## Business Methodology

All 365 accredited master's programs in business were surveyed ( 284 responded; 165 provided the data needed to calculate rankings based on a weighted average of the eight quality indicators described below). All schools appear in the directory. More on the methodology.

Quality assessment
(weighted by .40): Two surveys were conducted in the fall of 2002. Business school deans and directors of accredited programs were asked to rate programs on a scale from "marginal" (1) to "outstanding" (5); 56 percent responded, and the resulting score accounts for a quarter of the overall score. Corporate recruiters who hire from previously ranked programs were also asked to rate programs; 26 percent responded, and their ratings are weighted by .15 in the model.

Placement success
(.35): This is measured by mean starting salary and bonus ( 40 percent) and employment rates for 2002 graduates, computed at graduation ( 20 percent) and three months later (40 percent). Those not seeking jobs are excluded. Salary figures are based on the number of graduates reporting data. Since not everyone who reported a base salary reported a signing bonus, mean signing bonus is weighted by the proportion who do.

## Student selectivity

(.25): The strength of full-time students entering in the fall of 2002 was measured by mean GMAT ( 65 percent), mean undergraduate GPA ( 30 percent), and the proportion of applicants accepted by the school ( 5 percent).

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

Specialty rankings:
These rankings are based solely on ratings by educators at peer schools. Business school deans and program heads were asked to nominate up to 10 programs for excellence in each of the areas listed. The 10 schools receiving the most votes appear.

## Education Methodology

Graduate programs at 188 schools granting doctoral degrees were surveyed. Of those, 155 responded; all provided the data needed to calculate rankings based on a weighted average of the 12 quality measures described here.

Quality assessment (weighted by .40): Two surveys were conducted in the fall of 2002. Education school deans and deans of graduate studies were asked to rate program quality from "marginal" (1) to "outstanding" (5). Fifty-four percent responded. The resulting score is weighted by .25 . School superintendents in a sampling of districts were also asked to rate programs. Thirty-five percent responded; their opinions are weighted by . 15 .

Student selectivity (.18): Uses the mean verbal and quantitative GRE scores of doctoral students entering fall 2002 and the acceptance rate of doctoral applicants (. 06 each).

Faculty resources (.12): The 2002 ratio of full-time students to full-time faculty (.02); the percent of faculty holding awards or editorships among selected education journals in the past two years (.025); the number of doctoral degrees granted in the past school year (.05); and the proportion of fall 2002 students who were in doctoral programs (.025).

Research activity (.30): Uses total research expenditures (.075), expenditures per faculty member in funded research (.15), and percent of full-time faculty in funded research (.075). Expenditures refer to separately funded research, public and private, conducted by the school, averaged over fiscal years 2001 and 2002.

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

Specialty rankings: Specialty ratings are based solely on nominations by deans at peer schools from the list of schools surveyed. They rank up to 10 schools with top programs in each area. Those with the most votes appear here.

## Engineering Methodology

Programs at 185 engineering schools that granted doctoral degrees were surveyed; 169 responded; 168 provided the data needed to calculate rankings based on a weighted average of the 11 indicators described below. (All schools are listed in the directory.)

Quality assessment (weighted by .40): Two surveys were conducted in the fall of 2002. Engineering school deans and deans of graduate studies were asked to rate program quality from marginal (1) to outstanding (5); 54 percent responded. The resulting score is weighted by .25 . Corporate recruiters who hire from previously ranked programs were also asked to rate programs; 29 percent responded. Their opinions are weighted by . 15 .

Student selectivity (.10): The strength of students entering in fall 2002 was measured by mean GRE quantitative and analytical scores ( 45 percent each) and the acceptance rate (10 percent).

Faculty resources (.25): Based on the 2002 ratios of full-time doctoral students to fulltime faculty ( 30 percent) and full-time master's students to full-time faculty ( 15 percent); the proportions of full-time faculty in the National Academy of Engineering in 2002 (30 percent); and number of doctoral degrees granted in last school year ( 25 percent).

Research activity (.25): Based on total research expenditures ( 60 percent) and research dollars per faculty member engaged in research ( 40 percent). Expenditures refer to separately funded research, public and private, conducted by the school, averaged over fiscal years 2001 and 2002.

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 nomination by educators at peer schools. From the list of schools surveyed, deans nominated up to 10 schools for excellence in each area. Those with the most votes appear here.

