
RANKINGS AND COMPARISONS OF QUALITY IN HIGHER EDUCATION

OVERVIEW

The UT System Board of Regents strategic plan calls for investments and actions to increase the quality and (by implication) the rankings of UT System institutions. The change in rankings can be an important indicator of progress and impact of these investments—to recruit top faculty and build state-of-the-art research facilities, to enhance technology transfer, to attract and retain a diverse group of students—even as the ranking themselves should not be a strategic goal.

In Section I of this accountability report, numerous data trends are presented that demonstrate institutional progress on critical indicators. And Section III addresses more detailed rankings for each institution. This essay provides a broader international and national context for the key trends or changes of note in rankings of UT System institutions, focusing on research, technology transfer, quality of students and academic programs, and diversity.

Rankings look retrospectively at inputs and outcomes in previous years. Therefore, the reflection in rankings of UT System Board of Regents strategic investments in capital projects and talent, and initiatives to improve student success, will lag current rankings by several years. Moreover, all institutions are competing for the students, faculty, donations, and research dollars that affect rankings. Therefore, if rankings remain stable, that stability can be interpreted as an indicator of competitive success. Increases in rankings indicate even greater accomplishments against the competition. By establishing a baseline and monitoring changes this accountability framework provides a context that will reflect that impact over time.

In addition to the general trends discussed below, and the detail for each institution in Section III, the UT System prepares and publishes on the Web a number of more in-depth reports on key rankings: *Top American Research Universities*; *America's Best Graduate Programs*; *America's Best Colleges*; and *Diversity of Undergraduate and Graduate/Professional Programs*.

RANKINGS FOCUSED ON RESEARCH PRODUCTIVITY

With nearly \$2 billion in research expenditures in FY 2007, as a whole, the UT System is at the top of national rankings in terms of research. It consistently places number one or two in total research and development and federal research expenditures. Evidence of the UT System's competitiveness is the 7.9% average annual rate of increase in total research expenditures from FY 2002 through FY 2006, which exceeds the 6.13% average annual rate of increase in available NIH funding for research grants and contracts for all institutions of higher education over the same five-year period. The table below summarizes national and international research rankings of particular note for the UT System and individual institutions, followed by more detailed analysis of each ranking system.

Table II-8 INSTITUTIONAL RANKINGS SUMMARY

UT System	1 in R&D expenditures FY 2006 2 in federal research expenditures FY 2006	NSF 2007 NSF 2007
MDACC	28 of 640 in R&D expenditures FY 2006 51 of top public and private research universities; tied for 32 of top public research universities 21 in clinical medicine #1 cancer hospital	NSF 2007 The Center, 2008 Shanghai Jiao Tong 07/08 U.S. News, 2007
Austin	33 of 640 in R&D expenditures FY 2006 Tied for 25 of top public and private research universities; tied for 8 of top public universities 13 among top public universities; 44 among all universities; 38 among top 500 world universities; 6 in engineering/computer science; 19 in social science; 29 in natural sciences/math	NSF 2007 The Center, 2008 U.S. News, 2007 Shanghai Jiao Tong 2007

INSTITUTIONAL RANKINGS SUMMARY *cont.*

UTSWMC	48 of 640 in R&D expenditures FY 2006 39 among top 500 world universities; 6 in life sciences; 7 in clinical medicine Tied for 53 of top public and private research universities; 23 of top public research universities 4 graduate programs in Top 10	NSF 2007 Shanghai Jiao Tong 07/08 The Center, 2008 <i>U.S. News</i> , 2007
UTMB	93 of 640 in R&D expenditures FY 2006 Tied for 62 of top public research universities	NSF 2007 The Center, 2008
HSC-H	97 of 640 in R&D expenditures FY 2006 31 in clinical medicine Tied for 62 of top public research universities 1 graduate program in Top 10	NSF 2007 Shanghai Jiao Tong 07/08 The Center, 2008 <i>U.S. News</i> , 2007
HSC-SA	103 of 640 in R&D expenditures FY 2006 Tied for 76 for top public research universities	NSF 2007 The Center, 2008
UTD	171 of 640 in R&D expenditures FY 2006 3rd tier, national universities	NSF 2007 <i>U.S. News</i> , 2007
UTEP	196 of 640 in R&D expenditures FY 2006 4th tier, national universities	NSF 2007 <i>U.S. News</i> , 2007
UTSA	201 of 640 in R&D expenditures FY 2006 3rd tier, master's universities – West	NSF 2007 <i>U.S. News</i> , 2007
UTA	203 of 640 in total R&D expenditures FY 2006 4th tier, national universities	NSF 2007 <i>U.S. News</i> , 2007
UTPA	327 of 640 in R&D expenditures FY 2006 4th tier, master's universities – West	NSF 2007 <i>U.S. News</i> , 2007
UTT	3rd tier, master's universities – West 519 of 640 in R&D expenditures FY 2006	<i>U.S. News</i> , 2007 NSF 2007
UTPB	4th tier, master's universities – West	<i>U.S. News</i> , 2007
UTB	Unranked, master's universities – West	<i>U.S. News</i> , 2007

