Schools of Engineering

THE TOP SCHOOLS

Rank/School	Overall score	Peer assessment score (5.0 highest)	Recruiter assessment score (5.0 highest)	'04 average quantitative GRE score	'04 acceptance rate	'04 Ph.D. students/faculty	'04 faculty membership in National Academy of Engineering	'04 engineering school research expenditures (in millions)	'04 research expenditures per faculty member (in thousands)	Ph.D.'s granted 2003–2004	'04 total graduate engineering enrollment
1. Massachusetts Institute of Technology	100	4.9	4.8	770	25.3%	4.1	12.7%	$216.5	$614.9	206	2,727
2. Stanford University (CA)	95	4.9	4.7	774	35.5%	5.0	14.5%	$130.4	$665.4	230	3,150
3. University of California–Berkeley	87	4.8	4.5	766	16.2%	4.7	19.0%	$119.9	$477.8	164	1,722
4. Georgia Institute of Technology	83	4.5	4.3	755	31.6%	4.2	5.1%	$205.3	$430.5	246	3,705
University of Illinois–Urbana-Champaign	83	4.6	4.4	769	17.8%	4.3	2.7%	$175.1	$428.1	171	2,679
6. University of Michigan–Ann Arbor	79	4.5	4.2	768	36.9%	4.4	4.2%	$165.3	$519.7	185	2,704
7. U. of Southern California (Andrew and Erna Viterbi)	78	3.7	3.7	753	45.6%	5.3	13.5%	$147.4	$921.5	97	3,390
8. California Institute of Technology	76	4.8	4.6	780	10.6%	5.0	11.6%	$48.7	$507.3	69	554
9. Carnegie Mellon University (PA)	75	4.3	4.3	766	21.9%	4.1	8.5%	$123.8	$597.9	107	1,528
10. Purdue University–West Lafayette (IN)	74	4.2	4.2	738	30.1%	3.4	3.7%	$195.8	$569.2	140	2,423
11. University of California–San Diego (Jacobs)	73	3.8	3.8	765	21.1%	4.7	10.0%	$138.3	$869.8	75	1,111
12. Cornell University (NY)	72	4.3	4.2	762	25.2%	3.7	8.7%	$109.5	$561.3	116	1,156
University of Texas–Austin	72	4.2	4.2	765	25.2%	3.8	8.7%	$98.8	$431.5	160	2,013
14. Texas A&M University–College Station (Look)	69	3.8	3.7	742	43.1%	3.0	4.2%	$176.6	$676.8	131	2,200
15. University of California–Los Angeles (Samueli)	68	3.8	3.9	760	29.6%	5.4	11.0%	$80.7	$580.5	118	1,387
University of Wisconsin–Madison	68	4.1	4.0	786	22.8%	3.2	4.3%	$116.5	$489.7	119	1,599
17. Princeton University (NJ)	64	4.1	4.1	782	18.1%	3.5	12.0%	$51.9	$435.8	65	470
University of Maryland–College Park (Clark)	64	3.6	3.6	763	23.3%	4.5	5.3%	$133.2	$576.8	117	2,334
19. Pennsylvania State Univ.–Univ. Park	60	3.9	3.8	754	26.8%	3.1	2.9%	$117.4	$324.4	138	1,615
20. Harvard University (MA)	59	3.7	3.9	783	12.5%	4.1	14.0%	$29.8	$573.7	23	270
21. Northwestern University (IL)	57	4.0	3.7	761	26.5%	3.9	5.7%	$58.5	$356.9	106	1,121
