Expenditures

- This measure compares state appropriations for research with each institution's research funding. Research funds are appropriated in the first year of each biennium.

Table II-7

**Appropriated Research Funds as a Percentage of Research Expenditures
U. T. Academic Institutions**

	FY 2000			FY 2004		
	Research Expenditures	Appropriated Research Funds	Percent Approp. Research	Research Expenditures	Appropriated Research Funds	Percent Approp. Research
Arlington	\$14,552,315	\$1,825,604	13%	\$22,417,130	\$966,140	4%
Austin	295,901,287	12,119,570	4	382,391,771	4,352,519	1
Brownsville/TSC	299,359	63,097	21	3,273,326	0	0
Dallas	15,923,269	1,516,610	10	31,274,590	585,737	2
El Paso	27,784,046	381,069	1	32,067,735	267,042	1
Pan American	2,175,562	400,157	18	4,309,262	0	0
Permian Basin	811,973	0	0	1,895,564	15,000	1
San Antonio	10,613,082	109,800	1	16,516,457	148,618	1
Tyler	210,747	0	0	894,034	0	0
Total	\$368,271,640	\$16,415,907	4%	\$495,039,869	\$6,335,056	1%

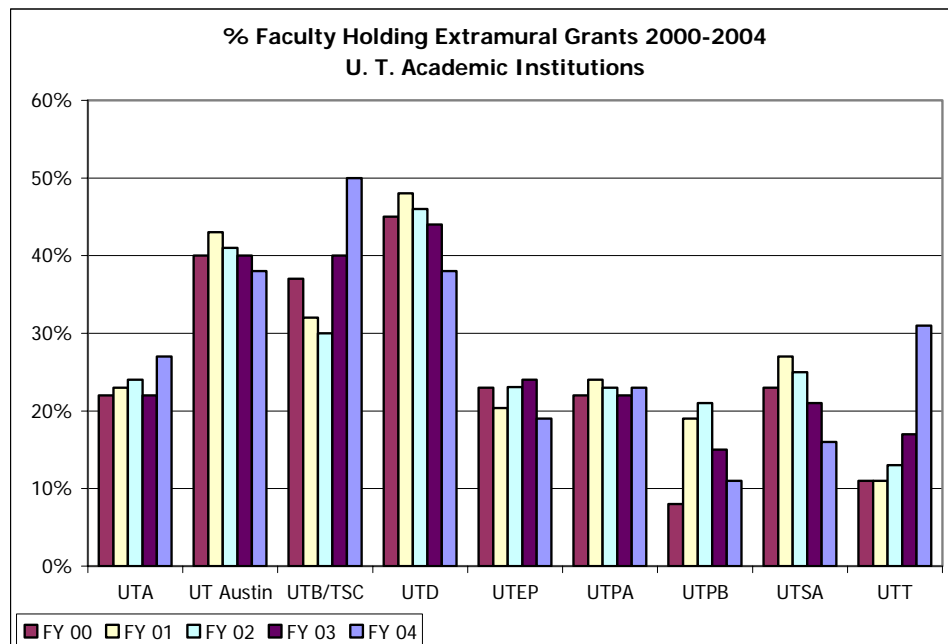
Source: THECB "Survey of Research Expenditures" and "Report of Awards -- Advanced Program/Advanced Technology Programs"

- State appropriations for research represent a comparatively small, but important, source of support at each institution, averaging four percent for academic institutions. In 2004, these appropriations were one percent of all research expenditures, down from four percent over the previous two biennia.

Faculty Holding Extramural Grants

- The number and percentage of faculty holding grants provide another measure of productivity which emphasizes success in obtaining an award, rather than the size of the award (Table II-8, next page). This is relevant particularly in humanities, arts, and some social science disciplines, where the number and size of grants are comparatively small.
- This measure includes extramural grants from all sources and of all types and is, therefore, broader than measures that address sponsored research activities.
- Many faculty hold more than one grant per year, either as principal investigator or as co-investigator. This productivity is reflected in the "total number of grants" rows.
- In response to the recommendations of the *Report of The Washington Advisory Group [WAG], LLC on Research Capability Expansion for The University of Texas System* (March 31, 2004), many U. T. academic institutions are developing plans to strengthen support for research development (see <http://www.utsystem.edu/news/wag/> for more information on this report).
- These plans are reflected in individual institution Compacts. Over the coming years, trends in faculty research productivity may be expected to improve as a result of these efforts.
- Over the past five years, U. T. Arlington, U. T. Austin, U. T. Brownsville/Texas Southmost College, U. T. Pan American, U. T. Permian Basin, and U. T. Tyler have gradually increased the number of grants faculty have received, the number of faculty receiving grants, or the proportion of tenure/tenure track faculty who hold grants.

Figure II-5



- At U. T. Arlington, from FY 2000 to 2004, the number of faculty holding grants increased by one-third, and the number of grants increased by more than 50 percent; at U. T. Pan American, the increase was 70 percent.
- The number of grants held by faculty at U. T. Brownsville/Texas Southmost College more than doubled over the past five years, as did the number of faculty holding grants. The proportion of tenure/tenure-track faculty holding grants reached 50 percent in 2004.
- From FY 2003 to 2004, U. T. Pan American increased its number of grants received by nearly 50%, and the number of faculty holding grants increased by 11. This progress is attributable to increased support and resources for faculty applying for small grants for the first time; many were

successful. In addition, many current grant holders have applied for and received additional grants; some principal investigators have as many as six active grants operating simultaneously.

- U. T. Tyler faculty more than doubled the number of grants they received from 2000 to 2004; the number of faculty holding grants tripled, and the proportion of faculty holding grants nearly tripled over this period.

Table II-8

Faculty Holding Extramural Grants – U. T. Academic Institutions

		FY 00	FY 01	FY 02	FY 03	FY 04
Arlington	# grants	168	164	210	183	268
	# T/TT faculty holding grants	106	105	114	108	133
	# FTE T/TT faculty	482	463	476	482	491
	% T/TT faculty holding grants	22%	23%	24%	22%	27%
Austin	# grants	2,628	2,526	2,373	2,633	2,506
	# T/TT faculty holding grants	620	640	630	651	647
	# FTE T/TT faculty	1,547	1,506	1,551	1,608	1,698
	% T/TT faculty holding grants	40%	42%	41%	40%	38%
Brownsville/ Texas Southmost	# grants	26	34	36	47	56
	# T/TT faculty holding grants	26	34	36	47	55
	# FTE T/TT faculty	70	107	119	119	109
	% T/TT faculty holding grants	37%	32%	30%	39%	50%
Dallas	# grants	185	246	212	218	180
	# T/TT faculty holding grants	109	121	111	112	109
	# FTE T/TT faculty	240	250	242	254	285
	% T/TT faculty holding grants	45%	48%	46%	44%	38%
El Paso	# grants	264	229	244	180	222
	# T/TT faculty holding grants	86	77	89	97	80
	# FTE T/TT faculty	374	378	386	404	411
	% T/TT faculty holding grants	23%	20%	23%	24%	19%
Pan American	# grants	117	131	132	130	193
	# T/TT faculty holding grants	60	67	71	73	84
	# FTE T/TT faculty	270	282	312	332	362
	% T/TT faculty holding grants	22%	24%	23%	22%	23%
Permian Basin	# grants	8	19	28	15	16
	# T/TT faculty holding grants	5	13	15	11	8
	# FTE T/TT faculty	64	67	72	74	71
	% T/TT faculty holding grants	8%	19%	21%	15%	11%
San Antonio	# grants	164	162	202	156	171
	# T/TT faculty holding grants	66	75	83	86	67
	# FTE T/TT faculty	287	281	338	403	413
	% T/TT faculty holding grants	23%	27%	25%	21%	16%
Tyler	# grants	19	22	29	39	55
	# T/TT faculty holding grants	13	14	17	25	44
	# FTE T/TT faculty	120	126	133	146	143
	% T/TT faculty holding grants	11%	11%	13%	17%	31%

Note: For grants with multiple investigators, only the principle investigator is counted.

Source: U. T. System Academic Institutions; THECB for FTE faculty

Research Expenditures per FTE Faculty — Academic Institutions

- The magnitude of research and research-related expenditures largely reflects the size and mission of each campus.
- The ratio of research expenditures to FTE faculty is a general indicator of the research productivity of the faculty and the mission of each campus.
- Over the past five years, this ratio has increased at most academic institutions, with greater proportionate growth at U. T. Arlington, U. T. Austin, U. T. Brownsville, U. T. Dallas, U. T. San Antonio, and U. T. Tyler.

Table II-9

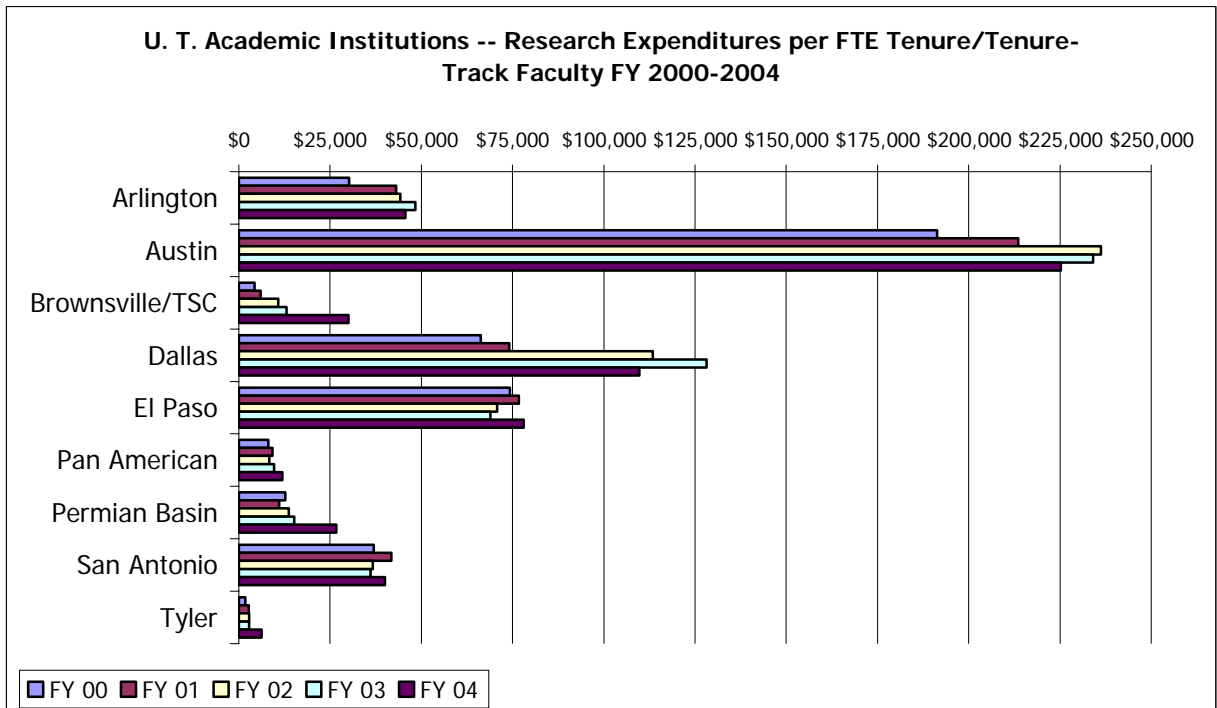
Research Expenditures per FTE Tenure/Tenure Track Faculty -- U. T. Academic Institutions FY 2000-2004

	FY 2000			FY 2001			FY 2002		
	Research Expenditures	FTE T/TT Faculty	Ratio Exp Amt/ FTE T/TT Faculty	Research Expenditures	FTE T/TT Faculty	Ratio Exp Amt/ FTE T/TT Faculty	Research Expenditures	FTE T/TT Faculty	Ratio Exp Amt/ FTE T/TT Faculty
Arlington	\$14,552,315	482	\$30,192	\$19,966,034	463	\$43,123	\$21,072,964	476	\$44,271
Austin	295,901,287	1,547	191,274	321,580,736	1,506	213,533	366,355,359	1,551	236,206
Brownsville	299,359	70	4,277	635,365	107	5,938	1,286,638	119	10,812
Dallas	15,923,269	240	66,347	18,531,582	250	74,126	27,444,057	242	113,405
El Paso	27,784,046	374	74,289	29,003,608	378	76,729	27,328,772	386	70,800
Pan American	2,175,562	270	8,058	2,601,598	282	9,226	2,605,758	312	8,352
Permian Basin	811,973	64	12,687	737,853	67	11,013	980,905	72	13,624
San Antonio	10,613,082	287	36,979	11,751,323	281	41,820	12,402,017	338	36,692
Tyler	210,747	120	1,756	342,206	126	2,716	375,821	133	2,826

	FY 2003			FY 2004		
	Research Expenditures	FTE T/TT Faculty	Ratio Exp Amt/ FTE T/TT Faculty	Research Expenditures	FTE T/TT Faculty	Ratio Exp Amt/ FTE T/TT Faculty
Arlington	\$23,314,938	482	\$48,371	\$22,417,130	491	\$45,656
Austin	376,403,651	1,608	234,082	382,391,771	1,698	225,201
Brownsville	1,558,306	119	13,095	3,273,326	109	30,031
Dallas	32,547,141	254	128,138	31,274,590	285	109,735
El Paso	27,847,152	404	68,929	32,067,735	411	78,024
Pan American	3,193,419	332	9,619	4,309,262	362	11,904
Permian Basin	1,118,184	74	15,111	1,895,564	71	26,698
San Antonio	14,547,732	403	36,099	16,516,457	413	39,991
Tyler	411,275	146	2,817	894,034	143	6,252

Source: Sponsored Research Expenditures from 1999-2003 Survey of Research Expenditures Submitted to the Texas Higher Education Coordinating Board; these include indirect costs and pass-throughs to institutions. FTE faculty from THECB.

