

APPENDIX A: TECHNICAL NOTES

SURVEY UNIVERSE

The data collected in the 2002 Survey of Graduate Students and Postdoctorates in Science and Engineering¹ represent national estimates of graduate enrollment and postdoctoral employment as of fall 2002 in all academic institutions in the United States that granted doctorates or master's degrees in any science, engineering, or health-related field. The survey collects data for all branch campuses, affiliated research centers, and separately organized components, such as medical or dental schools, nursing schools, and schools of public health. The survey universe consisted of 715 reporting units (schools) at 594 graduate institutions: 234 reporting units at 234 master's-granting institutions, and 481 reporting units at 360 doctorate-granting institutions.

Data on graduate science and engineering (S&E) enrollment and postdoctoral appointees have been collected since 1966. From fall 1966 through fall 1971, the NSF Graduate Traineeship Program collected these data from a limited number of doctorate-granting institutions and requested data on only those S&E fields supported by NSF. The NSF Universities and Nonprofit Institutions Studies Group began collecting these data with the 1972 survey. Between 1972 and 1975, eligibility definitions were changed to include health-related fields and to increase the number of S&E fields surveyed, and the survey was broadened to include all institutions known to have programs leading to a master's or doctoral degree. Because of these changes, data for 1974 and earlier years are not comparable with 1975 and later data.

Table A-1 shows the number of institutions, reporting units, and departments at each level included in the data, as well as the total enrollment reported for each year between 1966 and 2002. The data for 1966–74 have not been inflated to reflect universe totals. Beginning with the fall 1984 academic year, the survey included master's-granting institutions on a sample basis. From 1984 through 1987, the survey design incorporated a stratified random sample with a certainty stratum that included all doctorate-granting institutions; all master's-granting, historically black colleges and universities; and all land-grant institutions. NSF divided the remaining master's-granting institutions into two sample strata based on

¹See <http://www.nsf.gov/statistics/srvygradpostdoc/> for a more detailed discussion of the methodology used in this survey.

enrollment size. In 1988 NSF reestimated data for sampled institutions for the years 1984–87 on the basis of 1983 and 1988 data. During the 1989 survey cycle, NSF revised the S&E field definitions, resulting in the deletion of some departments. NSF adjusted data for 1975–88 to conform to the revised definitions. The fall 1988 survey universe included for the first time since 1983 all eligible institutions, not just a sample. Since 1988 the survey universe has included any institution that has established an S&E and health-related master's or doctoral program and has excluded any that has closed all of its S&E graduate programs. (See Survey Methodology.)

Tables A-2 and A-3 present data on departmental coverage by S&E and health-related fields for doctorate- and master's-granting institutions for the years 1995–2002.

SURVEY INSTRUMENTS

The 2002 and 2001 survey instruments were essentially the same. The survey package included the questionnaire proper, with instructions, and the following:

- an enclosure detailing mailing package contents
- a flyer explaining NSF's academic S&E surveys
- a cover letter to survey coordinators at graduate schools or at medical schools
- a computer-generated list of departments or programs (NSF Form 811) specific to each institution surveyed and based on the departments known to exist in the previous survey cycle
- a crosswalk showing National Center for Education Statistics instructional program codes corresponding to each S&E field as defined by NSF
- a postcard for respondent use, acknowledging receipt of the survey and indicating any changes in coordinator name, address, telephone number, or e-mail address
- a flyer informing coordinators of their ID numbers and passwords to use in responding to the survey via the NSF-NIH Graduate Student Survey Web-Based Data Reporting System
- an enclosure encouraging respondents to view last year's data on the Web through the NSF Division of Science Resources Statistics home page

SURVEY METHODOLOGY

The contractor mailed the survey packages by 4 November 2002. For the fifth year, schools (reporting units) had the option of providing data using the NSF-NIH Graduate Student Survey Web-Based Data Reporting System, and 516 reporting units elected to do so. The survey universe consisted of 715 reporting units at 594 graduate institutions.

In addition to the verification information cited above, the acknowledgment postcard also requested that institutional coordinators indicate how the data were collected, whether the data were maintained centrally or collected from individual departments, and whether they were derived from a computerized database or were hand tabulated. Of the 715 reporting units, 98.5 percent have provided this information during the past 10 years. The majority of reporting units indicate a combination of sources for their data. Over the years, the use of computerized systems has shown a gradual but small increase.

Institutional coordinators review the departmental listing provided in the survey packet and indicate any changes in their departmental structure, such as departments newly formed, phased out, split, or merged; they check off any departments that had neither graduate students nor postdoctorates and for which survey questionnaires would therefore not be submitted. Institutional coordinators returned the revised Form 811s to the survey contractor for use as a checklist in tracking departmental responses.

Institutions completed a survey questionnaire for each department either centrally or at the department level and returned the questionnaire to the survey contractor for data entry, editing, and tabulation. The survey contractor referred arithmetic errors, inconsistencies between items, and sharp year-to-year fluctuations to the institutional coordinators for correction or clarification.

RESPONSE RATE

Of the 715 reporting units included in the fall 2002 survey, 705 (98.6 percent) provided at least partial data, distributed as follows. The 705 reporting units represent, at the departmental level, 12,001 responding departments, or 99.0 percent of the 12,126 departments surveyed. Of these, 10,434 departments, or 86.0 percent of the total, provided complete responses. A total of 125 departments, or 1.0 percent of the departmental total, required complete imputation, and 1,567, or 12.9 percent, had one or more data cells imputed. Table A-4 presents the department response rates for earlier years for comparison.

The survey contractor imputed missing data for departments that provided partial responses using data from the previous year, where available, or from peer institutions if data had not been reported the previous year. The contractor imputed data for nonrespondent departments (those that did not provide any data) using data from the previous year, where available. Tables A-5 and A-6 show the number of departments in doctorate- and master's-granting institutions that required total or partial imputation, graduate enrollment and postdoctorates imputed, and imputation rates. Table A-7 provides imputation rates by data item.

CHANGES IN DATA ITEMS

Over time, changes have been made to the content of the survey to keep it relevant to the needs of the data users. Such changes prevent precise maintenance of trend data. Therefore, some data items are not available for all institutions in all years. Major changes in the data collected are listed below by the year the changes became effective.