University of California–Santa Barbara	57	3.5	3.5	761	17.8%	4.5	15.7%	$53.8	$417.2	53	679
23. Columbia University (Fu Foundation) (NY)	56	3.6	3.5	764	34.2%	4.1	7.5%	$70.4	$563.3	45	1,229
24. University of Washington	55	3.7	3.7	732	30.3%	3.7	3.7%	$82.9	$434.0	99	1,387
25. University of Florida	54	3.5	3.6	744	19.7%	4.0	1.5%	$89.9	$341.7	127	1,931
26. Johns Hopkins University (Whiting) (MD)	53	4.0	3.7	760	14.2%	4.0	1.4%	$53.3	$397.8	51	2,636
Ohio State University	53	3.6	3.5	766	29.9%	2.9	2.4%	$102.7	$407.4	88	1,299
University of Minnesota–Twin Cities	53	3.8	3.8	752	37.8%	3.5	5.3%	$58.8	$263.5	94	1,645
29. Rice University (Brown) (TX)	52	3.7	4.0	755	16.0%	4.5	7.1%	$32.2	$332.0	46	504
University of Pennsylvania	52	3.6	3.6	753	29.2%	4.0	5.8%	$47.7	$463.2	49	1,066
31. Virginia Tech	51	3.7	3.7	765	24.4%	2.7	2.6%	$68.6	$231.9	99	1,960
32. Duke University (NC)	50	3.6	3.7	765	23.1%	3.6	1.9%	$49.4	$503.7	40	477
33. University of Colorado–Boulder	49	3.5	3.5	751	57.4%	3.2	5.1%	$57.4	$352.2	74	1,579
34. North Carolina State University	48	3.4	3.5	749	29.8%	2.9	3.2%	$86.2	$307.9	88	1,841
Rensselaer Polytechnic Institute (NY)	48	3.7	3.8	759	26.6%	3.1	5.4%	$34.6	$205.9	91	1,219
University of Virginia	48	3.5	3.6	753	18.3%	3.3	6.1%	$47.0	$364.7	52	762
Washington University in St. Louis (Sever)	48	3.4	3.6	760	35.8%	3.4	6.8%	$46.3	$551.8	22	851
38. University of California–Davis	47	3.5	3.6	748	27.7%	3.3	4.9%	$53.6	$283.6	77	1,056
39. Yale University (CT)	44	3.3	3.5	776	14.9%	2.7	9.2%	$24.8	$340.2	18	223
40. Case Western Reserve University (OH)	43	3.4	3.5	744	26.8%	2.4	2.7%	$41.7	$379.3	53	631
University of California–Irvine (Samueli)	43	3.2	3.4	747	20.9%	4.7	5.7%	$38.8	$279.4	43	956
University of Rochester (NY)	43	2.8	3.0	743	13.3%	3.4	1.2%	$66.3	$838.7	24	349
43. Dartmouth College (Thayer) (NH)	41	3.1	3.4	748	15.7%	2.5	2.6%	$22.5	$593.2	11	196
Iowa State University	41	3.3	3.4	765	17.5%	2.2	1.4%	$49.1	$237.3	58	988
Lehigh University (Rossin) (PA)	41	3.2	3.4	770	30.1%	2.8	7.4%	$28.2	$239.2	43	558
Rutgers State University–New Brunswick (NJ)	41	3.1	3.2	746	20.6%	1.4	3.8%	$79.6	$408.0	43	880
47. Arizona State University (Fulton)	40	3.3	3.2	746	32.2%	2.9	2.7%	$42.2	$219.8	74	1,448
University of Delaware	40	3.0	3.4	744	25.4%	4.3	2.1%	$29.9	$328.3	52	637
49. Brown University (RI)	39	3.4	3.5	N/A	21.1%	2.9	6.9%	$15.7	$291.1	14	217
University of Pittsburgh	39	3.0	3.3	742	29.7%	2.4	4.2%	$45.5	$382.0	34	649