Top American Research Universities. The Center for Measuring University Performance has published a ranking of research institutions for eight years. This national report has evolved into one of the most objective and consistent ranking systems because it includes no reputational information. Criteria and definitions have been stable over a number of years and it is the system that best reflects the overall strength of research institutions.

Nine measures, including such indicators as research expenditures, size of endowment, and alumni giving, are used to measure competitiveness of research universities in garnering resources to attract top faculty and support research. The most recent (published in 2008) ranking of the “top research universities” is based on data collection from 196 institutions that reported at least \$20 million in federal research expenditures in FY 2005. Institutions are grouped on the basis of the number of measures they have in the top 25. (In addition to these primary rankings, on its web site The Center also publishes data on these indicators for a total of 640 institutions, including 389 public universities that reported receiving any federal research funding.)

Using this cluster approach, The Center placed 51 institutions, including UT Austin and M. D. Anderson, in the “top 25” of all public and private research universities in 2008, based on reaching the absolute top 25 in at least one of the nine measures. The minimum level to reach the 25th position in each measure in 2008 was as follows. These amounts increase every year:

- \$447,196,000 in total FY 2005 research expenditures. (For the period of this study, the institution ranked 100 in “total research” expended \$139,488,000.)
- \$289,985,000 in total FY 2005 federal research expenditures

- \$2,224,308,000 in endowment assets in FY 2006
- \$201,206,000 in annual giving in FY 2006
- 39 national academy members in 2006
- 25 faculty awards (national fellowships) received in 2006
- 463 doctorates awarded in 2006
- 462 postdoctoral appointments in 2005
- 660-740 verbal and 670-740 quantitative 25th and 75th percentile SAT scores for freshmen entering in 2005

Public and Private Institutions: In the most recent ranking of top public and private research universities, no public institutions had all nine measures in the top 25. Only two—UC-Berkeley and the University of Michigan-Ann Arbor—had eight.

- Over the past five years, UT Austin has raised or sustained its top ranking on four measures. Again in 2008, UT Austin was ranked in the top 25 on four indicators and in the top 26-50 on three indicators. UT Austin ranked in the top 25 in: endowment assets (6), number of national academy members (18), number of faculty awards (19), and number of doctorates granted (1). It ranked in the top 26-50 in: total research expenditures (31), federal research expenditures (30), and annual giving (28). Universities with similar rankings included Pennsylvania State University, University of Florida, and the University of Illinois.
- For 2008, UT M. D. Anderson had one measure ranked in the top 25 (number of postdoctoral appointees, 23) and one in the top 26-50 (total research expenditures, 33). Although not yet reaching this top ranking universally, over the past five years UT M. D. Anderson has steadily risen on nearly all indicators.
- UT Southwestern had five measures in the top 26-50 nationally: total research expenditures (42), federal research expenditures (46), annual giving (36), national academy members (32), and number of postdoctoral appointees (35). Over the past five years, UT Southwestern has steadily raised its position on most indicators.

Public Institutions: The universities ranked in the top 25 among public universities on all nine indicators were: UC Berkeley, UC-Los Angeles, University of Illinois-Urbana-Champaign, University of Michigan-Ann Arbor, University of North Carolina-Chapel Hill, University of Pittsburgh, and University of Wisconsin-Madison. Among public institutions, three UT System institutions had measures in the top 25 and six institutions had measures in the top 26-50.