- From 1975 through 1977, data for master's-granting institutions were collected on an abbreviated form of the survey (short form), which did not collect data on sex or citizenship of graduate students or collect data on postdoctoral appointees. In 1978 doctorate-granting institutions received a similar short form of the survey; master's-granting institutions were not surveyed that year. The 1978 survey did not collect data on mechanisms of support for full-time students. All mechanisms of support data for that year were combined and appear as "other types of support" in any data tables. The 1978 figures shown in the tables for master's-granting institutions represent estimates based on 1977 and 1979 data. Beginning in 1979 both doctorate- and master's-granting institutions received the full survey.
- In 1976 master's-granting institutions were asked to provide data on all graduate students by sex, and in 1977 similar data were requested for all graduate students in all institutions. The short form used in 1978 did not request any information on sex; 1978 figures in the tables represent estimates based on 1977 and 1979 data.
- Through 1977 the survey collected citizenship data only for graduate students enrolled full time in doctorate-granting institutions. The short form used for master's-granting institutions from 1975 through 1977 and for doctorate-granting institutions in 1978 did not collect any citizenship data. Data on citizen-

ship of all full-time graduate students have been available since 1979, and data on those enrolled part time have been available since 1983.

- In 1979 the survey collected race/ethnicity data; separate data on mechanisms of support for fellowships and traineeships (previous years collected these mechanisms on one line); and separate data on “other non-faculty research staff with doctorates” and postdoctoral appointees.
- In 1985 the survey collected separate data on students receiving their primary support from the U.S. Department of Agriculture.
- In 1992 the definitions of foreign students and U.S. citizens were modified to match those used by the U.S. Department of Education National Center for Education Statistics and the Institute of International Education. In previous years, NSF counted permanent residents (those who held green cards but had not yet been granted U.S. citizenship) with foreign students, but in 1992 it included permanent residents with U.S. citizens and reported them by race/ethnicity.
- In 1993 the survey collected race/ethnicity data by sex.
- In 1996 the survey collected separate data on students receiving their primary support from the National Aeronautics and Space Administration.
- In 1998 coordinators and departmental respondents could submit their data through the World Wide Web. Using this new Web-based option, respondents could avoid manually completing the paper survey; obtain immediate feedback on their responses, which helped them provide accurate and complete data; and upload their own data files, speeding up the reporting process.
- In 1999 the survey collected separate data on students receiving their primary support from the Department of Energy and data on first-time enrollment by race/ethnicity. These first-time enrollment data are not reflected in the 2002 published tables. Also in 1999 the survey presented respondents with new race/ethnicity categories:

the “Asian/Pacific Islander” category used in previous years’ surveys became two categories: “Asian” and “Native Hawaiian/Pacific Islander”

the categories “More than One Race Hispanic/Latino” and “More than One Race Non-Hispanic/Latino” were added

the “Other” category included in previous years’ surveys was removed

These changes are also not reflected in the 2002 published tables. In each of the 4 years of collecting these data, only about 8 percent of the departments reported data in any of the new categories. For this year’s table production, as in the previous 3 years, the data reported in the new categories are combined into previous survey categories. The data are combined for the tables as follows: the “Asian” category and the “Native Hawaiian/Pacific Islander” category form the Asian/Pacific Islander category; the “One Race Only Hispanic/Latino” category and the “More than One Race Hispanic/Latino” category form the “Hispanic” category; and the “More than One Race Non-Hispanic” category and the “Unknown” category form the “Other or Unknown” category.

DATA REVISIONS

- During the 1988 survey cycle, a review of the survey universe and of the S&E definition resulted in the exclusion of those departments that were not primarily oriented toward granting research degrees. A number of departments—mostly those in the field of “Social sciences, not elsewhere classified”—were primarily engaged in training teachers, practitioners, administrators, or managers rather than researchers; thus, they were no longer eligible for the survey. During the 1989–2002 survey cycles this process continued, and adjustments were made to ensure trend consistency for the entire 1975–2002 period. These changes resulted in a reduction in total enrollments and social science enrollments for all years. Table A-8 shows the net effect of adjustments over the years.
- In fall 1992 an institution’s previous year’s data for highest S&E degree were changed to reflect the institution’s highest S&E degree in the current year. This change resulted in a smaller decrease in enrollment at doctorate-granting institutions than at master’s-granting institutions, given that over the years a number of master’s-granting institutions had become doctorate-granting institutions.
- During the fall 1992 survey cycle, the definition of medical schools changed to include only those institutional components with membership in the Association of American Medical Colleges. Data collected before this change exclude schools of nursing, public health, dentistry, veterinary medicine, and other health-related disciplines and therefore should not be compared with data collected after the 1992 survey.

TABLE A-1. The National Science Foundation data collection series: 1966–2002

Year	Institutions surveyed	Reporting units surveyed	Departments surveyed			Graduate enrollment in surveyed fields		
			Total	Master's	Doctorate	Total	Full time	Part time
1966	204	204	2,866	441	2,425	169,303	124,255	45,048
1967	209	209	3,014	434	2,580	179,622	133,972	45,650
1968	219	219	3,190	454	2,736	184,759	140,714	44,045
1969	224	224	3,354	460	2,894	196,341	147,515	48,826
1970	227	227	3,544	473	3,071	201,918	153,250	48,668
1971 ^a	224	249	3,397	407	2,990	214,680	164,764	49,916
Doctorate-granting institutions								
1972	260	328	4,593	780	3,813	210,895	161,329	49,566
1973	262	340	6,547	865	5,682	214,563	161,626	52,937
1974	276	365	7,439	1,350	6,089	258,897	190,395	68,502
1975	277	372	7,602	1,420	6,182	285,810	203,861	81,949
1976	282	378	7,675	1,452	6,223	289,004	207,043	81,961
1977	287	387	7,889	1,572	6,317	295,911	209,431	86,480
1978	310	419	8,122	1,731	6,391	298,884	208,527	90,357
1979	313	427	8,208	1,718	6,490	306,600	214,071	92,529
1980	321	437	8,407	1,857	6,550	320,298	221,079	99,219
1981	315	427	8,262	1,783	6,479	324,425	224,331	100,094
1982	316	431	8,162	1,812	6,350	332,735	227,825	104,910
1983	316	430	8,038	1,777	6,261	339,043	233,565	105,478
1984	316	434	8,110	1,816	6,294	344,744	236,388	108,356
1985	319	432	8,208	1,841	6,367	352,945	239,673	113,272
1986	321	436	8,291	1,859	6,432	364,245	248,741	115,504
1987	325	443	8,425	1,882	6,543	370,201	253,572	116,629
1988	338	457	8,699	1,991	6,708	376,337	258,896	117,441
1989	340	459	8,830	2,013	6,817	383,097	265,853	117,244
1990	338	457	8,973	2,063	6,910	397,823	274,665	123,158
1991	337	456	9,143	2,063	7,080	412,970	286,823	126,147
1992	338	457	9,374	2,106	7,268	431,672	300,579	131,093
1993	340	459	9,576	2,128	7,448	439,884	306,737	133,147
1994	339	458	9,783	2,182	7,601	440,257	308,368	131,889
1995	338	457	9,957	2,232	7,725	434,462	304,823	129,639
1996	340	459	9,993	2,304	7,689	429,971	303,734	126,237
1997	344	467	10,006	2,415	7,591	424,693	302,061	122,632
1998	346	468	10,115	2,455	7,660	424,025	302,033	121,992
1999	349	471	10,220	2,413	7,807	431,011	308,684	122,327
2000	353	475	10,319	2,515	7,804	433,280	315,088	118,192
2001	361	482	10,397	2,543	7,854	452,321	329,706	122,615
2002	360	481	10,573	2,620	7,953	482,211	352,764	129,447
Master's-granting institutions								
1975 ^b	307	310	1,401	1,401	NA	42,700	15,787	26,913
1976	312	315	1,435	1,435	NA	44,712	16,369	28,343
1977	314	317	1,503	1,503	NA	49,463	17,307	32,156
1978 ^c	289	289	1,387	1,387	NA	41,028	14,503	26,525
1979	316	318	1,478	1,478	NA	50,978	17,689	33,289
1980	305	305	1,391	1,391	NA	46,780	17,337	29,443
1981	307	309	1,466	1,466	NA	50,705	17,718	32,987
1982	293	293	1,422	1,422	NA	49,556	16,932	32,624
1983	292	293	1,429	1,429	NA	51,389	18,452	32,937
1984	95	96	681	681	NA	49,926	17,534	32,392
1985	92	93	703	703	NA	51,076	17,614	33,462
1986	90	91	694	694	NA	51,275	17,427	33,848
1987	90	90	679	679	NA	51,296	17,484	33,812
1988	266	266	1,316	1,316	NA	48,186	16,231	31,955

