Science and Engineering Doctorate Awards: 1999

Detailed Statistical Tables

Division of Science Resources Studies
Directorate for Social, Behavioral, and Economic Sciences

National Science Foundation

January 2001

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Susan T. Hill, Author

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Directorate for Social, Behavioral, and Economic Sciences
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General Notes

The data presented in this report show trends in doctorate awards by science and engineering (S&E) field and recipient characteristics, institutions awarding doctorates, and postgraduation plans of recipients. The source of the data is the Survey of Earned Doctorates (SED).

The SED has been conducted annually for the National Science Foundation (NSF) and four other Federal agencies. Information from this survey becomes part of the Doctorate Records File, which is a census of recipients of research doctorates awarded since 1920 by regionally-accredited universities and colleges. Doctoral degrees such as the Ph.D. or D. Sc. are included in these surveys, but first-professional degrees such as the J.D. or M.D. are not.

Data for the SED are collected directly from the individual doctorate recipients. The questionnaire is distributed to them through the cooperation of the Graduate Deans to persons as they are completing their doctorate. The data for a given year include all doctorates awarded in the 12-month period ending on June 30 of that year.

These tables present detailed data on S&E doctorate recipients, with some totals provided for broad non-S&E fields. Detailed data on non-S&E fields are published in the Summary Report and by other Federal sponsors of the Survey of Earned Doctorates. The groupings of field specialties into broad fields may differ among the sponsoring agencies according to their missions.

Approximately 92 percent of the annual cohort of doctorate recipients in 1999 responded to the questionnaire. Over the period 1989-97, the response rate varied between 92 and 95 percent. Note that most of the numbers presented are actual self-reports, as there are no adjustments for nonresponse. For the nonrespondents, partial data from public sources are added to the file for nonrespondents; therefore, complete counts are presented for conferred doctorates by field of study and sex of recipient. Because some tables present data subject to nonresponse, these summaries represent the conservative known responses for any data item. Therefore, small changes in numbers should be interpreted with caution, as numerical trends are affected by fluctuations in response rates and declines and increases may appear greater than they may be in reality.

For further information on the survey methodology or the availability of data on S&E doctorate recipients, please go to http://www.nsf.gov/sbe/srs/ssed/sedmeth.htm or contact–

Susan T. Hill
Division of Science Resources Studies
National Science Foundation, Rm 965
4201 Wilson Boulevard
Arlington, VA 22230

Telephone: (703) 292-7790
E-mail: sthill@nsf.gov

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Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Science and engineering, total	22,868	24,023	24,675	25,443	26,205	26,535	27,229	27,245	27,309	25,953
Engineering, total	4,894	5,214	5,438	5,698	5,822	6,008	6,305	6,114	5,930	5,337
Aeronautical/astronautical engineering	192	207	234	228	230	252	287	273	243	207
Chemical engineering, total	658	691	725	737	725	708	798	767	775	678
Chemical	561	621	607	624	630	602	681	662	668	580
Petroleum	49	28	54	52	42	48	52	51	48	45
Polymer/plastics[1]	48	42	64	61	53	58	65	54	59	53
Civil engineering, total	553	575	594	624	684	656	697	656	651	585
Civil	505	509	540	563	602	572	599	593	588	507
Environmental health	48	66	54	61	82	84	98	63	63	78
Electrical engineering, total	1,276	1,405	1,483	1,543	1,673	1,731	1,740	1,721	1,596	1,477
Communications	35	21	30	22	33	29	32	33	40	38
Computer	131	178	175	167	202	189	208	227	210	206
Electrical/electronics	1,110	1,206	1,278	1,354	1,438	1,513	1,500	1,461	1,346	1,233
Industrial/manufacturing engineering[2]	151	165	196	236	228	284	258	246	230	209
Materials/metallurgical engineering, total	440	489	485	535	539	588	572	581	565	470
Ceramic sciences[3]	43	58	42	42	39	39	41	39	24	33
Materials science	307	361	365	416	433	476	470	482	482	394
Metallurgical	90	70	78	77	67	73	61	60	59	43
Mechanical engineering, total	884	875	987	1,030	1,015	1,025	1,052	1,021	1,023	853
Mechanical	773	762	855	902	883	917	947	928	937	785
Engineering mechanics	111	113	132	128	132	108	105	93	86	68
Other engineering, total	740	807	734	765	728	764	901	849	847	858
Agricultural	101	83	84	86	89	73	104	79	74	59
Bioengineering/biomedical	129	149	147	171	173	189	220	210	207	245
Engineering physics	16	23	25	21	17	17	37	24	15	28
Engineering science	37	42	51	55	46	56	52	45	50	51
Mining/mineral	39	38	26	24	23	19	31	33	21	18
Naval architecture/marine[4]	8	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nuclear	114	107	120	108	85	105	113	102	97	77
Ocean	17	21	21	24	29	21	26	34	29	16
Operations research	46	76	56	56	47	48	74	74	62	67
Systems	51	48	37	57	51	47	47	49	68	42
Engineering, general	75	78	64	47	39	60	60	51	30	39
Engineering, other	107	137	103	116	129	129	137	148	194	216
Sciences, total	17,974	18,809	19,237	19,745	20,383	20,527	20,924	21,131	21,379	20,616
Physical sciences, total	3,524	3,626	3,781	3,699	3,977	3,841	3,837	3,768	3,829	3,582
Astronomy, total	128	125	134	145	144	173	192	198	208	160
Astronomy	52	50	55	76	66	89	84	71	91	60
Astrophysics	76	75	79	69	78	84	108	127	117	100
Chemistry, total	2,100	2,194	2,214	2,137	2,257	2,162	2,148	2,147	2,219	2,134
Analytical	293	304	304	286	334	317	346	350	384	333
Inorganic	242	260	268	237	262	258	249	279	287	279
Medicinal/ pharmaceutical[5]	48	83	69	99	102	96	96	105	115	132
Nuclear	13	14	7	8	10	5	5	8	6	10
Organic	452	538	512	518	544	483	506	566	597	564
Physical	325	364	398	336	334	338	300	334	279	310
Polymer	81	111	83	107	117	116	121	110	123	95
Theoretical	55	45	59	53	52	40	57	48	41	56
Chemistry, general	524	400	449	431	447	458	396	261	286	196
Chemistry, other	67	75	65	62	55	51	72	86	101	159

See explanatory information, if any, and SOURCE at end of table.

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Physics, total	1,265	1,286	1,403	1,399	1,548	1,479	1,484	1,401	1,378	1,271
Acoustics	21	13	18	27	20	18	19	19	18	16
Chemical & atomic/ molecular[6]	87	76	85	95	140	110	129	106	100	99
Electron[4]	2	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Elementary particle	163	182	153	170	176	183	175	170	173	169
Fluids	17	14	17	19	12	18	21	24	26	23
Nuclear	73	66	86	82	90	91	87	106	92	76
Optics	76	85	94	96	104	98	129	123	104	97
Plasma & high-temperature[7]	42	58	65	62	79	46	48	39	55	49
Polymer	11	17	17	29	29	23	33	19	24	28
Solid state & low-temperature[8]	306	372	408	336	388	371	364	328	313	308
Physics, general	323	247	297	340	343	355	323	255	191	205
Physics, other	144	155	163	143	167	166	156	212	282	201
Other physical sciences	31	21	30	18	28	27	13	22	24	17
Earth, atmospheric, and ocean sciences, total	738	815	794	771	824	780	794	878	814	807
Atmospheric sciences, total	83	108	120	99	129	130	125	149	125	124
Atmospheric dynamics	20	21	23	23	27	16	21	25	24	16
Atmospheric physics/ chemistry	18	20	36	13	27	27	22	45	38	43
Meteorology	20	31	28	34	32	25	35	28	25	22
Atmospheric science/ meteorology, general	23	26	27	22	37	44	33	36	22	33
Atmospheric science/ meteorology, other	2	10	6	7	6	18	14	15	16	10
Geosciences, total	477	560	503	479	509	454	452	489	504	453
Applied geology[4]	6	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Geology	166	192	166	197	194	186	162	165	171	158
Geochemistry	56	64	62	50	59	42	49	49	58	55
Geomorphology/glacial geology	14	18	12	16	13	11	11	26	20	18
Geophysics/seismology	91	117	108	101	106	93	101	108	106	100
Hydrology/water resources	13	16	29	25	30	24	31	43	35	32
Mineralogy/petrology	26	36	29	9	21	19	23	19	14	14
Paleontology	21	24	25	21	17	20	14	23	23	15
Stratigraphy/ sedimentation	25	29	23	28	27	16	12	23	24	17
Geological & related sciences, general	31	30	18	15	18	21	27	16	13	9
Geological & related sciences, other	28	33	31	17	24	22	22	17	40	35
Oceanography, total	128	112	114	125	125	115	134	144	112	130
Marine sciences	39	27	32	27	34	32	27	30	18	30
Oceanography	89	85	82	98	91	83	107	114	94	100
Other environmental sciences	50	35	57	68	61	81	83	96	73	100

See explanatory information, if any, and SOURCE at end of table.

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Mathematical/computer sciences, total	1,597	1,839	1,927	2,026	2,021	2,187	2,043	2,035	2,102	1,935
Mathematics, total	892	1,039	1,058	1,146	1,118	1,190	1,122	1,125	1,177	1,085
Algebra	39	72	69	84	78	82	78	78	75	84
Analysis/functional analysis	90	132	105	105	107	99	100	103	130	87
Applied mathematics	185	193	213	188	206	211	230	242	265	252
Computing theory	12	19	12	18	16	14	18	14	18	14
Geometry	42	66	45	44	35	45	72	70	54	65
Logic	19	23	28	19	29	35	16	23	16	23
Mathematical statistics[9]	157	206	217	228	205	205	178	181	204	174
Number theory	26	30	25	42	37	35	42	46	46	50
Operations research	29	16	22	37	26	36	21	20	17	21
Topology	50	57	58	54	38	51	55	62	65	65
Mathematics, general	191	180	209	276	269	305	233	155	163	117
Mathematics, other	52	45	55	51	72	72	79	131	124	133
Computer sciences, total	705	800	869	880	903	997	921	910	925	850
Computer science	612	720	791	825	833	913	837	829	819	735
Information science/ systems	93	80	78	55	70	84	84	81	106	115
Biological/agricultural sciences, total	5,502	5,723	5,862	6,060	6,281	6,412	6,760	6,768	6,891	6,565
Biological sciences, total	4,328	4,650	4,799	5,092	5,203	5,376	5,723	5,786	5,854	5,600
Bacteriology	15	11	13	14	18	13	16	13	13	13
Biochemistry	678	765	715	846	804	824	794	831	798	763
Biomedical sciences[10]	N/A	N/A	N/A	N/A	N/A	93	140	158	184	177
Biophysics	103	100	125	103	123	155	142	147	166	173
Biotechnology research[11]	N/A	N/A	N/A	8	14	4	6	11	12	19
Plant genetics	31	23	33	41	30	35	41	30	40	31
Plant pathology	37	50	32	41	40	32	38	33	18	36
Plant physiology	51	65	68	48	70	55	73	47	61	54
Botany, other	104	105	107	105	117	102	105	91	113	68
Anatomy	70	77	75	76	66	64	47	50	35	33
Biometrics/biostatistics	47	59	63	74	72	67	81	84	75	76
Cell biology	145	149	188	231	237	236	233	251	299	285
Developmental biology/ embryology[12]	22	37	48	57	62	64	96	115	127	108
Ecology	166	189	180	177	201	203	245	255	293	272
Endocrinology	24	33	27	16	26	20	24	17	30	19
Entomology	147	138	139	114	123	121	136	124	139	113
Biological immunology[13]	153	177	181	169	161	190	238	214	245	223
Microbiology	335	372	377	433	423	426	444	410	384	382
Molecular biology	413	481	527	582	598	617	651	772	741	719
Neuroscience	192	238	238	276	284	309	404	437	413	437
Nutritional sciences	118	106	132	134	147	136	142	124	139	104
Parasitology	13	20	17	17	22	14	22	17	15	13
Toxicology	91	86	105	100	120	126	138	180	156	115
Human/animal genetics	153	160	142	172	203	202	212	217	197	217
Human/animal pathology	101	122	114	130	128	109	135	106	91	120
Human/animal pharmacology	244	266	279	274	259	278	316	300	256	254
Human/animal physiology	278	272	266	271	289	262	275	227	258	243
Zoology, other	122	125	134	114	117	145	100	97	111	126
Biological sciences, general	333	278	315	305	288	348	291	209	217	182
Biological sciences, other	142	146	159	164	161	126	138	219	228	225

See explanatory information, if any, and SOURCE at end of table.

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Agricultural sciences, total	1,174	1,073	1,063	968	1,078	1,036	1,037	982	1,037	965
Agronomy & crop science[14]	143	117	123	104	143	114	110	77	97	106
Animal breeding/genetics	22	18	23	18	17	19	12	24	18	21
Animal nutrition	54	57	41	52	58	50	54	55	45	46
Dairy science	20	19	14	11	11	14	9	14	10	12
Poultry science	17	13	22	16	21	11	12	9	11	8
Animal sciences, other	90	92	97	74	86	85	90	62	60	71
Fisheries science & management[15]	42	39	26	38	48	49	46	45	30	38
Wildlife/range management[16]	58	59	55	54	52	50	64	50	56	44
Food engineering[17]	10	12	14	9	16	7	7	11	13	7
Food sciences, other[17]	141	137	151	141	153	135	142	175	153	137
Forest biology[18]	27	17	29	18	20	24	19	22	20	14
Forest engineering[18]	2	2	2	3	N/A	4	0	13	2	1
Forest management[18]	14	22	16	17	17	20	22	21	27	17
Wood science & pulp/paper technology[18]	16	16	21	20	26	26	18	25	25	21
Conservation/renewable natural resources[18]	16	19	9	13	21	24	13	17	25	25
Forestry & related sciences, other[18]	62	45	62	55	59	71	56	50	69	49
Horticulture science	101	78	65	62	65	67	73	44	60	66
Plant breeding/genetics	87	69	82	68	81	72	63	67	69	44
Plant pathology	64	90	63	58	55	52	90	65	66	66
Plant protection/pest management[19]	4	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Plant sciences, other	23	17	29	28	24	30	21	20	37	38
Soil chemistry/ microbiology[20]	27	24	24	26	21	27	29	32	27	29
Soil sciences, other[20]	91	78	63	59	69	72	78	56	74	67
Agricultural sciences, general	5	3	9	10	4	6	5	10	8	8
Agricultural sciences, other	38	28	23	14	11	7	4	18	35	30

See explanatory information, if any, and SOURCE at end of table.

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Psychology, total	3,281	3,250	3,263	3,420	3,379	3,429	3,491	3,571	3,685	3,667
Clinical	1,337	1,305	1,309	1,373	1,285	1,291	1,325	1,268	1,350	1,449
Cognitive psychology & psycholinguistics[21]	76	94	101	104	129	104	128	166	113	143
Comparative	8	7	2	5	8	4	3	6	6	11
Counseling	466	497	507	488	497	470	464	487	448	461
Developmental & child[22]	159	155	170	202	179	152	188	215	267	193
Educational	98	110	91	91	69	74	92	61	61	66
Experimental	143	142	154	143	139	151	128	145	149	137
Family & marriage counseling[10]	N/A	N/A	N/A	N/A	N/A	57	52	64	51	55
Human/individual & family development[23]	N/A	N/A	N/A	N/A	129	150	151	126	118	130
Industrial/organizational	126	142	138	159	137	155	162	187	189	158
Physiological/ psychobiology[24]	46	45	55	85	93	92	80	77	92	87
Quantitative	15	7	10	16	17	13	19	17	15	14
Personality	20	13	17	22	19	16	24	26	25	16
Psychometrics	8	9	5	9	5	10	11	11	9	15
School	82	82	88	95	84	91	82	84	106	120
Social	145	147	139	125	153	155	170	181	186	175
Psychology, general	371	324	295	306	280	306	279	321	304	229
Psychology, other	181	171	182	197	285	288	284	131	196	208
Social sciences, total	3,332	3,556	3,610	3,769	3,901	3,878	3,999	4,111	4,058	4,060
Economics, total	1,007	1,053	1,051	1,067	1,101	1,152	1,177	1,163	1,155	1,076
Agricultural economics	145	168	141	137	162	173	169	133	155	149
Econometrics	26	24	25	24	26	27	29	31	25	15
Economics	836	861	885	906	913	952	979	999	975	912
Political science, total	734	740	804	824	930	894	928	974	962	1,016
International relations & affairs[25]	97	88	76	102	112	73	99	88	97	120
Political science/ government	462	434	513	507	589	600	621	665	663	653
Public administration	88	107	108	117	135	128	104	95	105	119
Public policy analysis[26]	87	111	107	98	94	93	104	126	97	124
Sociology, total	448	493	512	535	548	555	527	601	581	571
Demography/population studies[27]	20	28	17	22	23	15	11	24	31	28
Sociology	428	465	495	513	525	540	516	577	550	543
Other social sciences, total	1,143	1,270	1,243	1,343	1,322	1,277	1,367	1,373	1,360	1,397
American studies	72	92	81	101	88	94	115	84	100	98
Anthropology	324	341	320	342	384	375	396	434	425	461
Archaeology	22	33	33	38	34	35	21	35	34	26
Area studies	22	24	33	36	34	27	28	10	14	11
Criminology	42	35	37	39	41	44	60	49	55	51
Geography	131	108	111	137	146	150	165	149	154	144
History/philosophy of science & technology[28]	26	27	28	37	27	41	37	36	43	49
Linguistics	167	227	266	214	221	201	230	244	220	250
Statistics	69	31	29	48	46	48	48	56	61	72
Urban affairs & studies[29]	67	90	86	123	132	103	106	93	77	57
Social sciences, general	23	36	33	32	21	35	26	26	30	25
Social sciences, other	178	226	186	196	148	124	135	157	147	153

See explanatory information, if any, and SOURCE at end of table.

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Non-S&E, total[30]	13,199	13,511	14,215	14,358	14,829	15,208	15,185	15,310	15,374	15,187
Health	956	1,041	1,112	1,197	1,296	1,330	1,324	1,423	1,503	1,410
Humanities[31]	3,535	3,720	4,036	4,092	4,374	4,690	4,713	5,037	5,114	5,045
Education	6,510	6,454	6,677	6,689	6,708	6,649	6,772	6,573	6,575	6,557
Professional/other	2,198	2,296	2,390	2,380	2,451	2,539	2,376	2,277	2,182	2,175
Grand total, all fields	36,067	37,534	38,890	39,801	41,034	41,743	42,414	42,555	42,683	41,140

1 In 1993 this subfield was changed from "Polymer engineering" to "Polymer and plastics engineering."

2 In 1993 this subfield was changed from "Industrial engineering" to "Industrial and manufacturing engineering."

3 In 1993 this subfield was changed from "Ceramic engineering" to "Ceramic sciences engineering."

4 These subfields were deleted in 1991: "Naval architecture/marine engineering," "Electron physics," and "Applied geology."