N/A: Not available from school. Sources: *U.S. News*, the schools. Assessment data collected by Synovate.
Names of department heads came from the American Society for Engineering Education.

SPECIALTIES

PROGRAMS RANKED BEST BY ENGINEERING SCHOOL DEPARTMENT HEADS

Rank/School	Average assessment score (5.0 = highest)
AEROSPACE • AERONAUTICAL • ASTRONAUTICAL	
1. California Institute of Technology	4.8
Massachusetts Institute of Technology	4.8
Stanford University (CA)	4.8
4. Georgia Institute of Technology	4.3
5. University of Michigan–Ann Arbor	4.2
6. Purdue University–West Lafayette (IN)	4.1
7. Princeton University (NJ)	3.9
8. University of Illinois–Urbana-Champaign	3.8
9. Texas A&M University–College Station (Look)	3.7
University of Maryland–College Park (Clark)	3.7
University of Texas–Austin	3.7
BIOMEDICAL • BIOENGINEERING	
1. Johns Hopkins University (Whiting) (MD)	4.7
2. University of California–San Diego (Jacobs)	4.6
3. Georgia Institute of Technology	4.5
4. Duke University (NC)	4.3
University of Washington	4.3
6. University of Pennsylvania	4.2
7. Boston University	4.1
Massachusetts Institute of Technology	4.1
9. Case Western Reserve University (OH)	4.0
10. Rice University (Brown) (TX)	3.8
U. of Calif.–Berkeley / U. of Calif.–San Francisco	3.8
CHEMICAL	
1. Massachusetts Institute of Technology	4.8
University of Minnesota–Twin Cities	4.8
3. California Institute of Technology	4.7
University of California–Berkeley	4.7
5. Stanford University (CA)	4.5
University of Wisconsin–Madison	4.5
7. University of Texas–Austin	4.4
8. Princeton University (NJ)	4.3
University of Illinois–Urbana-Champaign	4.3
10. University of California–Santa Barbara	4.2
University of Delaware	4.2
CIVIL	
1. University of California–Berkeley	4.8
University of Illinois–Urbana-Champaign	4.8
3. University of Texas–Austin	4.6
4. Stanford University (CA)	4.5
5. Georgia Institute of Technology	4.4
Massachusetts Institute of Technology	4.4
Purdue University–West Lafayette (IN)	4.4
8. Cornell University (NY)	4.1
Northwestern University (IL)	4.1
University of Michigan–Ann Arbor	4.1
COMPUTER ENGINEERING	
1. Massachusetts Institute of Technology	5.0
2. Stanford University (CA)	4.9
University of California–Berkeley	4.9
4. Carnegie Mellon University (PA)	4.8
University of Illinois–Urbana-Champaign	4.8
6. California Institute of Technology	4.4
Georgia Institute of Technology	4.4
University of Michigan–Ann Arbor	4.4
9. Cornell University (NY)	4.2
Purdue University–West Lafayette (IN)	4.2
University of Texas–Austin	4.2
ELECTRICAL • ELECTRONIC • COMMUNICATIONS	
1. Massachusetts Institute of Technology	5.0
University of California–Berkeley	5.0
3. Stanford University (CA)	4.9
4. University of Illinois–Urbana-Champaign	4.8
5. California Institute of Technology	4.7
6. Georgia Institute of Technology	4.5
University of Michigan–Ann Arbor	4.5
8. Carnegie Mellon University (PA)	4.4
9. Cornell University (NY)	4.3
10. Princeton University (NJ)	4.2
Purdue University–West Lafayette (IN)	4.2
ENVIRONMENTAL • ENVIRONMENTAL HEALTH	
1. Stanford University (CA)	4.8
2. University of Illinois–Urbana-Champaign	4.5
3. Johns Hopkins University (Whiting) (MD)	4.3
University of California–Berkeley	4.3
5. University of Texas–Austin	4.2
6. California Institute of Technology	4.1
7. University of North Carolina–Chapel Hill	4.0
8. Carnegie Mellon University (PA)	3.9
Cornell University (NY)	3.9
Georgia Institute of Technology	3.9
University of Michigan–Ann Arbor	3.9
INDUSTRIAL • MANUFACTURING	
1. Georgia Institute of Technology	4.7
2. University of Michigan–Ann Arbor	4.5
3. Pennsylvania State University–University Park	4.3
4. Northwestern University (IL)	4.2
Purdue University–West Lafayette (IN)	4.2
Stanford University (CA)	4.2
University of California–Berkeley	4.2
8. Virginia Tech	4.1
9. Cornell University (NY)	4.0
10. Texas A&M University–College Station (Look)	3.9
MATERIALS	
1. Massachusetts Institute of Technology	4.8
2. Northwestern University (IL)	4.6
University of Illinois–Urbana-Champaign	4.6
4. Stanford University (CA)	4.5
University of California–Santa Barbara	4.5
6. University of California–Berkeley	4.4
7. Cornell University (NY)	4.1
8. California Institute of Technology	4.0
Pennsylvania State University–University Park	4.0
University of Florida	4.0
University of Michigan–Ann Arbor	4.0
MECHANICAL	
1. Massachusetts Institute of Technology	4.9
2. Stanford University (CA)	4.8
University of California–Berkeley	4.8
4. California Institute of Technology	4.6
University of Michigan–Ann Arbor	4.6
6. University of Illinois–Urbana-Champaign	4.5
7. Georgia Institute of Technology	4.4
8. Cornell University (NY)	4.3
9. Purdue University–West Lafayette (IN)	4.2
10. Carnegie Mellon University (PA)	4.1
Northwestern University (IL)	4.1
Princeton University (NJ)	4.1
University of Texas–Austin	4.1
NUCLEAR	
1. Massachusetts Institute of Technology	4.5
2. University of Michigan–Ann Arbor	4.2
University of Wisconsin–Madison	4.2
4. Purdue University–West Lafayette (IN)	4.0
Texas A&M University–College Station (Look)	4.0
PETROLEUM	
1. University of Texas–Austin	4.7
2. Stanford University (CA)	4.4
3. University of Tulsa (OK)	3.8
4. Texas A&M University–College Station (Look)	3.7
5. Colorado School of Mines	3.3
University of Oklahoma	3.3