TABLE A-1. The National Science Foundation data collection series: 1966–2002

Year	Institutions surveyed	Reporting units surveyed	Departments surveyed			Graduate enrollment in surveyed fields		
			Total	Master's	Doctorate	Total	Full time	Part time
1989	267	267	1,357	1,357	NA	51,381	16,795	34,586
1990	270	270	1,385	1,385	NA	54,290	18,117	36,173
1991	270	270	1,455	1,455	NA	58,242	20,187	38,055
1992	268	268	1,498	1,498	NA	61,850	21,976	39,874
1993	264	264	1,527	1,527	NA	64,420	22,907	41,513
1994	264	264	1,582	1,582	NA	64,142	23,720	40,422
1995	263	263	1,609	1,609	NA	65,178	24,460	40,718
1996	261	261	1,586	1,586	NA	64,108	24,802	39,306
1997	255	255	1,583	1,583	NA	62,515	25,228	37,287
1998	253	253	1,570	1,570	NA	61,602	25,356	36,246
1999	248	248	1,607	1,607	NA	62,245	25,739	36,506
2000	241	241	1,575	1,575	NA	60,031	26,195	33,836
2001	238	238	1,565	1,565	NA	57,299	24,816	32,483
2002	234	234	1,553	1,553	NA	58,509	26,058	32,451

NA = not available.

^a The 1972 survey also collected selected data for 1971.

^b The 1976 survey also collected 1975 data from master's-granting institutions.

^c Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

NOTES: Data for 1966–74 are not inflated to reflect universe totals. Master's-granting institutions were surveyed on a sample basis from 1984–87; see "Technical Notes" for further information.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-2. Science, engineering, and health departments in doctorate-granting institutions, by detailed field: 1995–2002

Field	1995	1996	1997	1998	1999	2000	2001	2002
All surveyed fields	9,957	9,993	10,006	10,115	10,220	10,319	10,397	10,573
Science and engineering	7,109	7,121	7,175	7,265	7,324	7,426	7,480	7,574
Science	5,725	5,723	5,747	5,803	5,854	5,914	5,979	6,071
Physical sciences	568	566	572	579	578	583	589	580
Astronomy	35	35	35	36	36	38	38	38
Chemistry	262	264	267	269	271	273	277	270
Physics	251	249	253	256	248	246	245	242
Physical sciences, nec	20	18	17	18	23	26	29	30
Earth, atmospheric, and ocean sciences	348	347	350	361	358	362	361	362
Atmospheric sciences	33	33	32	33	32	33	33	34
Geosciences	210	211	209	209	205	204	205	203
Oceanography	50	48	49	54	56	55	53	55
Earth, atmospheric, and ocean sciences, nec	55	55	60	65	65	70	70	70
Mathematical sciences	387	388	389	388	386	390	397	399
Mathematics and applied mathematics	305	305	307	307	304	305	312	313
Statistics	82	83	82	81	82	85	85	86
Computer sciences	270	278	285	295	305	320	333	344
Agricultural sciences	333	327	338	342	339	342	348	355
Biological sciences	1,973	1,956	1,934	1,954	1,971	1,964	1,973	2,034
Anatomy	92	91	87	84	82	80	80	83
Biochemistry	191	190	191	191	193	186	183	188
Biology	225	229	239	245	244	247	247	250
Biometry/epidemiology	72	72	72	73	75	76	79	88
Biophysics	33	34	31	31	31	30	31	33
Botany	91	88	85	84	78	76	77	76
Cell biology	132	132	133	146	147	154	154	159
Ecology	32	31	31	31	36	37	39	42
Entomology/parasitology	48	48	48	49	47	46	46	44
Genetics	85	84	83	83	85	87	91	93
Microbiology, immunology, and virology	262	261	251	254	261	260	255	261
Nutrition	123	123	122	124	124	124	122	123
Pathology	144	139	138	135	134	132	133	133
Pharmacology	169	164	159	158	162	160	161	165
Physiology	146	144	138	133	133	130	125	128
Zoology	47	43	39	38	38	34	33	31
Biosciences, nec	81	83	87	95	101	105	117	137
Psychology	546	552	562	569	586	593	606	608
Clinical psychology	123	127	130	130	131	130	136	136
Psychology, general	163	160	166	170	173	179	181	184
Psychology, nec	260	265	266	269	282	284	289	288
Social sciences	1,300	1,309	1,317	1,315	1,331	1,360	1,372	1,389
Agricultural economics	54	54	54	55	55	55	55	57
Anthropology (cultural and social)	135	135	139	136	135	133	131	132
Economics (except agricultural)	201	196	197	195	196	199	200	195
Geography	99	98	100	101	100	101	102	106
History and philosophy of science	21	23	23	23	24	26	26	25
Linguistics	70	72	71	70	71	72	72	71
Political science	326	329	332	333	338	346	347	353
Sociology	176	174	173	173	175	177	179	179
Sociology/anthropology	24	24	24	23	23	23	23	22
Social sciences, nec	194	204	204	206	214	228	237	249
Engineering	1,384	1,398	1,428	1,462	1,470	1,512	1,501	1,503
Aerospace engineering	53	52	54	54	56	57	55	54
Agricultural engineering	38	38	38	38	39	40	38	38