Figure II-6



Private Funding

Table II-10

Endowed Faculty Positions – U. T. Academic Institutions

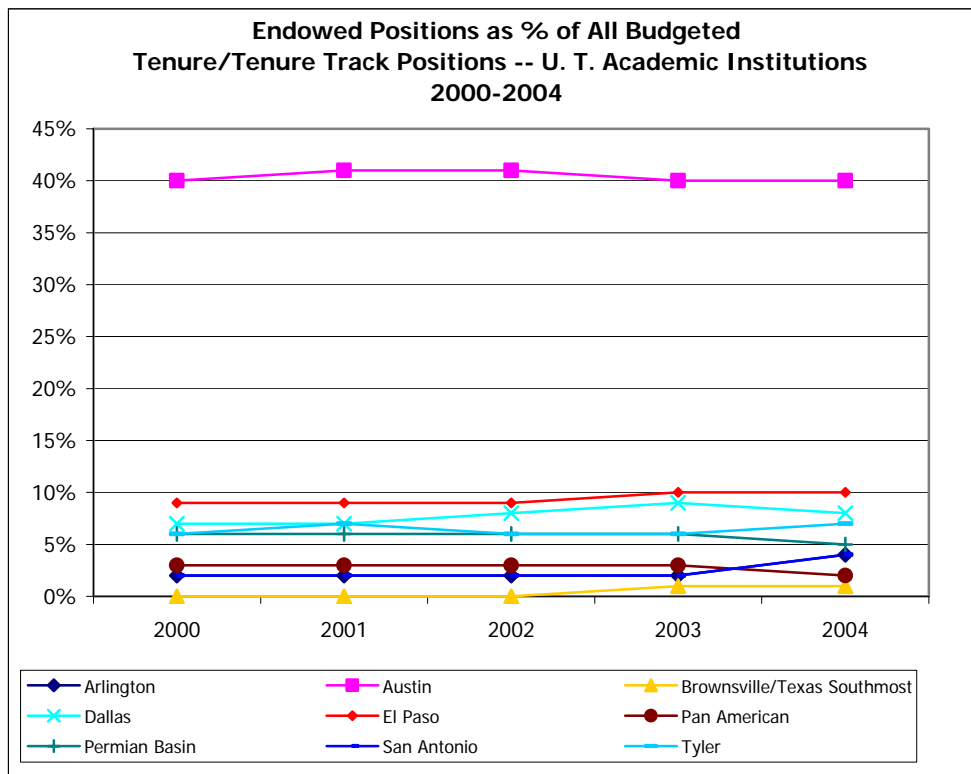
		FY 00	FY 01	FY 02	FY 03	FY 04
Arlington	Total Budgeted Endowed Professorships and Chairs	10	10	12	12	20
	Number Filled	5	5	7	7	9
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	2%	2%	2%	2%	4%
Austin	Total Budgeted Endowed Professorships and Chairs	705	715	725	731	738
	Number Filled	510	540	565	590	598
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	40%	41%	41%	40%	40%
Brownsville/ Texas Southmost	Total Budgeted Endowed Professorships and Chairs	--	--	--	3	3
	Number Filled	--	--	--	2	3
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	0%	0%	0%	1%	1%
Dallas	Total Budgeted Endowed Professorships and Chairs	20	20	23	29	25
	Number Filled	20	20	23	29	20
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	7%	7%	8%	9%	8%
El Paso	Total Budgeted Endowed Professorships and Chairs	37	38	38	44	46
	Number Filled	31	29	26	38	35
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	9%	9%	9%	10%	10%
Pan American	Total Budgeted Endowed Professorships and Chairs	8	8	8	8	8
	Number Filled	2	2	2	2	4
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	3%	3%	3%	3%	2%
Permian Basin	Total Budgeted Endowed Professorships and Chairs	5	5	5	5	5
	Number Filled	4	5	5	4	5
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	6%	6%	6%	6%	5%
San Antonio	Total Budgeted Endowed Professorships and Chairs	8	9	10	11	20
	Number Filled	7	6	6	6	7
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	2%	2%	2%	2%	4%
Tyler	Total Budgeted Endowed Professorships and Chairs	8	9	9	9	11
	Number Filled	6	6	7	7	6
	% of Total Budgeted Tenure/Tenure-Track Positions Endowed	6%	7%	6%	6%	7%

Source: U. T. System Academic Institutions

- Endowed professorships and chairs significantly supplement the faculty positions that institutions are able to support with state appropriations, tuition, grants, and other sources of funding.
- Endowed positions help institutions compete for, recruit, and retain top faculty. These hires, in turn, help institutions achieve excellence in targeted fields.
- These endowments reflect the specific fundraising environment for each institution, which are influenced by local and regional economic conditions.
- In response to the recommendations of the WAG report (see above, p. II-9), a number of institutions are increasing resources and plans to expand fundraising efforts. These plans are reflected in their institutional Compacts and may be expected, over time, to result in continued or even faster increases in the numbers of endowed positions on many U. T. System campuses.

- With the addition of U. T. Brownsville/Texas Southmost College's three positions in 2003, every U. T. institution now has endowed positions.
- From FY 2000 to FY 2004, U. T. Arlington doubled the number of its endowed professorships and chairs.
- U. T. El Paso increased the number of its endowed positions by over 25% from 2000 to 2004.
- At U. T. San Antonio, the number of endowed positions increased by 50% from 2000 to 2004.
- From 2000 to 2004, U. T. Tyler nearly doubled its endowed positions.
- The majority of these positions are filled each year. Open positions provide flexibility or reflect the timing of making academic hires in a highly competitive environment. The openings may result from such situations as retirements, deaths, declined offers, or other circumstances that arise in a given academic year.

Figure II-7



Faculty Awards and Honors

- The faculty of the U. T. System receives a wide range of honors and awards. Those listed here are perpetual, lifetime awards received by faculty members on or before September 1, 2004.

Table II-11

Cumulative Honors – U. T. Academic Institutions				
	Total	UTA	UT Austin	UTD
Nobel Prize	4		2	2
Pulitzer Prize	1		19	
National Academy of Sciences	20		18	2
National Academy of Engineering	46		45	1
American Academy of Arts and Sciences	38		37	1
American Law Institute	23		23	
American Academy of Nursing	24	11	13	

Source: U. T. System Academic Institutions

- Faculty at U. T. academic institutions receive many other prestigious awards, honors, prizes, and professional recognitions. Additional information on specific honors is available in the Institutional Profiles, Section V.
- Noteworthy awards received in 2003-2004 are listed below.
- U. T. Austin faculty received five Guggenheim fellowships, a noteworthy accomplishment in a single academic year.
- U. T. Pan American faculty received three Fulbright scholarships, a notable accomplishment.

Table II-12

Faculty Awards Received in 2003-04 – U. T. Academic Institutions						
	UTA	UT Austin	UTB/ TSC	UTD	UTEP	UTPA
Nobel				1		
National Academy of Sciences		1				
National Academy of Engineering		1				
American Academy of Arts & Sciences		3				
American Academy of Nursing	2					
American Association for Advancement of Science Fellows				1		
American Council of Learned Societies Fellows		2				
Fulbright American Scholars	1	7	1	1	4	3
Guggenheim Fellows		5				
National Institutes of Health (NIH) MERIT		1				
NSF CAREER awards (excluding those who are also PECASE winners)		19		1		
Sloan Research Fellows		5				

Source: U. T. System Academic Institutions

Technology Transfer – System Overview

Table II-13

**Aggregate U. T. System Technology Transfer
2001 to 2003**

Total New Invention Disclosures			Total Patents Issued			Total Licenses & Options Executed		
2001	2002	2003	2001	2002	2003	2001	2002	2003
455	474	520	99	101	99	109	97	151

Public Start-up Companies Formed			Total Gross Revenue Received from Intellectual Property		
2001	2002	2003	2001	2002	2003
18	16	12	\$22,907,414	\$26,555,136	\$24,564,924

Source: Texas Higher Education Coordinating Board Technology Development and Transfer Survey

- According to the U.S. Patent and Trademark Office, when academic and health-related institution patents are combined, in 2003 the U. T. System ranked fourth in number of patents issued (96), up from fifth (with 93) in 2002. The University of California System topped the list, as it has for the past ten years, with 439 in 2003 and 431 in 2002. [*Chronicle of Higher Education*, March 5, 2004; United States Patent Office release, Feb. 9, 2004].

Table II-14

**Patents Issued by U. S. Patent and Trademark Office
Top-Ranked Universities
2002 and 2003**

	2002		2003	
	Rank	# Patents	Rank	# Patents
University of California	1	431	1	439
Massachusetts Institute of Technology	2	135	3	127
California Institute of Technology	3	109	2	139
University of Texas System	5	93	4	96
Stanford University	4	104	5	85
Johns Hopkins University	6	81	7	70
University of Wisconsin System	6	81	6	84
University of Michigan	12	47	8	63
Columbia University	13	45	9	61
Cornell University	21	35	10	59
University of Florida	15	42	19	59

Source: Chronicle of Higher Education, March 5, 2004.

Technology Transfer 2001 and 2002 – U. T. Academic Institutions

Table II-15

U. T. Academic Institution Technology Transfer Trends

	Total New Invention Disclosures			Total Patents Issued			Total Licenses & Options Executed		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
Arlington	5	11	21	3	2	2	1	1	0
Austin	85	83	69	20	21	28	34	24	20
Dallas	16	12	33	5	5	6	6	0	2
El Paso	7	10	10	0	0	0	1	0	0
Total Academic Institutions	113	116	133	28	28	36	42	25	22

	Public Start-up Companies Formed			Total Gross Revenue Received from Intellectual Property		
	2001	2002	2003	2001	2002	2003
Arlington	0	1	0	92,074	\$ 113,250	\$ 35,606
Austin	11	4	6	2,768,769	5,008,592	4,301,165
Dallas	0	0	0	241,799	47,971	149,093
El Paso	0	0	0	750	750	30,150
Total Academic Institutions	11	5	6	\$ 3,103,392	\$ 5,170,563	\$ 4,516,014

Source: Texas Higher Education Coordinating Board Technology Development and Transfer Survey.

- Technology transfer success begins with new invention disclosures; these should increase over time in order to increase the number of patents issued, licenses executed, and revenues received from licenses and options executed.
- Patents issued to U. T. Austin increased by one third between 2002 and 2003, to 28.
- Gross revenue from intellectual property more than doubled at U. T. Austin between 2001 and 2002. It increased significantly at U. T. El Paso, to \$30,150 in 2003.
- However, the pace of technology transfer has been comparatively slow over the past three years due to a combination of factors including the recent economic downsizing which reduced the amount of venture activity and product innovation.
- The development associated with major investments, like U. T. Austin's and U. T. Dallas's Strategic Partnership for Research in Nanotechnology (see examples of research collaborations, below) are expected to help reverse this trend.
- Other U. T. academic institutions, like U. T. El Paso, are in earlier stages of developing the necessary infrastructure to build technology transfer and commercialization programs.

Faculty Headcount – U. T. Academic Institutions

- Nationally, 38 percent of instructional faculty are women; most U. T. academic institutions meet or exceed this figure (*Chronicle of Higher Education*, 12.3.04), although the proportion has declined slightly at U. T. Pan American, U. T. Permian Basin, and U. T. Tyler.

Table II-16

Tenure/Tenure-Track Faculty Headcount: Professors, Associate Professors, Assistant Professors, Instructors						
	Fall	1999	2000	2001	2002	2003
Arlington		557	535	525	524	532
Austin		1,803	1,800	1,833	1,904	1,897
Brownsville/TSC		189	209	221	218	228
Dallas		264	279	284	309	331
El Paso		412	410	426	437	441
Pan American		317	317	325	351	376
Permian Basin		74	76	81	81	81
San Antonio		389	405	421	450	449
Tyler		125	131	138	150	146

Source: Texas Higher Education Coordinating Board and UTB/TSC

Table II-17

Headcount: All Instructional Staff*						
	Fall	1999	2000	2001	2002	2003
Arlington		1,180	1,192	1,216	1,255	1,302
Austin		3,168	3,265	3,308	3,418	3,342
Brownsville/TSC		428	453	469	502	537
Dallas		576	596	655	716	743
El Paso		862	867	923	956	919
Pan American		686	738	628	667	716
Permian Basin		135	146	139	158	192
San Antonio		904	949	999	1,089	1,159
Tyler		274	257	285	302	293

*All Instructional Staff includes Professors, Associate Professors, Assistant Professors, Instructors, Lecturers, Teaching Assistants, Visiting Teachers, and Special, Adjunct, and Emeritus faculty at the institution.

Source: Texas Higher Education Coordinating Board and UTB/TSC

Figure II-8

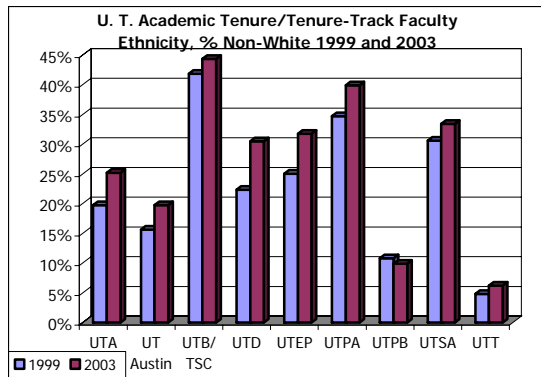


Figure II-9

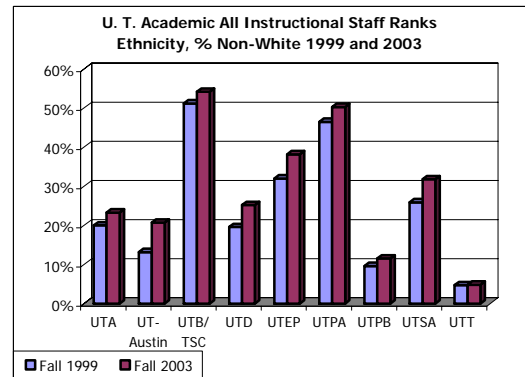


Figure II-10

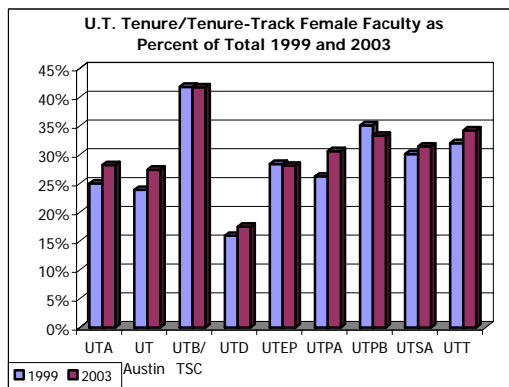
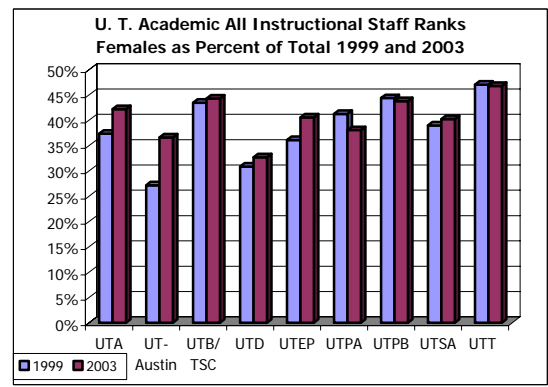


Figure II-11



Staff Headcount

Table II-18

Classified, Administrative/Professional and Student Employee Headcount U. T. Academic Institutions*							
	Total	AY	00-01	01-02	02-03	03-04	04-05
Arlington	Classified		1,057	1,252	1,275	1,254	1,301
	Administrative/Professional		327	968	444	424	446
	Student Employees		1,521	1,026	1,737	1,724	2,145
Austin	Classified		6,594	7,941	8,060	7,642	7,858
	Administrative/Professional		2,706	3,279	3,292	3,255	3,320
	Student Employees		6,842	7,767	7,929	7,875	8,137
Brownsville/TSC	Classified		880	1,094	1,030	985	978
	Administrative/Professional		183	197	223	233	263
Dallas	Classified		1,084	813	858	875	906
	Administrative/Professional		388	507	577	591	600
	Student Employees		52	426	888	981	1,051
El Paso	Classified		666	1,036	1,054	951	937
	Administrative/Professional		913	1,231	1,247	1,141	1,174
	Student Employees		880	980	1,064	1,028	1,176
Pan American	Classified		693	812	819	828	872
	Administrative/Professional		1,336	1,380	1,319	1,422	1,281
	Student Employees		4	6	92	78	40
Permian Basin	Classified		130	146	160	167	179
	Administrative/Professional		70	79	89	84	93
	Student Employees		115	123	149	163	203
San Antonio	Classified		1,184	1,429	1,477	1,434	1,509
	Administrative/Professional		300	330	387	632	742
	Student Employees		547	608	627	717	870
Tyler	Classified		191	225	232	236	271
	Administrative/Professional		34	43	54	64	63
	Student Employees		127	172	227	238	319

*Classified staff includes positions which do not entail significant instructional or administrative responsibilities.

Administrative and professional staff exclude faculty positions; therefore, these positions do not entail significant direct instructional activities. Student employees are those positions for which student status is a condition of employment.