5 In 1993 this subfield was changed from "Pharmaceutical chemistry" to "Medicinal and pharmaceutical chemistry."

6 In 1993 this subfield was changed from "Atomic/molecular physics" to "Chemical and atomic/molecular physics."

7 In 1993 this subfield was changed from "Plasma physics" to "Plasma and high-temperature physics."

8 In 1993 this subfield was changed from "Solid state physics" to "Solid state and low-temperature physics."

9 In 1993 this subfield was changed from "Math probability and statistics" to "Mathematical statistics."

10 These subfields were introduced in 1995: "Biomedical sciences" and "Family and marriage counseling."

11 "Biotechnology research" was introduced in 1993.

12 In 1990 this subfield was changed from "Embryology" to "Developmental biology/embryology."

13 In 1993 this subfield was changed from "Immunology" to "Biological immunology."

14 In 1993 this subfield was changed from "Agronomy" to "Agronomy and crop science."

15 In 1993 this subfield was changed from "Fisheries science" to "Fisheries science and management."

16 In 1988 this subfield was changed from "Wildlife management" to "Wildlife/range management."

17 In 1990 "Food sciences" was separated into "Food engineering" and "Food sciences, other."

18 In 1988 "Forestry science" was separated into "Forest biology," "Forest engineering," "Forest management," "Wood science," "Renewable natural resources," and "Forestry and related sciences, other." In 1993 "Pulp and paper technology" was added to "Wood science," and "Conservation" was added to "Renewable natural resources." "Forest engineering" was deleted from the survey in 1994 and reintroduced in 1995.

19 "Plant protection/pest management" was deleted in 1991.

20 In 1988 "Soil sciences" was separated into "Soil chemistry/microbiology" and "Soil sciences, other."

21 In 1993 this subfield was changed from "Cognitive psychology" to "Cognitive psychology and psycholinguistics."

22 In 1993 this subfield was changed from "Developmental psychology" to "Developmental and child psychology."

23 "Human/individual & family development" was introduced in 1994.

24 In 1993 this subfield was changed from "Physiological psychology" to "Physiological psychology/psychobiology."

25 In 1993 this subfield was changed from "International relations" to "International relations and affairs."

26 In 1993 this subfield was changed from "Public policy studies" to "Public policy analysis."

27 In 1993 this subfield was changed from "Demography" to "Demography and population studies."

28 In 1993 this subfield was changed from "History of science" to "History and philosophy of science and technology."

29 In 1993 this subfield was changed from "Urban studies" to "Urban affairs and studies."

30 Non-S&E doctorates include those whose field of specialization is unknown.

31 Categories differ from those published by other Federal sponsors and the Summary Reports in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

KEY: N/A = Not available (i.e., the subfield was not identified separately in the questionnaire for that year)

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Percent women	
											1990	1999
Science and engineering, total	6,370	6,932	7,080	7,652	7,921	8,286	8,646	8,943	9,355	9,084	27.9	35.0
Engineering, total	415	467	506	522	635	696	776	751	773	791	8.5	14.8
Aeronautical/astronautical engineering	4	7	8	8	11	14	24	16	15	17	2.1	8.2
Chemical engineering, total	78	83	113	94	113	109	143	122	140	124	11.9	18.3
Chemical	71	75	101	83	101	96	126	106	119	102	12.7	17.6
Petroleum	0	1	3	5	3	1	3	3	6	5	.0	11.1
Polymer/plastics[1]	7	7	9	6	9	12	14	13	15	17	14.6	32.1
Civil engineering, total	49	41	50	54	80	76	79	80	100	89	8.9	15.2
Civil	39	31	36	45	56	55	64	70	83	76	7.7	15.0
Environmental health	10	10	14	9	24	21	15	10	17	13	20.8	16.7
Electrical engineering, total	84	79	115	125	147	173	169	150	156	156	6.6	10.6
Communications	2	2	1	2	5	5	2	3	6	6	5.7	15.8
Computer	11	9	13	15	25	18	23	21	22	33	8.4	16.0
Electrical/electronics	71	68	101	108	117	150	144	126	128	117	6.4	9.5
Industrial/manufacturing engineering[2]	25	17	25	27	33	50	51	40	40	43	16.6	20.6
Materials/metallurgical engineering, total	49	77	61	78	83	95	83	106	84	88	11.1	18.7
Ceramic sciences[3]	11	10	9	6	9	5	3	8	2	9	25.6	27.3
Materials science	31	59	50	67	69	84	71	96	75	75	10.1	19.0
Metallurgical	7	8	2	5	5	6	9	2	7	4	7.8	9.3
Mechanical engineering, total	38	57	45	57	69	64	78	88	93	95	4.3	11.1
Mechanical	29	50	33	46	60	56	68	82	80	84	3.8	10.7
Engineering mechanics	9	7	12	11	9	8	10	6	13	11	8.1	16.2
Other engineering, total	88	106	89	79	99	115	149	149	145	179	11.9	20.9
Agricultural	7	8	6	6	10	7	17	12	5	12	6.9	20.3
Bioengineering/biomedical	23	27	33	31	45	48	49	54	50	63	17.8	25.7
Engineering physics	1	2	2	3	3	1	3	4	3	4	6.3	14.3
Engineering science	6	3	6	3	3	6	4	7	8	4	16.2	7.8
Mining/mineral	2	6	3	1	3	0	3	3	4	2	5.1	11.1
Naval architecture/marine[4]	1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.5	-
Nuclear	9	6	9	5	8	9	9	8	10	8	7.9	10.4
Ocean	2	1	0	1	2	3	3	5	0	1	11.8	6.3
Operations research	6	22	11	10	7	8	16	15	15	16	13.0	23.9
Systems	3	4	3	4	5	5	9	10	9	7	5.9	16.7
Engineering, general	10	7	3	3	4	9	11	3	3	4	13.3	10.3
Engineering, other	18	20	13	12	9	19	25	28	38	58	16.8	26.9
Sciences, total	5,955	6,465	6,574	7,130	7,286	7,590	7,870	8,192	8,582	8,293	33.1	40.2
Physical sciences, total	661	679	770	780	828	878	842	852	927	831	18.8	23.2
Astronomy, total	20	14	19	25	25	30	41	37	46	32	15.6	20.0
Astronomy	13	7	11	12	9	18	21	18	22	17	25.0	28.3
Astrophysics	7	7	8	13	16	12	20	19	24	15	9.2	15.0
Chemistry, total	503	517	579	582	625	661	605	613	695	633	24.0	29.7
Analytical	68	83	95	91	102	109	111	106	146	108	23.2	32.4
Inorganic	60	73	69	59	87	92	68	81	84	90	24.8	32.3
Medicinal/ pharmaceutical[5]	20	27	27	38	26	32	32	43	46	51	41.7	38.6
Nuclear	2	4	1	0	0	3	0	0	1	1	15.4	10.0
Organic	104	108	119	131	128	134	118	145	160	163	23.0	28.9
Physical	76	86	109	88	93	93	85	91	77	75	23.4	24.2
Polymer	13	24	12	22	23	28	30	25	40	31	16.0	32.6
Theoretical	14	7	16	16	17	10	14	11	10	9	25.5	16.1
Chemistry, general	128	76	107	112	126	135	119	76	88	52	24.4	26.5
Chemistry, other	18	29	24	25	23	25	28	35	43	53	26.9	33.3

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Percent women	
											1990	1999
Physics, total	130	142	167	169	175	182	193	193	177	160	10.3	12.6
Acoustics	2	2	0	1	2	3	2	4	6	1	9.5	6.3
Chemical & atomic/ molecular[6]	7	4	6	14	17	15	10	11	13	14	8.0	14.1
Electron[4]	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	.0	-
Elementary particle	14	20	12	18	16	7	19	21	11	17	8.6	10.1
Fluids	1	0	1	2	1	0	4	0	0	2	5.9	8.7
Nuclear	5	7	12	8	9	12	9	11	11	9	6.8	11.8
Optics	5	13	9	14	14	13	20	16	18	12	6.6	12.4
Plasma & high-temperature[7]	2	2	4	4	8	5	2	2	2	2	4.8	4.1
Polymer	3	3	1	5	4	3	12	7	4	7	27.3	25.0
Solid state & low-temperature[8]	35	42	53	42	53	57	54	51	37	42	11.4	13.6
Physics, general	33	31	42	46	30	41	39	36	29	23	10.2	11.2
Physics, other	23	18	27	15	21	26	22	34	46	31	16.0	15.4
Other physical sciences	8	6	5	4	3	5	3	9	9	6	25.8	35.3
Earth, atmospheric, and ocean sciences, total	141	179	188	160	183	170	172	210	219	210	19.1	26.0
Atmospheric sciences, total	14	16	27	18	26	23	22	25	30	22	16.9	17.7
Atmospheric dynamics	4	3	4	5	9	3	4	5	8	4	20.0	25.0
Atmospheric physics/ chemistry	1	2	5	2	5	8	7	10	7	11	5.6	25.6
Meteorology	3	7	10	3	8	3	2	3	5	1	15.0	4.5
Atmospheric science/ meteorology, general	5	3	7	7	4	7	5	5	8	3	21.7	9.1
Atmospheric science/ meteorology, other	1	1	1	1	0	2	4	2	2	3	50.0	30.0
Geosciences, total	85	124	115	89	95	91	88	119	127	112	17.8	24.7
Applied geology[4]	3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50.0	-
Geology	32	34	35	35	32	38	36	39	40	41	19.3	25.9
Geochemistry	9	19	16	13	10	10	10	15	22	21	16.1	38.2
Geomorphology/glacial geology	1	2	5	3	2	4	1	4	8	9	7.1	50.0
Geophysics/seismology	15	20	23	14	24	19	14	19	21	15	16.5	15.0
Hydrology/water resources	1	2	7	9	3	4	5	8	8	5	7.7	15.6
Mineralogy/petrology	4	15	6	1	6	4	11	6	5	3	15.4	21.4
Paleontology	2	7	2	5	2	3	4	11	7	4	9.5	26.7
Stratigraphy/ sedimentation	5	8	10	5	4	1	3	7	4	3	20.0	17.6
Geological & related sciences, general	5	9	4	2	1	4	2	4	5	1	16.1	11.1
Geological & related sciences, other	8	8	7	2	11	4	2	6	7	10	28.6	28.6
Oceanography, total	31	26	29	35	38	28	39	38	32	45	24.2	34.6
Marine sciences	7	2	11	8	11	8	5	8	3	9	17.9	30.0
Oceanography	24	24	18	27	27	20	34	30	29	36	27.0	36.0
Other environmental sciences	11	13	17	18	24	28	23	28	30	31	22.0	31.0

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Percent women	
											1990	1999
Mathematical/computer sciences, total	268	316	325	402	373	451	370	413	456	433	16.8	22.4
Mathematics, total	158	199	205	264	236	265	231	263	297	277	17.7	25.5
Algebra	6	16	13	28	24	24	18	20	18	25	15.4	29.8
Analysis/functional analysis	15	21	18	23	16	18	15	13	25	19	16.7	21.8
Applied mathematics	34	27	44	43	39	47	52	55	61	59	18.4	23.4
Computing theory	1	3	0	3	2	2	2	1	3	3	8.3	21.4
Geometry	8	5	6	7	4	8	14	13	15	16	19.0	24.6
Logic	3	1	2	4	6	7	1	5	5	5	15.8	21.7
Mathematical statistics[9]	31	56	46	57	50	54	47	46	62	46	19.7	26.4
Number theory	1	8	4	4	5	9	7	11	7	12	3.8	24.0
Operations research	2	4	6	9	9	5	4	5	6	9	6.9	42.9
Topology	11	18	16	9	11	8	5	14	13	15	22.0	23.1
Mathematics, general	32	31	37	56	54	64	45	44	39	22	16.8	18.8
Mathematics, other	14	9	13	21	16	19	21	36	43	46	26.9	34.6
Computer sciences, total	110	117	120	138	137	186	139	150	159	156	15.6	18.4
Computer science	85	96	91	123	118	160	116	132	120	119	13.9	16.2
Information science/ systems	25	21	29	15	19	26	23	18	39	37	26.9	32.2
Biological/agricultural sciences, total	1,861	1,982	2,064	2,278	2,358	2,445	2,697	2,754	2,836	2,680	33.8	40.8
Biological sciences, total	1,615	1,773	1,831	2,050	2,109	2,217	2,415	2,494	2,538	2,400	37.3	42.9
Bacteriology	4	5	5	6	11	6	8	1	4	6	26.7	46.2
Biochemistry	237	289	284	318	320	341	317	364	349	310	35.0	40.6
Biomedical sciences[10]	N/A	N/A	N/A	N/A	N/A	42	54	63	81	72	-	40.7
Biophysics	23	26	33	21	33	46	41	41	47	49	22.3	28.3
Biotechnology research[11]	N/A	N/A	N/A	4	2	2	1	3	4	2	-	10.5
Plant genetics	7	5	8	12	5	12	16	11	18	9	22.6	29.0
Plant pathology	12	13	10	15	11	10	13	8	8	12	32.4	33.3
Plant physiology	19	19	16	19	21	21	29	18	28	23	37.3	42.6
Botany, other	33	39	45	43	46	34	44	31	55	26	31.7	38.2
Anatomy	29	31	31	34	29	25	20	19	8	16	41.4	48.5
Biometrics/biostatistics	18	29	24	21	34	23	34	43	39	36	38.3	47.4
Cell biology	69	63	80	116	102	117	107	113	154	136	47.6	47.7
Developmental biology/ embryology[12]	12	20	22	25	32	29	49	61	61	54	54.5	50.0
Ecology	52	60	65	67	70	64	84	108	114	121	31.3	44.5
Endocrinology	11	16	12	12	8	6	13	9	14	9	45.8	47.4
Entomology	26	35	35	28	28	27	36	42	38	36	17.7	31.9
Biological immunology[13]	72	76	83	73	74	82	129	93	115	100	47.1	44.8
Microbiology	116	150	157	183	177	188	185	185	169	163	34.6	42.7
Molecular biology	152	182	194	237	268	265	291	330	324	299	36.8	41.6
Neuroscience	76	88	92	110	129	121	165	190	169	183	39.6	41.9
Nutritional sciences	88	70	95	99	102	92	98	92	96	69	74.6	66.3
Parasitology	4	7	8	7	9	7	12	10	6	6	30.8	46.2
Toxicology	36	30	33	43	50	50	60	80	61	53	39.6	46.1
Human/animal genetics	73	71	61	76	87	92	101	103	91	106	47.7	48.8
Human/animal pathology	32	46	41	45	45	38	52	42	35	54	31.7	45.0
Human/animal pharmacology	92	91	92	121	106	129	142	143	121	113	37.7	44.5
Human/animal physiology	98	107	82	100	106	103	107	82	100	108	35.3	44.4
Zoology, other	37	39	45	32	32	50	31	34	43	47	30.3	37.3
Biological sciences, general	140	113	115	113	117	148	120	86	82	75	42.0	41.2
Biological sciences, other	47	53	63	70	55	47	56	89	104	107	33.1	47.6

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Percent women	
											1990	1999
Agricultural sciences, total	246	209	233	228	249	228	282	260	298	280	21.0	29.0
Agronomy & crop science[14]	21	11	23	19	17	13	17	10	18	16	14.7	15.1
Animal breeding/genetics	3	2	6	4	3	1	3	4	6	7	13.6	33.3
Animal nutrition	13	10	8	7	10	9	11	13	13	12	24.1	26.1
Dairy science	2	4	2	2	1	3	2	5	2	5	10.0	41.7
Poultry science	3	1	6	6	5	0	3	2	3	2	17.6	25.0
Animal sciences, other	11	20	21	19	25	19	26	14	16	23	12.2	32.4
Fisheries science & management[15]	6	4	1	4	11	9	10	5	8	7	14.3	18.4
Wildlife/range management[16]	6	8	7	17	13	8	22	13	15	8	10.3	18.2
Food engineering[17]	2	2	2	2	2	0	0	3	3	2	20.0	28.6
Food sciences, other[17]	54	46	60	57	69	54	69	79	66	67	38.3	48.9
Forest biology[18]	8	3	8	7	6	5	4	1	6	4	29.6	28.6
Forest engineering[18]	0	1	0	0	N/A	0	0	2	0	0	.0	.0
Forest management[18]	1	4	1	0	2	6	2	4	9	3	7.1	17.6
Wood science & pulp/paper technology[18]	0	2	2	3	6	6	3	2	4	6	.0	28.6
Conservation/renewable natural resources[18]	3	3	1	4	6	5	3	7	11	9	18.8	36.0
Forestry & related sciences, other[18]	10	5	9	9	6	13	18	15	16	16	16.1	32.7
Horticulture science	27	19	16	15	14	22	22	16	13	16	26.7	24.2
Plant breeding/genetics	20	10	12	14	13	15	13	9	14	13	23.0	29.5
Plant pathology	25	26	20	15	20	9	27	26	24	27	39.1	40.9
Plant protection/pest management[19]	1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.0	-
Plant sciences, other	4	4	6	9	9	3	3	7	14	12	17.4	31.6
Soil chemistry/ microbiology[20]	6	6	3	5	4	5	9	9	7	8	22.2	27.6
Soil sciences, other[20]	8	11	12	4	6	18	14	8	21	11	8.8	16.4
Agricultural sciences, general	0	1	2	2	0	3	0	2	1	0	.0	.0
Agricultural sciences, other	12	6	5	4	1	2	1	4	8	6	31.6	20.0

