

The Center for Measuring University Performance: Top American Research Universities

The Center for Measuring University Performance has published a ranking of research institutions for seven years (most recently dated December 2006, but published in March 2007). Building on a benchmarking and accountability initiative required by the Florida legislature, this report is considered more objective than other studies, as it includes no reputational information. This ranking system is the one that best reflects the overall strength of research institutions.

Its primary focus is “the measure of a research university’s success as an enterprise . . . the quantity of high-quality human capital it can accumulate and sustain” (p. 10, 2004 edition). This approach is somewhat limited, however, in that it looks at institutions as a whole and is considered by some to underemphasize undergraduate education. Nine measures, including such criteria as research expenditures, size of endowment, and alumni giving, were identified specifically to measure competitiveness of research universities in garnering resources to support research. The most recent (2006-07) published ranking of the “top research universities” is based on data collection from 187 institutions that reported receiving at least \$20 million in federal research funding in FY 2004. Institutions are grouped on the basis of how many 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 in the “top 25” of all public and private research universities in 2006, 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 2006 was as follows. (For the period of this study, the institution ranked 100 in “total research” expended \$133,753,000.) (Dates vary because of differences in sources this study uses):

- \$447,146,000 in total FY 2004 research expenditures
- \$268,830,000 in total FY 2004 federal research expenditures
- \$1,774,200,000 in endowment assets in FY 2005
- \$164,010,000 in annual giving in FY 2005
- 40 national academy members in 2005
- 23 faculty awards (national fellowships) received in 2005
- 425 doctorates awarded in 2005
- 496 postdoctoral appointments in 2004
- 640-760 verbal; 650-730 quantitative 25th and 75th percentile SAT scores for freshmen entering in 2004
- 99 National Merit and Achievement Scholars in 2005

The table on pages 5-6 displays the most current national ranking among all institutions and among public institutions alone on each of nine measures for all UT System institutions included in the study by The Center. It also includes an additional measure of undergraduate student quality. (Depending on institution mission, not every measure appears for all institutions ranked; each ranking is higher when only public institutions are compared.)

Ranking of systems. The UT System is noteworthy for the number of its institutions that appear in the lists of “top 25” public and private institutions on various measures. This is due to UT Austin’s strengths, combined with the research expenditures, private giving, and postdoctoral programs at UT System health-related institutions. The Center study deliberately focuses on ranking individual institutions. The authors have argued that faculty are the primary drivers affecting research university performance and faculty are almost always associated with a specific institution. They contend, moreover, that “totals for systems reflect primarily the political and bureaucratic arrangements of public university campuses rather than any performance criteria.” In the 2004 edition, The Center added a brief analysis of the performance of public research university systems (pp. 17-19, 36). It showed that the UT System as a whole was third nationally, behind the University of California System and Johns Hopkins University in federal research expenditures (as reported to the NSF for FY

2002), and second nationally in total research expenditures; the UC System was first. By FY 2004, the relative positions changed: the UC System was first with \$3,860,208,000 in research expenditures, the UT System was second (\$1,557,690,000) and Johns Hopkins was third (\$1,375,014,000).

Highlights from the 2006 Report: Looking at change from 2002 to 2006, UT System institutions increased their ranking in a number of areas [increase is in both the national (public and private) and public-only rankings unless otherwise noted]:

Arlington	Total research, federal research, faculty awards, postdoctoral appointments
Austin	National academy members, faculty awards, median SAT, National merit scholars
Dallas	Total research, federal research, annual giving, national academy members, faculty awards, doctorates granted, postdoctoral appointments, median SAT, national merit scholars (UTD improved in all areas except endowment value).
El Paso	Annual giving (national), postdoctoral appointments
Pan American	Total research, federal research, annual giving
San Antonio	Federal research (national), annual giving, doctorates granted, postdoctoral appointments (national)
SWMC	Total research, federal research, annual giving, national academy members, doctorates granted
UTMB	Total research, federal research, national academy members, faculty awards, postdoctoral appointments
HSC-H	Annual giving, national academy members, doctorates granted
HSC-SA	Annual giving, faculty awards, postdoctoral appointments
MDACC	Total research, federal research, annual giving, postdoctoral appointments

Top National Universities (public and private)

UT Austin

- In 2006, UT Austin was once again ranked in the top 25, with three measures ranked in the top 25 and four measures ranked in the top 26-50.
- In 2006, the top ten public universities were: UC Berkeley, UCLA, University of Illinois - Urbana-Champaign, University of Michigan, University of North Carolina-Chapel Hill, University of Pittsburgh, University of Wisconsin-Madison, University of Florida, University of Minnesota-Twin Cities, University of Washington, and Ohio State University.
- In their 2005 report, The Center differentiated between universities with and without medical schools. Based on the FY 2003 data used for that report, UT Austin ranked fifth in federal research expenditures and seventh in total research expenditures among universities without a medical school.
- UT Austin continues to stand out in its very high ranking in numbers of National Merit and Achievement Scholars. Although not one of the nine formal indicators, this measure is used by the The Center as a supplement to show undergraduate quality. In 2006, UT Austin was ranked third among all institutions; and first among public universities.