Source: U. T. System Common Data Warehouse

Figure II-12

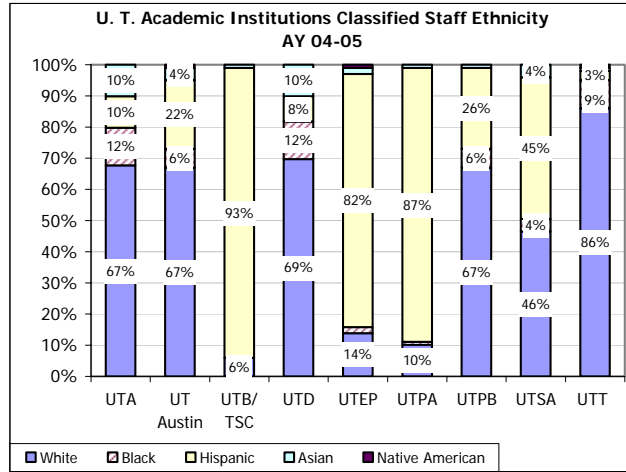


Figure II-13

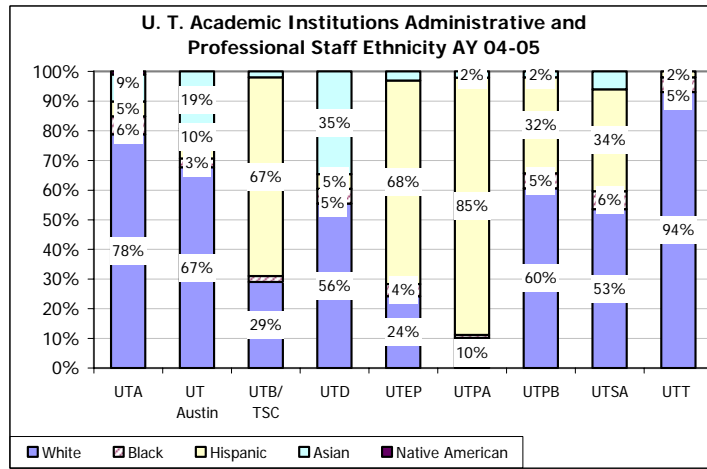
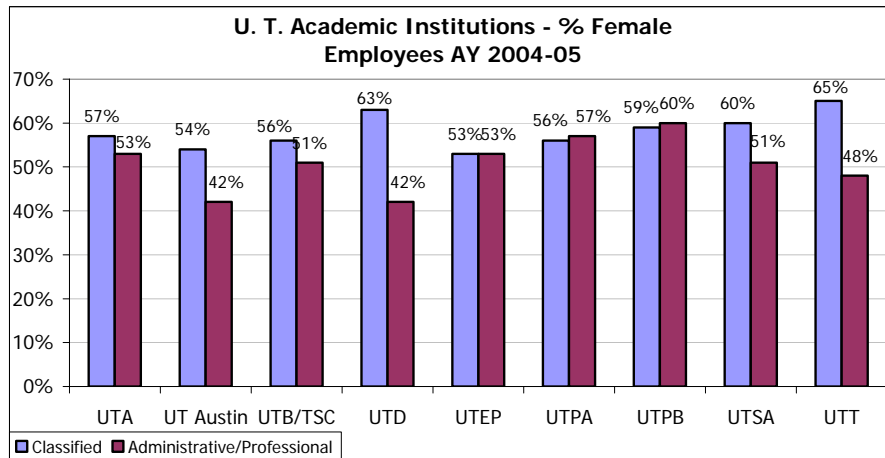


Figure II-14



Student/Faculty Ratios

Table II-19

FTE Student / FTE Faculty Ratio -- U.T. Academic Institutions		AY	99-00	00-01	01-02	02-03	03-04
Arlington	FTE Students		13,714	14,386	15,322	17,160	18,467
	FTE Faculty		720	722	752	782	834
	Ratio		19 to 1	20 to 1	20 to 1	22 to 1	22 to 1
Austin	FTE Students		41,688	42,772	43,629	45,700	45,144
	FTE Faculty		2,048	2,035	2,101	2,167	2,252
	Ratio		20 to 1	21 to 1	21 to 1	21 to 1	20 to 1
Brownsville/TSC	FTE Students*		5,765	5,866	5,912	6,354	6,832
	FTE Faculty**		308	326	349	360	382
	Ratio		19 to 1	18 to 1	17 to 1	18 to 1	18 to 1
Dallas	FTE Students		6,681	7,404	8,507	9,192	9,797
	FTE Faculty		358	374	380	424	468
	Ratio		19 to 1	20 to 1	22 to 1	22 to 1	21 to 1
El Paso	FTE Students		10,863	11,270	12,087	12,816	13,497
	FTE Faculty		592	618	651	678	656
	Ratio		18 to 1	18 to 1	19 to 1	19 to 1	21 to 1
Pan American	FTE Students		9,133	9,179	9,821	10,521	11,689
	FTE Faculty		452	470	476	511	556
	Ratio		20 to 1	20 to 1	21 to 1	21 to 1	21 to 1
Permian Basin	FTE Students		1,500	1,554	1,637	1,847	2,129
	FTE Faculty		90	92	99	106	118
	Ratio		17 to 1	17 to 1	17 to 1	17 to 1	18 to 1
San Antonio	FTE Students		13,054	13,274	14,264	15,934	18,203
	FTE Faculty		532	529	594	660	696
	Ratio		25 to 1	25 to 1	24 to 1	24 to 1	26 to 1
Tyler	FTE Students		2,172	2,316	2,502	2,862	3,390
	FTE Faculty		191	194	204	218	217
	Ratio		11 to 1	12 to 1	12 to 1	13 to 1	16 to 1

*Includes students who matriculate through Texas Southmost College

**Includes faculty in Master Technical Instructor ranks

Source: Texas Higher Education Coordinating Board

- The number of full-time-equivalent students and faculty has increased over the past five years at all nine U. T. System academic institutions.
- At the same time, ratio of FTE students to FTE faculty has increased slightly at seven institutions, as the number of students has increased at a faster pace than the number of faculty.
- The ratio of FTE students to FTE faculty has remained nearly constant at U. T. Austin.
- Institutions must balance the advantages of smaller classes—a criterion that has an impact on their national rankings—with the efficiency that a higher student/faculty ratio may confer.

Tenure/Tenure-Track and Professional Faculty Teaching Lower Division Courses

Table II-20

Faculty Teaching Lower Division Semester Credit Hours -- U. T. Academic Institutions						
	Faculty Rank	AY 99-00	AY 00-01	AY 01-02	AY 02-03	AY 03-04
Arlington	Tenure/Tenure-Track	43.6%	40.0%	40.3%	36.8%	36.1%
	Professional	46.6	49.1	51.2	53.8	56.0
Austin	Tenure/Tenure-Track	50.4	48.2	46.0	45.6	49.3
	Professional	31.4	32.3	35.2	36.2	33.6
Brownsville/TSC*	Tenure/Tenure-Track	64.9	64.7	71.0	64.4	59.4
	Professional	35.1	35.3	29.0	35.6	40.6
Dallas	Tenure/Tenure-Track	38.6	35.6	33.3	29.8	29.6
	Professional	56.7	60.4	63.1	65.9	65.8
El Paso	Tenure/Tenure-Track	48.3	47.7	40.1	39.3	41.9
	Professional	47.7	48.6	54.6	55.9	54.2
Pan American	Tenure/Tenure-Track	48.2	45.8	46.6	45.4	48.0
	Professional	45.5	51.9	48.8	52.3	49.0
Permian Basin	Tenure/Tenure-Track	68.1	64.2	67.8	51.2	48.0
	Professional	30.6	32.8	31.6	46.9	50.3
San Antonio	Tenure/Tenure-Track	38.4	44.1	44.4	45.6	43.1
	Professional	59.6	53.1	53.9	52.4	54.2
Tyler	Tenure/Tenure-Track	70.9	73.9	66.3	71.5	62.4
	Professional	29.1	26.1	33.7	26.9	36.3

* TSC data not included

Source: Texas Higher Education Coordinating Board

- This measure illustrates the distribution of lower-division teaching between tenure/tenure-track and professional faculty. Teaching by both groups is necessary to cover all scheduled classes within the resources available to each institution.
- Since 2000, the proportion of tenure/tenure-track faculty teaching lower division semester credit hours has decreased at every U. T. academic institution except U. T. San Antonio. At U. T. Austin, where the proportion began to increase again in 2004, the campus goal is to have at least 60 percent of undergraduate courses taught by tenure/tenure-track faculty.
- Tenure and tenure-track faculty have responsibilities to teach, conduct research, and perform service on behalf of their institution. Once tenured, they become permanent members of an institution's faculty.
- Professional faculty include instructors who bring special expertise but are not on tenure track: adjuncts, those with special appointments, visiting professors, emeritus professors, and lecturers; this group excludes teaching assistants.

Training Postdoctoral Fellows

Table II-21

Postdoctoral Fellows – U. T. Academic Institutions

	FY 00	FY 01	FY 02	FY 03	FY 04
Arlington	19	25	25	30	27
Austin	384	390	379	365	385
Brownsville/Texas Southmost	0	0	1	6	4
Dallas	41	41	49	39	56
El Paso*	6	3	2	7	17
Pan American	-	-	-	1	2
Permian Basin	0	0	1	2	0
San Antonio	6	11	15	19	20

*As at most universities, postdoctoral fellow positions are diverse. In the last year UTEP has made an effort to ensure that they are appointed in the proper categories, making it easier to track them.

Source: U. T. System Academic Institutions

- The number of postdoctoral fellows at an institution is one measure of the size and growth of its advanced research programs. Postdoctoral fellowships are typically funded by public grants or private gifts, so these positions demonstrate the impact of an institution's success in obtaining external funding to support its research programs.
- These numbers also indicate the service U. T. academic institutions provide in preparing researchers who are likely to make the discoveries that advance fields in the future.
- Postdoctoral fellows have increased significantly over the past five years at most U. T. academic institutions, and dramatically at several: at U. T. Arlington 2004 by over 40 percent; quadrupled at U. T. Brownsville/Texas Southmost College; increased by more than one-third at U. T. Dallas; nearly tripled at U. T. El Paso; and nearly quadrupled at U. T. San Antonio.
- These changes reflect a growing emphasis on and success in acquiring research and external funding.

Examples of Externally Funded Research Collaborations

- The U. T. System has made it a high priority to increase the research collaborations among U. T. institutions as well as organizations outside of U. T.
- These collaborations achieve economies of scale and greatly improve the quality of research by leveraging faculty, external funding, and facilities resources beyond the scope that any individual institution could bring to bear on a research problem.
- The scope of U. T. research is very large. Below are examples from each institution of current and high priority collaborative research projects.
- A more extensive list of collaborations is available at: [<http://www.utsystem.edu/ogr/CollabProj-Intro.htm>].

Table II-22

Examples of Research Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
U. T. Arlington		
Optical Imaging	Applies optical imaging in medicine. Collaborations include image guided surgery for implantation of deep brain stimulators to treat Parkinson's disease as well as laparoscopic surgery for removal of gallstones. Additionally, optical imaging which diagnoses and guides the treatment of diabetic foot to prevent lower limb amputation is being investigated. A study of breast cancer tumor growth using optical imaging is underway. Other areas of collaboration include treatment of urinary incontinence; body reaction to implants such as breast implants; gene therapy; controlled drug release; characterization of corneal fibroblast; obesity and respiration; modeling of cerebral blood flow autoregulation; and magnetic anchoring of organs for minimally invasive surgery.	UT Arlington, UTSWMC Dallas
Strategic Partnership for Research in Nanotechnology	Fosters nanotechnology-based education and research, and university/industry technology transfer in Texas.	UT Arlington, UT Austin, UT Dallas, and Rice University
Experimental High Energy Physics	Designs, installs, and operates physics detectors; to analyze data from collisions at the world's highest energy particle colliders; to conduct an experimental study of the elementary particles that make up all known matter.	UT Pan American, Texas Tech University, Southern Methodist University, Rice University, Fermi National Accelerator Lab
U. T. Austin		
The Institute for Computational Engineering and Sciences	An interdisciplinary research center for faculty and graduate students in computational sciences and engineering, mathematical modeling, applied mathematics, software engineering, and computational visualization which supports five research centers and numerous research groups, new research units in distributed and grid computing, computational biology, biomedical science and engineering, computational materials research, and many others are planned over the next four years.	UT System campuses, Texas Advanced Computing Center, Teragrid, National Lambda Rail project.
Waggoner Center for Alcohol and Addiction Research	Develops solutions for the prevention and cure of alcoholism. Through genetic and environmental research, provides humanity with a better understanding of the disease of alcoholism and will ultimately lead to effective early warning, treatment, and hopefully a cure for the disease and the related illness of addiction.	<i>Waiting on a reply from the Center to identify collaborators.</i>
Texas Advanced Computing Center (TACC)	Helps build a distributed national cyberinfrastructure, the Tera-Grid, to service the nation's science and engineering community. Develop a unified user support infrastructure and software environment to allow users to access storage and information resources as well as over a dozen major computing systems via a single allocation, either	National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign, Pittsburg Supercomputing Center at the

Examples of Research Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
	as stand-alone resources or as components of a distributed application using Grid software capabilities. Partners include: National Science Foundation, Argonne National Laboratory, Caltech Center for Advanced Computing Research, Indiana and Purdue University,	University of Pittsburgh and Carnegie Mellon University, San Diego Supercomputing Center, et. al.
Ukert-UT Circular Heart	Develops a cheaper, safer, more efficient heart pump. The prototype Ukert-UT left ventricle assist devise (LVAD) uses two independent pistons propelled by electromagnets to push blood inside a circular tube. This eliminates the need for external valves that potentially could reduce blood clotting, strokes, and further damage to the heart.	UT Austin Biomedical Engineers, UTHSC-Houston
Countermeasures to Biological and Chemical Threats	Develops human and material resources to counter biological/chemical threats and bio-terrorism; to develop sensors to biological threat agents; to develop vaccines; to establish an archival data set of diseases in Texas; to conduct surveillance in real time of patients entering emergency medical facilities.	UT System campuses, Texas Department of Health, Civil Support Team, Office of Emergency Management
Strategic Partnership for Research in Nanotechnology	Promotes nanotechnology research and scholarly publications, workshops, patents and technology licenses, undergraduate courses, and graduate student education.	Rice University, UT Dallas, UT Arlington
Education and Group Support for Diabetic Hispanics	Tests behavioral interventions designed for Mexican-Americans in order to overcome genetic predisposition for diabetes in this high-risk population.	UTHSC–Houston School of Public Health
Armenia ICT Master Strategy Development	IC2 is working with SETA Corporation and the Armenian government to create an ICT master strategy for the nation.	Government of Armenia (Armenian Development Agency and ICT Secretariat), SETA Corporation
U. T. Brownsville/Texas Southmost College		
The International Virtual Data Grid Laboratory (iVDGL)	Provides an international Virtual-Data Grid Laboratory of unprecedented scale and scope, comprising heterogeneous computing and storage resources in the U.S., Europe and ultimately other regions linked by high-speed networks, and operates as a single system for the purposes of interdisciplinary experimentation in grid-enabled, data-intensive scientific computing.	Over 40 universities and laboratories in U.S., Europe and Asia
Bahia Grande Restoration Project	Provides quantitative assessment of the recovery of the Bahia Grande (lower Laguna Madre) at the system level using integrated and comprehensive approaches and partnerships.	USFWS; UT Pan American, Texas A&M University, Texas A&M University-Corpus Christi
Project EXPORT	Aims to build research capacity at UTB/TSC to promote participation and training in biomedical research among health disparity populations. The project encompasses research on health disparities in Hispanics, provides a source of data on Hispanic health, develops and evaluates intervention strategies for Hispanic cultures, evolves research collaborations with other Hispanic communities, and builds research capacity in South Texas LRGV. Has led to the creation of the first Hispanic Health Research Center in the nation, which serves as the hub of Project EXPORT at UTB/TSC.	School of Public Health, UTHSC-Houston
U. T. Dallas		
Strategic Partnership for Research in Nanotechnology	A consortium that collaborates on research projects, programs, conferences and the development of joint facilities and infrastructure to position the state as a center for education, research and development in the science of nanotechnology.	Rice University, UT Dallas, UT Austin, UT Arlington