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Percent women	
											1990	1999
Psychology, total	1,913	1,996	1,928	2,088	2,101	2,180	2,328	2,372	2,460	2,447	58.3	66.7
Clinical	785	848	810	873	842	870	919	902	969	1,040	58.7	71.8
Cognitive psychology & psycholinguistics[21]	35	46	47	48	56	52	60	75	50	70	46.1	49.0
Comparative	3	5	2	3	7	1	2	3	4	7	37.5	63.6
Counseling	281	306	289	284	310	297	303	313	295	296	60.3	64.2
Developmental & child[22]	112	119	131	155	132	121	154	170	207	149	70.4	77.2
Educational	69	64	69	67	39	53	66	45	39	45	70.4	68.2
Experimental	49	64	73	68	71	83	68	70	65	64	34.3	46.7
Family & marriage counseling[10]	N/A	N/A	N/A	N/A	N/A	37	28	43	28	38	-	69.1
Human/individual & family development[23]	N/A	N/A	N/A	N/A	103	118	121	101	90	107	-	82.3
Industrial/organizational	53	76	64	73	69	89	99	103	110	99	42.1	62.7
Physiological/ psychobiology[24]	28	21	25	50	52	35	41	42	49	50	60.9	57.5
Quantitative	3	2	5	11	8	9	7	10	8	7	20.0	50.0
Personality	10	4	8	12	12	9	11	13	15	11	50.0	68.8
Psychometrics	4	3	2	2	1	4	3	7	5	2	50.0	13.3
School	53	57	59	65	53	62	71	66	81	88	64.6	73.3
Social	92	86	78	67	100	84	111	116	117	114	63.4	65.1
Psychology, general	233	185	168	185	158	185	180	201	204	125	62.8	54.6
Psychology, other	103	110	98	125	191	189	205	94	124	135	56.9	64.9
Social sciences, total	1,111	1,313	1,299	1,422	1,443	1,466	1,461	1,591	1,684	1,692	33.3	41.7
Economics, total	200	217	219	246	249	279	263	266	311	291	19.9	27.0
Agricultural economics	27	38	28	31	20	42	37	34	40	39	18.6	26.2
Econometrics	3	5	2	7	4	4	8	4	4	5	11.5	33.3
Economics	170	174	189	208	225	233	218	228	267	247	20.3	27.1
Political science, total	170	211	235	246	282	266	305	297	365	356	23.2	35.0
International relations & affairs[25]	15	24	24	28	24	21	32	19	33	38	15.5	31.7
Political science/ government	108	117	142	129	173	167	186	197	243	215	23.4	32.9
Public administration	22	32	30	41	47	43	37	30	48	48	25.0	40.3
Public policy analysis[26]	25	38	39	48	38	35	50	51	41	55	28.7	44.4
Sociology, total	218	246	250	255	283	294	276	334	318	341	48.7	59.7
Demography/population studies[27]	11	16	5	12	12	6	2	16	13	17	55.0	60.7
Sociology	207	230	245	243	271	288	274	318	305	324	48.4	59.7
Other social sciences, total	523	639	595	675	629	627	617	694	690	704	45.8	50.4
American studies	37	56	47	57	48	53	67	47	52	56	51.4	57.1
Anthropology	173	210	155	213	208	219	214	241	239	261	53.4	56.6
Archaeology	12	20	17	18	17	18	11	20	23	12	54.5	46.2
Area studies	9	5	11	11	17	12	9	5	11	3	40.9	27.3
Criminology	16	18	15	15	12	23	25	25	22	20	38.1	39.2
Geography	35	33	29	40	35	43	45	54	49	49	26.7	34.0
History/philosophy of science & technology[28]	9	11	8	16	10	17	10	13	19	18	34.6	36.7
Linguistics	90	112	133	118	134	102	113	135	123	147	53.9	58.8
Statistics	12	10	11	14	16	11	7	23	21	21	17.4	29.2
Urban affairs & studies[29]	21	22	31	44	43	37	38	29	26	17	31.3	29.8
Social sciences, general	9	17	20	13	9	23	15	14	17	14	39.1	56.0
Social sciences, other	100	125	118	116	80	69	63	88	88	86	56.2	56.2

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Percent women	
											1990	1999
Non-S&E, total[30]	6,736	6,941	7,356	7,470	7,899	8,128	8,298	8,308	8,503	8,409	51.0	55.4
Health	592	668	710	777	843	843	860	937	1,008	901	61.9	63.9
Humanities[31]	1,600	1,720	1,858	1,919	2,054	2,256	2,343	2,382	2,467	2,425	45.3	48.1
Education	3,752	3,748	3,976	3,921	4,089	4,092	4,179	4,120	4,132	4,196	57.6	64.0
Professional/other	792	805	812	853	913	937	916	869	896	887	36.0	40.8
Grand total, all fields	13,106	13,873	14,436	15,122	15,820	16,414	16,944	17,251	17,858	17,493	36.3	42.5

1 In 1993 this subfield was changed from "Polymer engineering" to "Polymer and plastics engineering."

2 In 1993 this subfield was changed from "Industrial engineering" to "Industrial and manufacturing engineering."

3 In 1993 this subfield was changed from "Ceramic engineering" to "Ceramic sciences engineering."

4 These subfields were deleted in 1991: "Naval architecture/marine engineering," "Electron physics," and "Applied geology."

5 In 1993 this subfield was changed from "Pharmaceutical chemistry" to "Medicinal and pharmaceutical chemistry."

6 In 1993 this subfield was changed from "Atomic/molecular physics" to "Chemical and atomic/molecular physics."

7 In 1993 this subfield was changed from "Plasma physics" to "Plasma and high-temperature physics."

8 In 1993 this subfield was changed from "Solid state physics" to "Solid state and low-temperature physics."

9 In 1993 this subfield was changed from "Math probability and statistics" to "Mathematical statistics."

10 These subfields were introduced in 1995: "Biomedical sciences" and "Family and marriage counseling."

11 "Biotechnology research" was introduced in 1993.

12 In 1990 this subfield was changed from "Embryology" to "Developmental biology/embryology."

13 In 1993 this subfield was changed from "Immunology" to "Biological immunology."

14 In 1993 this subfield was changed from "Agronomy" to "Agronomy and crop science."

15 In 1993 this subfield was changed from "Fisheries science" to "Fisheries science and management."

16 In 1988 this subfield was changed from "Wildlife management" to "Wildlife/range management."

17 In 1990 "Food sciences" was separated into "Food engineering" and "Food sciences, other."

18 In 1988 "Forestry science" was separated into "Forest biology," "Forest engineering," "Forest management," "Wood science," "Renewable natural resources," and "Forestry and related sciences, other." In 1993 "Pulp and paper technology" was added to "Wood science," and "Conservation" was added to "Renewable natural resources." "Forest engineering" was deleted from the survey in 1994 and reintroduced in 1995.

19 "Plant protection/pest management" was deleted in 1991.

20 In 1988 "Soil sciences" was separated into "Soil chemistry/microbiology" and "Soil sciences, other."

21 In 1993 this subfield was changed from "Cognitive psychology" to "Cognitive psychology and psycholinguistics."

22 In 1993 this subfield was changed from "Developmental psychology" to "Developmental and child psychology."

23 "Human/individual & family development" was introduced in 1994.

24 In 1993 this subfield was changed from "Physiological psychology" to "Physiological psychology/psychobiology."

25 In 1993 this subfield was changed from "International relations" to "International relations and affairs."

26 In 1993 this subfield was changed from "Public policy studies" to "Public policy analysis."

27 In 1993 this subfield was changed from "Demography" to "Demography and population studies."

28 In 1993 this subfield was changed from "History of science" to "History and philosophy of science and technology."

29 In 1993 this subfield was changed from "Urban studies" to "Urban affairs and studies."

30 Non-S&E doctorates include those whose field of specialization is unknown.

31 Categories differ from those published by other Federal sponsors and the Summary Reports in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

KEY: - = Percent not available as data were not collected that year.
N/A = Not available (i.e., the subfield was not identified separately in the questionnaire for that year)

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents									
Science and engineering, total	15,364	15,914	15,942	16,573	18,187	18,996	18,639	18,402	18,268	17,428
Engineering, total	2,346	2,474	2,520	2,697	3,053	3,342	3,387	3,329	3,045	2,873
Chemical	392	399	378	377	380	381	391	409	373	374
Civil	241	213	215	227	292	309	305	327	297	310
Electrical	599	686	719	795	899	971	928	938	804	762
Mechanical	368	359	426	434	538	563	588	537	516	460
Other engineering	746	817	782	864	944	1,118	1,175	1,118	1,055	967
Sciences, total	13,018	13,440	13,422	13,876	15,134	15,654	15,252	15,073	15,223	14,555
Physical sciences, total	2,341	2,300	2,357	2,330	2,789	2,841	2,569	2,497	2,455	2,263
Astronomy	96	86	106	111	112	141	149	158	148	116
Chemistry	1,497	1,461	1,441	1,400	1,616	1,624	1,462	1,439	1,466	1,400
Physics	725	739	790	806	1,044	1,059	948	883	823	735
Other physical sciences	23	14	20	13	17	17	10	17	18	12
Earth, atmospheric, & ocean sciences	535	618	541	504	613	594	558	606	562	521
Mathematics	422	518	507	590	657	771	648	630	669	605
Computer sciences	403	451	489	509	543	616	514	521	558	483
Biological sciences	3,380	3,525	3,568	3,752	4,088	4,329	4,365	4,254	4,313	4,118
Agricultural sciences	687	620	573	506	616	598	576	551	543	491
Psychology	2,992	3,018	2,986	3,161	3,136	3,184	3,228	3,138	3,281	3,230
Social sciences	2,258	2,390	2,401	2,524	2,692	2,721	2,794	2,876	2,842	2,844
Non-S&E, total	11,239	11,516	12,048	12,135	12,707	13,062	12,879	12,684	12,898	12,494
Health	756	839	855	939	1,050	1,044	1,016	1,028	1,155	1,043
Humanities[1]	3,082	3,194	3,440	3,512	3,766	4,055	4,045	4,235	4,325	4,277
Education	5,787	5,788	6,017	5,968	6,063	5,995	6,062	5,744	5,741	5,609
Professional/other	1,614	1,695	1,736	1,716	1,828	1,968	1,756	1,677	1,677	1,565
Grand total, all fields	26,603	27,430	27,990	28,708	30,894	32,058	31,518	31,086	31,166	29,922
	U.S. citizens and permanent residents, American Indian/Alaskan Native									
Science and engineering, total	43	56	69	43	64	68	97	79	96	117
Engineering, total	4	6	11	2	6	9	15	17	13	12
Chemical	0	1	1	1	1	2	1	4	3	2
Civil	2	1	1	0	0	0	2	2	0	2
Electrical	0	2	4	0	1	1	2	5	3	1
Mechanical	0	1	1	0	0	2	4	6	2	2
Other engineering	2	1	4	1	4	4	6	0	5	5
Sciences, total	39	50	58	41	58	59	82	62	83	105
Physical sciences, total	3	10	12	5	6	7	6	10	10	10
Astronomy	0	0	0	1	0	0	0	1	1	2
Chemistry	3	9	6	2	4	5	4	6	7	5
Physics	0	1	6	2	2	2	2	2	2	3
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	1	3	1	4	1	0	2	2	3	6
Mathematics	1	0	2	1	2	2	1	1	3	1
Computer sciences	0	1	2	1	1	0	4	1	3	1
Biological sciences	4	10	13	7	16	15	20	7	12	20
Agricultural sciences	4	4	0	1	1	2	6	5	9	2
Psychology	19	13	15	15	12	14	18	18	31	36
Social sciences	7	9	13	7	19	19	25	18	12	29
Non-S&E, total	54	76	80	77	79	80	91	87	93	102
Health	1	5	5	6	6	9	4	6	4	6
Humanities[1]	6	10	18	10	20	18	18	19	21	21
Education	37	56	50	51	37	41	60	51	50	60
Professional/other	10	5	7	10	16	12	9	11	18	15
Grand total, all fields	97	132	149	120	143	148	188	166	189	219

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, Asian/Pacific Islander									
Science and engineering, total	1,009	1,180	1,345	1,610	2,989	3,669	3,095	2,539	2,148	1,951
Engineering, total	359	405	451	527	867	1,033	897	707	556	515
Chemical	51	50	54	62	96	101	80	73	65	60
Civil	28	30	34	41	69	91	89	72	38	46
Electrical	115	140	175	199	304	322	276	256	206	172
Mechanical	69	62	78	93	179	189	166	113	90	89
Other engineering	96	123	110	132	219	330	286	193	157	148
Sciences, total	650	775	894	1,083	2,122	2,636	2,198	1,832	1,592	1,436
Physical sciences, total	164	172	227	265	600	751	503	402	334	257
Astronomy	5	0	4	4	10	22	12	8	13	3
Chemistry	99	122	135	157	332	416	295	235	207	187
Physics	58	50	88	103	255	312	195	158	113	67
Other physical sciences	2	0	0	1	3	1	1	1	1	0
Earth, atmospheric, & ocean sciences	15	17	27	22	89	104	77	72	51	39
Mathematics	27	57	52	79	142	208	140	98	71	59
Computer sciences	48	66	86	77	117	137	111	108	91	86
Biological sciences	200	261	269	370	720	924	890	723	661	619
Agricultural sciences	32	24	37	29	72	78	81	63	47	45
Psychology	53	59	59	73	109	122	124	127	115	129
Social sciences	111	119	137	168	273	312	272	239	222	202
Non-S&E, total	297	351	419	407	557	640	604	583	581	567
Health	39	44	52	45	94	93	87	87	85	85
Humanities[1]	62	81	99	108	151	194	191	181	195	196
Education	104	130	144	144	173	179	185	181	180	170
Professional/other	92	96	124	110	139	174	141	134	121	116
Grand total, all fields	1,306	1,531	1,764	2,017	3,546	4,309	3,699	3,122	2,729	2,518
	U.S. citizens and permanent residents, black									
Science and engineering, total	374	464	408	469	500	560	576	623	646	715
Engineering, total	40	55	49	50	54	71	74	98	84	96
Chemical	10	8	13	6	8	3	12	16	3	11
Civil	1	12	3	5	8	11	8	10	10	6
Electrical	8	16	17	15	17	24	22	31	23	29
Mechanical	5	3	5	3	7	14	10	12	14	12
Other engineering	16	16	11	21	14	19	22	29	34	38
Sciences, total	334	409	359	419	446	489	502	525	562	619
Physical sciences, total	30	32	25	41	46	43	60	52	56	66
Astronomy	1	0	1	2	0	1	0	2	1	2
Chemistry	24	23	17	31	34	33	45	35	45	56
Physics	5	9	6	7	11	9	15	15	10	8
Other physical sciences	0	0	1	1	1	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	3	6	4	6	3	4	8	9	14
Mathematics	4	11	4	8	11	5	8	7	16	12
Computer sciences	1	8	5	6	10	11	12	4	14	18
Biological sciences	51	64	62	75	79	108	98	111	110	116
Agricultural sciences	15	17	14	16	22	17	25	25	19	24
Psychology	115	130	106	119	124	151	154	156	156	173
Social sciences	115	144	137	150	148	151	141	162	182	196
Non-S&E, total	676	702	708	811	779	915	880	865	957	1,014
Health	32	40	38	59	46	60	49	56	65	57
Humanities[1]	72	92	90	98	106	114	119	141	141	169
Education	496	472	501	557	521	627	608	558	652	650
Professional/other	76	98	79	97	106	114	104	110	99	138
Grand total, all fields	1,050	1,166	1,116	1,280	1,279	1,475	1,456	1,488	1,603	1,729

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, Hispanic									
Science and engineering, total	468	493	513	542	548	563	618	656	753	688
Engineering, total	54	61	71	66	66	76	97	95	110	82
Chemical	8	11	16	10	7	12	18	6	13	7
Civil	9	5	7	12	14	11	6	12	16	12
Electrical	13	16	17	17	21	15	27	25	31	29
Mechanical	5	9	11	5	8	8	12	15	19	9
Other engineering	19	20	20	22	16	30	34	37	31	25
Sciences, total	414	432	442	476	482	487	521	561	643	606
Physical sciences, total	72	65	72	79	90	73	66	69	54	57
Astronomy	2	1	4	2	2	4	2	3	2	0
Chemistry	57	46	42	51	59	43	35	44	34	42
Physics	13	18	26	26	29	26	29	22	18	15
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	13	16	16	13	8	13	19	15	16	20
Mathematics	10	9	12	16	13	15	10	20	27	15
Computer sciences	5	12	8	7	7	6	16	17	14	14
Biological sciences	89	95	102	114	131	125	128	146	169	164
Agricultural sciences	23	15	18	20	25	21	12	27	35	15
Psychology	109	122	133	131	133	145	173	171	207	202
Social sciences	93	98	81	96	75	89	97	96	121	119
Non-S&E, total	369	375	396	431	482	491	485	535	566	558
Health	17	16	13	24	25	30	38	32	37	46
Humanities[1]	127	136	129	145	168	154	178	207	196	193
Education	190	189	214	222	241	258	216	253	285	266
Professional/other	35	34	40	40	48	49	53	43	48	53
Grand total, all fields	837	868	909	973	1,030	1,054	1,103	1,191	1,319	1,246
	U.S. citizens and permanent residents, Puerto Rican									
Science and engineering, total	115	99	120	112	131	137	140	173	171	164
Engineering, total	6	9	13	10	10	13	22	23	17	23
Chemical	2	2	3	2	2	4	4	1	3	2
Civil	1	1	1	1	1	1	1	5	1	2
Electrical	2	0	3	5	3	3	4	4	3	11
Mechanical	0	2	1	1	1	1	3	6	5	2
Other engineering	1	4	5	1	3	4	10	7	5	6
Sciences, total	109	90	107	102	121	124	118	150	154	141
Physical sciences, total	24	17	20	17	26	21	12	20	11	18
Astronomy	1	0	1	0	0	1	0	0	1	0
Chemistry	20	14	14	14	19	17	9	13	9	15
Physics	3	3	5	3	7	3	3	7	1	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	5	0	3	1	0	2	3	5	5	5
Mathematics	2	0	2	1	1	1	3	4	7	2
Computer sciences	2	3	1	1	4	0	5	6	2	6
Biological sciences	24	23	27	27	28	30	30	37	43	39
Agricultural sciences	5	0	3	10	5	3	4	5	3	1
Psychology	26	20	35	24	43	44	48	57	69	49
Social sciences	21	27	16	21	14	23	13	16	14	21
Non-S&E, total	95	92	109	120	126	132	109	139	128	128
Health	6	3	4	3	6	12	7	10	7	11
Humanities[1]	28	30	22	36	38	30	38	49	36	30
Education	56	52	76	70	68	69	51	69	71	70
Professional/other	5	7	7	11	14	21	13	11	14	17
Grand total, all fields	210	191	229	232	257	269	249	312	299	292