## Fine Arts Methodology

The master of fine arts program rankings are based solely on the results of a peer assessment survey. Respondents were asked to rate the academic quality of programs on a scale of 1 (marginal) to 5 (outstanding). Scores for each school were totaled and divided by the number of respondents who rated that school. The response rate was 48 percent. Surveys were conducted by Synovate.

Note: Lists of schools, persons surveyed at each school, and specialty concentrations were developed in cooperation with the Slane College of Communications and Fine Arts at Bradley University in Illinois.

## Health Methodology

The health rankings are based solely on the results of peer assessment surveys sent to deans, other administrators, and/or faculty at accredited degree programs or schools in each discipline. All schools surveyed in a discipline were sent the same number of surveys. Respondents rated the academic quality of programs on a 5-point scale: outstanding (5 points); strong (4); good (3); adequate (2); or marginal (1), based on their assessment of the curriculum, faculty, and graduates. They were instructed to select "don't know" if they did not have enough knowledge to rate a program. Scores for each school were determined by computing a trimmed mean of the ratings of all respondents who rated that school; scores were then sorted in descending order. Only fully accredited programs in good standing during the survey period are ranked.

In the fall of 2002, surveys were conducted for 2003 rankings of community health programs and schools of public health accredited by the Council on Education for Public Health (response rates: 67 percent and 68 percent, respectively); health services administration programs accredited by the Accrediting Commission on Education for Health Services Administration (61 percent); master's programs in nursing accredited by either the Commission on Collegiate Nursing or the National League for Nursing Accrediting Commission (48 percent); graduate nurse anesthesia programs accredited by the Council of Accreditation of Nurse Anesthesia Educational Programs of the American Association of Nurse Anesthetists (54 percent); graduate nurse-midwifery programs accredited by the American College of Nurse-Midwives Division of Accreditation (71 percent); physician assistant programs accredited by the The Accreditation Review Commission on Education for the Physician Assistant (70 percent); rehabilitation counselor education programs accredited by the Council on Rehabilitation Education (59 percent); and veterinary schools accredited by the American Veterinary Medical Association (67 percent). Nursing specialty rankings are based solely on ratings by educators at peer schools. From the list of nursing schools surveyed, nursing educators nominated up to 10 schools for excellence in each area. Those with the most votes appear here.

In the fall of 2000, surveys were conducted for 2001 rankings of doctoral programs in clinical psychology accredited by the American Psychological Association (response rate: 20 percent) and graduate programs in occupational therapy accredited by the American Occupational Therapy

Association (57 percent). In fall 1999, surveys were conducted for 2000 rankings of audiology programs and speech-language-pathology programs accredited by the American Speech-Language-Hearing Association (response rates: 57 percent and 45 percent, respectively); physical therapy programs accredited by the American Physical Therapy Association (52 percent); and master of social work programs accredited by the Council on Social Work Education (53 percent). Peer assessment surveys were conducted by Synovate.

## Law Methodology

The rankings of 177 accredited law schools are based on a weighted average of the 12 measures of quality described here. Specialty rankings are based on nomination by legal educators at peer institutions. More on the methodology.

Quality assessment (weighted by .40): Measured by two surveys conducted in fall 2002. The dean and three faculty members at each school were asked to rate schools from "marginal" (1) to "outstanding" (5); 70 percent voted. Their average rating for a school counts for a quarter of its overall score. Lawyers and judges also rated schools; the response was 34 percent. Their rating is weighted by 15 .

Selectivity (.25): Combines median LSAT scores ( 50 percent), median undergrad GPA (40 percent), and proportion of applicants accepted for fall 2002 (10 percent).

Placement success (.20): Employment rates at graduation for 2001 graduates (30 percent) and nine months after ( 60 percent), and bar passage rate ( 10 percent). Employed graduates includes those reported as working or pursuing graduate degrees; for the ninemonth rate only, 25 percent of those whose status is unknown are also counted as working. Those not seeking jobs are excluded. Bar passage rate indicator is the ratio of a school's rate in the cited jurisdiction to the overall state rate, computed for first-time test takers in summer 2001 and winter 2002. The jurisdiction cited is the state where the largest number of 2001 grads first took the test.

Faculty resources (.15): Based on average 2001 and 2002 expenditures per student for instruction, library, and supporting services (65 percent); student/teacher ratio (20 percent); average per-student spending in 2001 and 2002 on all other items, including financial aid ( 10 percent); and total number of volumes and titles in library ( 5 percent).