Examples of Research Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
fMRI Brain Mapping	Conducts brain mapping research: to seek federal and private funding for a research-dedicated fMRI machine; to develop new treatments of mental disorders and brain diseases.	UTSWMC Dallas
Cochlear Implant Program	Diagnoses the needs and prospects of deaf children for cochlear implants to carry out research and apply treatment on correction of profound hearing loss in children.	UTSWMC Dallas
U. T. El Paso		
Texas Engineering and Technical Consortium: Launching the Texas Engineering Education Pipeline	Collaborative research with Engineering and Education partners to increase retention of undergraduate students in engineering, utilizing innovative pedagogical strategies and studying long- and short-term impacts on student retention.	UTEP Colleges of Engineering and Education, Baylor University, Lamar University, Prairie View A&M University, Rice University, Southern Methodist University, St. Mary's University of San Antonio, Texas A & M University, UT Arlington, UT Austin, UT San Antonio
Fund for the Improvement of Post-Secondary Education (FIPSE) – Latino Student Success at Hispanic-Serving Institutions	The project developed tools that help institutions assess the effectiveness of existing resource and strategies in retaining and graduating Latino Students and identify commonalities through NSSE data, IPEDS data, self-reported institutional data, and Title V grants.	California State University Los Angeles, California State University Dominguez Hills, CUNY Lehman College, CUNY New York City College of Technology, UTSA
National Science Foundation-ADVANCE Transformation for Faculty Diversity	A program dedicated to the recruitment, retention, and advancement of women and underrepresented minorities employed in academic science and engineering disciplines.	University of California-Irvine, University of Colorado-Boulder, CUNY-Hunter College, Georgia Institute of Technology, University of Michigan, New Mexico State University, University of Puerto Rico-Humacao, University of Washington-Seattle, University of Wisconsin-Madison
U. T. Pan American		
U. S. Hispanic Nutrition and Research Education Center	Focuses on understanding how diet and nutrition, combined with genetic, social, psychological, socioeconomic, cultural and environmental factors, affect the health of the U.S. Hispanic population, especially in South Texas.	UTHSC-San Antonio, Regional Academic Health Center-Harlingen
VaNTH Biomedical Engineering	Develops learning modules for bioengineering based on effective learning theory.	MIT, Vanderbilt University, Northwestern University, UT Austin, Harvard, UT San Antonio
Advanced Process Technologies for Controlling Functional Nanostructures and Polymer/Nanotube Composites	Investigates the composites for promising applications of nanotechnology such as photocells, photo detectors, electroluminescent displays, and EMI shielding.	Rice University
U. T. Permian Basin		
Center for Energy and Economic Diversification (CEED)	Research, training, and technology transfer activities on issues facing the region's primary industry, energy; to conduct research on bio-mass conversion into fuel, energy security, and alternative	Welch Foundation, Texas Higher Education Coordinating Board Advanced Technology

Examples of Research Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
	energy technologies and economics.	Program
EDA University Center	Works with local governments and regional planning authorities on applied research to assist in economic development in the region; to increase economic activity in West Texas.	U.S. Economic Development Administration, Monahans EDC, La Entrada Al Pacifico Rural Rail District, McCamey EDC
Faculty Research	Research collaboration of Biology Professor Douglas P. Henderson with Professor John S. Olson of Rice University, leading to co-inventor patent application for making hemoglobin in bacteria for use as a blood substitute.	Rice University
U. T. San Antonio		
San Antonio Life Sciences Institute (SALSI)	Strengthens collaboration between the UTHSC–SA and UTSA and enhances their research, teaching, and service missions. Research proposals submitted in a variety of scientific disciplines ranging from biomechanics, cancer biology, and computational sciences, to health care disparities. Three educational proposals were received in diverse areas, as well. (See also Educational Collaboration with UTHSC-SA in Ph.D. in Biomedical Engineering)	UTHSC-San Antonio
Center for Infrastructure Assurance and Security and Center of Excellence in Biotechnology and Bioprocessing Education and Research	Conducts current research in Biometrics, Intrusion Detection, Wireless Technologies, Steganography, Database, and Data Mining to assist in new technologies and better processes for these types of technologies. Creation of a Center for Research and Education in various aspects of Bioprocessing and Biotechnology.	Air Force Research Labs and Air Intelligence Agency UTSA, Air Force, City of San Antonio
UTSA College of Sciences, Department of Physics and Astronomy	The M.S. and Ph.D. degrees in physics will be offered by the Department of Physics and Astronomy in the UTSA College of Sciences in collaboration with the Southwest Research Institute (SwRI) Space Science and Engineering Division. The programs are designed to prepare graduates to make significant contributions to the evolution of space technologies and research, the nation's biomedical infrastructure and the rapidly advancing scientific and technological capabilities in the city, region, state, and nation. Students will have the opportunity to participate in a process of development, testing, and integration of instrumentation for space science missions, an area in which SwRI has played a leading role for decades.	Southwest Research Institute (SwRI) Space Science and Engineering Division.
U. T. Tyler		
The Aging RN Workforce	To decrease risks of injury/illness in RNs and other personnel via environmental interventions.	UTHC-Tyler medical staff
U. T. Tyler	Participation in the U. T. System Assessment of Teacher Preparation Programs conducted by the National Center for Educational Accountability.	UT Austin
Launching the Texas Engineering Education Pipeline: Deploying the Infinity Project Statewide	Helps educators deliver a maximum of engineering exposure with a minimum of training, expense, and time; to help students see the real value of math and science and its varied applications to high tech engineering.	UT Austin, UT Dallas, UT Arlington, SMU, Rice, Baylor, Texas Instruments

Examples of Educational Collaborations

- The U. T. System encourages educational collaborations among U. T. institutions as well as with organizations outside of U. T.
- These collaborations achieve economies of scale and help extend the scope and quality of educational programs by leveraging faculty and learning resources beyond the scope that any individual institution could bring to bear.
- Below are examples from each institution of current and high priority collaborative educational projects.
- A more extensive list of collaborations is available at: [<http://www.utsystem.edu/ogr/CollabProj-Intro.htm>].

Table II-23

Examples of Educational Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
U. T. Arlington		
The Texas TWO-STEP Projects	Offers seamless transition pathways from high schools to community colleges and on to universities.	Dallas County Community College District, Tarrant County College District, Collin County Community College District
Closing the Gap: Ethnic/Racial Diversity in Nursing	To increase the number of underrepresented minorities enrolled and graduating with degrees in nursing.	Texas Health Resources, St. Paul Hospital, Zale Lipshy University Hospital, Parkland Health & Hospital System, Methodist Medical Center, Harris Methodist Fort Worth Hospital, Osteopathic Medical Center of Texas, John Peter Smith Health Network, North Texas Division of HCA, Medical City of Dallas
UTA School of Social Work/West Texas A&M University (WTAMU) Joint Degree Program	Delivers graduate Social Work education in the Texas Panhandle leading to the Masters of Science in Social Work; meets the need for professionally trained master's level social workers in the Texas Panhandle and South Plains area.	West Texas A&M University, Canyon
U. T. Austin		
Texas Advanced Computing Center (TACC)	Builds the high-speed Lonestar Education And Research Network (LEARN) for Texas higher education institutions and construct the Texas Internet Grid for Research and Education (TIGRE) to enable these institutions to access and share resources, collaborate on research, and facilitate online teaching and remote learning. Gets Texas higher education working together.	More than 30 universities and medical research institutions in Texas.
College of Pharmacy Partnerships	Supports professional and graduate education and training. Cooperative Pharmacy Program with Hispanic Serving Institutions and the Joint Pharm.D. Program. Strengths of these partnerships lead to establishment of the College of Pharmacy Hispanic Center of Excellence in September 2003.	UT El Paso, UT Pan American, UTHSC-San Antonio, M.D. Anderson Cancer Center Science Park

Examples of Educational Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
Coordinated Admissions Program	Manages freshmen enrollment and provide a means by which otherwise eligible Texas resident students not admitted by U.T Austin can, if they successfully complete a set course of study within a set time at a U. T. institution, is guaranteed admission to U. T. Austin.	UT Arlington, UT El Paso, UT Brownsville, UT Pan American, UT Permian Basin, UT San Antonio
School of Law Recruiting Initiatives	Enhances School diversity and student opportunity. The South Texas Recruitment Program commits 15 offers of admission to five designated south Texas schools. The Institutes Program provides intensive pre-law programs to assist students with law school preparation. Historically Black Colleges and Universities (HBCU). Recruitment programs are reaching more potential students. Better prepared students are being enrolled.	UT System Institutions, Texas A&M Institutions, HBCU Institutes.
DEFINE: Administrative Computing System	Provides, improves, and maintains a computing system that provides payroll, procurement, human resources, budget, financial accounting, and management services for Texas institutions of higher education.	UT Arlington, UT Brownsville, UT El Paso
UT System Digital Library (UTSDL)	Expands existing services and programs; creates entirely new options for access to scholarly information for the UT System community, including distance learners.	UT System Administration
Cooperative Pharmacy Program	Provides the Doctor of Pharmacy degree opportunities for South Texas institutions, graduates of the cooperative programs, and pharmacy professionals to meet the needs of the state, especially in traditionally underserved areas.	UT El Paso, UT Pan American
U. T. Brownsville/Texas Southmost College		
Cooperative Doctoral Program in Education	Increases access to doctoral education for residents in the Lower Rio Grande Valley, particularly Hispanics. Over 75 Ed.D. degrees have been awarded in the 16 years of this collaborative.	University of Houston
Health Careers Opportunity Program (HCOP) and Joint Admission Medical Program (JAMP)	Provides underrepresented minorities access to medical schools through facilitated admissions programs (Early Medical School Acceptance Programs).	UTMB Galveston, Baylor College of Medicine, Texas Tech University Health Science Center, Texas A&M System Health Science Center, University of North Texas Health Science Center/Texas College of Osteopathic Medicine, UTHSC-Houston, UTHSC-San Antonio
Pre-medical Opportunity Programs	Helps disadvantaged and underrepresented minority students gain access to medical, dental, physician assistant, veterinary medicine, and pharmacy schools; provides assistance and support for pre-medical (MCAT) and pre-dental (DAT) admission test preparations; conducts summer camps for underrepresented minority high school students from rural areas pursuing health care careers; and provides underrepresented minority students paid summer internships and other enriching educational experiences through Medical School Familiarization Programs.	UTHSC-Houston, UTHSC-San Antonio, UTMB Galveston, UTHSC-San Antonio Dental School, UTHSC-Houston Dental Branch, UT Austin, Texas A&M-Corpus Christi, Texas Tech University Health Science Center, University of North Texas Health Science Center - Fort Worth

Examples of Educational Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
U. T. Dallas		
Alliance for Medical Management Education	Provides customized programs in leadership, strategy, and operational improvement for major integrated health systems; to conduct research on important operational and strategic issues in healthcare organizations.	UTSWMC Dallas
Urban Collaborative for Educational Leadership	Provides a "grow-your-own" principal preparation program to help prepare a diverse group of individuals to serve as principals with partner ISDs; will certify approximately 20 new principals each year for the participating ISDs.	Dallas ISD, Richardson ISD, UT Arlington
Computer Science/Electrical Engineering (CE/EE) OnLine Degree Program	Provides telecommunications professionals with the ability to obtain a master's degree online.	UT Arlington, UT TeleCampus
U. T. El Paso		
UTEP/UT Austin Cooperative Pharmacy Program	Improving pharmacy manpower deficiencies of the region; offers pharmacy as a career opportunity for El Paso students; provides research opportunities for an underserved, understudied border population.	UT Austin, UT Pan American, UT San Antonio, many healthcare organizations in the area
Project Podemos	Development of effective models of parental engagement strategies through engagement of faculty, schools, and communities with pre-service teacher education students as action researchers.	AACTE (American Association of College Teacher Education), MetLife, UNT, UCF, USF, UI.
Title V Grant-EPCC/UTEP Transfer Program	A program to develop the transfer infrastructure to enable EPCC students to self-direct their transfer to UTEP, to develop a Transfer Center at EPCC's Valle Verde campus, to expand the Transfer Center at UTEP, and to develop Transfer Seminars and a communication plan to recruit and inform EPCC students about UTEP.	El Paso Community College
U. T. Pan American		
Doctor of Philosophy in Nursing, Clinical Nurse Scientist	Increasing the number of Ph.D.-trained nursing scientist faculty in the Rio Grande Valley.	UTHSC-San Antonio
Hispanic Pharmacy Center of Excellence (HCOE)	Remedies a severe shortage of Hispanic faculty members in College of Pharmacy throughout the country; educates students to understand demographic changes and health care realities of underserved and minority populations.	UT Austin, UT El Paso, UTHSC-San Antonio, Health Resources and Services Administration
Undergraduate Research Training Program Focused on Plant Responses	Provides research opportunities for undergraduate students in the sciences, especially biology.	Purdue University
U. T. Permian Basin		
UT TeleCampus Distance Education Programs	Delivery of one bachelor's and two master's programs to students throughout Texas and to sites throughout the world; delivery of coursework leading to Certification as a Superintendent for educational administrators located in Texas as well as throughout the world.	UT TeleCampus, UT Arlington, UT Brownsville, UT Dallas, UT El Paso, UT Pan American, UT San Antonio, UT Tyler
Regional College and University Collaborations	Expanding higher educational opportunities for students throughout West Texas; to encourage growth in enrollments at UT Permian Basin	Howard College, Midland College, Odessa College,

Examples of Educational Collaborations – U. T. Academic Institutions		
	Purpose and Outcomes	Collaborators
	and at partner institutions in West Texas.	Western Texas College, Angelo State University, Sul Ross State University
International University Collaborations	Expanding educational and cultural opportunities for students at UT Permian Basin and at the partner institution in the State of Chihuahua, Mexico, with exchange programs including annual Language Institutes, orchestral performances, and art exhibitions.	Universidad Autonoma de Chihuahua
U. T. San Antonio		
Ph.D. Program in Biomedical Engineering	Training for future scholars in the use of fundamental bioengineering approaches for the investigation of biomedical quests associated with the diagnosis and treatment of human diseases.	UTHSC-San Antonio
MBA Online Program in General Management	The 48-hour General Management MBA is a collaboration among eight accredited U. T. System institutions and is managed by the UT TeleCampus.	UT Arlington, UT Brownsville/Texas Southmost College, UT Dallas, UT El Paso UT Pan American, UT Permian Basin, UT San Antonio, UT Tyler
UTSA/UT Pan American	Inter-campus student experimentation and resource sharing for Dynamic Systems & Controls Laboratory courses.	UT Pan American
U. T. Tyler		
MS in Kinesiology	Makes available a degree program not otherwise accessible.	UT TeleCampus
MS in Environmental and Occupational Health	Proposed degree to meet the critical needs for Occupational Health and Public Health degrees for medical residents and other students.	UTHC-Tyler Dept. of Occupational Health
MS in Occupational Health	Degree articulation to make a needed health careers program available for East Texas students.	UTMB
BS in Clinical Laboratory Sciences (Medical Technology)	Collaborative degree plan to meet the critical needs for medical technology graduates in the region.	UTHC-Tyler, UTMB
DNS	Collaborative effort to prepare future nurse educators and scientists who would otherwise be unable to access the degree.	UT Houston
MSN—Women’s Health Nurse Practitioner	To meet the needs of the certification program at UT Southwestern—master’s level; to make available an NP specialty track not currently available in this region.	UTSWMC Dallas
MBA On-Line	Now serving about 400 students per semester. Each of the eight campuses not including UT Austin contributes two courses to the 16-course AACSB curriculum.	UT TeleCampus and all UT institutions except UT Austin
MSN-Nurse Practitioner degree (Family, Pediatric, Geriatric)	Increasing the number of advanced nurse practitioners in the region; to increase the quality of health care for residents of rural East Texas.	UTHC-Tyler, Texas Tech University Health Sciences Center School of Nursing
Master of Science in Nursing (Psychiatric, Acute Care)	Makes available specialty tracks not otherwise available.	UT Arlington, UTHC-Tyler

Contextual Measure: Faculty Salary Trends

Table II-24

Average Budgeted Salaries of Instructional Faculty by Rank U. T. Academic Institutions