TABLE A-2. Science, engineering, and health departments in doctorate-granting institutions, by detailed field: 1995–2002

Field	1995	1996	1997	1998	1999	2000	2001	2002
Biomedical engineering	59	61	64	72	77	81	81	83
Chemical engineering	141	143	144	145	147	149	147	144
Civil engineering	216	225	231	237	243	250	253	252
Electrical engineering	226	230	236	243	241	250	249	249
Engineering science	39	36	36	38	40	39	38	37
Industrial/manufacturing engineering	161	164	167	168	164	172	174	171
Mechanical engineering	185	185	187	190	188	191	190	190
Metallurgical/materials engineering	106	107	112	114	112	110	108	106
Mining engineering	26	24	24	24	24	25	24	23
Nuclear engineering	26	24	23	24	24	24	23	23
Petroleum engineering	20	19	18	17	16	18	17	18
Engineering, nec	88	90	94	98	99	106	104	115
Health	2,848	2,872	2,831	2,850	2,896	2,893	2,917	2,999
Medical fields	2,119	2,120	2,061	2,060	2,082	2,040	2,037	2,078
Anesthesiology	88	90	89	89	87	87	88	88
Cardiology	71	71	71	71	72	71	70	68
Endocrinology	74	74	71	71	72	70	68	67
Gastroenterology	71	71	68	68	68	68	67	65
Hematology	73	72	71	69	72	71	70	67
Neurology	155	152	155	157	164	162	164	171
Obstetrics and gynecology	96	95	90	91	91	88	88	89
Oncology/cancer research	55	57	62	63	71	70	74	89
Ophthalmology	80	78	78	78	78	76	76	77
Otorhinolaryngology	72	72	68	64	64	62	63	62
Pediatrics	116	118	111	112	110	110	109	110
Preventive medicine/community health	185	186	185	192	197	195	192	194
Psychiatry	107	104	102	101	100	98	98	104
Pulmonary disease	69	68	66	67	66	64	64	63
Radiology	141	138	134	129	131	128	127	128
Surgery	257	259	245	244	246	240	239	234
Clinical medicine, nec	409	415	395	394	393	380	380	402
Other health fields	729	752	770	790	814	853	880	921
Dental sciences	87	86	81	78	79	82	83	85
Nursing	144	142	148	152	156	157	161	164
Pharmaceutical sciences	90	93	91	92	91	86	86	86
Speech pathology/audiology	132	134	138	140	142	150	154	158
Veterinary sciences	48	48	49	51	54	62	61	67
Health related, nec	228	249	263	277	292	316	335	361

nec = not elsewhere classified.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-3. Science, engineering, and health departments in master's-granting institutions, by detailed field: 1995–2002

Field	1995	1996	1997	1998	1999	2000	2001	2002
All surveyed fields	1,609	1,586	1,583	1,570	1,607	1,575	1,565	1,553
Science and engineering	1,390	1,359	1,348	1,329	1,351	1,305	1,294	1,283
Science	1,195	1,171	1,162	1,153	1,159	1,130	1,107	1,091
Physical sciences	129	121	121	117	116	104	96	94
Astronomy	0	0	0	0	0	0	0	0
Chemistry	80	76	75	71	72	66	63	61
Physics	34	31	31	30	30	26	23	24
Physical sciences, nec	15	14	15	16	14	12	10	9
Earth, atmospheric, and ocean sciences	63	61	63	62	64	65	65	63
Atmospheric sciences	2	2	2	2	1	1	1	1
Geosciences	29	28	28	27	29	31	31	31
Oceanography	7	6	7	7	8	8	7	5
Earth, atmospheric, and ocean sciences, nec	25	25	26	26	26	25	26	26
Mathematical sciences	113	111	111	108	110	101	94	91
Mathematics and applied mathematics	107	106	106	103	105	97	89	86
Statistics	6	5	5	5	5	4	5	5
Computer sciences	95	95	91	89	91	96	98	100
Agricultural sciences	35	33	31	33	30	28	28	34
Biological sciences	187	182	178	175	179	178	177	173
Anatomy	0	0	0	0	0	0	0	0
Biochemistry	5	5	4	4	3	3	3	3
Biology	137	136	133	131	133	127	125	122
Biometry/epidemiology	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0
Botany	2	2	2	2	2	2	2	2
Cell biology	2	1	3	3	3	4	4	4
Ecology	3	2	3	4	4	5	5	6
Entomology/parasitology	0	0	0	0	0	0	0	0
Genetics	1	1	1	1	2	2	2	2
Microbiology, immunology, and virology	2	2	3	2	2	3	3	3
Nutrition	18	17	14	14	15	14	13	12
Pathology	2	2	1	1	1	1	1	0
Pharmacology	0	0	0	1	1	1	1	1
Physiology	0	0	0	0	1	2	2	2
Zoology	2	2	2	2	2	2	2	1
Biosciences, nec	13	12	12	10	10	12	14	15
Psychology	243	244	249	244	248	247	234	230
Clinical psychology	35	35	37	36	39	40	35	35
Psychology, general	95	96	93	91	91	90	86	81
Psychology, nec	113	113	119	117	118	117	113	114
Social sciences	330	324	318	325	321	311	315	306
Agricultural economics	4	4	4	3	3	2	1	1
Anthropology (cultural and social)	11	11	11	11	13	13	13	13
Economics (except agricultural)	37	37	36	37	36	32	31	29
Geography	25	24	23	23	25	23	23	24
History and philosophy of science	0	0	0	2	2	3	6	6
Linguistics	7	7	7	7	7	7	7	7
Political science	117	115	112	112	111	111	108	106
Sociology	49	46	46	47	46	42	42	42
Sociology/anthropology	3	3	3	2	2	2	2	1
Social sciences, nec	77	77	76	81	76	76	82	77
Engineering	195	188	186	176	192	175	187	192
Aerospace engineering	4	3	3	3	3	3	3	3
Agricultural engineering	0	0	0	0	0	0	0	0