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, Mexican American									
Science and engineering, total	104	126	120	122	145	148	144	160	223	163
Engineering, total	13	14	10	12	15	19	26	18	30	13
Chemical	2	4	1	1	1	3	3	2	1	0
Civil	2	2	2	0	2	7	2	2	5	3
Electrical	4	3	3	2	4	3	9	5	7	4
Mechanical	3	3	2	0	2	2	3	3	3	1
Other engineering	2	2	2	9	6	4	9	6	14	5
Sciences, total	91	112	110	110	130	129	118	142	193	150
Physical sciences, total	11	15	9	12	24	13	22	15	21	16
Astronomy	0	0	0	0	1	1	1	0	1	0
Chemistry	11	12	6	8	19	8	14	9	15	9
Physics	0	3	3	4	4	4	7	6	5	7
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	4	7	2	4	4	5	3	5	5
Mathematics	3	3	4	4	4	6	1	3	6	7
Computer sciences	0	0	3	1	2	3	1	2	3	1
Biological sciences	22	26	24	24	30	27	28	44	54	41
Agricultural sciences	8	5	5	4	6	4	1	2	10	3
Psychology	25	35	37	42	40	48	38	49	53	44
Social sciences	19	24	21	21	20	24	22	24	41	33
Non-S&E, total	86	106	99	130	163	140	144	145	199	181
Health	7	3	5	8	5	8	6	7	15	16
Humanities[1]	19	27	24	35	42	34	41	38	58	46
Education	50	67	58	74	102	93	79	90	115	101
Professional/other	10	9	12	13	14	5	18	10	11	18
Grand total, all fields	190	232	219	252	308	288	288	305	422	344
	U.S. citizens and permanent residents, other Hispanic									
Science and engineering, total	249	268	273	308	272	278	334	323	359	361
Engineering, total	35	38	48	44	41	44	49	54	63	46
Chemical	4	5	12	7	4	5	11	3	9	5
Civil	6	2	4	11	11	3	3	5	10	7
Electrical	7	13	11	10	14	9	14	16	21	14
Mechanical	2	4	8	4	5	5	6	6	11	6
Other engineering	16	14	13	12	7	22	15	24	12	14
Sciences, total	214	230	225	264	231	234	285	269	296	315
Physical sciences, total	37	33	43	50	40	39	32	34	22	23
Astronomy	1	1	3	2	1	2	1	3	0	0
Chemistry	26	20	22	29	21	18	12	22	10	18
Physics	10	12	18	19	18	19	19	9	12	5
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	5	12	6	10	4	7	11	7	6	10
Mathematics	5	6	6	11	8	8	6	13	14	6
Computer sciences	3	9	4	5	1	3	10	9	9	7
Biological sciences	43	46	51	63	73	68	70	65	72	84
Agricultural sciences	10	10	10	6	14	14	7	20	22	11
Psychology	58	67	61	65	50	53	87	65	85	109
Social sciences	53	47	44	54	41	42	62	56	66	65
Non-S&E, total	188	177	188	181	193	219	232	251	239	249
Health	4	10	4	13	14	10	25	15	15	19
Humanities[1]	80	79	83	74	88	90	99	120	102	117
Education	84	70	80	78	71	96	86	94	99	95
Professional/other	20	18	21	16	20	23	22	22	23	18
Grand total, all fields	437	445	461	489	465	497	566	574	598	610

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, white									
Science and engineering, total	13,170	13,324	13,327	13,737	13,890	13,906	14,008	13,829	14,026	13,656
Engineering, total	1,840	1,837	1,880	2,025	2,020	2,093	2,262	2,287	2,171	2,101
Chemical	318	322	284	295	259	257	275	294	276	287
Civil	196	159	166	168	199	194	199	220	216	240
Electrical	450	478	487	553	548	590	588	578	523	508
Mechanical	286	266	326	328	337	339	392	376	371	334
Other engineering	590	612	617	681	677	713	808	819	785	732
Sciences, total	11,330	11,487	11,447	11,712	11,870	11,813	11,746	11,542	11,855	11,555
Physical sciences, total	2,008	1,969	1,974	1,911	2,025	1,924	1,887	1,883	1,914	1,831
Astronomy	86	83	95	100	97	111	131	132	121	108
Chemistry	1,284	1,239	1,220	1,145	1,179	1,112	1,063	1,078	1,127	1,088
Physics	618	634	641	656	736	687	684	658	650	624
Other physical sciences	20	13	18	10	13	14	9	15	16	11
Earth, atmospheric, & ocean sciences	494	557	485	455	504	464	449	487	464	430
Mathematics	372	419	425	476	479	535	479	479	526	506
Computer sciences	339	355	378	410	401	452	356	361	411	348
Biological sciences	2,975	3,041	3,068	3,146	3,107	3,118	3,175	3,158	3,251	3,139
Agricultural sciences	601	545	493	438	487	473	444	411	418	398
Psychology	2,648	2,652	2,636	2,807	2,730	2,727	2,744	2,525	2,657	2,665
Social sciences	1,893	1,949	1,988	2,069	2,137	2,120	2,212	2,238	2,214	2,238
Non-S&E, total	9,708	9,862	10,299	10,315	10,705	10,815	10,683	10,129	10,287	10,069
Health	662	720	735	800	867	836	823	827	932	836
Humanities[1]	2,766	2,821	3,061	3,109	3,283	3,521	3,487	3,526	3,605	3,621
Education	4,900	4,889	5,051	4,965	5,044	4,853	4,943	4,452	4,416	4,392
Professional/other	1,380	1,432	1,452	1,441	1,511	1,605	1,430	1,324	1,334	1,220
Grand total, all fields	22,878	23,186	23,626	24,052	24,595	24,721	24,691	23,958	24,313	23,725
	U.S. citizens and permanent residents, men									
Science and engineering, total	10,182	10,317	10,365	10,549	11,693	12,084	11,676	11,408	11,094	10,434
Engineering, total	2,070	2,158	2,192	2,349	2,605	2,822	2,862	2,816	2,594	2,383
Chemical	330	339	296	313	302	293	293	332	297	298
Civil	207	188	192	195	237	257	258	269	239	249
Electrical	552	638	652	715	811	851	822	832	713	681
Mechanical	344	322	401	398	484	514	528	482	466	400
Other engineering	637	671	651	728	771	907	961	901	879	755
Sciences, total	8,112	8,159	8,173	8,200	9,088	9,262	8,814	8,592	8,500	8,051
Physical sciences, total	1,871	1,846	1,843	1,809	2,164	2,133	1,959	1,910	1,851	1,711
Astronomy	78	79	91	88	91	116	114	132	120	91
Chemistry	1,114	1,093	1,040	999	1,152	1,087	1,023	1,008	1,004	974
Physics	663	663	696	712	907	916	814	759	716	640
Other physical sciences	16	11	16	10	14	14	8	11	11	6
Earth, atmospheric, & ocean sciences	417	461	394	384	469	450	428	443	391	370
Mathematics	329	406	390	426	506	588	503	453	471	413
Computer sciences	313	357	406	400	449	473	423	421	435	379
Biological sciences	2,068	2,135	2,130	2,168	2,345	2,470	2,424	2,335	2,392	2,256
Agricultural sciences	528	483	423	372	456	463	401	396	360	331
Psychology	1,220	1,128	1,206	1,223	1,169	1,128	1,045	1,024	1,066	1,053
Social sciences	1,366	1,343	1,381	1,418	1,530	1,557	1,631	1,610	1,534	1,538
Non-S&E, total	5,173	5,295	5,447	5,439	5,679	5,791	5,517	5,508	5,482	5,324
Health	239	252	226	260	328	325	293	288	310	325
Humanities[1]	1,660	1,703	1,832	1,815	1,978	2,075	2,000	2,203	2,220	2,200
Education	2,358	2,347	2,347	2,378	2,307	2,243	2,238	2,059	2,056	1,955
Professional/other	916	993	1,042	986	1,066	1,148	986	958	896	844
Grand total, all fields	15,355	15,612	15,812	15,988	17,372	17,875	17,193	16,916	16,576	15,758

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, men, American Indian/Alaskan Native									
Science and engineering, total	25	37	42	25	40	42	62	45	54	61
Engineering, total	4	4	8	2	4	9	13	14	9	10
Chemical	0	0	1	1	1	2	1	3	0	1
Civil	2	1	0	0	0	0	1	1	0	1
Electrical	0	1	3	0	1	1	1	5	3	1
Mechanical	0	1	1	0	0	2	4	5	2	2
Other engineering	2	1	3	1	2	4	6	0	4	5
Sciences, total	21	33	34	23	36	33	49	31	45	51
Physical sciences, total	3	8	10	3	5	5	5	10	9	7
Astronomy	0	0	0	1	0	0	0	1	1	1
Chemistry	3	7	4	1	4	3	3	6	6	3
Physics	0	1	6	1	1	2	2	2	2	3
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	0	2	1	4	1	0	2	1	2	3
Mathematics	1	0	1	1	2	1	1	1	1	1
Computer sciences	0	1	2	0	0	0	2	0	3	0
Biological sciences	3	6	8	5	11	10	11	4	6	10
Agricultural sciences	4	4	0	1	1	2	2	5	7	1
Psychology	6	5	6	6	5	6	9	6	13	13
Social sciences	4	7	6	3	11	9	17	4	4	16
Non-S&E, total	27	37	40	35	31	38	41	33	50	37
Health	1	3	3	0	1	2	1	2	1	0
Humanities[1]	4	3	12	7	12	10	10	8	14	11
Education	16	29	20	21	10	17	22	18	26	19
Professional/other	6	2	5	7	8	9	8	5	9	7
Grand total, all fields	52	74	82	60	71	80	103	78	104	98
	U.S. citizens and permanent residents, men, Asian/Pacific Islander									
Science and engineering, total	757	806	927	1,079	2,169	2,554	2,112	1,645	1,381	1,223
Engineering, total	326	356	390	466	748	863	763	588	458	428
Chemical	40	41	38	55	71	76	62	61	46	45
Civil	25	26	32	39	65	77	75	58	32	41
Electrical	109	135	154	174	273	276	246	217	175	146
Mechanical	66	59	74	90	155	166	149	97	79	76
Other engineering	86	95	92	108	184	268	231	155	126	120
Sciences, total	431	450	537	613	1,421	1,691	1,349	1,057	923	795
Physical sciences, total	122	124	147	168	422	540	358	269	232	162
Astronomy	3	0	2	2	9	18	8	7	10	3
Chemistry	70	86	79	85	203	270	187	142	135	105
Physics	47	38	66	80	208	251	162	120	86	54
Other physical sciences	2	0	0	1	2	1	1	0	1	0
Earth, atmospheric, & ocean sciences	14	11	19	14	72	76	65	52	32	28
Mathematics	20	39	33	43	116	158	104	70	44	37
Computer sciences	41	51	74	58	101	107	95	82	68	67
Biological sciences	113	132	136	198	451	513	483	373	368	334
Agricultural sciences	26	16	25	20	52	62	51	45	29	28
Psychology	22	15	20	22	32	43	31	32	29	34
Social sciences	73	62	83	90	175	192	162	134	121	105
Non-S&E, total	152	166	209	208	300	312	290	246	262	260
Health	17	21	22	22	48	52	47	37	35	38
Humanities[1]	28	39	48	42	84	83	86	73	81	84
Education	39	45	48	58	66	59	71	52	72	64
Professional/other	68	61	91	86	102	118	86	84	74	74
Grand total, all fields	909	972	1,136	1,287	2,469	2,866	2,402	1,891	1,643	1,483

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, men, black									
Science and engineering, total	225	270	238	261	284	290	323	332	296	349
Engineering, total	34	47	43	39	41	56	55	75	62	73
Chemical	8	7	12	3	4	2	7	10	2	7
Civil	1	10	3	3	6	8	7	10	8	4
Electrical	7	14	15	13	14	20	17	27	19	24
Mechanical	5	2	5	3	6	13	7	11	14	11
Other engineering	13	14	8	17	11	13	17	17	19	27
Sciences, total	191	223	195	222	243	234	268	257	234	276
Physical sciences, total	23	27	19	31	33	25	47	41	25	37
Astronomy	1	0	0	2	0	1	0	1	1	0
Chemistry	17	18	12	22	25	16	35	26	17	33
Physics	5	9	6	7	7	8	12	14	7	4
Other physical sciences	0	0	1	0	1	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	2	5	4	5	3	2	7	6	9
Mathematics	3	7	4	7	8	4	6	5	9	6
Computer sciences	1	4	4	2	8	7	9	3	6	9
Biological sciences	29	32	38	43	34	65	58	51	41	50
Agricultural sciences	14	16	10	12	16	11	25	19	15	16
Psychology	43	44	28	44	46	39	39	43	43	40
Social sciences	77	91	87	79	93	80	82	88	89	109
Non-S&E, total	254	282	281	318	269	325	318	309	318	347
Health	14	17	14	18	11	18	13	15	14	12
Humanities[1]	37	44	47	56	51	53	53	68	69	72
Education	169	179	174	201	161	204	203	173	192	195
Professional/other	34	42	46	43	46	50	49	53	43	68
Grand total, all fields	479	552	519	579	553	615	641	641	614	696
	U.S. citizens and permanent residents, men, Hispanic									
Science and engineering, total	290	307	308	320	318	336	346	392	426	344
Engineering, total	45	51	56	54	60	65	82	72	97	59
Chemical	7	7	12	7	7	10	12	3	13	3
Civil	7	3	6	10	11	10	6	11	13	6
Electrical	12	16	14	14	21	14	23	19	29	25
Mechanical	4	7	9	5	7	8	12	12	18	8
Other engineering	15	18	15	18	14	23	29	27	24	17
Sciences, total	245	256	252	266	258	271	264	320	329	285
Physical sciences, total	46	54	52	59	69	52	54	54	43	36
Astronomy	2	1	3	2	2	2	1	2	2	0
Chemistry	33	37	26	33	43	29	28	32	25	22
Physics	11	16	23	24	24	21	25	20	16	14
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	9	14	10	11	6	7	13	11	10	16
Mathematics	6	5	9	14	10	11	10	14	20	10
Computer sciences	4	11	7	6	7	2	9	15	13	11
Biological sciences	56	56	59	57	69	79	62	84	89	93
Agricultural sciences	17	12	14	15	13	16	9	20	22	8
Psychology	52	52	55	45	43	48	53	63	55	55
Social sciences	55	52	46	59	41	56	54	59	77	56
Non-S&E, total	159	152	174	197	200	201	214	232	253	209
Health	2	7	4	8	7	15	16	8	12	15
Humanities[1]	52	64	66	72	79	72	85	107	102	89
Education	85	65	82	94	82	91	87	93	111	84
Professional/other	20	16	22	23	32	23	26	24	28	21
Grand total, all fields	449	459	482	517	518	537	560	624	679	553

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, men, Puerto Rican									
Science and engineering, total	67	52	71	70	72	74	72	100	68	79
Engineering, total	4	7	10	8	10	11	17	19	16	15
Chemical	2	1	3	2	2	3	2	1	3	1
Civil	1	1	1	0	1	1	1	5	1	1
Electrical	1	0	2	4	3	3	4	3	3	9
Mechanical	0	2	0	1	1	1	3	6	5	2
Other engineering	0	3	4	1	3	3	7	4	4	2
Sciences, total	63	45	61	62	62	63	55	81	52	64
Physical sciences, total	14	11	14	12	19	12	8	18	6	10
Astronomy	1	0	1	0	0	0	0	0	1	0
Chemistry	10	9	9	9	13	9	6	11	4	7
Physics	3	2	4	3	6	3	2	7	1	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	4	0	3	1	0	1	3	4	2	4
Mathematics	2	0	1	1	1	0	3	3	4	2
Computer sciences	2	3	1	0	4	0	4	6	1	5
Biological sciences	14	12	16	16	14	21	12	21	20	19
Agricultural sciences	4	0	3	7	2	3	3	4	2	0
Psychology	11	6	16	13	13	13	15	20	11	15
Social sciences	12	13	7	12	9	13	7	5	6	9
Non-S&E, total	37	32	39	51	51	46	40	55	57	49
Health	0	2	3	0	2	7	2	3	3	5
Humanities[1]	8	11	10	18	16	14	16	26	19	14
Education	26	16	23	25	23	19	17	21	27	21
Professional/other	3	3	3	8	10	6	5	5	8	9
Grand total, all fields	104	84	110	121	123	120	112	155	125	128
	U.S. citizens and permanent residents, men, Mexican American									
Science and engineering, total	67	84	79	73	87	89	91	91	136	90
Engineering, total	11	12	10	10	13	18	23	11	27	9
Chemical	2	3	1	1	1	2	2	1	1	0
Civil	1	2	2	0	2	7	2	1	4	1
Electrical	4	3	3	2	4	3	8	2	7	3
Mechanical	2	2	2	0	2	2	3	3	3	1
Other engineering	2	2	2	7	4	4	8	4	12	4
Sciences, total	56	72	69	63	74	71	68	80	109	81
Physical sciences, total	8	12	7	9	20	9	19	13	18	11
Astronomy	0	0	0	0	1	0	1	0	1	0
Chemistry	8	10	4	6	16	6	12	7	12	5
Physics	0	2	3	3	3	3	6	6	5	6
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	4	5	2	4	3	3	2	4	4
Mathematics	1	1	4	3	3	4	1	2	3	5
Computer sciences	0	0	3	1	2	1	1	2	3	1
Biological sciences	15	19	11	13	17	16	16	22	32	25
Agricultural sciences	7	4	4	3	4	3	1	2	7	3
Psychology	11	20	19	16	17	15	18	20	18	16
Social sciences	12	12	16	16	7	20	9	17	24	16
Non-S&E, total	51	48	46	59	74	70	71	70	83	70
Health	1	0	0	3	2	3	2	0	1	5
Humanities[1]	11	14	14	19	23	21	21	22	33	26
Education	31	28	26	30	38	42	38	42	44	34
Professional/other	8	6	6	7	11	4	10	6	5	5
Grand total, all fields	118	132	125	132	161	159	162	161	219	160