UT Southwestern Medical Center

- In 2006, UT Southwestern Medical Center remained in the top 25 with one measure in the top 25 (postdoctoral appointments) and five measures in the top 26-50 among all institutions: total research expenditures, federal research expenditures, annual giving, national academy members, and faculty awards. Institutions most similarly ranked include Rice University and University of Maryland – College Park.
- Among public institutions, UT Southwestern Medical Center had six measures in the top 25 and one in the top 26-50. University of California – San Francisco was in the same category.

UT M. D. Anderson Cancer Center

- The M. D. Anderson Cancer Center also remained in the top 25 of all public and private institutions with one measure in the top 25 (postdoctoral appointments) and one measure in the top 26-50 (total research). Institutions most similarly ranked include University of California institutions at Irvine and Santa Barbara and Notre Dame.
- Among public institutions, UT M. D. Anderson had two measures in the top 25 and two in the top 26-50. University at Buffalo and University of California – Santa Barbara were in the same category.

Top Public Universities

UT Medical Branch at Galveston

- UT Medical Branch remained in the top 26-50 public universities in the 2006 study with one measure (postdoctoral appointments).
- Since 2002, UTMB's standings for total research, federal research, National Academy members, faculty awards, and postdoctoral appointments improved.
- Other schools in this group include: Medical University of South Carolina, University of Medicine & Dentistry of New Jersey, UC-Riverside, and OSU-Stillwater.

UT Health Science Center-Houston

- UT Health Science Center-Houston was ranked in 2006 in the top 26-50 public universities, with two measures in the top 26-50 of public institutions: federal research and National Academy members.
- UT HSC-Houston's standings have improved since 2002 in annual giving, National Academy members, and doctorates granted.
- Other institutions in this group include: Oregon State University, UC-Santa Cruz, University of Oklahoma-Norman, and University of Oregon.

UT Health Science Center-San Antonio

- UT Health Science Center-San Antonio was not ranked in the top 26-50 public institutions in 2005, but returned in 2006 with one measure (faculty awards).
- It had four measures ranked in the top 100 of all institutions and six measures in the top 100 of public institutions.
- Other institutions in this group include: Medical University of South Carolina, University of Medicine & Dentistry of New Jersey, UC-Riverside, and Oklahoma State University-Stillwater.

The Impact of Medical Schools: The impact of medical schools deserves particular attention in the UT System context. Earlier editions of The Center study pointed out that the presence of medical schools on a campus provides a distinct advantage to universities in competing for research grants. The authors argued that medical centers that are part of research campuses also have a greater impact on research activities of faculty in related and allied disciplines. In the 2005 report, only four institutions ranked in the top 25 in federal research expenditures did not have medical schools (MIT, Pennsylvania State University, University of Illinois – Urbana-Champaign, and UC Berkeley). All of the top 10 institutions in research expenditures have medical schools.¹³

If UT Austin and UT Medical Branch federal R&D expenditures in FY 2003 were combined, the total (\$325 million) would rank fifteenth among all institutions. If UT Austin and UT Southwestern Medical Center's federal FY 2003 R&D expenditures were combined, the total (\$409 million) would rank seventh among all institutions. The Center's conclusion is if UT Austin had a medical school, it is likely that it would appear much higher in the rankings, but this would not be the case for all institutions currently lacking medical schools.

¹³ *The Top American Research Universities*, December 2005, p. 192.

The Center concluded that “highly competitive research oriented medical schools contribute substantially to the success of many American research campuses.”¹⁴ Still, as top-ranked MIT demonstrates, it is possible to be “exceptionally effective” without the presence of a medical school.

The comparatively high ranking of UT System health-related institutions is noteworthy, given their more focused mission. They are included in The Center’s study because they receive federal research funding, but other ranking systems, for example from the National Institutes of Health, provide a more focused assessment of their competitive position among peers.

¹⁴ Ibid., p.16.

Data summary. The following summary displays data on all UT System institutions noted in the *Top American Research Universities* report for 2002 through 2006, distinguishing ranking on each measure for all universities (first number) and all public universities (second number).