TABLE A-3. Science, engineering, and health departments in master's-granting institutions, by detailed field: 1995–2002

Field	1995	1996	1997	1998	1999	2000	2001	2002
Biomedical engineering	4	3	4	4	4	4	4	5
Chemical engineering	9	9	8	7	7	6	7	7
Civil engineering	37	37	35	31	31	28	29	29
Electrical engineering	48	48	47	43	49	45	47	48
Engineering science	2	2	2	2	2	2	3	4
Industrial/manufacturing engineering	32	30	28	30	33	29	31	30
Mechanical engineering	27	25	24	23	26	23	26	24
Metallurgical/materials engineering	7	6	7	5	6	4	5	6
Mining engineering	2	2	2	2	2	2	2	2
Nuclear engineering	0	0	0	0	0	0	0	0
Petroleum engineering	2	2	1	1	1	1	1	1
Engineering, nec	21	21	25	25	28	28	29	33
Health	219	227	235	241	256	270	271	270
Medical fields	19	17	17	19	19	19	21	25
Anesthesiology	3	2	3	3	3	3	4	5
Cardiology	0	0	0	0	0	0	0	0
Endocrinology	0	0	0	0	0	0	0	0
Gastroenterology	0	0	0	0	0	0	0	0
Hematology	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0
Obstetrics and gynecology	0	0	0	0	0	0	0	0
Oncology/cancer research	0	0	0	0	0	0	0	0
Ophthalmology	1	1	1	1	0	0	0	0
Otorhinolaryngology	0	0	0	0	0	0	0	0
Pediatrics	0	0	0	0	0	0	0	0
Preventive medicine/community health	9	9	8	9	9	8	8	10
Psychiatry	2	1	1	1	1	1	1	2
Pulmonary disease	0	0	0	0	0	0	0	0
Radiology	1	1	1	1	1	1	1	1
Surgery	0	0	0	0	0	0	0	0
Clinical medicine, nec	3	3	3	4	5	6	7	7
Other health fields	200	210	218	222	237	251	250	245
Dental sciences	0	0	0	0	0	0	0	0
Nursing	69	72	75	76	82	87	89	86
Pharmaceutical sciences	1	1	1	2	2	2	2	2
Speech pathology/audiology	62	65	65	66	69	70	65	64
Veterinary sciences	1	1	1	1	1	0	1	1
Health related, nec	67	71	76	77	83	92	93	92

nec = not elsewhere classified.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-4. Departmental response rates : 1975–2002

Year	Complete response			Partial response		Non-response	
	Total	Number	Percent	Number	Percent	Number	Percent
1975 ^a	9,162	8,998	98.2	NA	NA	NA	NA
1976	9,275	9,148	98.6	NA	NA	NA	NA
1977	9,513	9,432	99.1	NA	NA	NA	NA
1978 ^b	8,242	8,077	98.0	NA	NA	NA	NA
1979	9,796	9,446	96.4	NA	NA	NA	NA
1980	9,930	9,593	96.6	NA	NA	NA	NA
1981	9,917	8,594	86.7	613	6.2	710	7.2
1982	9,776	8,104	82.9	744	7.6	928	9.5
1983	9,663	8,070	83.5	816	8.4	777	8.0
1984	8,748	7,490	85.6	643	7.4	615	7.0
1985	9,025	7,818	86.6	672	7.4	535	5.9
1986	9,097	7,817	85.9	779	8.6	501	5.5
1987	9,254	8,030	86.8	715	7.7	509	5.5
1988	10,295	8,812	85.6	970	9.4	513	5.0
1989	10,318	8,908	86.3	891	8.6	519	5.0
1990	10,483	8,884	84.7	1,053	10.0	546	5.2
1991	10,705	9,052	84.6	1,186	11.1	467	4.4
1992	10,936	9,066	82.9	1,538	14.1	332	3.0
1993	11,146	9,156	82.1	1,555	14.0	435	3.9
1994	11,411	8,863	77.7	2,109	18.5	439	3.8
1995	11,598	9,514	82.0	1,730	14.9	354	3.1
1996	11,592	9,851	85.0	1,522	13.1	219	1.9
1997	11,597	9,720	83.8	1,665	14.4	212	1.8
1998	11,718	9,822	83.8	1,706	14.6	190	1.6
1999	11,833	9,396	79.4	2,289	19.3	148	1.3
2000	11,899	9,818	82.5	1,965	16.5	116	1.0
2001	11,967	10,121	84.6	1,731	14.5	115	1.0
2002	12,126	10,434	86.0	1,567	12.9	125	1.0

NA = not available.

^a The 1976 survey also collected 1975 data from master's-granting institutions.^b Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

NOTES: Figures for 1984–87 include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984–87; see "Technical Notes" for further information. Departments providing partial responses are included in the complete response column prior to 1981 and reported separately beginning in 1981. Response rates reported for 2002 are as of August 2003.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-5. Imputation for nonresponse in doctorate-granting institutions, by field and graduate enrollment or postdoctoral status: 2000–02