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, men, other Hispanic									
Science and engineering, total	156	171	158	177	159	173	183	201	222	175
Engineering, total	30	32	36	36	37	36	42	42	54	35
Chemical	3	3	8	4	4	5	8	1	9	2
Civil	5	0	3	10	8	2	3	5	8	4
Electrical	7	13	9	8	14	8	11	14	19	13
Mechanical	2	3	7	4	4	5	6	3	10	5
Other engineering	13	13	9	10	7	16	14	19	8	11
Sciences, total	126	139	122	141	122	137	141	159	168	140
Physical sciences, total	24	31	31	38	30	31	27	23	19	15
Astronomy	1	1	2	2	1	2	0	2	0	0
Chemistry	15	18	13	18	14	14	10	14	9	10
Physics	8	12	16	18	15	15	17	7	10	5
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	10	2	8	2	3	7	5	4	8
Mathematics	3	4	4	10	6	7	6	9	13	3
Computer sciences	2	8	3	5	1	1	4	7	9	5
Biological sciences	27	25	32	28	38	42	34	41	37	49
Agricultural sciences	6	8	7	5	7	10	5	14	13	5
Psychology	30	26	20	16	13	20	20	23	26	24
Social sciences	31	27	23	31	25	23	38	37	47	31
Non-S&E, total	71	72	89	87	75	85	103	107	113	90
Health	1	5	1	5	3	5	12	5	8	5
Humanities[1]	33	39	42	35	40	37	48	59	50	49
Education	28	21	33	39	21	30	32	30	40	29
Professional/other	9	7	13	8	11	13	11	13	15	7
Grand total, all fields	227	243	247	264	234	258	286	308	335	265
	U.S. citizens and permanent residents, men, white									
Science and engineering, total	8,648	8,585	8,624	8,725	8,732	8,683	8,653	8,561	8,530	8,235
Engineering, total	1,614	1,602	1,640	1,764	1,715	1,772	1,915	1,955	1,865	1,751
Chemical	270	277	225	244	211	197	206	242	224	237
Civil	167	143	147	143	153	160	168	180	171	193
Electrical	411	444	447	504	494	523	522	524	470	464
Mechanical	267	236	307	296	311	314	353	343	334	289
Other engineering	499	502	514	577	546	578	666	666	666	568
Sciences, total	7,034	6,983	6,984	6,961	7,017	6,911	6,738	6,606	6,665	6,484
Physical sciences, total	1,623	1,586	1,575	1,523	1,617	1,476	1,456	1,471	1,465	1,435
Astronomy	70	77	84	79	78	92	101	110	96	86
Chemistry	969	926	902	846	872	760	755	773	784	794
Physics	570	573	575	590	656	613	593	578	576	549
Other physical sciences	14	10	14	8	11	11	7	10	9	6
Earth, atmospheric, & ocean sciences	385	415	353	345	381	356	340	358	324	305
Mathematics	293	335	332	352	361	409	374	344	376	348
Computer sciences	259	282	309	327	326	348	295	295	327	278
Biological sciences	1,821	1,871	1,847	1,835	1,758	1,773	1,774	1,759	1,816	1,731
Agricultural sciences	455	422	364	323	367	369	307	293	278	274
Psychology	1,075	991	1,078	1,096	1,029	983	907	833	889	904
Social sciences	1,123	1,081	1,126	1,160	1,178	1,197	1,285	1,253	1,190	1,209
Non-S&E, total	4,512	4,569	4,656	4,623	4,827	4,851	4,581	4,436	4,381	4,380
Health	203	199	177	208	258	234	212	219	235	256
Humanities[1]	1,505	1,516	1,629	1,606	1,727	1,820	1,735	1,849	1,854	1,904
Education	2,029	2,002	1,997	1,992	1,968	1,858	1,832	1,618	1,588	1,564
Professional/other	775	852	853	817	874	939	802	750	704	656
Grand total, all fields	13,160	13,154	13,280	13,348	13,559	13,534	13,234	12,997	12,911	12,615

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, women									
Science and engineering, total	5,182	5,597	5,577	6,024	6,494	6,912	6,963	6,994	7,174	6,994
Engineering, total	276	316	328	348	448	520	525	513	451	490
Chemical	62	60	82	64	78	88	98	77	76	76
Civil	34	25	23	32	55	52	47	58	58	61
Electrical	47	48	67	80	88	120	106	106	91	81
Mechanical	24	37	25	36	54	49	60	55	50	60
Other engineering	109	146	131	136	173	211	214	217	176	212
Sciences, total	4,906	5,281	5,249	5,676	6,046	6,392	6,438	6,481	6,723	6,504
Physical sciences, total	470	454	514	521	625	708	610	587	604	552
Astronomy	18	7	15	23	21	25	35	26	28	25
Chemistry	383	368	401	401	464	537	439	431	462	426
Physics	62	76	94	94	137	143	134	124	107	95
Other physical sciences	7	3	4	3	3	3	2	6	7	6
Earth, atmospheric, & ocean sciences	118	157	147	120	144	144	130	163	171	151
Mathematics	93	112	117	164	151	183	145	177	198	192
Computer sciences	90	94	83	109	94	143	91	100	123	104
Biological sciences	1,312	1,390	1,438	1,584	1,743	1,859	1,941	1,919	1,921	1,862
Agricultural sciences	159	137	150	134	160	135	175	155	183	160
Psychology	1,772	1,890	1,780	1,938	1,967	2,056	2,183	2,114	2,215	2,177
Social sciences	892	1,047	1,020	1,106	1,162	1,164	1,163	1,266	1,308	1,306
Non-S&E, total	6,066	6,221	6,601	6,696	7,028	7,271	7,362	7,176	7,416	7,170
Health	517	587	629	679	722	719	723	740	845	718
Humanities[1]	1,422	1,491	1,608	1,697	1,788	1,980	2,045	2,032	2,105	2,077
Education	3,429	3,441	3,670	3,590	3,756	3,752	3,824	3,685	3,685	3,654
Professional/other	698	702	694	730	762	820	770	719	781	721
Grand total, all fields	11,248	11,818	12,178	12,720	13,522	14,183	14,325	14,170	14,590	14,164
	U.S. citizens and permanent residents, women, American Indian/Alaskan Native									
Science and engineering, total	18	19	27	18	24	26	35	34	42	56
Engineering, total	0	2	3	0	2	0	2	3	4	2
Chemical	0	1	0	0	0	0	0	1	3	1
Civil	0	0	1	0	0	0	1	1	0	1
Electrical	0	1	1	0	0	0	1	0	0	0
Mechanical	0	0	0	0	0	0	0	1	0	0
Other engineering	0	0	1	0	2	0	0	0	1	0
Sciences, total	18	17	24	18	22	26	33	31	38	54
Physical sciences, total	0	2	2	2	1	2	1	0	1	3
Astronomy	0	0	0	0	0	0	0	0	0	1
Chemistry	0	2	2	1	0	2	1	0	1	2
Physics	0	0	0	1	1	0	0	0	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	1	0	0	0	0	0	1	1	3
Mathematics	0	0	1	0	0	1	0	0	2	0
Computer sciences	0	0	0	1	1	0	2	1	0	1
Biological sciences	1	4	5	2	5	5	9	3	6	10
Agricultural sciences	0	0	0	0	0	0	4	0	2	1
Psychology	13	8	9	9	7	8	9	12	18	23
Social sciences	3	2	7	4	8	10	8	14	8	13
Non-S&E, total	27	39	40	42	48	42	50	54	43	65
Health	0	2	2	6	5	7	3	4	3	6
Humanities[1]	2	7	6	3	8	8	8	11	7	10
Education	21	27	30	30	27	24	38	33	24	41
Professional/other	4	3	2	3	8	3	1	6	9	8
Grand total, all fields	45	58	67	60	72	68	85	88	85	121

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, women, Asian/Pacific Islander									
Science and engineering, total	252	374	418	531	820	1,115	983	894	767	728
Engineering, total	33	49	61	61	119	170	134	119	98	87
Chemical	11	9	16	7	25	25	18	12	19	15
Civil	3	4	2	2	4	14	14	14	6	5
Electrical	6	5	21	25	31	46	30	39	31	26
Mechanical	3	3	4	3	24	23	17	16	11	13
Other engineering	10	28	18	24	35	62	55	38	31	28
Sciences, total	219	325	357	470	701	945	849	775	669	641
Physical sciences, total	42	48	80	97	178	211	145	133	102	95
Astronomy	2	0	2	2	1	4	4	1	3	0
Chemistry	29	36	56	72	129	146	108	93	72	82
Physics	11	12	22	23	47	61	33	38	27	13
Other physical sciences	0	0	0	0	1	0	0	1	0	0
Earth, atmospheric, & ocean sciences	1	6	8	8	17	28	12	20	19	11
Mathematics	7	18	19	36	26	50	36	28	27	22
Computer sciences	7	15	12	19	16	30	16	26	23	19
Biological sciences	87	129	133	172	269	411	407	350	293	285
Agricultural sciences	6	8	12	9	20	16	30	18	18	17
Psychology	31	44	39	51	77	79	93	95	86	95
Social sciences	38	57	54	78	98	120	110	105	101	97
Non-S&E, total	145	185	210	199	257	328	314	337	319	307
Health	22	23	30	23	46	41	40	50	50	47
Humanities[1]	34	42	51	66	67	111	105	108	114	112
Education	65	85	96	86	107	120	114	129	108	106
Professional/other	24	35	33	24	37	56	55	50	47	42
Grand total, all fields	397	559	628	730	1,077	1,443	1,297	1,231	1,086	1,035
	U.S. citizens and permanent residents, women, black									
Science and engineering, total	149	194	170	208	216	270	253	291	350	366
Engineering, total	6	8	6	11	13	15	19	23	22	23
Chemical	2	1	1	3	4	1	5	6	1	4
Civil	0	2	0	2	2	3	1	0	2	2
Electrical	1	2	2	2	3	4	5	4	4	5
Mechanical	0	1	0	0	1	1	3	1	0	1
Other engineering	3	2	3	4	3	6	5	12	15	11
Sciences, total	143	186	164	197	203	255	234	268	328	343
Physical sciences, total	7	5	6	10	13	18	13	11	31	29
Astronomy	0	0	1	0	0	0	0	1	0	2
Chemistry	7	5	5	9	9	17	10	9	28	23
Physics	0	0	0	0	4	1	3	1	3	4
Other physical sciences	0	0	0	1	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	1	1	0	1	0	2	1	3	5
Mathematics	1	4	0	1	3	1	2	2	7	6
Computer sciences	0	4	1	4	2	4	3	1	8	9
Biological sciences	22	32	24	32	45	43	40	60	69	66
Agricultural sciences	1	1	4	4	6	6	0	6	4	8
Psychology	72	86	78	75	78	112	115	113	113	133
Social sciences	38	53	50	71	55	71	59	74	93	87
Non-S&E, total	422	420	427	493	510	590	562	556	639	667
Health	18	23	24	41	35	42	36	41	51	45
Humanities[1]	35	48	43	42	55	61	66	73	72	97
Education	327	293	327	356	360	423	405	385	460	455
Professional/other	42	56	33	54	60	64	55	57	56	70
Grand total, all fields	571	614	597	701	726	860	815	847	989	1,033

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, women, Hispanic									
Science and engineering, total	178	186	205	222	230	227	272	264	327	344
Engineering, total	9	10	15	12	6	11	15	23	13	23
Chemical	1	4	4	3	0	2	6	3	0	4
Civil	2	2	1	2	3	1	0	1	3	6
Electrical	1	0	3	3	0	1	4	6	2	4
Mechanical	1	2	2	0	1	0	0	3	1	1
Other engineering	4	2	5	4	2	7	5	10	7	8
Sciences, total	169	176	190	210	224	216	257	241	314	321
Physical sciences, total	26	11	20	20	21	21	12	15	11	21
Astronomy	0	0	1	0	0	2	1	1	0	0
Chemistry	24	9	16	18	16	14	7	12	9	20
Physics	2	2	3	2	5	5	4	2	2	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	4	2	6	2	2	6	6	4	6	4
Mathematics	4	4	3	2	3	4	0	6	7	5
Computer sciences	1	1	1	1	0	4	7	2	1	3
Biological sciences	33	39	43	57	62	46	66	62	80	71
Agricultural sciences	6	3	4	5	12	5	3	7	13	7
Psychology	57	70	78	86	90	97	120	108	152	147
Social sciences	38	46	35	37	34	33	43	37	44	63
Non-S&E, total	210	223	222	234	282	290	271	303	313	349
Health	15	9	9	16	18	15	22	24	25	31
Humanities[1]	75	72	63	73	89	82	93	100	94	104
Education	105	124	132	128	159	167	129	160	174	182
Professional/other	15	18	18	17	16	26	27	19	20	32
Grand total, all fields	388	409	427	456	512	517	543	567	640	693
	U.S. citizens and permanent residents, women, Puerto Rican									
Science and engineering, total	48	47	49	42	59	63	68	73	103	85
Engineering, total	2	2	3	2	0	2	5	4	1	8
Chemical	0	1	0	0	0	1	2	0	0	1
Civil	0	0	0	1	0	0	0	0	0	1
Electrical	1	0	1	1	0	0	0	1	0	2
Mechanical	0	0	1	0	0	0	0	0	0	0
Other engineering	1	1	1	0	0	1	3	3	1	4
Sciences, total	46	45	46	40	59	61	63	69	102	77
Physical sciences, total	10	6	6	5	7	9	4	2	5	8
Astronomy	0	0	0	0	0	1	0	0	0	0
Chemistry	10	5	5	5	6	8	3	2	5	8
Physics	0	1	1	0	1	0	1	0	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	0	0	0	0	1	0	1	3	1
Mathematics	0	0	1	0	0	1	0	1	3	0
Computer sciences	0	0	0	1	0	0	1	0	1	1
Biological sciences	10	11	11	11	14	9	18	16	23	20
Agricultural sciences	1	0	0	3	3	0	1	1	1	1
Psychology	15	14	19	11	30	31	33	37	58	34
Social sciences	9	14	9	9	5	10	6	11	8	12
Non-S&E, total	58	60	70	69	75	86	69	84	71	79
Health	6	1	1	3	4	5	5	7	4	6
Humanities[1]	20	19	12	18	22	16	22	23	17	16
Education	30	36	53	45	45	50	34	48	44	49
Professional/other	2	4	4	3	4	15	8	6	6	8
Grand total, all fields	106	107	119	111	134	149	137	157	174	164

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, women, Mexican American									
Science and engineering, total	37	42	41	49	58	59	53	69	87	73
Engineering, total	2	2	0	2	2	1	3	7	3	4
Chemical	0	1	0	0	0	1	1	1	0	0
Civil	1	0	0	0	0	0	0	1	1	2
Electrical	0	0	0	0	0	0	1	3	0	1
Mechanical	1	1	0	0	0	0	0	0	0	0
Other engineering	0	0	0	2	2	0	1	2	2	1
Sciences, total	35	40	41	47	56	58	50	62	84	69
Physical sciences, total	3	3	2	3	4	4	3	2	3	5
Astronomy	0	0	0	0	0	1	0	0	0	0
Chemistry	3	2	2	2	3	2	2	2	3	4
Physics	0	1	0	1	1	1	1	0	0	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	0	2	0	0	1	2	1	1	1
Mathematics	2	2	0	1	1	2	0	1	3	2
Computer sciences	0	0	0	0	0	2	0	0	0	0
Biological sciences	7	7	13	11	13	11	12	22	22	16
Agricultural sciences	1	1	1	1	2	1	0	0	3	0
Psychology	14	15	18	26	23	33	20	29	35	28
Social sciences	7	12	5	5	13	4	13	7	17	17
Non-S&E, total	35	58	53	71	89	70	73	75	116	111
Health	6	3	5	5	3	5	4	7	14	11
Humanities[1]	8	13	10	16	19	13	20	16	25	20
Education	19	39	32	44	64	51	41	48	71	67
Professional/other	2	3	6	6	3	1	8	4	6	13
Grand total, all fields	72	100	94	120	147	129	126	144	203	184
	U.S. citizens and permanent residents, women, other Hispanic									
Science and engineering, total	93	97	115	131	113	105	151	122	137	186
Engineering, total	5	6	12	8	4	8	7	12	9	11
Chemical	1	2	4	3	0	0	3	2	0	3
Civil	1	2	1	1	3	1	0	0	2	3
Electrical	0	0	2	2	0	1	3	2	2	1
Mechanical	0	1	1	0	1	0	0	3	1	1
Other engineering	3	1	4	2	0	6	1	5	4	3
Sciences, total	88	91	103	123	109	97	144	110	128	175
Physical sciences, total	13	2	12	12	10	8	5	11	3	8
Astronomy	0	0	1	0	0	0	1	1	0	0
Chemistry	11	2	9	11	7	4	2	8	1	8
Physics	2	0	2	1	3	4	2	2	2	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	2	4	2	2	4	4	2	2	2
Mathematics	2	2	2	1	2	1	0	4	1	3
Computer sciences	1	1	1	0	0	2	6	2	0	2
Biological sciences	16	21	19	35	35	26	36	24	35	35
Agricultural sciences	4	2	3	1	7	4	2	6	9	6
Psychology	28	41	41	49	37	33	67	42	59	85
Social sciences	22	20	21	23	16	19	24	19	19	34
Non-S&E, total	117	105	99	94	118	134	129	144	126	159
Health	3	5	3	8	11	5	13	10	7	14
Humanities[1]	47	40	41	39	48	53	51	61	52	68
Education	56	49	47	39	50	66	54	64	59	66
Professional/other	11	11	8	8	9	10	11	9	8	11
Grand total, all fields	210	202	214	225	231	239	280	266	263	345