METHODOLOGY

Programs at 198 engineering schools that grant doctoral degrees were surveyed; 180 responded; 179 provided the data needed to calculate rankings based on a weighted average of the 10 indicators described below. (All schools are listed in the directory, beginning on Page 101.)

Quality assessment (weighted by .40): Two surveys were conducted in the fall of 2004. Engineering school deans and deans of graduate studies were each asked to rate program quality from marginal (1) to outstanding (5); 64 percent responded. The resulting score is weighted by .25. Corporate recruiters and company contacts who hire engineers with graduate degrees from previously ranked engineering schools were also asked to rate programs; 31 percent responded. Their opinions are weighted by .15.

Student selectivity (.10): The strength of master's and doctoral students entering in fall 2003 was measured by mean GRE quantitative score (67.5 percent) and the acceptance rate (32.5 percent).

Faculty resources (.25): Based on the 2004 ratio of full-time doctoral students to full-time faculty (30 percent) and full-time master's students to full-time faculty (15 percent); the proportion of full-time faculty in the National Academy of Engineering in 2004 (30 percent); and the number of engineering doctoral degrees granted in the last school year (25 percent).

Research activity (.25): Based on total externally funded engineering research expenditures (60 percent) and research dollars per full-time tenured and tenure-track engineering faculty member (40 percent). Expenditures refer to separately funded research, public and private, conducted by the school, averaged over fiscal years 2003 and 2004.

Overall rank: Data were standardized about their means, and standardized scores were weighted, totaled, and rescaled so that the top-scoring school received 100; others received their percentage of the top score.

Specialty rankings: These rankings are based solely on assessments by department heads in each specialty area. Department heads in their specialty area rated the other schools that offered the specialty on a 5-point scale. Those schools with the highest average scores appear here. Names of the department heads who were surveyed came from the American Society for Engineering Education.