Year and field	Graduate departments		Total in survey			Number imputed			Imputation rate (%)		
	In universe	Totally imputed	Full-time student	Part-time student	Post-doctorate	Full-time student	Part-time student	Post-doctorate	Full-time student	Part-time student	Post-doctorate
Fall 2002, all fields	10,573	115	352,764	129,447	45,171	3,345	2,185	1,003	0.9	1.7	2.2
Physical sciences	580	5	28,173	3,143	6,513	53	18	1	0.2	0.6	0.0
Earth, atmospheric, and ocean sciences	362	3	10,606	2,471	1,112	88	35	6	0.8	1.4	0.5
Mathematical sciences	399	2	13,080	3,291	388	17	27	0	0.1	0.8	0.0
Computer sciences	344	5	29,715	17,836	350	206	380	0	0.7	2.1	0.0
Agricultural sciences	355	0	9,121	2,648	930	0	0	0	0.0	0.0	0.0
Biological sciences	2,034	7	49,703	7,488	17,927	178	75	416	0.4	1.0	2.3
Psychology	608	15	28,978	11,862	812	501	269	0	1.7	2.3	0.0
Social sciences	1,389	24	53,847	24,914	473	544	480	0	1.0	1.9	0.0
Engineering	1,503	15	83,086	29,377	3,503	1,230	237	14	1.5	0.8	0.4
Health fields	2,999	39	46,455	26,417	13,163	528	664	566	1.1	2.5	4.3
Fall 2001, all fields	10,397	109	329,706	122,615	43,225	2,232	2,695	156	0.7	2.2	0.4
Physical sciences	589	3	26,771	3,256	6,158	12	16	0	0.0	0.5	0.0
Earth, atmospheric, and ocean sciences	361	2	10,014	2,608	1,036	60	24	0	0.6	0.9	0.0
Mathematical sciences	397	4	11,961	3,107	351	44	55	0	0.4	1.8	0.0
Computer sciences	333	7	26,965	16,941	334	401	283	0	1.5	1.7	0.0
Agricultural sciences	348	2	8,891	2,458	830	14	8	0	0.2	0.3	0.0
Biological sciences	1,973	19	46,484	7,440	17,021	299	338	90	0.6	4.5	0.5
Psychology	606	16	28,474	10,865	807	352	312	3	1.2	2.9	0.4
Social sciences	1,372	23	50,691	23,977	409	295	442	0	0.6	1.8	0.0
Engineering	1,501	8	75,576	27,857	3,161	137	180	27	0.2	0.6	0.9
Health fields	2,917	25	43,879	24,106	13,118	618	1,037	36	1.4	4.3	0.3
Fall 2000, all fields	10,319	103	315,088	118,192	43,022	2,126	2,236	122	0.7	1.9	0.3
Physical sciences	583	3	26,029	3,229	6,202	12	17	0	0.0	0.5	0.0
Earth, atmospheric, and ocean sciences	362	1	10,101	2,607	1,155	3	24	0	0.0	0.9	0.0
Mathematical sciences	390	3	11,138	2,689	383	24	40	0	0.2	1.5	0.0
Computer sciences	320	5	23,177	16,295	341	130	243	0	0.6	1.5	0.0
Agricultural sciences	342	0	8,880	2,331	820	0	0	0	0.0	0.0	0.0
Biological sciences	1,964	11	45,091	7,237	16,728	271	83	64	0.6	1.1	0.4
Psychology	593	16	28,228	9,512	728	535	262	1	1.9	2.8	0.1
Social sciences	1,360	21	48,764	23,005	467	338	590	2	0.7	2.6	0.4
Engineering	1,512	14	70,570	27,822	3,309	177	192	13	0.3	0.7	0.4
Health fields	2,893	29	43,110	23,465	12,889	636	785	42	1.5	3.3	0.3

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-6. Imputation for nonresponse in master's-granting institutions, by field and graduate enrollment or postdoctoral status: 2000–02

Year and field	Graduate departments		Total in survey			Number imputed			Imputation rate (%)		
	In universe	Totally imputed	Full-time student	Part-time student	Post-doctorate	Full-time student	Part-time student	Post-doctorate	Full-time student	Part-time student	Post-doctorate
Fall 2002, all fields	1,553	10	26,058	32,451	71	48	92	0	0.2	0.3	0.0
Physical sciences	94	1	447	579	45	1	4	0	0.2	0.7	0.0
Earth, atmospheric, and ocean sciences	63	1	510	653	1	4	8	0	0.8	1.2	0.0
Mathematical sciences	91	1	629	1,163	2	1	0	0	0.2	0.0	0.0
Computer sciences	100	0	3,145	4,863	2	0	0	0	0.0	0.0	0.0
Agricultural sciences	34	0	564	365	4	0	0	0	0.0	0.0	0.0
Biological sciences	173	2	1,870	2,071	9	4	13	0	0.2	0.6	0.0
Psychology	230	1	5,671	4,824	1	6	12	0	0.1	0.2	0.0
Social sciences	306	4	4,237	7,280	0	32	55	0	0.8	0.8	1.0
Engineering	192	0	2,317	4,828	3	0	0	0	0.0	0.0	0.0
Health fields	270	0	6,668	5,825	4	0	0	0	0.0	0.0	0.0
Fall 2001, all fields	1,565	6	24,816	32,483	90	61	96	0	0.2	0.3	0.0
Physical sciences	96	1	408	603	60	4	0	0	1.0	0.0	0.0
Earth, atmospheric, and ocean sciences	65	0	490	729	0	0	0	0	0.0	0.0	1.0
Mathematical sciences	94	0	506	1,077	2	0	0	0	0.0	0.0	0.0
Computer sciences	98	0	3,122	5,168	4	0	0	0	0.0	0.0	0.0
Agricultural sciences	28	0	514	372	5	0	0	0	0.0	0.0	0.0
Biological sciences	177	3	1,654	2,061	8	11	19	0	0.7	0.9	0.0
Psychology	234	1	6,013	5,115	2	38	17	0	0.6	0.3	0.0
Social sciences	315	0	3,615	7,399	1	0	0	0	0	0.0	0.0
Engineering	187	0	1,872	4,188	5	0	0	0	0.0	0.0	0.0
Health fields	271	1	6,622	5,771	3	8	60	0	0.1	1.0	0.0
Fall 2000, all fields	1,575	8	26,195	33,836	93	104	403	0	0.4	1.2	0.0
Physical sciences	104	0	463	664	68	0	0	0	0.0	0.0	0.0
Earth, atmospheric, and ocean sciences	65	0	457	776	0	0	0	0	0.0	0.0	1.0
Mathematical sciences	101	1	602	1,221	2	4	7	0	0.7	0.6	0.0
Computer sciences	96	0	3,381	4,497	3	0	0	0	0.0	0.0	0.0
Agricultural sciences	28	0	477	335	2	0	0	0	0.0	0.0	0.0
Biological sciences	178	2	1,696	2,258	6	54	18	0	3.2	0.8	0.0
Psychology	247	1	6,691	6,035	2	17	6	0	0.3	0.1	0.0
Social sciences	311	3	3,904	7,654	4	25	277	0	0.6	3.6	0.0
Engineering	175	0	1,706	4,014	4	0	0	0	0.0	0.0	0.0
Health fields	270	1	6,818	6,382	2	4	95	0	0.1	1.5	0.0

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-7. Imputation rates for all departments at all graduate institutions: Fall 2002

Mechanism of support and sex	Item 5. Full-time graduate students by source and mechanism of the largest amount of support received												
	Total for all sources	Federal sources (excluding loans)								Nonfederal sources			Self support ^a
		HHS				NASA	NSF	USDA	Other	Foreign sources	Institutional support	Other U.S. sources	
		DOD	DOE	NIH	Other								
All full-time graduate students	0.9	18.4	8.5	10.7	11.1	13.3	13.2	8.7	14.1	14.1	13.0	13.4	16.2
Graduate fellowships	10.3	15.6	9.3	8.7	15.3	13.6	11.7	8.2	10.0	13.4	10.0	13.5	na
Graduate traineeships	12.4	6.6	0.0	8.5	14.7	23.5	17.6	21.7	22.9	22.4	12.2	10.9	na
Graduate research assistantships	13.0	16.3	8.6	11.8	3.1	13.2	13.3	8.8	14.0	10.9	14.8	13.3	na
Graduate teaching assistantships	12.5	na	25.6	5.2	12.3	0.0	15.9	12.5	16.0	na	12.7	21.2	na
Other kinds of support	15.8	30.1	0.0	11.0	9.5	11.9	12.8	0.0	13.9	15.7	14.4	11.0	16.2
Female students	2.8	15.0	8.4	11.1	13.1	11.1	12.2	8.6	14.9	14.3	13.7	12.5	17.6