Overall rank: A school's score on each indicator was standardized. Then scores were weighted, totaled, and rescaled so that the top school received 100 and other schools received a percentage of the top score.

Specialty rankings: Legal educators nominated up to 15 schools in each field. Those voted the top 10 appear.

## Law School Diversity

Law schools rich in racial and ethnic diversity are thought to offer their students a chance to encounter ideas and experiences different from their own, which can be good practice for the life of a lawyer.

To identify institutions where students are most likely to encounter classmates from different racial or ethnic groups, U.S. News has created a diversity index based on the total proportion of minority students-not including international students-and the mix of racial and ethnic groups on campus. The data are drawn from each law school's 2002-2003 student body, including both fulland part-time students. The groups forming the basis for our calculations are African-Americans, Asian-Americans, Hispanics, American Indians, and whites. Our formula produces a diversity index that ranges from 0.0 to 1.0 . The closer a school's number is to 1.0 , the more diverse is the student population. Schools that have a large proportion of one ethnic group, even if it is a minority group, don't score high in this index.

To be included in the table, a law school must be accredited by the American Bar Association. Because student-body ethnic diversity data are not consistently compiled and reported as yet for other types of graduate schools, U.S. News has prepared a diversity table for law schools only

## Library Science Methodology

U.S. News ranked the 48 master's degree programs in the United States that are accredited by the American Library Association. The rankings are based on the results of a fall 1998 survey sent to deans, program directors, and faculty of accredited graduate programs. The questionnaires asked individuals to rate the academic quality of programs at each institution as distinguished (5); strong (4); good (3); adequate (2); or marginal (1). Individuals who were unfamiliar with a particular school's programs were asked to select "don't know." Scores for each school were totaled and divided by the number of respondents who rated that school. The response rate was 60 percent.

## Medicine Methodology

The 125 medical schools fully accredited by the Liaison Committee on Medical Education plus the 19 schools of osteopathic medicine fully accredited by the American Osteopathic Association were surveyed for the ranking of research medical schools; 117 schools provided the data needed to calculate the research rankings based on the indicators used in the research model. The same medical and osteopathic schools were surveyed for the primary-care ranking; 117 schools provided the data needed to calculate the primary-care ranking. Both rankings are based on a weighted average of seven indicators, six of them common to both models. The research model factors in research activity; the primary-care model adds a measure of the proportion of graduates entering primary-care specialties.

Quality assessment (weighted by .40): Peer assessment surveys were conducted in the fall of 2002, asking medical and osteopathic school deans, deans of academic affairs, and heads of internal medicine or the directors of admissions to rate program quality on a scale of "marginal" (1) to "outstanding" (5). Survey populations were asked to separately rate program quality for both research and primary-care programs on a single survey instrument. The response rate was 53 percent. A research school's average score is weighted .20 ; the average score in the primary-care model is weighted .25 . Residency program directors were also asked to rate programs using the same 5-point scale. The residency program directors surveyed were a geographically balanced selection from the American Medical Association's Graduate Medical Education Library 2002-2003 and a list of primary-care residency program directors from the American Osteopathic Association. The response rate for those sent the research survey was 32 percent. The response rate for those sent the primary-care survey was 25 percent. Residency directors' opinions are weighted .20 in the research model and .15 in primary-care.

Research activity (. 30 in research model only): measured as the total dollar amount of National Institutes of Health research grants awarded to the medical school and its affiliated hospitals, averaged for 2001 and 2002. An asterisk indicates schools that reported grants only to their medical school.

Primary-care rate (. 30 in primary-care model only): the percentage of M.D.'s entering primary-care residencies in the fields of family practice, pediatrics, and internal medicine, averaged over 2000, 2001, and 2002.

Student selectivity ( .20 in research model, .15 in primary-care model): three components, which describe the class entering in fall 2002: mean composite Medical College Admission Test score ( 65 percent), mean undergraduate grade-point average ( 30 percent), and pro- portion of applicants accepted ( 5 percent).

Faculty resources ( .10 in research model, .15 in primary-care model): The ratio of fulltime science and clinical faculty to full-time students in 2002.

Overall rank: The research-activity indicator had significant outliers; to avoid distortion, it was transformed using a logarithmic function. Indicators were standardized about their means, and standardized scores were weighted, totaled, and rescaled so that the top school received 100; other schools received their percentage of the top score.