- UT Austin had eight measures in the top 25 and one measure in the top 26-50. Measures in the top 25 for UT Austin included total research expenditures (19), federal research expenditures (16), endowment assets (1), annual giving (12), National Academy members (8), faculty awards (8), and doctorates granted (1). Among public institutions, UT Austin ranked 43 for number of postdoctoral appointees.
- UT Southwestern had five measures in the top 25 and two in the top 26-50. Among public institutions, UTSWMC ranked 25th in total research expenditures, 26th for federal research expenditures, 17th for endowment assets, 18th for annual giving, 15th for National Academy members, 30th for faculty awards, and 20th for postdoctoral appointees.
- UT M. D. Anderson had two measures in the top in the top 25 (total research expenditures (20) and postdoctoral appointees (14)) and three measures in the top 26-50 (federal research expenditures (33), endowment assets (45), and annual giving (27)).
- UT HSC-Houston and UT Medical Branch both had three measures in the top 26-50 of public institutions. UTHSCH ranked 49th in federal research expenditures, 46th in National Academy members, and 50th in faculty awards. UTMB was ranked in federal research expenditures (48), endowment assets (47), and postdoctoral appointees (29). These institutions have increased their rankings on a number of indicators (four for UT HSC-Houston and six for UT Medical Branch) over the past five years.
- UT HSC-San Antonio had one measure ranked in the top 26-50 of public institutions: faculty awards (46).

International Perspective: Shanghai Jiao Tong Ranking. Among the international rankings systems that attempt to make cross-national comparisons at the institutional level, the *Academic Ranking of World Universities* by Shanghai's Jiao Tong University provides a different set of objective, if selective, data on the top 500 world universities. Begun in 2003, it focuses on successful competition for research influence and recognition measured by highly prestigious awards and publications which result from funded research—alumni and academic staff receiving Nobel prizes and other major awards, publication citations, articles indexed, and proportion of articles published in top sources—all weighted by size of faculty. These criteria emphasize scientific publications and awards. In 2006, a complementary ranking by broad program areas was added.

Eight of the top 10 universities are American: Harvard, Stanford, University of California-Berkeley, Cambridge, MIT, Cal Tech, Columbia, Princeton, University of Chicago, Oxford. Thirty-eight of the top 50 universities were American.

In 2007, UT Austin ranked 38 among these 500 world universities. UT Southwestern Medical Center, UT Health Science Center-Houston, UT M. D. Anderson, UT Medical Branch, UT Health Science Center-San Antonio, and UT Dallas also appear in this elite group.

*Table II-9 SHANGHAI JIAO TONG UNIVERSITY
ACADEMIC RANKING OF WORLD UNIVERSITIES 2007/2008*

	Institution and Programs Rank among 500 World Universities	Institution Rank among 166 American Universities
UT Austin	38	29
Engineering/Technology/Computer Sciences	6	
Natural Sciences and Mathematics	29	
Social Sciences	19	
UT Southwestern Medical Center	39	30
Clinical Medicine and Pharmacy	7	
Life and Agricultural Sciences	6	
UT HSC-Houston	151-202 group	71-88 group
Clinical Medicine and Pharmacy	31	
UT M. D. Anderson Cancer Center	151-202 group	71-88 group
Clinical Medicine and Pharmacy	21	
UTHSC-San Antonio	203-304 group	89-117 group
Clinical Medicine and Pharmacy	52-75 group	
UT Medical Branch	203-304 group	89-117 group
Clinical Medicine and Pharmacy	52-75 group	
UT Dallas	305-402 group	118-140 group

TECHNOLOGY TRANSFER RANKINGS

Another outcome of research is the transfer of discoveries into the marketplace. Nationally, UT system institutions rank comparatively high on a number of measures of technology transfer productivity:

- First in the world in number of biotech patents (Milken Institute 2006)
- Second as a “patent powerhouse” (*The Scientist*, 2006)
- Fourth in U. S. patents issued (U. S. Patent and Trade Office, 2006)
- Five institutions ranked in top 100 on Milken Institute Technology Transfer and Commercialization Index: UT Austin, UT Southwestern, UT Medical Branch, UT Health Science Center-Houston, UT Health Science Center-San Antonio

RANKINGS FOCUSED ON STUDENTS

U.S. News and World Report “America’s Best Colleges”