Enrollment status and sex	Item 5. Full-time graduate students by source and mechanism of the largest amount of support received												
	Total	U.S. citizens and permanent residents										Foreign ^b	
		One race						More than one race					
		American Indian/Alaska Native	Asian	Black/African American	Hispanic/Latino	Native Hawaiian/Pacific Islander	White	Hispanic/Latino	Non-Hispanic/Latino	Unknown			
Item 6													
All part-time enrollment	2.0	3.9	4.9	7.3	5.3	11.8	5.4	0.1	7.6	5.3	8.2		
Male	3.9	4.4	5.0	7.9	5.4	14.5	5.6	0.3	9.3	4.7	8.6		
Female	3.6	3.4	4.8	7.0	5.2	10.0	5.3	0.0	6.7	6.0	7.2		
Item 7													
All full-time enrollment	0.9	3.3	4.5	6.9	9.0	4.1	5.1	1.6	1.5	2.9	5.5		
Male	3.0	3.0	4.6	6.5	10.2	5.0	5.0	4.5	0.0	2.9	5.9		
Female	2.8	3.5	4.3	7.1	8.1	3.5	5.2	0.4	2.6	2.9	4.7		
All full-time first-time enrollment	2.0	2.5	2.7	4.9	6.1	4.3	4.2	0.0	0.0	1.7	4.8		
Female	2.1	3.3	2.5	4.9	5.0	3.9	4.1	0.0	0.0	1.5	4.7		

Characteristic	Item 8. Postdoctorates and nonfaculty research staff with doctorates						
	Number of postdoctorates, all sources of support	Source of support, all postdoctorates				Number of foreign postdoctorates	Number of nonfaculty research staff with doctorates
		Federal					
		Fellowship	Traineeship	Research grant	Nonfederal		
Total	2.2	12.0	4.7	6.8	8.5	3.5	3.1
Female	3.0	11.6	4.3	6.8	8.5	3.8	4.5
MD, DO, DDS, or DVM degree	5.2	21.0	6.0	5.6	7.2	5.3	3.7

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; na = not applicable; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = United States Department of Agriculture.

^a Includes loans and family sources.

^b Temporary visa holders.

NOTE: Imputation rates are based on the percentage of total counts in each category imputed.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-8. Comparison of graduate enrollment data as originally published and as modified through the fall 2002 graduate student survey cycle: 1975–2002

Enrollment and year	All institutions			Doctorate-granting institutions			Master's-granting institutions		
	Original total	Revised total	% change	Original total	Revised total	% change	Original total	Revised total	% change
Graduate enrollment									
in surveyed fields									
1975 ^a	336,843	328,510	-2.5	290,662	285,810	-1.7	46,181	42,700	-7.5
1976	345,979	333,716	-3.5	297,280	289,004	-2.8	48,699	44,712	-8.2
1977	362,978	345,374	-4.8	306,710	295,911	-3.5	56,268	49,463	-12.1
1978 ^b	NA	339,912	NA	311,982	298,884	-4.2	NA	41,028	NA
1979	375,267	357,578	-4.7	321,770	306,600	-4.7	53,497	50,978	-4.7
1980	383,210	367,078	-4.2	333,658	320,298	-4.0	49,552	46,780	-5.6
1981	392,034	375,130	-4.3	340,203	324,425	-4.6	51,831	50,705	-2.2
1982	399,682	382,291	-4.4	347,414	332,735	-4.2	52,268	49,556	-5.2
1983	413,564	390,432	-5.6	358,276	339,043	-5.4	55,288	51,389	-7.1
1984	415,064	394,670	-4.9	363,470	344,744	-5.2	51,594	49,926	-3.2
1985	434,836	404,021	-7.1	371,052	352,945	-4.9	63,784	51,076	-19.9
1986	446,102	415,520	-6.9	384,203	364,245	-5.2	61,899	51,275	-17.2
1987	449,585	421,497	-6.2	388,681	370,201	-4.8	60,904	51,296	-15.8
1988	445,595	424,523	-4.7	391,683	376,337	-3.9	53,912	48,186	-10.6
1989	440,983	434,478	-1.5	385,025	383,097	-0.5	55,958	51,381	-8.2
1990	458,943	452,113	-1.5	398,405	397,823	-0.1	60,538	54,290	-10.3
1991	475,691	471,212	-0.9	411,296	412,970	0.4	64,395	58,242	-9.6
1992	495,397	493,522	-0.4	427,792	431,672	0.9	67,605	61,850	-8.5
1993	506,678	504,304	-0.5	440,875	439,884	-0.2	65,803	64,420	-2.1
1994	506,626	504,399	-0.4	441,480	440,257	-0.3	65,146	64,142	-1.5
1995	501,510	499,640	-0.4	436,328	434,462	-0.4	65,182	65,178	0.0
1996	494,526	494,079	-0.1	430,631	429,971	-0.2	63,895	64,108	0.3
1997	487,104	487,208	0.0	424,650	424,693	0.0	62,454	62,515	0.1
1998	485,754	485,627	0.0	422,834	424,025	0.3	62,920	61,602	-2.1
1999	493,425	493,256	0.0	432,657	431,011	-0.4	60,768	62,245	2.4
2000	494,594	493,311	-0.3	435,612	433,280	-0.5	58,982	60,031	1.8
2001	510,156	509,620	-0.1	452,411	452,321	0.0	57,745	57,299	-0.8
2002	540,720	NA	NA	482,211	NA	NA	58,509	NA	NA
Full-time enrollment									
1975 ^a	228,316	219,648	-3.8	210,641	203,861	-3.2	17,675	15,787	-10.7
1976	233,748	223,412	-4.4	215,355	207,043	-3.9	18,393	16,369	-11.0
1977	238,202	226,738	-4.8	218,226	209,431	-4.0	19,976	17,307	-13.4
1978 ^b	NA	223,030	NA	217,588	208,527	-4.2	NA	14,503	NA
1979	243,331	231,760	-4.8	224,057	214,071	-4.5	19,274	17,689	-8.2
1980	249,111	238,416	-4.3	230,601	221,079	-4.1	18,510	17,337	-6.3
1981	253,428	242,049	-4.5	234,529	224,331	-4.3	18,899	17,718	-6.2
1982	255,959	244,757	-4.4	237,676	227,825	-4.1	18,283	16,932	-7.4
1983	263,800	252,017	-4.5	243,646	233,565	-4.1	20,154	18,452	-8.4
1984	264,146	253,922	-3.9	246,848	236,388	-4.2	17,298	17,534	1.4
1985	269,319	257,287	-4.5	249,666	239,673	-4.0	19,653	17,614	-10.4
1986	279,235	266,168	-4.7	259,980	248,741	-4.3	19,255	17,427	-9.5
1987	285,200	271,056	-5.0	264,862	253,572	-4.3	20,338	17,484	-14.0
1988	288,619	275,127	-4.7	268,385	258,896	-3.5	20,234	16,231	-19.8
1989	286,619	282,648	-1.4	267,554	265,853	-0.6	19,065	16,795	-11.9
1990	295,836	292,782	-1.0	275,262	274,665	-0.2	20,574	18,117	-11.9
1991	308,669	307,010	-0.5	286,756	286,823	0.0	21,913	20,187	-7.9
1992	323,399	322,555	-0.3	299,753	300,579	0.3	23,646	21,976	-7.1
1993	330,249	329,644	-0.2	307,181	306,737	-0.1	23,068	22,907	-0.7
1994	331,969	332,088	0.0	307,964	308,368	0.1	24,005	23,720	-1.2
1995	330,235	329,283	-0.3	305,652	304,823	-0.3	24,583	24,460	-0.5
1996	328,368	328,536	0.1	303,586	303,734	0.0	24,782	24,802	0.1