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens and permanent residents, women, white									
Science and engineering, total	4,522	4,739	4,703	5,012	5,158	5,223	5,355	5,268	5,496	5,421
Engineering, total	226	235	240	261	305	321	347	332	306	350
Chemical	48	45	59	51	48	60	69	52	52	50
Civil	29	16	19	25	46	34	31	40	45	47
Electrical	39	34	40	49	54	67	66	54	53	44
Mechanical	19	30	19	32	26	25	39	33	37	45
Other engineering	91	110	103	104	131	135	142	153	119	164
Sciences, total	4,296	4,504	4,463	4,751	4,853	4,902	5,008	4,936	5,190	5,071
Physical sciences, total	385	383	399	388	408	448	431	412	449	396
Astronomy	16	6	11	21	19	19	30	22	25	22
Chemistry	315	313	318	299	307	352	308	305	343	294
Physics	48	61	66	66	80	74	91	80	74	75
Other physical sciences	6	3	4	2	2	3	2	5	7	5
Earth, atmospheric, & ocean sciences	109	142	132	110	123	108	109	129	140	125
Mathematics	79	84	93	124	118	126	105	135	150	158
Computer sciences	80	73	69	83	75	104	61	66	84	70
Biological sciences	1,154	1,170	1,221	1,311	1,349	1,345	1,401	1,399	1,435	1,408
Agricultural sciences	146	123	129	115	120	104	137	118	140	124
Psychology	1,573	1,661	1,558	1,711	1,701	1,744	1,837	1,692	1,768	1,761
Social sciences	770	868	862	909	959	923	927	985	1,024	1,029
Non-S&E, total	5,196	5,293	5,643	5,692	5,878	5,964	6,102	5,693	5,906	5,689
Health	459	521	558	592	609	602	611	608	697	580
Humanities[1]	1,261	1,305	1,432	1,503	1,556	1,701	1,752	1,677	1,751	1,717
Education	2,871	2,887	3,054	2,973	3,076	2,995	3,111	2,834	2,828	2,828
Professional/other	605	580	599	624	637	666	628	574	630	564
Grand total, all fields	9,718	10,032	10,346	10,704	11,036	11,187	11,457	10,961	11,402	11,110
	U.S. citizens									
Science and engineering, total	14,167	14,629	14,559	14,932	15,166	15,487	15,630	16,122	16,246	15,783
Engineering, total	1,957	2,086	2,109	2,228	2,215	2,386	2,594	2,736	2,566	2,474
Chemical	342	348	318	324	293	291	318	321	327	335
Civil	180	173	164	168	203	206	212	249	246	259
Electrical	491	554	597	630	634	683	707	751	638	637
Mechanical	299	297	352	347	359	383	436	455	434	396
Other engineering	645	714	678	759	726	823	921	960	921	847
Sciences, total	12,210	12,543	12,450	12,704	12,951	13,101	13,036	13,386	13,680	13,309
Physical sciences, total	2,169	2,120	2,157	2,093	2,198	2,137	2,076	2,131	2,140	2,023
Astronomy	92	84	100	106	103	120	137	151	132	110
Chemistry	1,398	1,351	1,328	1,272	1,291	1,238	1,169	1,234	1,286	1,251
Physics	660	671	709	704	789	764	761	731	706	651
Other physical sciences	19	14	20	11	15	15	9	15	16	11
Earth, atmospheric, & ocean sciences	516	592	506	463	507	478	462	536	500	470
Mathematics	375	463	454	496	504	554	490	531	576	538
Computer sciences	348	388	422	425	426	484	422	430	474	412
Biological sciences	3,191	3,314	3,328	3,449	3,422	3,494	3,547	3,670	3,759	3,654
Agricultural sciences	630	564	511	457	519	492	473	468	464	440
Psychology	2,919	2,953	2,900	3,071	3,052	3,083	3,124	3,049	3,188	3,161
Social sciences	2,062	2,149	2,172	2,250	2,323	2,379	2,442	2,571	2,579	2,611
Non-S&E, total	10,738	10,944	11,451	11,517	11,981	12,253	12,121	12,034	12,216	11,839
Health	721	779	809	879	961	938	933	959	1,073	966
Humanities[1]	2,899	2,975	3,211	3,274	3,486	3,747	3,726	3,946	4,020	3,995
Education	5,634	5,614	5,852	5,791	5,864	5,777	5,866	5,579	5,570	5,429
Professional/other	1,484	1,576	1,579	1,573	1,670	1,791	1,596	1,550	1,553	1,449
Grand total, all fields	24,905	25,573	26,010	26,449	27,147	27,740	27,751	28,156	28,462	27,622

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, American Indian/Alaskan Native									
Science and engineering, total	43	56	69	43	64	68	96	79	96	117
Engineering, total	4	6	11	2	6	9	15	17	13	12
Chemical	0	1	1	1	1	2	1	4	3	2
Civil	2	1	1	0	0	0	2	2	0	2
Electrical	0	2	4	0	1	1	2	5	3	1
Mechanical	0	1	1	0	0	2	4	6	2	2
Other engineering	2	1	4	1	4	4	6	0	5	5
Sciences, total	39	50	58	41	58	59	81	62	83	105
Physical sciences, total	3	10	12	5	6	7	6	10	10	10
Astronomy	0	0	0	1	0	0	0	1	1	2
Chemistry	3	9	6	2	4	5	4	6	7	5
Physics	0	1	6	2	2	2	2	2	2	3
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	1	3	1	4	1	0	2	2	3	6
Mathematics	1	0	2	1	2	2	1	1	3	1
Computer sciences	0	1	2	1	1	0	4	1	3	1
Biological sciences	4	10	13	7	16	15	20	7	12	20
Agricultural sciences	4	4	0	1	1	2	6	5	9	2
Psychology	19	13	15	15	12	14	18	18	31	36
Social sciences	7	9	13	7	19	19	24	18	12	29
Non-S&E, total	54	74	80	77	79	80	91	87	93	102
Health	1	5	5	6	6	9	4	6	4	6
Humanities[1]	6	10	18	10	20	18	18	19	21	21
Education	37	55	50	51	37	41	60	51	50	60
Professional/other	10	4	7	10	16	12	9	11	18	15
Grand total, all fields	97	130	149	120	143	148	187	166	189	219
	U.S. citizens, Asian/Pacific Islander									
Science and engineering, total	488	599	651	712	736	894	836	1,011	880	1,004
Engineering, total	157	187	214	217	202	255	272	290	245	266
Chemical	26	27	25	26	27	27	27	17	36	33
Civil	8	11	12	10	7	15	17	13	16	20
Electrical	51	67	95	86	97	92	109	128	87	93
Mechanical	27	26	35	34	28	38	40	50	36	43
Other engineering	45	56	47	61	43	83	79	82	70	77
Sciences, total	331	412	437	495	534	639	564	721	635	738
Physical sciences, total	86	86	108	121	122	148	107	153	119	128
Astronomy	1	0	2	3	4	4	5	6	6	2
Chemistry	54	63	65	76	70	91	55	83	71	92
Physics	31	23	41	42	47	53	47	64	42	34
Other physical sciences	0	0	0	0	1	0	0	0	0	0
Earth, atmospheric, & ocean sciences	4	7	14	6	7	8	8	18	7	15
Mathematics	11	23	21	28	18	25	23	34	25	31
Computer sciences	10	32	37	27	33	42	37	43	40	42
Biological sciences	116	160	134	190	194	228	238	258	252	297
Agricultural sciences	11	9	13	9	14	10	13	16	6	20
Psychology	44	46	47	52	81	84	77	102	94	107
Social sciences	49	49	63	62	65	94	61	97	92	98
Non-S&E, total	153	190	197	179	214	247	254	299	294	320
Health	26	23	32	17	36	22	37	42	33	43
Humanities[1]	30	43	46	53	59	86	82	106	104	116
Education	67	85	80	85	81	84	92	101	102	103
Professional/other	30	39	39	24	38	55	43	50	55	58
Grand total, all fields	641	789	848	891	950	1,141	1,090	1,310	1,174	1,324

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, black									
Science and engineering, total	292	368	323	376	391	471	491	538	576	639
Engineering, total	28	43	32	41	44	54	59	83	76	84
Chemical	5	4	8	4	6	2	10	12	3	9
Civil	0	8	0	3	8	7	6	9	8	5
Electrical	7	16	12	13	14	20	17	27	22	25
Mechanical	5	3	3	2	4	8	9	10	13	10
Other engineering	11	12	9	19	12	17	17	25	30	35
Sciences, total	264	325	291	335	347	417	432	455	500	555
Physical sciences, total	19	25	21	29	33	37	46	46	51	54
Astronomy	1	0	1	2	0	1	0	2	1	2
Chemistry	14	19	13	19	23	27	34	31	40	46
Physics	4	6	6	7	9	9	12	13	10	6
Other physical sciences	0	0	1	1	1	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	2	5	2	3	2	3	4	8	11
Mathematics	4	9	4	5	9	4	8	6	12	10
Computer sciences	1	5	4	5	7	9	12	4	12	16
Biological sciences	37	51	47	64	67	91	82	100	100	109
Agricultural sciences	9	6	6	5	10	9	15	15	8	16
Psychology	111	126	101	117	112	145	146	146	150	169
Social sciences	80	101	103	108	106	120	120	134	159	170
Non-S&E, total	609	642	648	735	710	836	822	811	907	957
Health	25	35	35	52	41	55	42	52	60	51
Humanities[1]	69	84	84	82	94	96	107	125	132	155
Education	456	437	467	516	486	583	581	532	625	621
Professional/other	59	86	62	85	89	102	92	102	90	130
Grand total, all fields	901	1,010	971	1,111	1,101	1,307	1,313	1,349	1,483	1,596
	U.S. citizens, Hispanic									
Science and engineering, total	390	411	433	444	463	478	526	571	682	615
Engineering, total	39	49	57	56	49	60	85	81	100	71
Chemical	7	10	10	10	5	11	14	5	10	5
Civil	6	5	6	7	7	7	2	10	15	11
Electrical	9	12	14	16	16	14	27	22	27	28
Mechanical	3	8	10	3	7	5	10	14	19	8
Other engineering	14	14	17	20	14	23	32	30	29	19
Sciences, total	351	362	376	388	414	418	441	490	582	544
Physical sciences, total	63	54	58	65	75	61	50	58	49	51
Astronomy	2	1	4	1	2	3	1	3	2	0
Chemistry	50	39	34	43	49	38	31	36	34	38
Physics	11	14	20	21	24	20	18	19	13	13
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	11	12	13	8	7	7	13	15	15	18
Mathematics	7	6	10	9	12	12	8	17	25	12
Computer sciences	4	11	7	5	5	6	12	15	13	12
Biological sciences	73	79	90	93	111	102	106	131	150	145
Agricultural sciences	14	7	9	14	16	10	8	15	25	10
Psychology	100	113	122	120	128	137	167	161	196	192
Social sciences	79	80	67	74	60	83	77	78	109	104
Non-S&E, total	331	321	345	390	421	434	421	484	515	494
Health	17	12	12	19	20	29	31	29	37	39
Humanities[1]	104	105	98	122	129	123	138	172	154	156
Education	179	175	200	213	226	235	203	243	280	252
Professional/other	31	29	35	36	46	47	49	40	44	47
Grand total, all fields	721	732	778	834	884	912	947	1,055	1,197	1,109

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, Puerto Rican									
Science and engineering, total	115	99	120	112	131	137	140	173	171	164
Engineering, total	6	9	13	10	10	13	22	23	17	23
Chemical	2	2	3	2	2	4	4	1	3	2
Civil	1	1	1	1	1	1	1	5	1	2
Electrical	2	0	3	5	3	3	4	4	3	11
Mechanical	0	2	1	1	1	1	3	6	5	2
Other engineering	1	4	5	1	3	4	10	7	5	6
Sciences, total	109	90	107	102	121	124	118	150	154	141
Physical sciences, total	24	17	20	17	26	21	12	20	11	18
Astronomy	1	0	1	0	0	1	0	0	1	0
Chemistry	20	14	14	14	19	17	9	13	9	15
Physics	3	3	5	3	7	3	3	7	1	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	5	0	3	1	0	2	3	5	5	5
Mathematics	2	0	2	1	1	1	3	4	7	2
Computer sciences	2	3	1	1	4	0	5	6	2	6
Biological sciences	24	23	27	27	28	30	30	37	43	39
Agricultural sciences	5	0	3	10	5	3	4	5	3	1
Psychology	26	20	35	24	43	44	48	57	69	49
Social sciences	21	27	16	21	14	23	13	16	14	21
Non-S&E, total	95	92	109	120	126	132	109	139	128	128
Health	6	3	4	3	6	12	7	10	7	11
Humanities[1]	28	30	22	36	38	30	38	49	36	30
Education	56	52	76	70	68	69	51	69	71	70
Professional/other	5	7	7	11	14	21	13	11	14	17
Grand total, all fields	210	191	229	232	257	269	249	312	299	292
	U.S. citizens, Mexican American									
Science and engineering, total	96	117	110	103	134	136	137	153	213	154
Engineering, total	12	14	10	10	14	14	24	18	28	11
Chemical	2	4	1	1	1	3	3	2	1	0
Civil	2	2	2	0	1	3	0	2	5	3
Electrical	4	3	3	2	4	3	9	5	6	3
Mechanical	2	3	2	0	2	1	3	3	3	1
Other engineering	2	2	2	7	6	4	9	6	13	4
Sciences, total	84	103	100	93	120	122	113	135	185	143
Physical sciences, total	11	15	9	9	20	13	19	14	21	15
Astronomy	0	0	0	0	1	1	1	0	1	0
Chemistry	11	12	6	6	16	8	13	9	15	9
Physics	0	3	3	3	3	4	5	5	5	6
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	4	6	1	4	3	5	3	5	5
Mathematics	3	3	3	2	4	5	1	3	6	7
Computer sciences	0	0	2	0	0	3	1	2	3	0
Biological sciences	20	23	21	22	29	24	28	40	49	39
Agricultural sciences	6	1	4	2	5	3	1	2	9	3
Psychology	25	34	36	40	38	47	38	49	51	41
Social sciences	17	23	19	17	20	24	20	22	41	33
Non-S&E, total	83	99	97	127	156	137	140	143	194	179
Health	7	3	5	7	3	8	6	7	15	14
Humanities[1]	17	23	22	34	39	33	39	37	53	46
Education	49	64	58	73	100	91	78	89	115	101
Professional/other	10	9	12	13	14	5	17	10	11	18
Grand total, all fields	179	216	207	230	290	273	277	296	407	333

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, other Hispanic									
Science and engineering, total	179	195	203	229	198	205	249	245	298	297
Engineering, total	21	26	34	36	25	33	39	40	55	37
Chemical	3	4	6	7	2	4	7	2	6	3
Civil	3	2	3	6	5	3	1	3	9	6
Electrical	3	9	8	9	9	8	14	13	18	14
Mechanical	1	3	7	2	4	3	4	5	11	5
Other engineering	11	8	10	12	5	15	13	17	11	9
Sciences, total	158	169	169	193	173	172	210	205	243	260
Physical sciences, total	28	22	29	39	29	27	19	24	17	18
Astronomy	1	1	3	1	1	1	0	3	0	0
Chemistry	19	13	14	23	14	13	9	14	10	14
Physics	8	8	12	15	14	13	10	7	7	4
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	4	8	4	6	3	2	5	7	5	8
Mathematics	2	3	5	6	7	6	4	10	12	3
Computer sciences	2	8	4	4	1	3	6	7	8	6
Biological sciences	29	33	42	44	54	48	48	54	58	67
Agricultural sciences	3	6	2	2	6	4	3	8	13	6
Psychology	49	59	51	56	47	46	81	55	76	102
Social sciences	41	30	32	36	26	36	44	40	54	50
Non-S&E, total	153	130	139	143	139	165	172	202	193	187
Health	4	6	3	9	11	9	18	12	15	14
Humanities[1]	59	52	54	52	52	60	61	86	65	80
Education	74	59	66	70	58	75	74	85	94	81
Professional/other	16	13	16	12	18	21	19	19	19	12
Grand total, all fields	332	325	342	372	337	370	421	447	491	484
	U.S. citizens, white									
Science and engineering, total	12,694	12,840	12,852	13,211	13,357	13,379	13,461	13,295	13,469	13,136
Engineering, total	1,690	1,707	1,750	1,892	1,886	1,959	2,125	2,150	2,038	1,982
Chemical	299	300	267	282	246	243	262	270	263	280
Civil	162	143	142	147	181	175	184	206	196	218
Electrical	413	430	457	507	503	540	541	528	485	470
Mechanical	261	244	300	303	316	320	369	360	348	321
Other engineering	555	590	584	653	640	681	769	786	746	693
Sciences, total	11,004	11,133	11,102	11,319	11,471	11,420	11,336	11,145	11,431	11,154
Physical sciences, total	1,939	1,897	1,918	1,848	1,944	1,848	1,824	1,793	1,833	1,742
Astronomy	86	81	91	97	94	109	127	129	113	103
Chemistry	1,249	1,201	1,193	1,119	1,139	1,066	1,028	1,040	1,093	1,052
Physics	586	602	616	623	698	660	660	610	612	577
Other physical sciences	18	13	18	9	13	13	9	14	15	10
Earth, atmospheric, & ocean sciences	488	546	469	440	486	452	430	475	451	408
Mathematics	346	403	407	445	455	507	441	449	491	474
Computer sciences	325	330	363	379	375	418	342	341	382	329
Biological sciences	2,909	2,965	2,998	3,056	3,005	3,023	3,055	3,070	3,144	3,028
Agricultural sciences	582	527	475	426	471	456	424	397	403	385
Psychology	2,599	2,616	2,580	2,751	2,694	2,679	2,701	2,483	2,605	2,632
Social sciences	1,816	1,849	1,892	1,974	2,041	2,037	2,119	2,137	2,122	2,156
Non-S&E, total	9,477	9,586	10,060	10,050	10,459	10,546	10,405	9,883	10,025	9,793
Health	648	691	714	782	846	809	806	812	909	815
Humanities[1]	2,649	2,685	2,927	2,969	3,150	3,374	3,333	3,369	3,461	3,473
Education	4,842	4,820	5,007	4,897	4,989	4,801	4,882	4,408	4,360	4,324
Professional/other	1,338	1,390	1,412	1,402	1,474	1,562	1,384	1,294	1,295	1,181
Grand total, all fields	22,171	22,426	22,912	23,261	23,816	23,925	23,866	23,178	23,494	22,929

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, men									
Science and engineering, total	9,274	9,391	9,397	9,429	9,463	9,599	9,575	9,900	9,751	9,387
Engineering, total	1,709	1,807	1,826	1,932	1,872	2,012	2,177	2,321	2,192	2,048
Chemical	288	297	250	265	236	221	235	260	263	269
Civil	151	152	144	138	155	170	175	204	196	205
Electrical	446	510	542	573	570	604	624	677	572	575
Mechanical	276	263	329	314	327	355	391	409	393	344
Other engineering	548	585	561	642	584	662	752	771	768	655
Sciences, total	7,565	7,584	7,571	7,497	7,591	7,587	7,398	7,579	7,559	7,339
Physical sciences, total	1,747	1,708	1,710	1,647	1,745	1,618	1,609	1,659	1,629	1,553
Astronomy	76	77	87	86	83	99	106	126	109	87
Chemistry	1,046	1,015	971	920	946	829	836	883	894	889
Physics	613	605	636	633	703	677	660	639	617	572
Other physical sciences	12	11	16	8	13	13	7	11	9	5
Earth, atmospheric, & ocean sciences	398	444	368	351	382	366	348	391	352	335
Mathematics	293	370	357	372	382	422	385	388	405	373
Computer sciences	268	305	353	343	349	368	345	348	371	322
Biological sciences	1,958	2,024	1,999	2,000	1,930	2,007	1,962	2,033	2,079	2,008
Agricultural sciences	483	436	377	333	387	380	328	334	310	296
Psychology	1,195	1,106	1,176	1,202	1,143	1,093	1,019	997	1,034	1,032
Social sciences	1,223	1,191	1,231	1,249	1,273	1,333	1,402	1,429	1,379	1,420
Non-S&E, total	4,891	4,997	5,122	5,088	5,272	5,367	5,133	5,181	5,143	4,996
Health	221	221	203	226	283	263	248	255	273	281
Humanities[1]	1,580	1,606	1,728	1,699	1,837	1,937	1,854	2,071	2,071	2,057
Education	2,272	2,255	2,263	2,282	2,200	2,149	2,149	1,984	1,984	1,886
Professional/other	818	915	928	881	952	1,018	882	871	815	772
Grand total, all fields	14,165	14,388	14,519	14,517	14,735	14,966	14,708	15,081	14,894	14,383
	U.S. citizens, men, American Indian/Alaskan Native									
Science and engineering, total	25	37	42	25	40	42	62	45	54	61
Engineering, total	4	4	8	2	4	9	13	14	9	10
Chemical	0	0	1	1	1	2	1	3	0	1
Civil	2	1	0	0	0	0	1	1	0	1
Electrical	0	1	3	0	1	1	1	5	3	1
Mechanical	0	1	1	0	0	2	4	5	2	2
Other engineering	2	1	3	1	2	4	6	0	4	5
Sciences, total	21	33	34	23	36	33	49	31	45	51
Physical sciences, total	3	8	10	3	5	5	5	10	9	7
Astronomy	0	0	0	1	0	0	0	1	1	1
Chemistry	3	7	4	1	4	3	3	6	6	3
Physics	0	1	6	1	1	2	2	2	2	3
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	0	2	1	4	1	0	2	1	2	3
Mathematics	1	0	1	1	2	1	1	1	1	1
Computer sciences	0	1	2	0	0	0	2	0	3	0
Biological sciences	3	6	8	5	11	10	11	4	6	10
Agricultural sciences	4	4	0	1	1	2	2	5	7	1
Psychology	6	5	6	6	5	6	9	6	13	13
Social sciences	4	7	6	3	11	9	17	4	4	16
Non-S&E, total	27	37	40	35	31	38	41	33	50	37
Health	1	3	3	0	1	2	1	2	1	0
Humanities[1]	4	3	12	7	12	10	10	8	14	11
Education	16	29	20	21	10	17	22	18	26	19
Professional/other	6	2	5	7	8	9	8	5	9	7
Grand total, all fields	52	74	82	60	71	80	103	78	104	98