FY	2000	2001	2002	2003	2004	Average Annual % change
Professor						
Arlington	\$71,218	\$75,217	\$78,030	\$80,475	\$80,498	3.1%
Austin	88,922	94,286	98,838	103,157	103,521	3.9
Brownsville/TSC*	54,520	56,812	58,771	59,984	61,517	3.1
Dallas	83,503	86,456	90,244	97,516	99,363	4.5
El Paso	65,298	67,855	73,133	75,139	76,147	3.9
Pan American	64,927	66,451	67,792	70,807	70,068	1.9
Permian Basin	64,314	65,532	65,918	69,375	72,830	3.2
San Antonio	70,086	72,701	79,785	85,104	90,687	6.7
Tyler	59,264	62,891	65,869	68,343	70,831	4.6
Associate Professor						
Arlington	\$52,145	\$55,091	\$57,277	\$60,165	\$60,633	3.9
Austin	58,369	60,670	63,502	65,913	64,965	2.7
Brownsville/TSC*	49,322	50,970	52,551	54,584	54,998	2.8
Dallas	62,010	63,332	67,436	72,634	72,494	4.0
El Paso	49,509	51,468	56,391	57,690	59,121	4.6
Pan American	51,569	55,757	56,850	59,877	59,394	3.6
Permian Basin	48,093	49,698	52,034	53,121	53,736	2.8
San Antonio	54,463	56,991	62,753	66,385	67,916	5.7
Tyler	47,141	50,422	52,014	53,598	53,956	3.5
Assistant Professor						
Arlington	\$47,173	\$49,269	\$52,274	\$55,632	\$56,417	4.6
Austin	54,362	57,569	59,919	61,674	62,510	3.6
Brownsville/TSC*	44,293	47,007	47,443	47,989	49,917	3.1
Dallas	63,063	67,561	74,716	74,351	74,210	4.3
El Paso	43,884	46,981	48,287	50,864	53,875	5.3
Pan American	44,790	47,060	48,214	51,357	50,633	3.2
Permian Basin	41,616	41,935	45,841	48,416	50,077	4.8
San Antonio	45,286	46,289	50,270	53,680	56,810	5.9
Tyler	44,794	45,184	48,216	47,435	46,917	1.2
Instructor						
Austin	\$40,106	\$40,033	\$45,807	\$58,090	\$44,143	4.3
Brownsville/TSC*	38,115	41,453	42,494	47,057	46,238	5.1
Permian Basin	38,100	--	--	--	--	--
San Antonio	36,742	40,100	40,750	51,204	60,064	13.4

* Salary information available for only Brownsville faculty

Source: Texas Higher Education Coordinating Board

Table II-25

**Average Faculty Salaries in Public Universities
Texas and the 10 Most Populous States
FY 2004**

	Professor	Associate Professor	Assistant Professor	Instructor
New Jersey	\$104,013	\$76,074	\$59,463	\$40,109
California	97,657	69,452	57,784	45,484
Michigan	95,524	68,405	56,369	38,864
Pennsylvania	99,240	70,533	58,472	40,508
New York	90,219	67,597	54,986	43,606
Ohio	89,624	64,215	52,517	36,419
Illinois	88,769	63,887	54,179	33,672
Florida	87,961	62,853	54,112	38,150
N. Carolina	85,698	62,699	54,143	47,056
Georgia	89,408	62,796	52,300	37,295
10 States Average	93,668	66,703	55,508	38,300
National Average	87,442	63,383	53,171	37,527
Texas	\$86,130	\$60,914	\$53,190	\$37,869

Includes all public four-year (Carnegie Classifications I, IIA, and IIB) institutions.
Salaries adjusted to standard nine-month salary and excludes reporting categories with three or fewer individuals.

Source: THECB, based on American Association of University Professors Annual Salary Study

- Annualized average salaries are based on salaries for the fall of each year.

Table II-26

U. T. Academic Institutions Average Tenure/Tenure-Track Faculty Salaries

	FY	2000	2001	2002	2003	2004	Average annual % change
Arlington		\$58,851	\$62,367	\$64,379	\$66,985	\$66,726	3.2%
Austin		73,837	78,326	81,589	85,080	84,911	3.6
Brownsville/TSC*		48,385	49,933	50,894	52,401	53,957	2.8
Dallas		72,420	74,651	79,542	83,347	84,332	3.9
El Paso		52,944	55,131	58,732	60,604	62,244	4.1
Pan American		52,627	55,513	56,089	58,967	58,489	2.7
Permian Basin		48,328	48,872	52,380	54,196	56,641	4.1
San Antonio		55,839	58,038	63,115	67,026	70,567	6.0
Tyler		50,654	52,426	54,441	55,521	56,532	2.8

* Salary information for Brownsville faculty only

Source: Texas Higher Education Coordinating Board

- To remain competitive, certain U. T. System academic institutions on average pay faculty slightly more than the average of four-year institutions in the most populous states.
- At U. T. Austin, U. T. Dallas, and U. T. San Antonio the average salary of professors is higher than the national average and the 10 most populous state averages.
- The average salary for associate professors at U. T. Austin, U. T. Dallas, and U. T. San Antonio is higher than the 10 most populous state average and the national average.
- The average salary of assistant professors at U. T. Arlington, U. T. Austin, U. T. Dallas, and U. T. San Antonio is higher than the national and 10 most populous states' averages.

II. Teaching, Research, and Health Care Excellence: U. T. Health-Related Institutions

Research Funding Trends 2000-2004 (all sources)

- In FY 2004, U. T. health-related institution research and research-related expenditures totaled \$1.047 billion, a 7.8 percent increase over the previous year. From 2000 to 2004, research and research-related expenditures have increased 62 percent, an average of 12 percent per year.
- Among Texas health-related institutions, U. T. health-related institutions ranked first in research and development expenditures in FY 2003. These expenditures comprised 45 percent of the \$2.174 billion total in Texas public university and health-related institution research and research-related expenditures in 2003.
- For FY 2003, five U. T. health-related institutions are among the top 10 Texas public institutions in research expenditures: U. T. M. D. Anderson Cancer Center (3), U. T. Southwestern Medical Center (4), U. T. Health Science Center-Houston (5), U. T. Medical Branch (6), and U. T. Health Science Center-San Antonio (7).

Table II-27

Total U. T. Health-Related Institution Research and Research-Related Expenditures, 2000-2004
(\$ in millions)

	FY 00	FY 01	FY 02	FY 03	FY 04
Total Health-Related	\$676.0	\$758.7	\$896.8	\$970.7	\$1,046.5

Source: "Survey of Research Expenditures," Texas Higher Education Coordinating Board

Table II-28

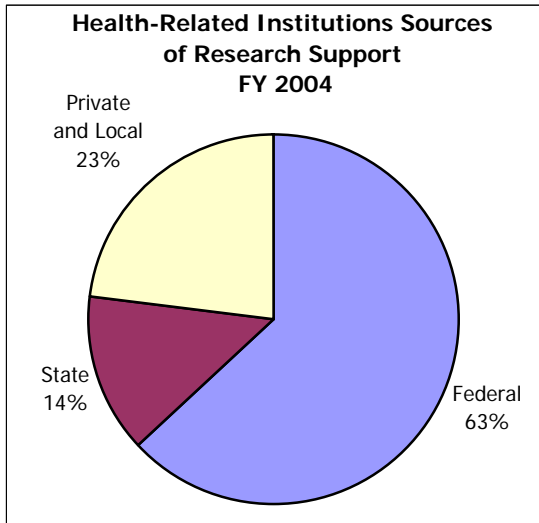
Research Expenditures by Source 2004
U. T. Health-Related Institutions

	Federal	State	Private	Local	Total
SWMC	\$200,887,545	\$23,297,509	\$83,117,665	\$7,100,309	\$314,403,028
UTMB	102,490,775	10,982,010	18,075,490	1,220,636	132,768,911
HSC-H	110,438,174	13,900,148	22,704,792	3,179,092	150,222,206
HSC-SA	89,661,741	4,924,841	23,728,770	6,597,370	124,912,722
MDACC	150,528,694	89,902,220	61,388,637	12,096,804	313,916,355
HC-T	4,659,021	2,208,368	808,016	2,564,985	10,240,390
Total	\$658,665,950	\$145,215,096	\$209,823,370	\$32,759,196	\$1,046,463,612

The THECB's definition of research expenditures includes indirect costs and pass-throughs to institutions of higher education.

Source: "Survey of Research Expenditures," Texas Higher Education Coordinating Board

Figure II-15



- The federal government provides the majority of research and research-related funding – 63 percent.
- Private and local sources provide the next largest proportion – 23 percent.
- Fourteen percent of research funds expended in 2003 came from state sources.

Sponsored Revenue

Table II-29
Sponsored Revenue - U. T. Health-Related Institutions
FY 2000-2004
 (\$ in thousands)

	FY 00	FY 01	FY 02	FY 03	FY 04
SWMC	\$275,494	\$280,848	\$314,345	\$337,979	\$381,945
UTMB	148,982	125,397	169,547	183,131	174,093
HSC-H	238,771	267,262	204,448	228,623	235,442
HSC-SA	112,174	116,495	156,520	162,337	163,255
MDACC	142,449	126,920	158,868	180,502	211,442
HC-T	6,872	7,190	5,740	11,897	11,479
Total Health-Related	\$924,742	\$924,112	\$1,009,468	\$1,104,469	\$1,177,656

Source: Exhibit B of Annual Financial Report

- Sponsored revenue is a more comprehensive measure of an institution's overall success in securing external funding to support research, public service, training, and other activities.
- From 2000 to 2004, sponsored revenue has increased by 27 percent at U. T. System health-related institutions.

Table II-30
Sponsored Revenue -- U. T. Health-Related Institutions
by Source, FY 2004

(\$ in thousands)

	Federal	State	Local	Private	Total
SWMC	\$207,747	\$8,717	\$111,120	\$54,361	\$381,945
UTMB	106,847	29,331	1,075	36,840	174,093
HSC-Houston	133,823	10,632	69,845	21,142	235,442
HSC-San Antonio	106,042	2,761	39,756	14,696	163,255
MDACC	156,901	339	0	54,202	211,442
HC-T	4,719	1,061	4,668	1,031	11,479
Total	\$716,079	\$52,841	\$226,464	\$182,272	\$1,177,656

Source: Exhibit B of Annual Financial Report

- Federal funding is the primary source of sponsored revenue at U. T. System health-related institutions.

Federal Research Expenditures

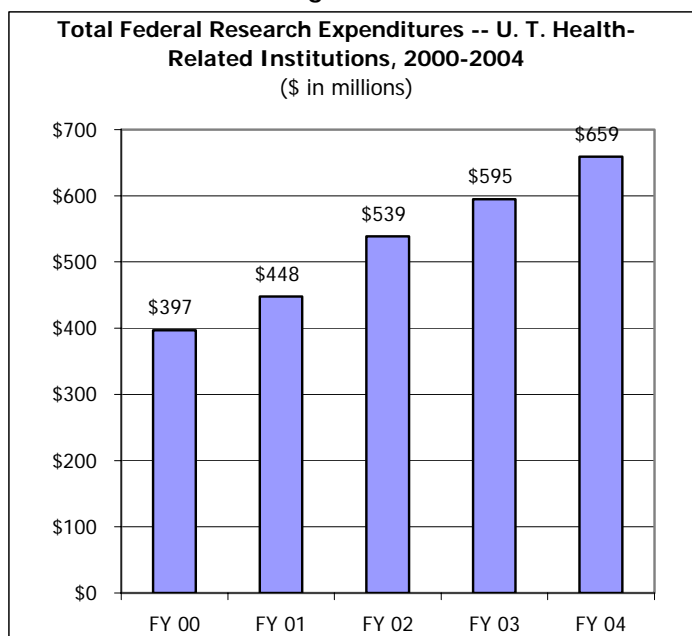
- Federal research expenditures are considered the national benchmark for research productivity at universities.
- From 2000 to 2004, these expenditures have increased by over 50 percent at five U. T. System health-related institutions.

Table II-31
Federal Research Expenditures by U. T. Health-Related Institutions

	FY 00	FY 01	FY 02	FY 03	FY 04	% change 03-04	% change 00-04
SWMC	\$109,165,343	\$131,820,109	\$155,257,992	\$177,133,099	\$200,887,545	13.4%	84.0%
UTMB	61,356,467	63,274,494	78,100,188	93,039,583	102,490,775	10.2	67.0
HSC-H	82,991,431	91,267,003	101,738,767	111,170,193	110,438,174	-0.7	33.1
HSC-SA	58,600,224	66,852,477	83,760,708	86,854,337	89,661,741	3.2	53.0
MDACC	81,871,561	91,543,036	117,633,074	122,868,912	150,528,694	22.5	83.9
HC-T	2,807,980	3,063,099	2,783,554	3,493,251	4,659,021	33.4	65.9
Total	\$396,793,006	\$447,820,218	\$539,274,283	\$594,559,375	\$658,665,950	10.8%	66.0%

Source: "Survey of Research Expenditures," Texas Higher Education Coordinating Board

Figure II-16



- Continued increases in these funds are critical to the success of the health-related institutions in the U. T. System.
- By 2004, federal research expenditures for all health-related institutions increased 66 percent over expenditures in 2000.

Research Expenditures and State General Revenue

- Comparing research expenditures to formula-derived general revenue illustrates the scope of research activities at health-related institutions and the leveraging effect of state support.

Table II-32

	FY	2000	2001	2002	2003	2004
SWMC	Research Expenditures	\$189,216,337	\$222,378,235	\$263,958,410	\$277,956,511	\$314,403,028
	Formula-Derived General Revenue	78,052,642	77,985,287	80,813,651	80,802,981	71,498,979
	Research Expenditures/GR	242%	285%	327%	344%	440%
UTMB	Research Expenditures	87,146,267	91,088,019	109,139,538	129,860,903	132,768,911
	Formula-Derived General Revenue	75,052,140	75,036,601	76,554,573	76,605,352	67,860,400
	Research Expenditures/GR	116%	121%	143%	170%	196%
HSC-H	Research Expenditures	122,914,171	128,161,248	140,827,726	152,117,064	150,220,206
	Formula-Derived General Revenue	102,341,076	102,213,193	110,145,604	110,149,899	99,859,199
	Research Expenditures/GR	120%	125%	128%	138%	150%
HSC-SA	Research Expenditures	86,074,434	97,638,253	112,232,653	119,279,555	124,912,722
	Formula-Derived General Revenue	97,729,893	97,667,518	99,975,785	100,068,763	89,333,722
	Research Expenditures/GR	88%	100%	112%	119%	140%
MDACC	Research Expenditures	182,196,490	210,236,589	262,144,960	282,260,250	313,916,355
	Formula-Derived General Revenue	21,422,773	21,422,773	24,230,050	24,230,050	24,307,634
	Research Expenditures/GR	850%	981%	1082%	1165%	1291%
HC-T	Research Expenditures	8,402,408	9,228,568	8,453,709	9,217,039	10,240,390
	Formula-Derived General Revenue	3,373,683	3,373,683	3,460,221	3,460,221	3,140,637
	Research Expenditures/GR	249%	274%	244%	266%	326%

Source: "Survey of Research Expenditures" submitted to the THECB; Formula-Derived General Revenue, Exhibit C of U. T. System Annual Financial Report (2000-2001) and Exhibit B of AFR for 2002-2004.

- Between 2000 and 2004, the ratio of research expenditures to formula-derived general revenue has increased at each health-related institution, with the exception of the Health Center-Tyler where it has been well over 200 percent for the past four years.
- For three U. T. health-related institutions, Southwestern Medical Center, M. D. Anderson Cancer Center, and the Health Center-Tyler, research expenditures exceed by more than 200 percent the amount of formula-derived general revenue.

Faculty Holding Extramural Grants

- In U. T. health-related institutions, faculty of many appointment types hold extramural grants to conduct research.
- Table II-33 on the next page illustrates the contributions of both tenure/tenure-track and non-tenure-track faculty to research, as measured by the number of grants held and the proportion of faculty holding grants in a given year. This measure illustrates success irrespective of the size of a particular grant.
- The proportion of tenure/tenure-track faculty receiving grants has remained high or declined somewhat at most institutions. The proportion is particularly high at U. T. Southwestern Medical Center (75%); U. T. Health Science Center-San Antonio (84%); U. T. M. D Anderson (61%), and U. T. Health Center-Tyler (72%).
- As well, the proportion of non-tenure-track research faculty holding grants has increased at U. T. Southwestern Medical Center, U. T. Health Science Center-Houston, U. T. M. D. Anderson Cancer Center, and U. T. Health Center-Tyler.