TABLE A-8. Comparison of graduate enrollment data as originally published and as modified through the fall 2002 graduate student survey cycle: 1975–2002

Enrollment and year	All institutions			Doctorate-granting institutions			Master's-granting institutions		
	Original total	Revised total	% change	Original total	Revised total	% change	Original total	Revised total	% change
1997	326,842	327,289	0.1	301,573	302,061	0.2	25,269	25,228	-0.2
1998	327,609	327,389	-0.1	301,544	302,033	0.2	26,065	25,356	-2.7
1999	334,405	334,423	0.0	309,466	308,684	-0.3	24,939	25,739	3.2
2000	342,121	341,283	-0.2	316,531	315,088	-0.5	25,590	26,195	2.4
2001	355,115	354,522	-0.2	330,043	329,706	-0.1	25,072	24,816	-1.0
2002	378,822	NA	NA	352,764	NA	NA	26,058	NA	NA
Part-time enrollment									
1975 ^a	108,527	108,862	0.3	80,021	81,949	2.4	28,506	26,913	-5.6
1976	112,231	110,304	-1.7	81,925	81,961	0.0	30,306	28,343	-6.5
1977	124,776	118,636	-4.9	88,484	86,480	-2.3	36,292	32,156	-11.4
1978 ^b	NA	116,882	NA	94,394	90,357	-4.3	NA	26,525	NA
1979	131,936	125,818	-4.6	97,713	92,529	-5.3	34,223	33,289	-2.7
1980	134,099	128,662	-4.1	103,057	99,219	-3.7	31,042	29,443	-5.2
1981	138,606	133,081	-4.0	105,674	100,094	-5.3	32,932	32,987	0.2
1982	143,723	137,534	-4.3	109,738	104,910	-4.4	33,985	32,624	-4.0
1983	149,764	138,415	-7.6	114,630	105,478	-8.0	35,134	32,937	-6.3
1984	150,918	140,748	-6.7	116,622	108,356	-7.1	34,296	32,392	-5.6
1985	165,517	146,734	-11.3	121,386	113,272	-6.7	44,131	33,462	-24.2
1986	166,867	149,352	-10.5	124,223	115,504	-7.0	42,644	33,848	-20.6
1987	164,385	150,441	-8.5	123,819	116,629	-5.8	40,566	33,812	-16.6
1988	156,976	149,396	-4.8	123,298	117,441	-4.8	33,678	31,955	-5.1
1989	154,364	151,830	-1.6	117,471	117,244	-0.2	36,893	34,586	-6.3
1990	163,107	159,331	-2.3	123,143	123,158	0.0	39,964	36,173	-9.5
1991	167,022	164,202	-1.7	124,540	126,147	1.3	42,482	38,055	-10.4
1992	171,998	170,967	-0.6	128,039	131,093	2.4	43,959	39,874	-9.3
1993	176,429	174,660	-1.0	133,694	133,147	-0.4	42,735	41,513	-2.9
1994	174,657	172,311	-1.3	133,516	131,889	-1.2	41,141	40,422	-1.7
1995	171,275	170,357	-0.5	130,676	129,639	-0.8	40,599	40,718	0.3
1996	166,158	165,543	-0.4	127,045	126,237	-0.6	39,113	39,306	0.5
1997	160,262	159,919	-0.2	123,077	122,632	-0.4	37,185	37,287	0.3
1998	158,145	158,238	0.1	121,290	121,992	0.6	36,855	36,246	-1.7
1999	159,020	158,833	-0.1	123,191	122,327	-0.7	35,829	36,506	1.9
2000	152,473	152,028	-0.3	119,081	118,192	-0.7	33,392	33,836	1.3
2001	155,041	155,098	0.0	122,368	122,615	0.2	32,673	32,483	-0.6
2002	161,898	NA	NA	129,447	NA	NA	32,451	NA	NA

NA = not available.

^a The 1976 survey also collected 1975 data from master's-granting institutions.

^b Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

NOTES: Figures for 1984–87 include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984–87; see "Technical Notes" for further information.

The % change column is a measure of retroactive changes in survey definitions. Three survey changes in the late 1980s and early 1990s had a retroactive effect on figures reported for earlier years. First, degree-granting status (doctorate or master's) used to be determined by an institution's status each year. Beginning in 1992, degree-granting status was determined by the status reported in the latest survey year. This change shifted numerous institutions (and students) from master's-granting to doctorate-granting categories for years before 1992. Second, in 1988 guidelines to determine S&E departments were tightened. This change meant retroactively dropping departments in fields such as educational psychology, social work, and cultural studies from the survey population. Third, improved estimates were generated for years in which enrollments at master's-granting institutions were sampled (1984–87).

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.