Top American Research Universities
University of Texas System Institutions – Overview of 2002-2006 National Rankings

In 2006, 640 total institutions were ranked, including 389 public institutions. This table displays ranking among all institutions (first number) / ranking among all public institutions only (second number).

	Research Expenditures	Federal Research	Endowment Assets	Annual Giving	National Academy Members	Faculty Awards	Doctorates Granted	Postdoc Appointees	25th-75th percentile/ Median SAT	National Merit Scholars**
U. T. System Academic Institutions*										
UTA 02	243 / 177	264 / 188	534 / 177	409 / 171	135 / 82	287 / 176	135 / 88	188 / 129	666 / 189	--
03	221 / 159	221 / 158	558 / 184	507 / 198	137 / 82	285 / 175	160 / 100	193 / 134	610 / 160	--
04	237 / 175	243 / 176	540 / 177	467 / 196	140 / 83	195 / 127	178 / 107	193 / 136	not provided	--
05	245 / 180	255 / 187	537 / 175	525 / 205	144 / 88	203 / 132	197 / 119	174 / 122	not provided	291 / 118
06	237 / 173	242 / 175	635 / 205	570 / 231	143 / 87	196 / 125	166 / 104	159 / 110	not provided	--
Austin 02	31 / 19	26 / 14	25 / 6	25 / 12	20 / 9	27 / 15	2 / 2	62 / 37	170 / 32	3 / 1
03	32 / 20	25 / 14	25 / 5	30 / 14	18 / 8	25 / 13	3 / 3	67 / 41	149 / 27	2 / 1
04	33 / 21	22 / 11	24 / 5	8 / 4	18 / 8	21 / 10	3 / 2	65 / 40	144 / 23	3 / 2
05	31 / 19	26 / 15	23 / 4	11 / 1	18 / 8	18 / 8	3 / 2	67 / 40	139 / 23	5 / 2
06	34 / 21	31 / 18	36 / 10	29 / 13	18 / 8	23 / 11	4 / 3	68 / 39	149 / 27	3 / 1
UTD 02	225 / 162	243 / 174	193 / 70	535 / 207	135 / 82	287 / 176	174 / 108	170 / 117	221 / 46	110 / 51
03	228 / 165	244 / 173	200 / 74	548 / 210	137 / 82	153 / 96	172 / 107	164 / 113	237 / 49	107 / 49
04	197 / 145	212 / 152	193 / 71	444 / 188	140 / 83	195 / 127	191 / 114	173 / 121	not provided	80 / 35
05	194 / 142	210 / 150	204 / 75	291 / 137	105 / 62	159 / 107	187 / 114	168 / 117	143 / 25	61 / 26
06	205 / 149	213 / 152	244 / 90	245 / 124	100 / 59	131 / 86	148 / 93	168 / 114	139 / 25	71 / 33
UTEP 02	203 / 146	174 / 120	305 / 105	235 / 116	--	287 / 176	272 / 156	222 / 152	1,171 / 411	--
03	205 / 148	183 / 127	307 / 108	194 / 103	--	199 / 123	282 / 160	--	1,258 / 429	--
04	211 / 156	191 / 135	291 / 102	248 / 129	--	274 / 175	278 / 160	249 / 170	not provided	--
05	207 / 153	195 / 138	300 / 111	247 / 121	--	135 / 93	278 / 161	220 / 153	not provided	--
06	221 / 162	207 / 146	354 / 122	227 / 116	--	--	301 / 164	211 / 150	not provided	--
UTPA 02	398 / 275	376 / 268	513 / 171	569 / 217	--	287 / 176	411 / 202	--	1,184 / 414	--
03	376 / 265	371 / 267	539 / 177	404 / 171	--	199 / 123	414 / 205	--	1,272 / 434	--
04	389 / 270	376 / 269	532 / 175	616 / 233	--	--	417 / 201	--	not provided	--
05	369 / 267	364 / 267	462 / 157	268 / 130	--	203 / 132	389 / 194	--	not provided	291 / 118
06	357 / 260	344 / 253	619 / 201	507 / 208	--	--	472 / 213	--	not provided	292 / 115
UTSA 02	247 / 179	238 / 170	583 / 199	554 / 214	--	126 / 85	480 / 222	--	939 / 307	286 / 110
03	251 / 179	236 / 168	613 / 204	527 / 205	--	--	467 / 219	224 / 53	1,002 / 320	--
04	261 / 193	251 / 183	625 / 204	500 / 205	--	147 / 95	448 / 209	215 / 150	not provided	--
05	255 / 189	232 / 170	594 / 192	367 / 162	--	203 / 132	497 / 228	203 / 143	not provided	--
06	248 / 183	237 / 171	689 / 229	413 / 178	--	271 / 171	433 / 200	200 / 142	not provided	--

* U. T. Brownsville, U. T. Permian Basin, U. T. Tyler, and U. T. Health Center-Tyler are not listed because they did not report federal research funding for the period 1999-2003 to the NSF R&D survey.