Table II-33

Faculty Holding Extramural Grants (All Sources and Types) – U. T. Health-Related Institutions

		FY 01	FY 02	FY 03	FY 04
SWMC	# Grants to T/TT Fac	703	861	846	882
	# T/TT Fac Holding Grants	303	323	282	257
	# FTE T/TT Faculty	313	324	333	353
	% T/TT Fac Holding Grants	97%	100%	85%	73%
	# NT Research Faculty Holding Grants	61	78	60	92
	# FTE NT Research Faculty	209	215	223	264
	% NT Research Faculty Holding Grants	29%	36%	27%	35%
UTMB*	# Grants to T/TT Fac	730	782	721	513
	# T/TT Fac Holding Grants	250	263	240	244
	# FTE T/TT Faculty	496	474	483	495
	% T/TT Fac Holding Grants	50%	56%	50%	49%
	# NT Research Faculty Holding Grants	32	29	27	31
	# FTE NT Research Faculty	154	142	143	141
	% NT Research Faculty Holding Grants	21%	20%	19%	22%
HSC-H	# Grants to T/TT Fac	408	480	442	501
	# T/TT Fac Holding Grants	196	223	219	219
	# FTE T/TT Faculty	429	394	425	459
	% T/TT Fac Holding Grants	46%	57%	52%	48%
	# NT Research Faculty Holding Grants	31	29	34	50
	# FTE NT Research Faculty	122	132	141	146
	% NT Research Faculty Holding Grants	25%	22%	24%	34%
HSC-SA**	# Grants to T/TT Fac	1,233	1,395	1,404	1,078
	# T/TT Fac Holding Grants	292	266	312	315
	# FTE T/TT Faculty	310	545	524	512
	% T/TT Fac Holding Grants	94%	49%	60%	62%
	# NT Research Faculty Holding Grants	86	100	99	76
	# FTE NT Research Faculty	91	100	105	161
	% NT Research Faculty Holding Grants	95%	100%	94%	47%
MDACC***	# Grants to T/TT Fac	671	698	736	793
	# T/TT Fac Holding Grants	145	153	145	344
	# FTE T/TT Faculty	510	529	557	563
	% T/TT Fac Holding Grants	28%	29%	26%	61%
	# NT Research Faculty Holding Grants	38	54	57	47
	# FTE NT Research Faculty	231	248	269	263
	% NT Research Faculty Holding Grants	16%	22%	21%	18%
HC-T	# Grants	30	33	34	37
	# NT Research Faculty Holding Grants	13	19	19	23
	# FTE NT Research Faculty	26	29	29	32
	% NT Research Faculty Holding Grants	50%	66%	66%	72%

Notes:

For multi-investigator grants, only the principle investigator is counted.

Non-tenure-track research faculty excludes those appointed primarily to teach.

*The apparent decline in FY04 is a result of the systems previously in place at UTMB. The prior system did not allow an unduplicated enumeration of grants and PI awardees.

** The method of calculation changed after FY2001. Number decreased for 2004 because changes in the software used to track these data. Some closed-out grants were included in the total in 2003 which have not been eliminated. In this report for FY04, they have been, thus the big drop in number per total tenured-tenure track faculty.

***"Tenure/tenure-track" equivalent faculty at MDACC are awarded seven-year term appointments, renewable through a formal promotion and reappointment process. A refinement in data collection resulted in the increase in number of grants to T/TT faculty in 2004.

Source: U. T. System Health-Related Institutions; THECB for FTE T/TT faculty

- Table II-34 illustrates the ratio of the dollar amount of external research expenditures to FTE faculty in a given year, illustrating success in terms of the amount of research funding faculty acquire.

Table II-34
Research Expenditures per FTE Faculty - U. T. Health-Related Institutions
FY 2002-2004

	FY 02			FY 03			FY 04		
	Research Expenditures	FTE Faculty	Exp Amt/ FTE Faculty	Research Expenditures	FTE Faculty	Exp Amt/ FTE Faculty	Research Expenditures	FTE Faculty	Exp Amt/ FTE Faculty
SWMC	\$263,958,410	324	\$814,686	\$277,956,511	333	\$834,704	\$314,403,028	353	\$890,660
UTMB	109,139,538	474	230,252	129,860,903	483	268,863	132,768,911	495	268,220
HSC-H	140,827,726	394	357,431	152,117,064	425	357,923	150,222,206	459	327,281
HSC-SA	112,232,653	545	205,931	119,279,555	524	227,633	124,912,722	512	243,970
MDACC	262,144,960	529	495,548	282,260,250	557	506,751	313,916,355	563	557,578
HC-T	8,453,709	106	79,752	9,217,039	113	81,567	10,240,390	105	\$97,528

The THECB's definition of research expenditures includes indirect costs and pass-throughs to institutions of higher education.

Source: Research expenditures are from the Survey of Research Expenditures submitted to the Texas Higher Education Coordinating Board. FTE faculty from the THECB.

Private Funding

Table II-35

Endowed Faculty Positions – U. T. Health-Related Institutions		FY 00	FY 01	FY 02	FY 03	FY 04
SWMC	Budgeted Endowed Professorships and Chairs	211	223	238	252	271
	Number Filled	189	201	217	221	235
	Endowed Positions as % of Budgeted T/TT Positions	62%	67%	70%	73%	76%
UTMB*	Budgeted Endowed Professorships and Chairs	97	102	110	127	138
	Number Filled	53	80	80	99	102
	Endowed Positions as % of Budgeted T/TT Positions	18%	22%	25%	24%	19%
HSC-H	Budgeted Endowed Professorships and Chairs	87	89	96	100	96
	Number Filled	70	68	75	76	73
	Endowed Positions as % of Budgeted T/TT Positions	20%	20%	22%	24%	24%
HSC-SA	Budgeted Endowed Professorships and Chairs	67	70	76	78	82
	Number Filled	34	41	49	52	58
	Endowed Positions as % of Budgeted T/TT Positions	11%	11%	13%	13%	15%
MDACC	Budgeted Endowed Professorships and Chairs	97	101	105	110	111
	Number Filled	67	76	80	87	88
	Endowed Positions as % of Budgeted T/TT Positions	21%	20%	20%	20%	19%
HC-T**	Budgeted Endowed Professorships and Chairs	31	31	33	33	37
	Number Filled	29	29	27	27	28
	Endowed Positions as % of Budgeted Positions**	46%	41%	38%	41%	51%

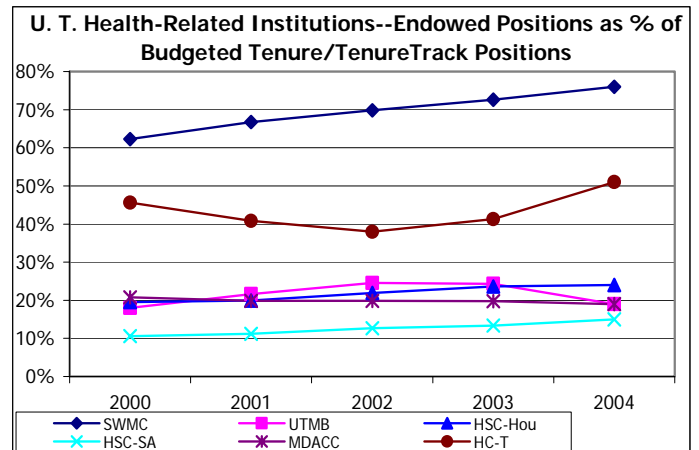
*In 2004, UTMB refined its methodology to match budgeted and filled positions.

**The Health Center-Tyler does not have tenure-track positions.

Source: U. T. Health-Related Institutions

- Endowed professorships and chairs significantly supplement those faculty positions that institutions support with State appropriations, tuition, grants, and other sources of funding. They help institutions compete for, recruit, and retain top faculty. These hires, in turn, help institutions achieve excellence in targeted fields.
- These endowments reflect each institution's specific fundraising environment, which is influenced by local and regional economic conditions.
- The majority of these positions are filled each year. Open positions provide flexibility, or reflect the timing of making academic hires in a highly competitive environment.
- The number and proportion of endowed positions has increased at all U. T. health-related institutions except U. T. Medical Branch between 2000 and 2004.
- U. T. Southwestern Medical Center has a very high proportion of endowed positions, which increased from 62% in 2000 to 76% in 2004.
- The proportion is also high at U. T. Health Center-Tyler, increasing from 46% in 2000 to 51% in 2004.

Figure II-17



Faculty Awards and Honors

- The faculty of the U. T. System receive a wide range of honors and awards. Those listed here are perpetual, lifetime awards received by faculty members on or before September 1, 2004.

Table II-36
Cumulative Honors – U. T. Health-Related Institutions

	Total	SWMC	UTMB	HSC-H	HSC-SA	MDACC
Nobel Prize	5	4		1		
National Academy of Sciences	16	15		1		
American Academy of Arts and Sciences	14	12		2		
American Academy of Nursing	29		6	13	10	
Institute of Medicine	23	15	2	4	1	1
International Association for Dental Research	38			35	3	

Source: U. T. System Health-Related Institutions

- Faculty at U. T. health-related institutions receive many other prestigious awards, honors, prizes, and professional recognitions. Additional information on specific honors is available in the Institutional Profiles, Section V.
- Noteworthy awards received in 2003-2004 include:

Table II-37
Faculty Awards Received 2003-2004 – U. T. Health-Related Institutions

	SWMC	UTMB	HSC-H	HSC-SA	MDA	HC-T
Nobel Prize						
National Academy of Sciences	1					
American Academy of Nursing				1		
Burroughs Wellcome Fund Career Awards	1					
Fulbright American Scholars		1	1		1	
National Institutes of Health (NIH) MERIT Award	2		1			
NIH Outstanding Investigator Award					1	
Pew Scholars in Biomedicine			1			
National Endowment for the Humanities		1				

Source: U. T. System Health Related Institutions

Technology Transfer

Table II-38

U. T. Health-Related Institution Technology Transfer Trends

	Total New Invention Disclosures			Total Patents Issued			Total Licenses & Options Executed		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
SWMC	115	128	103	23	32	19	24	26	33
UTMB	76	70	48	8	4	4	17	16	19
HSC-H	30	44	67	10	5	12	10	7	29
HSC-SA	29	30	43	11	12	9	6	5	24
MDACC	92	86	126	19	20	19	10	18	24
HC-T	0	2	3	0	1	0	0	0	1
Total Health-Related Institutions	342	360	390	71	74	63	67	72	130

	Public Start-up Companies Formed			Total Gross Revenue Received from Intellectual Property		
	2001	2002	2003	2001	2002	2003
SWMC	3	2	1	\$10,511,895	\$10,691,956	\$11,209,200
UTMB	0	0	1	1,070,828	924,943	415,000
HSC-H	2	1	1	889,836	1,599,603	1,482,193
HSC-SA	0	2	0	2,406,751	2,433,549	2,500,657
MDACC	2	6	3	4,924,712	5,734,522	4,441,860
HC-T	0	0	0	0	0	15,000
Total Health-Related Institutions	7	11	6	\$19,804,022	\$ 21,384,573	\$20,063,910

Source: Texas Higher Education Coordinating Board Technology Development and Transfer Survey

- Between 2001 and 2003, technology transfer activities increased modestly among most U. T. System health-related institutions.
- During this period, the number of new invention disclosures increased by more than ten percent at U. T. System institutions, more than doubling at U. T. Health Science Center-Houston, increasing by 50 percent at U. T. Health Science Center-San Antonio, and by one-third at U. T. M. D. Anderson Cancer Center.
- From 2001 to 2003, all institutions achieved an increase in the number of licenses and options executed; they nearly tripled at U. T. Health Science Center-Houston, quadrupled at U. T. Health Science Center-San Antonio, and more than doubled at U. T. M. D. Anderson Cancer Center.
- In the most recent ranking by the Association of University Technology Managers, U. T. Southwestern Medical Center was twenty-first with \$10.6 million in licensing income. New York University was first, with nearly \$86 million. Baylor College of Medicine was thirty-first, with \$7 million.

Faculty Headcount – U. T. Health-Related Institutions

Table II-39

Tenure and Tenure-Track Headcount: Professors, Associate Professors, Assistant Professors, Instructors				
	Fall	2001	2002	2003
SWMC		333	339	360
UTMB		479	489	501
HSC-H		399	431	474
HSC-SA		570	550	530
MDACC		548	576	565

*HC-T faculty do not have tenure-track appointments

Source: THECB and U. T. System Health-Related Institution

Table II-40

Headcount: All Instructional Staff*				
	Fall	2001	2002	2003
SWMC		1,483	1,536	1,599
UTMB		1,244	1,259	1,259
HSC-H		1,124	1,270	1,263
HSC-SA		1,393	1,404	1,405
MDACC		1,017	1,071	1,133
HC-T*		112	119	110

*All Instructional Staff includes Professors, Associate and Assistant Professors, Instructors, Lecturers, Teaching Assistants, Visiting Teachers, Clinical and Special, Adjunct and Emeritus faculty at the institution.

Source: THECB and U. T. System Health-Related Institutions

Figure II-18

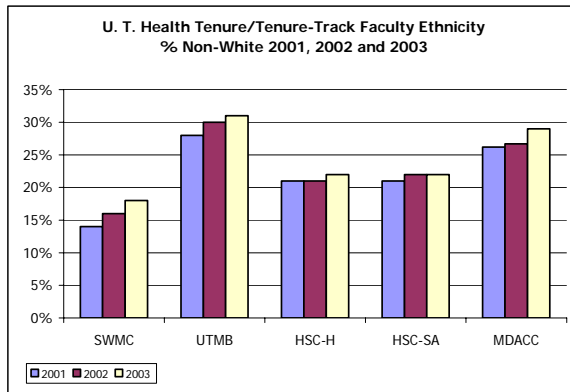


Figure II-19

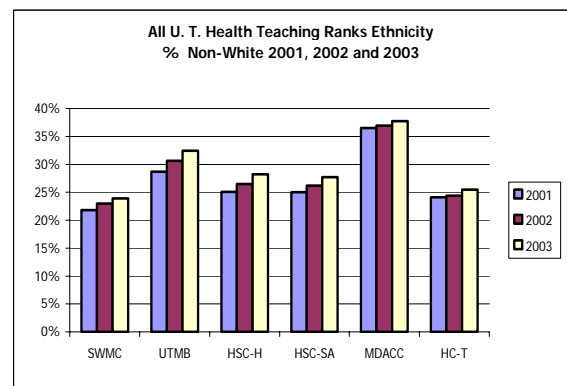


Figure II-20

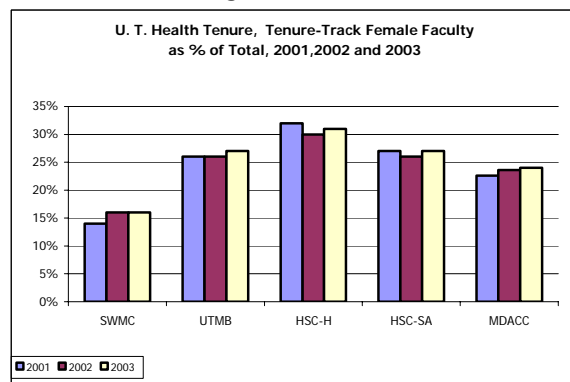
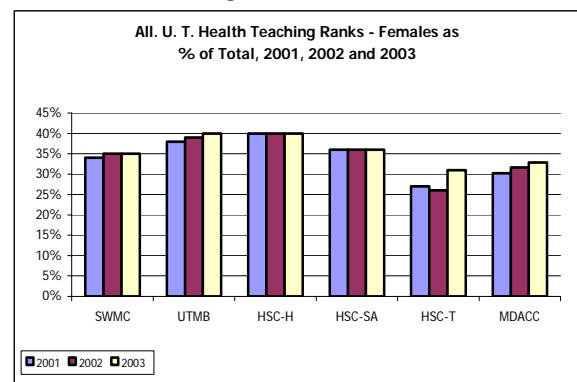


Figure II-21



Staff Headcount – U. T. Health-Related Institutions

Table II-41

		AY	00-01	01-02	02-03	03-04	04-05
SWMC	Classified		2,957	3,686	3,855	4,009	4,521
	Administrative/Professional		104	135	160	187	234
UTMB	Classified		10,226	10,603	10,933	10,207	10,636
	Administrative/Professional		1,517	1,540	1,470	1,532	1,568
	Student Employees		196	245	336	343	359
HSC-H	Classified		2,910	3,490	3,606	3,338	2,997
	Administrative/Professional		190	833	904	845	809
	Student Employees		0	99	86	84	90
HSC-SA	Classified		2,338	2,572	2,695	2,611	2,662
	Administrative/Professional		431	549	521	523	524
	Student Employees		323	607	551	440	480
MDACC	Classified		8,722	9,452	10,066	10,918	11,775
	Administrative/Professional		869	886	927	929	947
	Student Employees		219	249	277	312	349
HC-T	Classified		1,082	1,061	1,036	1,048	1,067
	Administrative/Professional		75	97	81	94	93
	Student Employees		11	14	13	11	8

*Classified staff includes positions which do not entail significant instructional or administrative responsibilities. Administrative and professional staff exclude faculty positions; therefore, these positions do not entail significant direct instructional activities. Student employees are those positions for which student status is a condition of employment.

