SPECIALTIES

PROGRAMS RANKED BEST BY ENGINEERING SCHOOL DEPARTMENT HEADS

AEROSPACE/AERONAUTICAL/ASTRONAUTICAL

Rank/School	Average assessment score (5.0=highest)
1. Stanford University (CA)	4.9
2. Massachusetts Institute of Technology	4.8
3. California Institute of Technology	4.6
4. Georgia Institute of Technology	4.2
University of Michigan–Ann Arbor	4.2
6. Purdue University–West Lafayette (IN)	4.1
7. Cornell University (NY)	3.8
Princeton University (NJ)	3.8
University of Illinois–Urbana-Champaign	3.8
University of Texas–Austin	3.8

BIOMEDICAL/BIOENGINEERING

Rank/School	Average assessment score (5.0=highest)
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. University of Washington	4.4
5. Duke University (NC)	4.2
University of Pennsylvania	4.2
7. Boston University	4.1
8. Massachusetts Institute of Technology	4.0
9. Case Western Reserve University (OH)	3.9
10. Rice University (Brown) (TX)	3.8
University of Michigan–Ann Arbor	3.8

CHEMICAL

Rank/School	Average assessment score (5.0=highest)
1. Massachusetts Institute of Technology	4.8
2. California Institute of Technology	4.7
University of California–Berkeley	4.7
University of Minnesota–Twin Cities	4.7
5. University of Wisconsin–Madison	4.6
6. Stanford University (CA)	4.4
7. Princeton University (NJ)	4.3
University of Texas–Austin	4.3
9. University of California–Santa Barbara	4.2
University of Delaware	4.2

CIVIL

Rank/School	Average assessment score (5.0=highest)
1. University of California–Berkeley	4.7
University of Illinois–Urbana-Champaign	4.7
3. Stanford University (CA)	4.6
4. Georgia Institute of Technology	4.4
Massachusetts Institute of Technology	4.4
University of Texas–Austin	4.4
7. California Institute of Technology	4.3
8. Purdue University–West Lafayette (IN)	4.2
9. Cornell University (NY)	4.1
10. Carnegie Mellon University (PA)	4.0
Northwestern University (McCormick) (IL)	4.0
University of Michigan–Ann Arbor	4.0
Virginia Tech	4.0

COMPUTER ENGINEERING

Rank/School	Average assessment score (5.0=highest)
1. Massachusetts Institute of Technology	4.9
Stanford University (CA)	4.9
3. Carnegie Mellon University (PA)	4.8
University of California–Berkeley	4.8
5. University of Illinois–Urbana-Champaign	4.6
6. University of Michigan–Ann Arbor	4.5
7. Georgia Institute of Technology	4.4
8. University of Texas–Austin	4.3
9. Cornell University (NY)	4.2
10. California Institute of Technology	4.1
Princeton University (NJ)	4.1
Purdue University–West Lafayette (IN)	4.1

ELECTRICAL/ELECTRONIC/COMMUNICATIONS

Rank/School	Average assessment score (5.0=highest)
1. Massachusetts Institute of Technology	5.0
2. Stanford University (CA)	4.9
University of California–Berkeley	4.9
4. University of Illinois–Urbana-Champaign	4.8
5. California Institute of Technology	4.7
6. University of Michigan–Ann Arbor	4.5
7. Carnegie Mellon University (PA)	4.4
Georgia Institute of Technology	4.4
9. Cornell University (NY)	4.3
10. University of Texas–Austin	4.2

ENVIRONMENTAL/ENVIRONMENTAL HEALTH

Rank/School	Average assessment score (5.0=highest)
1. Stanford University (CA)	4.8
2. Johns Hopkins University (Whiting) (MD)	4.3
University of California–Berkeley	4.3
University of Texas–Austin	4.3
5. University of Illinois–Urbana-Champaign	4.2
University of Michigan–Ann Arbor	4.2
7. Carnegie Mellon University (PA)	4.0
Georgia Institute of Technology	4.0
University of North Carolina–Chapel Hill	4.0
10. California Institute of Technology	3.9

INDUSTRIAL/MANUFACTURING

Rank/School	Average assessment score (5.0=highest)
1. Georgia Institute of Technology	4.8
2. University of Michigan–Ann Arbor	4.5
3. University of California–Berkeley	4.2
4. Pennsylvania State University–University Park	4.1
Purdue University–West Lafayette (IN)	4.1
Stanford University (CA)	4.1
7. Northwestern University (McCormick) (IL)	4.0
8. Cornell University (NY)	3.9
Texas A&M University–College Station (Look)	3.9
Virginia Tech	3.9

MATERIALS

Rank/School	Average assessment score (5.0=highest)
1. Massachusetts Institute of Technology	4.7
2. University of Illinois–Urbana-Champaign	4.6
3. Northwestern University (McCormick) (IL)	4.5
University of California–Santa Barbara	4.5
5. Stanford University (CA)	4.3
6. University of California–Berkeley	4.1
University of Florida	4.1
University of Michigan–Ann Arbor	4.1
9. Cornell University (NY)	4.0
Pennsylvania State University–University Park	4.0

MECHANICAL

Rank/School	Average assessment score (5.0=highest)
1. Massachusetts Institute of Technology	4.9
2. Stanford University (CA)	4.8
3. California Institute of Technology	4.7
University of California–Berkeley	4.7
5. University of Illinois–Urbana-Champaign	4.5
University of Michigan–Ann Arbor	4.5
7. Georgia Institute of Technology	4.4
8. Cornell University (NY)	4.3
Purdue University–West Lafayette (IN)	4.3
10. Carnegie Mellon University (PA)	4.0
Northwestern University (McCormick) (IL)	4.0
Princeton University (NJ)	4.0
University of Texas–Austin	4.0

NUCLEAR

Rank/School	Average assessment score (5.0=highest)
1. University of Michigan–Ann Arbor	4.6
2. Massachusetts Institute of Technology	4.4
3. University of Wisconsin–Madison	4.1
4. Texas A&M University–College Station (Look)	3.8
5. Purdue University–West Lafayette (IN)	3.7
6. North Carolina State University	3.6
7. Pennsylvania State University–University Park	3.4
University of California–Berkeley	3.4
9. Oregon State University	3.2
University of Florida	3.2

PETROLEUM

Rank/School	Average assessment score (5.0=highest)
1. Stanford University (CA)	4.6
University of Texas–Austin	4.6
3. Texas A&M University–College Station (Look)	4.0
4. University of Tulsa (OK)	3.9
5. Colorado School of Mines	3.8
6. University of Oklahoma	3.3
7. Pennsylvania State University–University Park	3.2
8. University of Southern California (Viterbi)	3.0
9. Louisiana State University–Baton Rouge	2.8
10. Texas Tech University	2.5

METHODOLOGY

Programs at 199 engineering schools that grant doctoral degrees were surveyed; 185 responded, and the previous year's data were used for two additional schools that were affected by Hurricane Katrina. Rankings for 187 schools were calculated based on a weighted average of the 10 indicators described below. (All schools are listed in the directory, beginning on Page 73.)

Quality assessment (weighted by .40): Two surveys were conducted in fall 2005. Engineering school deans and deans of graduate studies were each asked to rate program quality from marginal (1) to outstanding (5); 61 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; 27 percent responded. Their opinions are weighted by .15.

Student selectivity (.10): The strength of master's and Ph.D. students entering in fall 2005 was measured by mean GRE quantitative score (67.5 percent) and acceptance rate (32.5 percent).

Faculty resources (.25): Based on the 2005 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 2005 (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 2004 and 2005.

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.