The USNWR “America’s Best Colleges” series has, over the past twenty-four years, become the most publicized ranking of American colleges and universities, focused on the student perspective. Intended to help students choose a college, this publication excludes research as a criterion. Overall, the *USNWR* listings of top schools do not change radically from year to year. To sustain its position, let alone move up in the rankings, an institution must continue to invest in undergraduate improvement to increase retention, graduation rates, and selectivity; hire larger numbers of faculty to reduce student-faculty ratios and the number of large classes; and increase alumni giving. Peer assessment has a 25% weighting; retention rates are weighted 20% for national universities and 25% for master’s universities; faculty resources (including class size, faculty salaries, student-faculty ratio, proportion of faculty who are full time, and the proportion with the highest degree in their field) are weighted 20%. Other components of the rankings include student selectivity (15%), financial resources (10%), graduation rates (5%), and alumni giving (5%).

Even with incremental improvement in a number of indicators, most UT System academic institutions remained in the same tier as the previous year. Highlights of these changes include:

National universities:

- UT Austin ranked 13 among public universities and increased its rank among national universities from 47 to 44 (with 8 indicators moving up). UT Austin’s engineering program ranked 9 among the best undergraduate engineering programs in the country. Among engineering specialties, five of UT Austin’s engineering programs ranked in the top ten: civil (6), environmental/environmental health (6, tied with John Hopkins University), chemical (9), computer (8, tied with Cornell University), and aerospace/aeronautical/astronomical (9). Its undergraduate business programs have also maintained their high ranking: best program (7, tied with Carnegie Mellon University(PA)); accounting (1); management (5), management information systems (3); and marketing (2).
- UT Dallas remained in the third tier (national universities ranked 131 to 187) even as it improved its rating in the percent of classes of 50 students or more, the SAT scores for the 25th percentile, and the percent of faculty who are full-time. It is noteworthy that UTD’s 75th percentile SAT scores continue to be higher than any other third tier institution and higher even than many of those in the lower half of the top 124 national universities.
- UT Arlington and UT El Paso remained in the fourth tier among national universities.

Master’s universities (west):

- UT San Antonio remained in the third tier of master’s universities (west), and UT Tyler returned to the third tier of master’s universities, with improved ratings in student/faculty ratio and proportion of full-time faculty.
- UT Pan American and UT Permian Basin remained in the fourth tier.
- UT Brownsville was unranked this year because it did not report ACT/SAT data.

U.S. News and World Report “America’s Best Graduate Schools”

Each spring, *USNWR* uses a combination of qualitative and quantitative data to establish its rankings of graduate programs. Data include responses to reputational surveys sent to thousands of academics and professionals (the only criteria for some fields) and statistical indicators such as entrance exam scores, acceptance rates, student/faculty ratios, and research expenditures.

The most common trend in this most recent ranking was for graduate programs to shift by just a point or two. Thirty-one programs moved up compared with earlier rankings: 19 at Austin, 3 at Dallas, 1 each at Arlington, El Paso, and Pan American, and 2 each at Southwestern Medical Center, Medical Branch, and

HSC-Houston. The number of UT System institution programs ranked ten or better is also noteworthy: 41 at Austin, 1 at Dallas, 4 at Southwestern Medical Center, and 1 at HSC-Houston.

Diversity: Undergraduate degrees

- Nationally, UT System institutions continue to rank highly in numbers of baccalaureate degrees awarded to Hispanic students. On average nationally, 7 percent of baccalaureate degrees were awarded to Hispanic students in 2005-06, compared with an average of almost 32 percent at UT System academic institutions. UT System health-related institutions awarded Hispanic students almost 22 percent of baccalaureate degrees.
- During the 2005-06 academic year, the most recent year for which comparable national institutional data are available, UT System institutions ranked near the top in granting the bachelor's degree to Hispanic students (*Diverse Issues in Higher Education [DIHE]*, June 2007).
 - Pan American – 2nd
 - El Paso – 3rd
 - San Antonio – 4th
 - Austin – 10th. Austin was also 6th in bachelor's degrees to all minority students.
- UT System institutions also ranked in the top ten in numbers of baccalaureate degrees awarded to Hispanic students in specific disciplines in 2005:
 - UT Austin – area studies (7); biological and biomedical sciences (4); engineering (5); mathematics (3); physical sciences (4); social sciences (7). UT Austin also ranked 6th in mathematics baccalaureate degrees awarded to Black students.
 - UT Brownsville – mathematics (8).
 - UT El Paso – biological and biomedical sciences (5); business (3); engineering (1); health professions (3); mathematics (6); physical sciences (7).
 - UT Pan American – biological and biomedical sciences (1); business (4); engineering (10); English (1); health professions (2); mathematics (5); physical sciences (2).
 - UT San Antonio – biological and biomedical sciences (2); business (2); engineering (9); English (6); mathematics (2); psychology (7).
 - UT HSC-San Antonio – health professions (5).
- Rankings of note for bachelor's degrees to all minority students:
 - UT Austin – biology (6); engineering (4); mathematics (3); physical sciences (9); social sciences (10).
 - UT Pan American – English (7); health professions (7).