Source: U. T. System Common Data Warehouse

Figure II-22

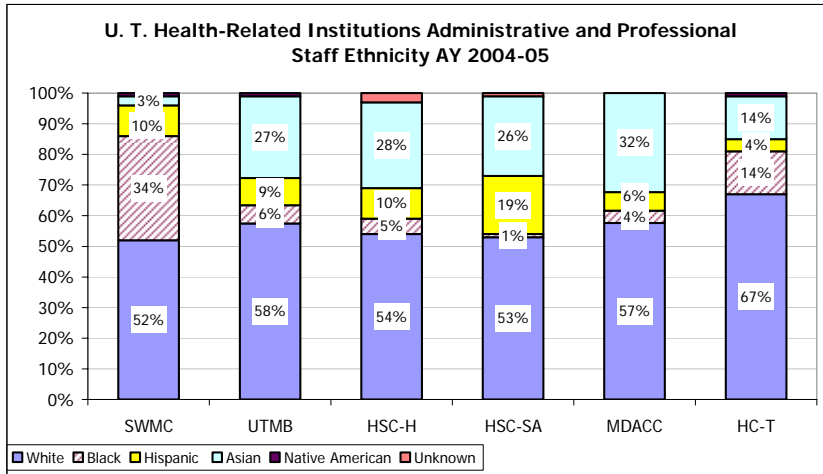


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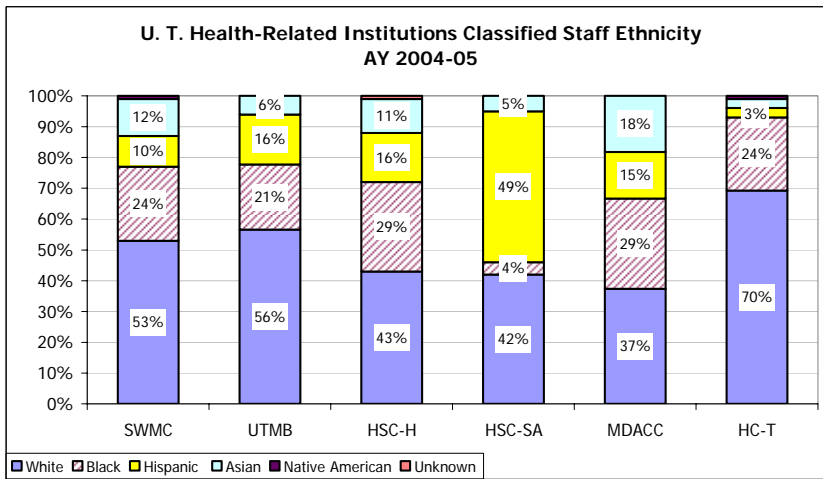
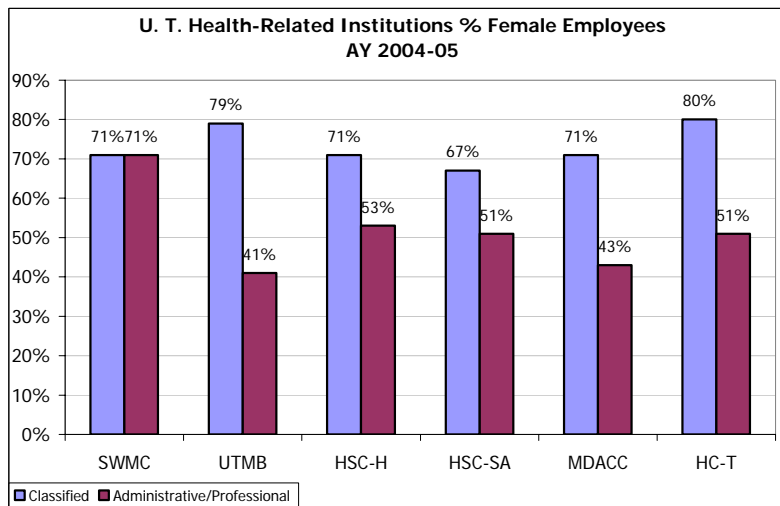


Figure II-24



FTE Student/FTE Faculty Ratio – U. T. Health-Related Institutions

Table II-42

		FTE Student / FTE Faculty Ratio U. T. Health-Related Institutions*		
	Fall	2001	2002	2003
SWMC	FTE Students	1,517	1,613	1,744
	FTE Faculty	1,263	1,319	1,377
	Ratio	1.2 to 1	1.2 to 1	1.3 to 1
UTMB	FTE Students	1,758	1,809	1,820
	FTE Faculty	1,178	1,198	1,214
	Ratio	1.5 to 1	1.5 to 1	1.5 to 1
HSC-H	FTE Students	2,690	2,792	2,822
	FTE Faculty	1,012	1,140	1,127
	Ratio	2.7 to 1	2.4 to 1	2.5 to 1
HSC-SA	FTE Students	2,516	2,501	2,512
	FTE Faculty	1,188	1,182	1,190
	Ratio	2.2 to 1	2.1 to 1	2.1 to 1

*M. D. Anderson Cancer Center admits a small number of Health Sciences undergraduates each year (59 FTEs in fall 2003). However, MDACC collaborates extensively with the Health Science Center-Houston to serve hundreds of students who rotate through their joint programs. In FY 2003, this included 450 graduate students shared with HSC-H, as well as 310 nursing students.

*The Health Center-Tyler does not admit students.

Source: THECB and U. T. System Health-Related Institutions

- The low student-to-faculty ratio at health-related institutions reflects the necessity of close interaction between faculty and students in health education programs.

Graduate Medical Education

Table II-43

		AY 02-03	AY 03-04
Accredited Resident Programs and Residents at U. T. Health-Related Institutions			
SWMC	Accredited resident programs	78	79
	Number of residents in accredited programs	1,149	1,210
UTMB	Accredited resident programs	52	54
	Number of residents in accredited programs	543	551
HSC-H	Accredited resident programs	53	52
	Number of residents in accredited programs	761	735
HSC-SA	Accredited resident programs	53	54
	Number of residents in accredited programs	700	648
MDACC	Accredited resident programs	12	14
	Number of residents in accredited programs	100	103
HC-T	Accredited resident programs	2	2
	Number of residents in accredited programs	24	23

Source: U. T. Health-Related Institutions

- The number of resident programs and number of residents in these programs is a measure of the contribution that U. T. System health-related institutions make to the education and development of medical professionals.

Clinical and Hospital Care

- The following measures illustrate the scope of hospital and clinical care provided by U. T. health-related institution faculty.
- In nearly every case, over the past four years the number of admissions, hospital days, and clinic visits has increased.

Table II-44

State-Owned Hospital Admissions by U.T. Health-Related Institution Faculty						
	FY 99	FY 00	FY 01	FY 02	FY 03	% change 99-03
UTMB	33,073	32,505	32,927	35,099	37,190	12.4%
MDACC	16,499	17,497	18,604	18,781	19,430	17.8
HC-T	3,504	3,714	3,554	3,805	3,765	7.4
HCPC*	5,263	5,186	5,700	6,135	5,906	12.2
Total	58,339	58,902	60,785	63,820	66,291	13.6%

*Harris County Psychiatric Center

Source: U. T. Health-Related Institutions and Annual U. T. System Hospital Report

Table II-45

**State-Owned and Affiliated Hospital Days by
U. T. Health-Related Institution Faculty**

	FY 99	FY 00	FY 01	FY 02	FY 03	% change 99-03
SWMC	370,942	379,770	399,136	411,288	407,991	10.0%
UTMB	173,136	170,797	175,956	186,975	194,642	12.4
HSC-H	276,273	248,045	221,127	243,315	273,499	-1.0
HSC-SA	201,745	123,266	224,311	202,000	224,366	11.2
MDACC	126,803	131,788	137,204	137,207	146,673	15.7
HC-T	28,163	29,802	29,451	29,021	26,942	-4.3
Total	1,177,062	1,083,468	1,187,185	1,209,806	1,274,113	8.2%

Source: Data submitted to the Legislative Budget Board

Table II-46

**Clinic Visits in State-Owned and Affiliated Facilities Treated by
U. T. Health-Related Institution Faculty**

	FY 99	FY 00	FY 01	FY 02	FY 03	% change 99-03
SWMC	1,752,510	1,528,751	1,775,500	2,064,987	1,959,288	11.80%
UTMB*	813,296	754,538	760,765	819,560	843,405	3.70
HSC-H	1,100,253	838,448	553,976**	671,891	748,486	-31.97
HSC-SA	832,255	915,725	854,046	834,000	1,110,429	33.42
MDACC	409,443	448,690	469,068	471,728	537,822	31.35
HC-T	126,585	132,772	135,978	140,473	119,515	-5.59
Total	5,034,342	4,618,924	4,549,333	5,002,639	5,318,945	5.65%

* UTMB figures do not include correctional managed care off-site visits.

** The decrease from previous years is due to centralization of patient activity/billing.

Source: Data submitted to the Legislative Budget Board and Institutional Reports

Table II-47

**Total Charges for Un-Sponsored Charity Care by Faculty in State-Owned and Affiliated Facilities --
U. T. Health-Related Institutions**

	FY 99*	FY 00*	FY 01	FY 02	FY 03
SWMC	\$194,564,381	\$211,953,613	\$234,938,900	\$256,968,945	\$281,998,363
UTMB	68,702,958	61,596,586	66,908,903	85,982,833	97,724,989
HSC-H	56,869,784	82,152,677	90,024,051	103,279,853	107,326,617
HSC-SA	94,385,418	60,729,594	60,602,900	70,149,189	77,586,366
MDACC	19,717,163	25,524,441	30,773,351	35,310,300	43,427,477
HC-T	2,619,752	3,261,170	4,992,457	5,405,720	6,814,083
Total	\$436,859,456	\$445,218,081	\$488,240,562	\$557,096,840	\$614,877,895

*Figures represent the amount reported in the AFR and care provided by institution faculty as part of University Care Plus.

Source: Institutions' Annual Financial Reports

- In FY 2003, U. T. health-related institutions provided nearly 90 percent of the total charity care provided by public health-related institutions in Texas.

Patient Satisfaction

- Patient satisfaction is an important component of the U. T. health-related institutions' service, and a valuable element in assessing the impact of their patient care.
- Each institution implements its own satisfaction rating system; these may focus on particular departments or on the overall operation. The Medical Branch at Galveston and the Health Center-Tyler use the national healthcare industry satisfaction and measurement improvement company, Press Ganey Associates, Inc., to survey their patients.
- Satisfaction scores, summarized on the table on the next page, are generally very high and in most cases show improvement in the past year.
- Additional information about patient satisfaction is available from each institution.

Table II-48

Patient Satisfaction Ratings from U. T. Health-Related Institutions 2003-04

	Period of Survey	Overall Rating	Change from Previous Rating	Noteworthy Ratings	Comments
SWMC	1.1.03-12.31.03	95.6% satisfied (100% = outstanding)	+ 3.5%	87% satisfied with phone calls 95% satisfied with physician	UT Southwestern has recently initiated the Press Ganey patient satisfaction survey tool. We look forward to receiving the improved data it will offer.
UTMB	9.1.03-8.31.04	87.1% of responses received from surveyed patients were either "good" or "very good" when rating their overall hospital experience. 91.4% of responses received from surveyed patients were either "good" or "very good" when rating their overall outpatient experience	+ 4.9 % from the last reporting period + 5.6 % from the last reporting period	Department of Surgery ranked in the 99 th percentile and the Meals section ranked in the 93 rd percentile when compared to other hospitals with over 600 beds during the survey period 3-1-04 to 5-31-04.	UTMB routinely assesses patient satisfaction using the Satisfaction Measurement designed and analyzed by the national healthcare industry satisfaction and measurement improvement company, Press Ganey Associates, Inc. Major improvement initiatives have been launched with regard to patient satisfaction.
HSC-H	3 rd Qtr, Fiscal Year 2004	UT Harris County Psychiatric Center rating of 4.01 on a scale of 1 to 5 (1=Strongly Disagree to 5=Strongly Agree)	Increased from 2 nd Qtr rating of 3.96. Overall on a monthly basis scores average at 3.96	Treatment Effectiveness continues to be our highest scoring area, with a rating of 4.08 for the third quarter. Helpfulness of the Nursing, Doctor staff and Safety consistently rank in top five organizational strengths	Continuously review patient satisfaction data to ensure we are meeting the needs of our patients.
	2003-2004	Dental Branch overall rating of very good/excellent: 94% in Fall 2003 and 95% in Spring 2004.		High satisfaction in particular with student clinics.	Ratings are consistent with previous surveys performed for Dental Branch undergraduate and graduate clinics.
HSC-SA (School of Medicine)	2004	Affiliated hospitals routinely conduct patient satisfaction surveys and report significant findings to the appropriate HSC department.	Significant improvements noted w/ CHRISTUS Santa Rosa Health Care patient satisfaction, including areas of physician responsibility.	University Physicians Group will determine thresholds for various components of patient satisfaction.	University Physicians Group has developed a survey tool with Press Ganey which will be used for patient satisfaction. UPG is working on the sampling methodology and is in the process of conducting telephone surveys with other Press Ganey clients to validate questions on the survey tool.
MDACC	Sept 03-Aug 04	Overall care given: Inpatients 96.5 Outpatients 95.9	Inpatient increased 3%; Outpatient increased 4%	Likelihood of recommending hospital or clinic: Inpatients 90.3 Outpatients 91.8	Changed survey tool June 2003, questions on overall rating remained the same, but thrust of survey is toward problem scores and benchmarking.
HC-T	4.1.04 – 6.30.04	89.4 medical practice score (scale of 1-100)	No significant change from previous year	85.0 Inpatient score (up from previous year) 86.4 Emergency Care Center (up from previous year)	

Source: U. T. System Health-Related Institutions

Examples of Externally Funded Research Collaborations – U. T. Health-Related Institutions

- The U. T. System has made it a high priority to increase the research collaborations among U. T. institutions as well as outside organizations.
- These collaborations achieve economies of scale and greatly improve the quality of research by leveraging faculty, external funding, and facilities resources beyond the scope that any individual institution could bring to bear on a research problem.
- The scope of U. T. research is very large. Below are examples from each institution of current and high priority collaborative research projects.
- Additional examples of these collaborations are available on the U. T. System's collaborations web site, at: [<http://www.utsystem.edu/ogr/CollabProj-Intro.htm>].