** Although not one of the study's primary measures, TheCenter provides data on National Merit and Achievement Scholars to supplement information about quality of undergraduate students.

Source: *Top American Research Universities* publication and web site: <http://mup.asu.edu/>

Top American Research Universities (continued)
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	Research Expenditures	Federal Research	Endowment Assets	Annual Giving	National Academy Members	Faculty Awards	Doctorates Granted	Postdoc Appointees	25th-75th percentile/ Median SAT	National Merit Scholars**
U. T. System Health-Related Institutions*										
SWMC 02	50 / 33	49 / 28	67 / 18	52 / 27	34 / 17	36 / 22	215 / 128	19 / 10	NA	NA
03	44 / 29	45 / 25	57 / 18	40 / 22	35 / 18	56 / 33	213 / 128	26 / 13	NA	NA
04	42 / 28	44 / 25	60 / 17	52 / 27	35 / 18	50 / 29	237 / 135	43 / 22	NA	NA
05	45 / 30	45 / 26	55 / 16	29 / 15	32 / 15	41 / 24	220 / 130	20 / 12	NA	NA
06	39 / 26	42 / 24	72 / 21	44 / 22	33 / 16	40 / 23	199 / 117	23 / 13	NA	NA
UTMB 02	97 / 67	88 / 56	134 / 45	124 / 74	115 / 70	202 / 132	261 / 151	61 / 36	NA	NA
03	100 / 70	91 / 58	132 / 47	106 / 62	115 / 70	199 / 123	233 / 137	58 / 33	NA	NA
04	94 / 67	88 / 57	127 / 43	113 / 69	116 / 70	108 / 68	252 / 147	75 / 48	NA	NA
05	86 / 59	83 / 55	130 / 44	103 / 58	117 / 71	135 / 93	259 / 150	56 / 32	NA	NA
06	89 / 61	83 / 55	156 / 56	137 / 80	100 / 59	97 / 62	275 / 153	58 / 32	NA	NA
HSC-H 02	85 / 56	69 / 43	330 / 110	181 / 96	97 / 57	106 / 70	156 / 100	65 / 40	NA	NA
03	84 / 56	68 / 42	327 / 113	121 / 72	89 / 53	104 / 66	144 / 92	130 / 88	NA	NA
04	87 / 60	67 / 43	308 / 109	141 / 84	87 / 51	99 / 61	162 / 99	111 / 76	NA	NA
05	90 / 63	69 / 43	306 / 113	126 / 75	90 / 53	88 / 56	138 / 89	119 / 79	NA	NA
06	97 / 69	78 / 50	370 / 127	122 / 74	81 / 46	110 / 70	151 / 95	98 / 65	NA	NA
HSC-SA 02	94 / 64	81 / 50	161 / 56	137 / 83	135 / 82	79 / 51	236 / 138	110 / 73	NA	NA
03	90 / 62	82 / 51	170 / 64	139 / 83	137 / 82	69 / 44	260 / 150	97 / 66	NA	NA
04	93 / 66	80 / 51	153 / 52	152 / 89	140 / 83	79 / 47	296 / 166	87 / 57	NA	NA
05	97 / 69	88 / 60	156 / 55	132 / 79	144 / 88	98 / 65	263 / 152	87 / 56	NA	NA
06	99 / 70	97 / 63	199 / 73	134 / 78	143 / 87	74 / 44	311 / 167	93 / 62	NA	NA
MDACC 02	54 / 36	66 / 40	146 / 49	75 / 41	135 / 82	--	--	63 / 38	NA	NA
03	47 / 31	65 / 40	150 / 54	84 / 49	137 / 82	--	--	37 / 19	NA	NA
04	43 / 29	57 / 34	177 / 64	65 / 36	140 / 83	274 / 175	--	25 / 13	NA	NA
05	36 / 22	62 / 38	128 / 43	48 / 24	144 / 88	--	--	21 / 13	NA	NA
06	33 / 20	57 / 34	178 / 64	62 / 35	196 / 121	271 / 171	--	22 / 12	NA	NA

* U. T. Brownsville, U. T. Permian Basin, U. T. Tyler, and U. T. Health Center-Tyler are not listed because they did not report federal research funding for the period 1999-2003 to the NSF R&D survey.

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