Diversity: Graduate and Professional Degrees

- UT System institutions are noted nationally for the numbers of minority students receiving graduate and professional degrees. Nationally in 2005-06, 5.1 percent of all PhDs were awarded to Black students and 3.1 percent to Hispanic students. For master's degrees, 8.9 percent were awarded to Black students and 4.9 percent to Hispanic students. These data represent steady, but very small, increases over the past decade, and underscore the persistent underrepresentation of Black and Hispanic doctoral recipients.
- Between 2001-02 and 2005-06, the proportion of graduate and professional degrees UT System academic institutions awarded to White students decreased by 5.5 percentage points to 44.2 percent, less than half of all degrees conferred, compared with the national average of 59.8 percent in 2005-06.
- The proportion of graduate and first professional degrees awarded to Hispanic students increased by 2.2 percentage points from 2001-02 to 2005-06, with professional degrees showing the largest increase with 6.4 percentage points. The UT System academic institution average was 17.9 percent, compared

with 4.7 percent nationally. UT System health-related institutions awarded 14.0 percent of graduate and first professional degrees to Hispanic students in 2005-06, up from 2001-02.

- During the same period, the percent of graduate and first professional degrees awarded to Black students increased at UT Arlington, UT Austin, UT Dallas, UT Pan American, UT Permian Basin, and UT Tyler. The average for UT System academic institutions was 4.0 percent, continuing a recent upward trend. The national average for 2005-06 is 8.3 percent. UT System health-related institutions awarded 4.4 percent of graduate and first professional degrees to Black students, up slightly from 2001-02.

Rankings for Master's Degrees

- At the master's level, UT System academic institutions ranked nationally among the top schools in awarding the master's degrees to Hispanic students during 2004-05.
 - UT Pan American – 5
 - UT El Paso – 6
 - UT San Antonio – 9
- Among institutions awarding master's to Hispanic students, UT System institutions rank in the top ten in many specific fields:
- UT Austin – engineering (4); mathematics (9); physical sciences (2).
- UT Brownsville – mathematics (6).
- UT El Paso – biology (6); computer science (5); education (5); engineering (2); mathematics (2); physical sciences (2).
- UT Pan American – education (7); health professions (3); mathematics (6).
- UT San Antonio – biology (5); computer science (5); education (10); mathematics (2).

Rankings for Doctoral Degrees

- UT Austin ranked 1 in doctorates awarded to Hispanic students in all disciplines and 6th for doctorates awarded to all minorities in all disciplines.
- Nationally, UT System academic institutions are ranked highly among those conferring doctoral degrees to minority students in specific disciplines:
 - UT Austin: education doctorates to Hispanic students (3); English doctorates to Black students (1); physical science doctorates to Hispanic students (3); social science doctorates to Hispanic students (1).
 - UT El Paso: engineering doctorates to Hispanic students (3).
 - UT Health Science Center-Houston: biology doctorates to Hispanic students (7).

Rankings for First Professional Degrees

- UT System institutions rank highly in degrees conferred to minority professional students in 2006.
 - UT Austin: law degrees awarded to Hispanic students (2) and law degrees awarded to all minority students (5).
 - UT Medical Branch: medical degrees awarded to Hispanic students (5).
 - UT HSC-Houston: dental degrees (4) and medical degrees (5) awarded to Hispanic students.
 - UT HSC-San Antonio: medical degrees (4) and dental degrees (5) awarded to Hispanic students.
 - UT Southwestern: medical degrees for all minority students (6) and for Hispanic students (10).