Table II-49

Examples of Externally Funded Research Collaborations – U. T. Health-Related Institutions		
	Illustrative Examples	Collaborators
U. T. Southwestern Medical Center		
Howard Hughes Medical Institute	A medical research organization employing its own scientific teams who also serve as faculty at Southwestern; conducts research with scientific staff in HHMI laboratories across the U.S.; explains how the human body functions and why disease occurs.	Howard Hughes Medical Institute
Alliance for Cellular Signaling	Studies the G-protein-rr signaling systems; identifies signaling molecules; determines molecular pathways; determines the quantitative analysis of the flow of information through the system.	Aventis Pharmaceuticals, Salk Institute for Biological Studies, Barbraham Institute – UK, California Institute of Technology (HHMI), Stanford University, University of Michigan
Collaborative University of Texas Metroplex Imaging Center	The three institutions have together identified radiologic imaging as a high academic priority for development, with a special emphasis on neuro-imaging to study brain development, neurological diseases, and cognition. This collaborative effort will share expensive fMRI and PET scanning equipment in a new imaging and research facility at UT Southwestern. Additionally, the three institutions will provide a broad array of scientific talent that includes radiologists, clinicians, scientists, computer scientists, physicists, and engineers.	UT Dallas and UT Arlington
U. T. Medical Branch at Galveston		
Regional Center of Excellence in Biodefense and Emerging Infectious Diseases	Provides access to state-of-the-art proteomics, genomics, standardized small animal and non-human primate models of infectious diseases, and BSL-4 laboratory facilities, as well as crosscutting functions in computation biology and a streamlined process for translational development of vaccines and drugs leading to FDA approval. Partners include: 20 institutions in Texas, New Mexico, Oklahoma, Arkansas, Louisiana, UT Health Center-Tyler, UT Health Science Center-San Antonio, UT Health Science Center-Houston, Texas A&M, University of Houston,	Rice University, National Institutes of Health/NIAID, Macrogenics Co., University of New Mexico, Louisiana State University Health Science Center, Shreveport, Oklahoma University
Keck Center for Computational & Structural Biology/ Gulf Coast Consortia	Provides a world-class environment for research training and specialized shared facilities at the interface between biological and biomedical sciences and the computational and physical sciences. Brings together modern biological, physical, and computational sciences to address key problems in biology and biomedicine. There are 5 jointly shared training	There are over 100 current faculty mentors from more than a dozen departments across

Examples of Externally Funded Research Collaborations – U. T. Health-Related Institutions		
	Illustrative Examples	Collaborators
	grants among the 6 institutions, including two NIH Roadmap training grants recently awarded. Shared facilities include high-field NMRs and an X-ray beamline. The Keck Center and GCC bring together computational, physical, and biological scientists in a stimulating and nurturing environment for the development and training of a new type of scientist--one who can incorporate theory, simulation, and experiment to expand the understanding of modern biological problems. Students are provided an intellectual environment for considering problems that transcend traditional disciplinary boundaries and training opportunities with mentors in different disciplines.	six participating institutions, including Rice, Baylor College of Medicine, the University of Houston, UTHSC-Houston, UT M.D. Anderson Cancer Center, and UTMB.
UTMB-UT Austin-Central Texas Veteran's Health Care System Research Coalition	Creation of interdisciplinary training programs of excellence in health-related research; will develop a unique research environment through research coalitions focused on new frontiers of multiple fields of diverse sciences; to develop shared facilities for major equipment.	UT Austin, Central Texas Veteran's Health Care System
Nurse Friendly	Assistance in addressing certain key nursing issues to attract and retain qualified nurses is now possible through the Texas Nurse-Friendly Program for Small/Rural Hospitals. To improve the workplace for nurses in small and rural Texas hospitals (<100 beds).	Texas Tech University Health Sciences Center, Texas Nurses Association (TNA)
U. T. Health Science Center-Houston		
The Gulf Coast Consortia	An interdisciplinary training program of excellence in computational and structural biology that will increase the number and quality of applicants and expands the number of students involved, both as trainees and participants.	UT MD Anderson, UT Medical Branch at Galveston, Baylor College of Medicine, Rice University, University of Houston, W.M. Keck Foundation
Support of Human Subjects Protection Program at UTHSC-H and Regional Consortium of IRBs	Completes the implementation of an electronic system for the management of the IRB information; develops a plan for a regional consortium of IRBs linked via a shared electronic IRB management system.	UT Brownsville, Texas Southern University, Prairie View A&M University
NanoHealth Alliance	Creates a collaborative program that has the potential to greatly enhance our ability to diagnose, treat, and prevent disease at the molecular level.	UT MD Anderson, Baylor College of Medicine, Rice University, University of Houston
U. T. Health Science Center-San Antonio		
San Antonio Center of Biomarkers of Risk of Prostate Cancer	The purpose of the collaborative center is to develop new methods for early detection and treatment for prostate cancer.	University of Nueva Leon Medical School, Monterrey, Mexico
Developmental Project for Advancing Prosthetic Design	Project to develop innovative methods for the design and fabrication of prosthetic limbs for amputees.	UTSA Department of Engineering, Audie Murphy VA Medical Center
U. T. M. D. Anderson Cancer Center		
Gulf Coast Consortia	The Center for Computational Cancer Research was launched to foster research to accelerate the rate at which high-performance software for advanced computational problems in cancer research can be developed.	Rice University, UTHSC-Houston, Univ. of Houston, Baylor, UTMB, Keck Foundation

Examples of Externally Funded Research Collaborations – U. T. Health-Related Institutions		
	Illustrative Examples	Collaborators
Cancer in Minority Populations	With NCI funding, MDACC and the University of Puerto Rico are studying cancer-related issues in the Hispanic population. The focus is on research and other areas including diversity training, physician education and community outreach. The first research projects will address the molecular epidemiology of head and neck cancer, breast cancer and acute promyelocytic leukemia. This collaboration allows PRCC faculty to be on the inside of the latest medical techniques and technology, while MDACC faculty open a new door to dealing with cancer-related issues in the Hispanic population.	Minority Institution Cancer Center Partnership, University of Puerto Rico
Center for Biomedical Engineering	Initiates and nurtures synergistic collaboration among biomedical engineers, life scientists, and clinicians to catalyze the innovative development of clinically translatable strategies, and provide multidisciplinary education and training of the next generation of scientist in biomedical engineering.	UT Austin, UTHSC-Houston
U. T. Health Center-Tyler		
Structure and Function of SRP RNA	Advances the understanding of the basic process of protein transport across biological membranes.	UTHSC-San Antonio
Southwest Center for Agricultural Health, Injury Prevention, and Education http://www.swagcenter.org/	NIOSH-funded center that coordinates research, prevention/intervention, education, and outreach projects in U.S. Public Health Region VI related to agricultural health and injury prevention.	National Institute for Occupational Safety and Health, National Center for Farmworker Health, U. T. Brownsville School of Public Health, Texas A&M University Health Sciences Center, West Texas A&M University, Southeastern Louisiana University, University of New Mexico, Drexel University, Area Health Education Center
Understanding the Frequency of Close Call Reports: Translation of Best Practices from Aviation to Healthcare	An anonymous, close-call reporting system; collects and describes close call reports from all healthcare providers at UTHC-T.	UT MD Anderson; UT Medical Branch at Galveston; Agency for Healthcare Research and Quality; Memorial Hermann Hospital System
Bioterrorism Training and Curriculum Development Program	Works with UTHSC-H School of Public health to develop curriculum and provide training throughout Texas.	UT HSC-Houston

Examples of Educational Collaborations

- The U. T. System encourages educational collaborations among U. T. institutions as well as with organizations outside of U. T. Below are examples from each institution of current and high priority collaborative research projects.
- Additional examples of these collaborations are available on the U. T. System's collaborations web site, at: [\[http://www.utsystem.edu/ogr/CollabProj-Intro.htm\]](http://www.utsystem.edu/ogr/CollabProj-Intro.htm).

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Examples of Educational Collaborations – U. T. Health-Related Institutions		
	Illustrative Examples	Collaborators
U. T. Southwestern Medical Center		
Graduate Medical Education (Residency Education Program)	Improves the quality of health care in the United States by ensuring the quality of graduate medical education experiences for physicians in training.	Parkland Health and Hospital System, Children's Medical Center of Dallas, Zale Lipshy Univ. Hospital & approx. 20 other hospitals
Family Practice Residency Program	Provides post-graduate training in family practice medicine.	St. Paul Medical Center, Parkland Health and Hospital System, four other hospitals outside the Dallas area
Joint Program In Biomedical Engineering	Prepares students as biomedical engineers for careers in industry, hospitals, and research facilities.	UT Arlington
U. T. Medical Branch at Galveston		
MD/PhD Program with UT Austin	Provides expansion plans for joint MD/PhD program with UTMB and UT Austin to include cellular and molecular biology. A selection committee for candidates will consist of faculty from UTMB and UT Austin.	UTMB and UT Austin
UTMB Work School Program	<p>Provides educational opportunities for UTMB employees pursuing certificates or degrees which would qualify them for positions that are difficult to fill. The work school program is currently being replicated in the 13 county region, supporting hospital and community college employees.</p> <p>Partners include:</p> <p>Lamar University, Galveston Community College, College of the Mainland, Texas A&M Corpus, Alamo CC, Alvin CC, Blinn CC, Central Texas College, DelMar College, Grayson County College, Houston Community College, Hill College, Lee College, North East Texas CC, San Jacinto CC, Temple CC, Texarkana College, TWU, Tyler CC, U of H, UTHSC, UTSA, UT Tyler, Employers include: MD Anderson, The Methodist Hospital, Bellville General Hospital, St. Luke's Episcopal Hospital, Texas Children's, Mainland Medical Center, Clear Lake Regional, St. John's, East Houston Medical Center, Conroe Regional Medical Center, Kingwood Medical Center, West Houston Medical Center, Spring Branch General Hospital, The Woman's Hospital of Texas, Memorial Hermann SW, Memorial Hermann SE, Memorial Hermann Children's, Memorial Hermann, Ben Taub,</p>	LBJ, Memorial Hermann, Katy, Memorial Hermann, Sugarland, Memorial Hermann, Woodlands, San Jacinto Community College, Alvin Community College, Houston Community College, Schools include the ones listed above and the following: Excelsior, HBU HCHD Radiology, Jacksonville University, LeTourneau, Midwestern State University, North Harris CC, North Harris Montgomery CC, Prairie View A&M, Regis, Texas A&M, Texas School of Business, TSU, university of North Dakota, Wharton CC, Wright State
Accelerated Baccalaureate Second Degree Nursing Program	Delivers a professional nursing education program in 3 semesters to students with previous degrees. The program takes into consideration the academic accomplishments of applicants, builds on strengths, and prepares students for entry	UTMB School of Nursing and UTHSC-Houston School of Nursing

Examples of Educational Collaborations – U. T. Health-Related Institutions		
	Illustrative Examples	Collaborators
	in practice and for graduate nursing education. Students engage in the full scope of professional nursing education using innovative teaching approaches which combine online learning, distance technology, Informatics, face to face seminars for synthesis, and intensive clinical experiences with faculty and expert preceptors. Faculty from the partnering institutions participate in the implementation of courses designed to move the students rapidly through the program, supervise clinical experiences, and evaluate the process and outcomes of this unique collaboration.	
Bioterrorism Training and Curriculum Development Program: Texas Bioterrorism and Other Public Health Emergency Continuing Education (Texas BCE)	Provides standardized multi-disciplinary continuing education programs for health professionals across Texas. Content pertains to bioterrorism and other public health emergency preparedness to recognize bioterrorism and other public health emergencies, meet acute care needs of patients, rapidly and effectively alert the public health system, and participate in coordinated, multidisciplinary emergency response. Courses include: 1- or 2-hour introductory course, a 4-hour "all-hazards" course, and an 8-hour "all hazards" course. The 2-hour course has been designed to meet the mandatory CE requirement for Texas nurses' relicensure. All courses are available "live"; the 1- and 2-hour courses will soon be available via videotape; the 2-hour course will soon be available on-line.	UTHSC-Houston, UTHSC-San Antonio, UTSWMC-Dallas, UTHC-Tyler, and UTMB. Other collaborators include the AMA and Texas Department of State Health Services, as well as others.
U. T. Health Science Center-Houston		
Graduate School of Biomedical Sciences at Houston	Offers graduate programs with a greater critical mass of faculty and students; to provide high quality research training to a large number of students in a wide variety of areas in a cost effective manner.	UT MD Anderson, Texas A&M University Health Science Center, Institute of Biosciences and Technology
Collaborative Doctoral Degree in Nursing Program	Provides access to the Doctor of Science in Nursing program via distance education to UT El Paso.	UT El Paso
Collaborative Master of Public Health Degree Program	Offers concentrations in Behavioral Sciences and Environmental Sciences to students in the Master of Public Health program.	UT El Paso
U. T. Health Science Center-San Antonio		
Preparedness Training for Bioterrorism and Public Health Emergencies	Develops and offers a bioterrorism and public health emergency preparedness curriculum for allied health students enrolled at Amarillo College, U. T. Dallas, UTSWMC Dallas, and UTHSC-SA.	Amarillo College, UTD, UTSWMC Dallas
Collaborative Program to Develop Nursing Education in Gerontology	Provides gerontology minor in nursing with support courses from both participating institutions. Gerontology is an ever-increasing area where nursing training is essential.	UTSA Departments of Sociology and Psychology
Dental Early Acceptance Program	A dual degree program to allow students to apply credits earned during dental school to college requirements.	UTSA, UT Pan American, Southwest Texas State University. St. Mary's University

Examples of Educational Collaborations – U. T. Health-Related Institutions		
	Illustrative Examples	Collaborators
U. T. M. D. Anderson Cancer Center		
Graduate Medical Education	MDACC participates in the training of residents and fellows by providing rotations in all Divisions.	UTHSC-Houston, UTHSC-San Antonio, UTMB, Baylor, UT Dental Branch, Texas Heart Institute, VA Hospital
Doctoral Degrees	Graduate School of Biomedical Sciences – joint degree granting.	UTHSC-Houston
U. T. Health Center-Tyler		
Collaborative Master’s Degree Programs and Related Graduate Coursework	Collaborative Master’s Degree Programs in Biotechnology, Public Health, and Environmental Science.	Stephen F. Austin State University, Texas A&M School of Rural Public Health, UT Tyler
Joint Collaborations with Various Higher Educational Institutions for Clinical Rotations and Health Care Training	Allows students in nursing, allied health, and medicine to have clinical rotations at a health training hospital and outpatient facility.	UT Tyler, Kilgore College Tyler Junior College University of North Texas Texas College of Osteopathic Medicine, University of North Dakota, St. Petersburg College
Occupational Medicine Residency Program http://www.tiosh.org/residency.htm	Offers academic and practicum training in occupational medicine. The residency program is one of three (3) civilian programs in Texas and fewer than 35 in the United States and Canada accredited by the Accreditation Council for Graduate Medical Education.	Stephen F. Austin State University, Texas Department of State Health Services Regions 4 & 5N, Occupational Safety and Health Administration (OSHA)
Department of Family Medicine—participates in various medical programs with other institutions of higher education	UTHCT Family Medicine physicians: Serve as “Team Physician” for UT Tyler and Tyler Junior College Athletic programs; teach class “Issues in Sports Medicine”; provide clinical “shadowing” opportunities for pre-medical and pre-dental students.	UT Tyler, Tyler Junior College

Teaching, Research, and Health Care: Implications for Future Planning and Measures for Future Development

Implications for Future Planning

- The U. T. System will continue to emphasize the priority of research collaborations between academic and health-related institutions. These will be reflected in new patterns of joint grants.
- Private support for endowed faculty positions should be a System priority.
- The organization, support, goals, and pace of technology transfer require attention and further development, and are connected to the economic impact that U. T. institutions make on their communities.
- Efforts to bolster support for faculty research development should be reflected in increases over time in the number of grants received, and the proportion of faculty receiving grants.

Measures for Future Development

- Measures of faculty teaching excellence should be developed with academic and health-related institutions.
- Measures of technology transfer productivity should be refined.
- Measures of information technology resources to support teaching and research should be developed.
- Faculty salary trend data for health-related institutions should be developed.