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, men, Asian/Pacific Islander									
Science and engineering, total	359	407	450	479	492	571	512	639	527	635
Engineering, total	137	160	181	193	171	203	221	244	193	223
Chemical	19	20	18	22	20	16	17	14	27	23
Civil	7	10	11	10	7	13	11	10	13	19
Electrical	47	64	83	79	86	80	95	112	69	81
Mechanical	25	23	33	33	23	34	36	42	29	37
Other engineering	39	43	36	49	35	60	62	66	55	63
Sciences, total	222	247	269	286	321	368	291	395	334	412
Physical sciences, total	67	66	72	79	88	99	74	108	85	85
Astronomy	1	0	1	2	4	3	3	6	5	2
Chemistry	41	48	36	39	43	52	32	52	49	55
Physics	25	18	35	38	40	44	39	50	31	28
Other physical sciences	0	0	0	0	1	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	4	11	4	6	7	5	13	4	11
Mathematics	8	18	17	18	14	18	15	28	12	23
Computer sciences	9	25	34	23	29	34	28	32	30	33
Biological sciences	77	91	71	102	114	126	109	132	132	168
Agricultural sciences	9	6	8	5	12	5	6	11	5	10
Psychology	19	13	17	20	20	30	20	22	23	31
Social sciences	30	24	39	35	38	49	34	49	43	51
Non-S&E, total	68	76	81	74	99	96	103	110	122	137
Health	12	10	9	7	15	7	16	15	14	15
Humanities[1]	18	17	22	17	31	28	29	42	39	44
Education	19	26	22	34	28	27	31	25	38	41
Professional/other	19	23	28	16	25	34	27	28	31	37
Grand total, all fields	427	483	531	553	591	667	615	749	649	772
	U.S. citizens, men, black									
Science and engineering, total	153	190	162	180	192	219	253	264	241	296
Engineering, total	23	35	26	30	31	41	40	61	55	61
Chemical	3	3	7	1	2	1	5	6	2	5
Civil	0	6	0	1	6	4	5	9	6	3
Electrical	6	14	10	11	11	16	12	24	18	20
Mechanical	5	2	3	2	3	8	6	9	13	9
Other engineering	9	10	6	15	9	12	12	13	16	24
Sciences, total	130	155	136	150	161	178	213	203	186	235
Physical sciences, total	13	21	16	20	21	20	34	36	25	30
Astronomy	1	0	0	2	0	1	0	1	1	0
Chemistry	8	15	9	11	15	11	24	23	17	27
Physics	4	6	6	7	5	8	10	12	7	3
Other physical sciences	0	0	1	0	1	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	1	4	2	2	2	1	3	5	6
Mathematics	3	5	4	4	6	3	6	4	5	4
Computer sciences	1	1	3	2	5	5	9	3	4	8
Biological sciences	16	25	25	34	24	52	46	43	34	47
Agricultural sciences	8	5	5	3	7	4	15	10	7	10
Psychology	42	42	25	43	40	37	39	39	38	39
Social sciences	46	55	54	42	56	55	63	65	68	91
Non-S&E, total	198	231	234	261	219	271	281	269	285	308
Health	7	13	11	15	11	14	10	12	11	8
Humanities[1]	35	37	42	44	42	42	47	55	63	63
Education	139	149	148	169	131	177	185	157	175	177
Professional/other	17	32	33	33	35	38	39	45	36	60
Grand total, all fields	351	421	396	441	411	490	534	533	526	604

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, men, Hispanic									
Science and engineering, total	237	242	263	256	262	279	290	337	380	302
Engineering, total	33	39	46	45	44	50	71	60	87	49
Chemical	7	6	8	7	5	9	9	3	10	2
Civil	5	3	5	5	5	6	2	9	12	5
Electrical	8	12	12	13	16	13	23	16	25	24
Mechanical	2	6	8	3	6	5	10	11	18	7
Other engineering	11	12	13	17	12	17	27	21	22	11
Sciences, total	204	203	217	211	218	229	219	277	293	253
Physical sciences, total	41	44	43	49	58	42	41	46	39	31
Astronomy	2	1	3	1	2	1	1	2	2	0
Chemistry	30	31	23	29	36	24	25	26	25	19
Physics	9	12	17	19	20	17	15	18	12	12
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	7	11	9	6	5	4	9	11	10	14
Mathematics	4	3	7	8	9	9	8	12	18	9
Computer sciences	3	10	6	4	5	2	7	13	12	9
Biological sciences	45	44	55	47	61	67	55	75	79	80
Agricultural sciences	11	6	7	9	9	9	6	12	16	6
Psychology	47	47	52	42	42	43	51	59	53	51
Social sciences	46	38	38	46	29	53	42	49	66	53
Non-S&E, total	143	129	147	167	176	179	183	205	228	184
Health	2	4	4	4	3	15	11	7	12	11
Humanities[1]	44	49	51	55	67	60	65	90	82	74
Education	80	63	74	88	76	82	83	85	109	82
Professional/other	17	13	18	20	30	22	24	23	25	17
Grand total, all fields	380	371	410	423	438	458	473	542	608	486
	U.S. citizens, men, Puerto Rican									
Science and engineering, total	67	52	71	70	72	74	72	100	68	79
Engineering, total	4	7	10	8	10	11	17	19	16	15
Chemical	2	1	3	2	2	3	2	1	3	1
Civil	1	1	1	0	1	1	1	5	1	1
Electrical	1	0	2	4	3	3	4	3	3	9
Mechanical	0	2	0	1	1	1	3	6	5	2
Other engineering	0	3	4	1	3	3	7	4	4	2
Sciences, total	63	45	61	62	62	63	55	81	52	64
Physical sciences, total	14	11	14	12	19	12	8	18	6	10
Astronomy	1	0	1	0	0	0	0	0	1	0
Chemistry	10	9	9	9	13	9	6	11	4	7
Physics	3	2	4	3	6	3	2	7	1	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	4	0	3	1	0	1	3	4	2	4
Mathematics	2	0	1	1	1	0	3	3	4	2
Computer sciences	2	3	1	0	4	0	4	6	1	5
Biological sciences	14	12	16	16	14	21	12	21	20	19
Agricultural sciences	4	0	3	7	2	3	3	4	2	0
Psychology	11	6	16	13	13	13	15	20	11	15
Social sciences	12	13	7	12	9	13	7	5	6	9
Non-S&E, total	37	32	39	51	51	46	40	55	57	49
Health	0	2	3	0	2	7	2	3	3	5
Humanities[1]	8	11	10	18	16	14	16	26	19	14
Education	26	16	23	25	23	19	17	21	27	21
Professional/other	3	3	3	8	10	6	5	5	8	9
Grand total, all fields	104	84	110	121	123	120	112	155	125	128

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, men, Mexican American									
Science and engineering, total	61	76	72	61	80	79	85	87	130	82
Engineering, total	10	12	10	9	12	13	21	11	25	7
Chemical	2	3	1	1	1	2	2	1	1	0
Civil	1	2	2	0	1	3	0	1	4	1
Electrical	4	3	3	2	4	3	8	2	6	2
Mechanical	1	2	2	0	2	1	3	3	3	1
Other engineering	2	2	2	6	4	4	8	4	11	3
Sciences, total	51	64	62	52	68	66	64	76	105	75
Physical sciences, total	8	12	7	7	17	9	16	12	18	10
Astronomy	0	0	0	0	1	0	1	0	1	0
Chemistry	8	10	4	5	14	6	11	7	12	5
Physics	0	2	3	2	2	3	4	5	5	5
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	4	4	1	4	2	3	2	4	4
Mathematics	1	1	3	2	3	3	1	2	3	5
Computer sciences	0	0	2	0	0	1	1	2	3	0
Biological sciences	13	16	10	12	16	15	16	20	29	23
Agricultural sciences	6	1	3	1	4	2	1	2	6	3
Psychology	11	19	19	16	17	14	18	20	18	14
Social sciences	11	11	14	13	7	20	8	16	24	16
Non-S&E, total	48	44	45	56	70	68	70	68	80	68
Health	1	0	0	2	0	3	2	0	1	3
Humanities[1]	9	11	13	18	22	21	21	21	30	26
Education	30	27	26	29	37	40	37	41	44	34
Professional/other	8	6	6	7	11	4	10	6	5	5
Grand total, all fields	109	120	117	117	150	147	155	155	210	150
	U.S. citizens, men, other Hispanic									
Science and engineering, total	109	114	120	125	110	126	133	150	182	141
Engineering, total	19	20	26	28	22	26	33	30	46	27
Chemical	3	2	4	4	2	4	5	1	6	1
Civil	3	0	2	5	3	2	1	3	7	3
Electrical	3	9	7	7	9	7	11	11	16	13
Mechanical	1	2	6	2	3	3	4	2	10	4
Other engineering	9	7	7	10	5	10	12	13	7	6
Sciences, total	90	94	94	97	88	100	100	120	136	114
Physical sciences, total	19	21	22	30	22	21	17	16	15	11
Astronomy	1	1	2	1	1	1	0	2	0	0
Chemistry	12	12	10	15	9	9	8	8	9	7
Physics	6	8	10	14	12	11	9	6	6	4
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	7	2	4	1	1	3	5	4	6
Mathematics	1	2	3	5	5	6	4	7	11	2
Computer sciences	1	7	3	4	1	1	2	5	8	4
Biological sciences	18	16	29	19	31	31	27	34	30	38
Agricultural sciences	1	5	1	1	3	4	2	6	8	3
Psychology	25	22	17	13	12	16	18	19	24	22
Social sciences	23	14	17	21	13	20	27	28	36	28
Non-S&E, total	58	53	63	60	55	65	73	82	91	67
Health	1	2	1	2	1	5	7	4	8	3
Humanities[1]	27	27	28	19	29	25	28	43	33	34
Education	24	20	25	34	16	23	29	23	38	27
Professional/other	6	4	9	5	9	12	9	12	12	3
Grand total, all fields	167	167	183	185	165	191	206	232	273	208

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, men, white									
Science and engineering, total	8,291	8,238	8,294	8,370	8,357	8,332	8,296	8,213	8,189	7,894
Engineering, total	1,474	1,486	1,523	1,644	1,595	1,662	1,801	1,838	1,760	1,651
Chemical	254	262	211	233	201	187	199	222	213	234
Civil	135	128	125	122	137	145	155	168	155	174
Electrical	374	397	419	462	453	480	482	482	443	431
Mechanical	242	217	281	272	291	296	332	328	316	277
Other engineering	469	482	487	555	513	554	633	638	633	535
Sciences, total	6,817	6,752	6,771	6,726	6,762	6,670	6,495	6,375	6,429	6,243
Physical sciences, total	1,571	1,525	1,536	1,473	1,557	1,422	1,418	1,402	1,403	1,368
Astronomy	70	75	81	78	75	91	98	107	91	83
Chemistry	942	896	886	828	843	733	738	748	765	770
Physics	547	544	555	560	628	587	575	537	539	510
Other physical sciences	12	10	14	7	11	11	7	10	8	5
Earth, atmospheric, & ocean sciences	379	409	339	332	366	346	326	349	317	292
Mathematics	272	324	319	334	344	388	348	325	353	327
Computer sciences	248	260	299	307	305	319	286	278	305	262
Biological sciences	1,776	1,825	1,802	1,782	1,700	1,724	1,710	1,717	1,762	1,668
Agricultural sciences	441	406	349	314	353	357	293	282	268	265
Psychology	1,059	980	1,059	1,081	1,022	968	894	824	872	891
Social sciences	1,071	1,023	1,068	1,103	1,115	1,146	1,220	1,198	1,149	1,170
Non-S&E, total	4,398	4,447	4,549	4,498	4,699	4,722	4,456	4,320	4,261	4,244
Health	198	186	171	198	250	222	207	214	224	244
Humanities[1]	1,451	1,466	1,574	1,546	1,662	1,761	1,675	1,779	1,784	1,826
Education	1,999	1,968	1,977	1,958	1,937	1,833	1,805	1,597	1,572	1,539
Professional/other	750	827	827	796	850	906	769	730	681	635
Grand total, all fields	12,689	12,685	12,843	12,868	13,056	13,054	12,752	12,533	12,450	12,138
	U.S. citizens, women									
Science and engineering, total	4,893	5,238	5,162	5,503	5,703	5,888	6,055	6,222	6,495	6,396
Engineering, total	248	279	283	296	343	374	417	415	374	426
Chemical	54	51	68	59	57	70	83	61	64	66
Civil	29	21	20	30	48	36	37	45	50	54
Electrical	45	44	55	57	64	79	83	74	66	62
Mechanical	23	34	23	33	32	28	45	46	41	52
Other engineering	97	129	117	117	142	161	169	189	153	192
Sciences, total	4,645	4,959	4,879	5,207	5,360	5,514	5,638	5,807	6,121	5,970
Physical sciences, total	422	412	447	446	453	519	467	472	511	470
Astronomy	16	7	13	20	20	21	31	25	23	23
Chemistry	352	336	357	352	345	409	333	351	392	362
Physics	47	66	73	71	86	87	101	92	89	79
Other physical sciences	7	3	4	3	2	2	2	4	7	6
Earth, atmospheric, & ocean sciences	118	148	138	112	125	112	114	145	148	135
Mathematics	82	93	97	124	122	132	105	143	171	165
Computer sciences	80	83	69	82	77	116	77	82	103	90
Biological sciences	1,233	1,290	1,329	1,449	1,492	1,487	1,585	1,637	1,680	1,646
Agricultural sciences	147	128	134	124	132	112	145	134	154	144
Psychology	1,724	1,847	1,724	1,869	1,909	1,990	2,105	2,052	2,154	2,129
Social sciences	839	958	941	1,001	1,050	1,046	1,040	1,142	1,200	1,191
Non-S&E, total	5,847	5,947	6,329	6,429	6,709	6,886	6,988	6,853	7,073	6,843
Health	500	558	606	653	678	675	685	704	800	685
Humanities[1]	1,319	1,369	1,483	1,575	1,649	1,810	1,872	1,875	1,949	1,938
Education	3,362	3,359	3,589	3,509	3,664	3,628	3,717	3,595	3,586	3,543
Professional/other	666	661	651	692	718	773	714	679	738	677
Grand total, all fields	10,740	11,185	11,491	11,932	12,412	12,774	13,043	13,075	13,568	13,239

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, women, American Indian/Alaskan Native									
Science and engineering, total	18	19	27	18	24	26	34	34	42	56
Engineering, total	0	2	3	0	2	0	2	3	4	2
Chemical	0	1	0	0	0	0	0	1	3	1
Civil	0	0	1	0	0	0	1	1	0	1
Electrical	0	1	1	0	0	0	1	0	0	0
Mechanical	0	0	0	0	0	0	0	1	0	0
Other engineering	0	0	1	0	2	0	0	0	1	0
Sciences, total	18	17	24	18	22	26	32	31	38	54
Physical sciences, total	0	2	2	2	1	2	1	0	1	3
Astronomy	0	0	0	0	0	0	0	0	0	1
Chemistry	0	2	2	1	0	2	1	0	1	2
Physics	0	0	0	1	1	0	0	0	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	1	0	0	0	0	0	1	1	3
Mathematics	0	0	1	0	0	1	0	0	2	0
Computer sciences	0	0	0	1	1	0	2	1	0	1
Biological sciences	1	4	5	2	5	5	9	3	6	10
Agricultural sciences	0	0	0	0	0	0	4	0	2	1
Psychology	13	8	9	9	7	8	9	12	18	23
Social sciences	3	2	7	4	8	10	7	14	8	13
Non-S&E, total	27	37	40	42	48	42	50	54	43	65
Health	0	2	2	6	5	7	3	4	3	6
Humanities[1]	2	7	6	3	8	8	8	11	7	10
Education	21	26	30	30	27	24	38	33	24	41
Professional/other	4	2	2	3	8	3	1	6	9	8
Grand total, all fields	45	56	67	60	72	68	84	88	85	121
	U.S. citizens, women, Asian/Pacific Islander									
Science and engineering, total	129	192	201	233	244	323	324	372	353	369
Engineering, total	20	27	33	24	31	52	51	46	52	43
Chemical	7	7	7	4	7	11	10	3	9	10
Civil	1	1	1	0	0	2	6	3	3	1
Electrical	4	3	12	7	11	12	14	16	18	12
Mechanical	2	3	2	1	5	4	4	8	7	6
Other engineering	6	13	11	12	8	23	17	16	15	14
Sciences, total	109	165	168	209	213	271	273	326	301	326
Physical sciences, total	19	20	36	42	34	49	33	45	34	43
Astronomy	0	0	1	1	0	1	2	0	1	0
Chemistry	13	15	29	37	27	39	23	31	22	37
Physics	6	5	6	4	7	9	8	14	11	6
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	3	3	2	1	1	3	5	3	4
Mathematics	3	5	4	10	4	7	8	6	13	8
Computer sciences	1	7	3	4	4	8	9	11	10	9
Biological sciences	39	69	63	88	80	102	129	126	120	129
Agricultural sciences	2	3	5	4	2	5	7	5	1	10
Psychology	25	33	30	32	61	54	57	80	71	76
Social sciences	19	25	24	27	27	45	27	48	49	47
Non-S&E, total	85	114	116	105	115	151	151	189	172	183
Health	14	13	23	10	21	15	21	27	19	28
Humanities[1]	12	26	24	36	28	58	53	64	65	72
Education	48	59	58	51	53	57	61	76	64	62
Professional/other	11	16	11	8	13	21	16	22	24	21
Grand total, all fields	214	306	317	338	359	474	475	561	525	552