Specialty rankings: The rankings are based solely on ratings by deans and senior faculty at peer schools. Medical school deans and senior faculty identified up to 10 schools offering the best programs in each specialty area. The 10 receiving the highest number of nominations appear here.

## Public Affairs Methodology

Rankings of master's programs in public affairs, are based on a survey of 259 programs nationwide. The list was provided by the National Association of Schools of Public Affairs and Administration and the Association for Public Policy Analysis and Management. Schools surveyed confer the M.P.A. (Master of Public Affairs or Master of Public Administration), the M.P.P. (Master of Public Policy), and the M.P.M. (Master of Public Management).

The associations provided contacts, typically the program director, dean, or department chair responsible for the program. Two responses were solicited from each program-one from the contact and one from a nominee made by the contact. Respondents were asked to rate the academic quality of programs as distinguished (5 points); strong (4); good (3); adequate (2); or marginal (1), based on their assessment of all factors bearing on excellence, such as curriculum, record of scholarship, and quality of faculty and graduates. Individuals who were unfamiliar with programs were instructed to select "don't know." Scores for each program were averaged across all respondents who rated the program. The response rate was 46 percent. The surveys were conducted by Market Facts Inc.

## Sciences Methodology

Rankings of doctoral programs in the sciences are based on the results of surveys sent to academics in each discipline during the fall of 2001 (or, in the case of geology, during the fall of
1998). The questionnaires asked individuals to rate the quality of the program at each institution on a 5-point scale: outstanding (5), strong (4), good (3), adequate (2), or marginal (1). Individuals who were unfamiliar with a particular school's programs were asked to select "don't know." Scores for each institution were totaled and divided by the number of respondents who rated that school. In the biological sciences, chemistry, computer science, and physics, survey respondents were also asked to nominate programs that had excellent offerings in certain specialty areas. Those programs that received seven or more nominations are published, ranked by the number of nominations received.

Surveys in the biological sciences, chemistry, computer science, mathematics, applied mathematics, and physics were conducted by T. E. Systems Inc. The National Science Foundation report "Science and Engineering Doctorate Awards: 1999" was the source for the lists of programs surveyed in each of these disciplines. In the biological sciences, graduate programs may be offered in a university's medical school as well as its college of arts and sciences. In those cases where the NSF report showed two separate program listings at a university, the U.S. News survey did also. Otherwise, schools were listed only once on the survey, even though they may have programs in the biological sciences that are housed in separate institutional units.

Questionnaires were sent to the department heads and deans or directors of graduate studies at each program in each discipline. In each discipline surveys were sent to two individuals associated with each program listed on the questionnaire.

Response rates were as follows: For the biological sciences, 31percent of those surveyed responded; for chemistry, 46 percent; for computer science, 57 percent; for mathematics, 43 percent; for applied mathematics, 40 percent; and for physics, 50 percent.

The survey of graduate programs in geology was conducted by Market Facts Inc. For geology, the survey covered all schools that had granted a total of five or more doctorates in the field during the five-year period from 1992 through 1996. Fifty-two percent of those surveyed responded.

## Social Sciences \& Humanities Methodology

Rankings of doctoral programs in the social sciences and humanities are based on the results of surveys sent to academics in each discipline. Each school (or, in the case of psychology, each institutional unit) offering a doctoral program was sent two surveys. The questionnaires asked respondents to rate the quality of the program at each institution as distinguished (5); strong (4); good (3); adequate (2); or marginal (1). Individuals who were unfamiliar with a particular school's programs were asked to select "don't know." Scores for each school were totaled and divided by the number of respondents who rated that school.

Surveys were conducted in the fall of 2000. Questionnaires were sent to department heads and directors of graduate studies (or alternatively, a senior faculty member who teaches graduate students) at schools that had granted a total of five or more doctorates in each discipline during the five-year period from 1991 through 1995, supplemented by programs that appeared on the 1998 Survey of Earned Doctorates. The surveys asked about Ph.D. programs in economics (response rate: 38 percent); English (43 percent); history ( 36 percent); political science (43 percent); psychology ( 20 percent); and sociology ( 45 percent).

As noted in the psychology table, some schools are listed more than once because separate doctoral programs are offered in different university units. Surveys were sent to the department chair or dean of the school of psychology and the director of graduate studies in each institutional
unit that offered a doctoral program. Unless otherwise noted in parentheses, the psychology program ranked is located in the department of psychology. Accredited doctoral programs in clinical psychology are ranked separately in the health professions section.