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, women, black									
Science and engineering, total	139	178	161	196	199	252	238	274	335	343
Engineering, total	5	8	6	11	13	13	19	22	21	23
Chemical	2	1	1	3	4	1	5	6	1	4
Civil	0	2	0	2	2	3	1	0	2	2
Electrical	1	2	2	2	3	4	5	3	4	5
Mechanical	0	1	0	0	1	0	3	1	0	1
Other engineering	2	2	3	4	3	5	5	12	14	11
Sciences, total	134	170	155	185	186	239	219	252	314	320
Physical sciences, total	6	4	5	9	12	17	12	10	26	24
Astronomy	0	0	1	0	0	0	0	1	0	2
Chemistry	6	4	4	8	8	16	10	8	23	19
Physics	0	0	0	0	4	1	2	1	3	3
Other physical sciences	0	0	0	1	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	1	1	0	1	0	2	1	3	5
Mathematics	1	4	0	1	3	1	2	2	7	6
Computer sciences	0	4	1	3	2	4	3	1	8	8
Biological sciences	21	26	22	30	43	39	36	57	66	62
Agricultural sciences	1	1	1	2	3	5	0	5	1	6
Psychology	69	84	76	74	72	108	107	107	112	130
Social sciences	34	46	49	66	50	65	57	69	91	79
Non-S&E, total	411	411	414	474	491	565	541	542	622	649
Health	18	22	24	37	30	41	32	40	49	43
Humanities[1]	34	47	42	38	52	54	60	70	69	92
Education	317	288	319	347	355	406	396	375	450	444
Professional/other	42	54	29	52	54	64	53	57	54	70
Grand total, all fields	550	589	575	670	690	817	779	816	957	992
	U.S. citizens, women, Hispanic									
Science and engineering, total	153	169	170	188	201	199	236	234	302	313
Engineering, total	6	10	11	11	5	10	14	21	13	22
Chemical	0	4	2	3	0	2	5	2	0	3
Civil	1	2	1	2	2	1	0	1	3	6
Electrical	1	0	2	3	0	1	4	6	2	4
Mechanical	1	2	2	0	1	0	0	3	1	1
Other engineering	3	2	4	3	2	6	5	9	7	8
Sciences, total	147	159	159	177	196	189	222	213	289	291
Physical sciences, total	22	10	15	16	17	19	9	12	10	20
Astronomy	0	0	1	0	0	2	0	1	0	0
Chemistry	20	8	11	14	13	14	6	10	9	19
Physics	2	2	3	2	4	3	3	1	1	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	4	1	4	2	2	3	4	4	5	4
Mathematics	3	3	3	1	3	3	0	5	7	3
Computer sciences	1	1	1	1	0	4	5	2	1	3
Biological sciences	28	35	35	46	50	35	51	56	71	65
Agricultural sciences	3	1	2	5	7	1	2	3	9	4
Psychology	53	66	70	78	86	94	116	102	143	141
Social sciences	33	42	29	28	31	30	35	29	43	51
Non-S&E, total	188	192	198	223	245	255	238	279	287	310
Health	15	8	8	15	17	14	20	22	25	28
Humanities[1]	60	56	47	67	62	63	73	82	72	82
Education	99	112	126	125	150	153	120	158	171	170
Professional/other	14	16	17	16	16	25	25	17	19	30
Grand total, all fields	341	361	368	411	446	454	474	513	589	623

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, women, Puerto Rican									
Science and engineering, total	48	47	49	42	59	63	68	73	103	85
Engineering, total	2	2	3	2	0	2	5	4	1	8
Chemical	0	1	0	0	0	1	2	0	0	1
Civil	0	0	0	1	0	0	0	0	0	1
Electrical	1	0	1	1	0	0	0	1	0	2
Mechanical	0	0	1	0	0	0	0	0	0	0
Other engineering	1	1	1	0	0	1	3	3	1	4
Sciences, total	46	45	46	40	59	61	63	69	102	77
Physical sciences, total	10	6	6	5	7	9	4	2	5	8
Astronomy	0	0	0	0	0	1	0	0	0	0
Chemistry	10	5	5	5	6	8	3	2	5	8
Physics	0	1	1	0	1	0	1	0	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	0	0	0	0	1	0	1	3	1
Mathematics	0	0	1	0	0	1	0	1	3	0
Computer sciences	0	0	0	1	0	0	1	0	1	1
Biological sciences	10	11	11	11	14	9	18	16	23	20
Agricultural sciences	1	0	0	3	3	0	1	1	1	1
Psychology	15	14	19	11	30	31	33	37	58	34
Social sciences	9	14	9	9	5	10	6	11	8	12
Non-S&E, total	58	60	70	69	75	86	69	84	71	79
Health	6	1	1	3	4	5	5	7	4	6
Humanities[1]	20	19	12	18	22	16	22	23	17	16
Education	30	36	53	45	45	50	34	48	44	49
Professional/other	2	4	4	3	4	15	8	6	6	8
Grand total, all fields	106	107	119	111	134	149	137	157	174	164
	U.S. citizens, women, Mexican American									
Science and engineering, total	35	41	38	42	54	57	52	66	83	72
Engineering, total	2	2	0	1	2	1	3	7	3	4
Chemical	0	1	0	0	0	1	1	1	0	0
Civil	1	0	0	0	0	0	0	1	1	2
Electrical	0	0	0	0	0	0	1	3	0	1
Mechanical	1	1	0	0	0	0	0	0	0	0
Other engineering	0	0	0	1	2	0	1	2	2	1
Sciences, total	33	39	38	41	52	56	49	59	80	68
Physical sciences, total	3	3	2	2	3	4	3	2	3	5
Astronomy	0	0	0	0	0	1	0	0	0	0
Chemistry	3	2	2	1	2	2	2	2	3	4
Physics	0	1	0	1	1	1	1	0	0	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	0	2	0	0	1	2	1	1	1
Mathematics	2	2	0	0	1	2	0	1	3	2
Computer sciences	0	0	0	0	0	2	0	0	0	0
Biological sciences	7	7	11	10	13	9	12	20	20	16
Agricultural sciences	0	0	1	1	1	1	0	0	3	0
Psychology	14	15	17	24	21	33	20	29	33	27
Social sciences	6	12	5	4	13	4	12	6	17	17
Non-S&E, total	35	55	52	71	86	69	70	75	114	111
Health	6	3	5	5	3	5	4	7	14	11
Humanities[1]	8	12	9	16	17	12	18	16	23	20
Education	19	37	32	44	63	51	41	48	71	67
Professional/other	2	3	6	6	3	1	7	4	6	13
Grand total, all fields	70	96	90	113	140	126	122	141	197	183

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens, women, other Hispanic									
Science and engineering, total	70	81	83	104	88	79	116	95	116	156
Engineering, total	2	6	8	8	3	7	6	10	9	10
Chemical	0	2	2	3	0	0	2	1	0	2
Civil	0	2	1	1	2	1	0	0	2	3
Electrical	0	0	1	2	0	1	3	2	2	1
Mechanical	0	1	1	0	1	0	0	3	1	1
Other engineering	2	1	3	2	0	5	1	4	4	3
Sciences, total	68	75	75	96	85	72	110	85	107	146
Physical sciences, total	9	1	7	9	7	6	2	8	2	7
Astronomy	0	0	1	0	0	0	0	1	0	0
Chemistry	7	1	4	8	5	4	1	6	1	7
Physics	2	0	2	1	2	2	1	1	1	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	1	2	2	2	1	2	2	1	2
Mathematics	1	1	2	1	2	0	0	3	1	1
Computer sciences	1	1	1	0	0	2	4	2	0	2
Biological sciences	11	17	13	25	23	17	21	20	28	29
Agricultural sciences	2	1	1	1	3	0	1	2	5	3
Psychology	24	37	34	43	35	30	63	36	52	80
Social sciences	18	16	15	15	13	16	17	12	18	22
Non-S&E, total	95	77	76	83	84	100	99	120	102	120
Health	3	4	2	7	10	4	11	8	7	11
Humanities[1]	32	25	26	33	23	35	33	43	32	46
Education	50	39	41	36	42	52	45	62	56	54
Professional/other	10	9	7	7	9	9	10	7	7	9
Grand total, all fields	165	158	159	187	172	179	215	215	218	276
	U.S. citizens, women, white									
Science and engineering, total	4,403	4,602	4,558	4,841	5,000	5,047	5,165	5,082	5,280	5,242
Engineering, total	216	221	227	248	291	297	324	312	278	331
Chemical	45	38	56	49	45	56	63	48	50	46
Civil	27	15	17	25	44	30	29	38	41	44
Electrical	39	33	38	45	50	60	59	46	42	39
Mechanical	19	27	19	31	25	24	37	32	32	44
Other engineering	86	108	97	98	127	127	136	148	113	158
Sciences, total	4,187	4,381	4,331	4,593	4,709	4,750	4,841	4,770	5,002	4,911
Physical sciences, total	368	372	382	375	387	426	406	391	430	374
Astronomy	16	6	10	19	19	18	29	22	22	20
Chemistry	307	305	307	291	296	333	290	292	328	282
Physics	39	58	61	63	70	73	85	73	73	67
Other physical sciences	6	3	4	2	2	2	2	4	7	5
Earth, atmospheric, & ocean sciences	109	137	130	108	120	106	104	126	134	116
Mathematics	74	79	88	111	111	119	93	124	138	147
Computer sciences	77	70	64	72	70	99	56	63	77	67
Biological sciences	1,133	1,140	1,196	1,274	1,305	1,299	1,345	1,353	1,382	1,360
Agricultural sciences	141	121	126	112	118	99	131	115	135	120
Psychology	1,540	1,636	1,521	1,670	1,672	1,711	1,807	1,659	1,733	1,741
Social sciences	745	826	824	871	926	891	899	939	973	986
Non-S&E, total	5,079	5,139	5,511	5,552	5,760	5,824	5,949	5,563	5,764	5,549
Health	450	505	543	584	596	587	599	598	685	571
Humanities[1]	1,198	1,219	1,353	1,423	1,488	1,613	1,658	1,590	1,677	1,647
Education	2,843	2,852	3,030	2,939	3,052	2,968	3,077	2,811	2,788	2,785
Professional/other	588	563	585	606	624	656	615	564	614	546
Grand total, all fields	9,482	9,741	10,069	10,393	10,760	10,871	11,114	10,645	11,044	10,791

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Non-U.S. citizens with permanent visas									
Science and engineering, total	1,197	1,285	1,383	1,641	3,021	3,509	3,009	2,280	2,022	1,645
Engineering, total	389	388	411	469	838	956	793	593	479	399
Chemical	50	51	60	53	87	90	73	88	46	39
Civil	61	40	51	59	89	103	93	78	51	51
Electrical	108	132	122	165	265	288	221	187	166	125
Mechanical	69	62	74	87	179	180	152	82	82	64
Other engineering	101	103	104	105	218	295	254	158	134	120
Sciences, total	808	897	972	1,172	2,183	2,553	2,216	1,687	1,543	1,246
Physical sciences, total	172	180	200	237	591	704	493	366	315	240
Astronomy	4	2	6	5	9	21	12	7	16	6
Chemistry	99	110	113	128	325	386	293	205	180	149
Physics	65	68	81	102	255	295	187	152	117	84
Other physical sciences	4	0	0	2	2	2	1	2	2	1
Earth, atmospheric, & ocean sciences	19	26	35	41	106	116	96	70	62	51
Mathematics	47	55	53	94	153	217	158	99	93	67
Computer sciences	55	63	67	84	117	132	92	91	84	71
Biological sciences	189	211	240	303	666	835	818	584	554	464
Agricultural sciences	57	56	62	49	97	106	103	83	79	51
Psychology	73	65	86	90	84	101	104	89	93	69
Social sciences	196	241	229	274	369	342	352	305	263	233
Non-S&E, total	501	572	597	618	726	809	758	650	682	655
Health	35	60	46	60	89	106	83	69	82	77
Humanities[1]	183	219	229	238	280	308	319	289	305	282
Education	153	174	165	177	199	218	196	165	171	180
Professional/other	130	119	157	143	158	177	160	127	124	116
Grand total, all fields	1,698	1,857	1,980	2,259	3,747	4,318	3,767	2,930	2,704	2,300
	Non-U.S. citizens with permanent visas, men									
Science and engineering, total	908	926	968	1,120	2,230	2,485	2,101	1,508	1,343	1,047
Engineering, total	361	351	366	417	733	810	685	495	402	335
Chemical	42	42	46	48	66	72	58	72	34	29
Civil	56	36	48	57	82	87	83	65	43	44
Electrical	106	128	110	142	241	247	198	155	141	106
Mechanical	68	59	72	84	157	159	137	73	73	56
Other engineering	89	86	90	86	187	245	209	130	111	100
Sciences, total	547	575	602	703	1,497	1,675	1,416	1,013	941	712
Physical sciences, total	124	138	133	162	419	515	350	251	222	158
Astronomy	2	2	4	2	8	17	8	6	11	4
Chemistry	68	78	69	79	206	258	187	125	110	85
Physics	50	58	60	79	204	239	154	120	99	68
Other physical sciences	4	0	0	2	1	1	1	0	2	1
Earth, atmospheric, & ocean sciences	19	17	26	33	87	84	80	52	39	35
Mathematics	36	36	33	54	124	166	118	65	66	40
Computer sciences	45	52	53	57	100	105	78	73	64	57
Biological sciences	110	111	131	168	415	463	462	302	313	248
Agricultural sciences	45	47	46	39	69	83	73	62	50	35
Psychology	25	22	30	21	26	35	26	27	32	21
Social sciences	143	152	150	169	257	224	229	181	155	118
Non-S&E, total	282	298	325	351	407	424	384	327	339	328
Health	18	31	23	34	45	62	45	33	37	44
Humanities[1]	80	97	104	116	141	138	146	132	149	143
Education	86	92	84	96	107	94	89	75	72	69
Professional/other	98	78	114	105	114	130	104	87	81	72
Grand total, all fields	1,190	1,224	1,293	1,471	2,637	2,909	2,485	1,835	1,682	1,375

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Non-U.S. citizens with permanent visas, women									
Science and engineering, total	289	359	415	521	791	1,024	908	772	679	598
Engineering, total	28	37	45	52	105	146	108	98	77	64
Chemical	8	9	14	5	21	18	15	16	12	10
Civil	5	4	3	2	7	16	10	13	8	7
Electrical	2	4	12	23	24	41	23	32	25	19
Mechanical	1	3	2	3	22	21	15	9	9	8
Other engineering	12	17	14	19	31	50	45	28	23	20
Sciences, total	261	322	370	469	686	878	800	674	602	534
Physical sciences, total	48	42	67	75	172	189	143	115	93	82
Astronomy	2	0	2	3	1	4	4	1	5	2
Chemistry	31	32	44	49	119	128	106	80	70	64
Physics	15	10	21	23	51	56	33	32	18	16
Other physical sciences	0	0	0	0	1	1	0	2	0	0
Earth, atmospheric, & ocean sciences	0	9	9	8	19	32	16	18	23	16
Mathematics	11	19	20	40	29	51	40	34	27	27
Computer sciences	10	11	14	27	17	27	14	18	20	14
Biological sciences	79	100	109	135	251	372	356	282	241	216
Agricultural sciences	12	9	16	10	28	23	30	21	29	16
Psychology	48	43	56	69	58	66	78	62	61	48
Social sciences	53	89	79	105	112	118	123	124	108	115
Non-S&E, total	219	274	272	267	319	385	374	323	343	327
Health	17	29	23	26	44	44	38	36	45	33
Humanities[1]	103	122	125	122	139	170	173	157	156	139
Education	67	82	81	81	92	124	107	90	99	111
Professional/other	32	41	43	38	44	47	56	40	43	44
Grand total, all fields	508	633	687	788	1,110	1,409	1,282	1,095	1,022	925
	Non-U.S. citizens with temporary visas									
Science and engineering, total	6,571	7,641	8,092	8,113	7,521	6,994	7,806	7,498	7,779	7,241
Engineering, total	2,277	2,633	2,743	2,784	2,653	2,524	2,720	2,550	2,584	2,193
Chemical	250	281	339	336	336	318	399	343	373	284
Civil	284	353	357	380	385	337	369	310	317	253
Electrical	602	690	725	703	735	712	749	711	709	636
Mechanical	465	493	538	554	459	437	431	448	454	353
Other engineering	676	816	784	811	738	720	772	738	731	667
Sciences, total	4,294	5,008	5,349	5,329	4,868	4,470	5,086	4,948	5,195	5,048
Physical sciences, total	1,073	1,257	1,346	1,263	1,107	930	1,140	1,082	1,205	1,130
Astronomy	30	37	28	34	32	28	42	37	52	39
Chemistry	530	689	729	675	597	493	613	598	661	624
Physics	507	525	581	550	471	399	482	445	487	462
Other physical sciences	6	6	8	4	7	10	3	2	5	5
Earth, atmospheric, & ocean sciences	171	185	236	235	197	173	205	229	216	242
Mathematics	424	506	511	517	448	382	442	442	447	444
Computer sciences	271	340	365	348	343	365	376	330	329	330
Biological sciences	853	1,059	1,159	1,246	1,058	969	1,240	1,320	1,333	1,286
Agricultural sciences	440	435	472	447	453	429	441	391	462	459
Psychology	117	133	156	148	151	164	181	137	168	154
Social sciences	945	1,093	1,104	1,125	1,111	1,058	1,061	1,017	1,035	1,003
Non-S&E, total	1,522	1,670	1,861	1,819	1,885	1,817	1,808	1,680	1,719	1,827
Health	166	171	226	214	230	246	267	273	287	287
Humanities[1]	354	444	495	466	529	548	522	529	532	540
Education	501	503	553	546	537	502	477	408	488	519
Professional/other	501	552	587	593	589	521	542	470	412	481
Grand total, all fields	8,093	9,311	9,953	9,932	9,406	8,811	9,614	9,178	9,498	9,068

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Non-U.S. citizens with temporary visas, men									
Science and engineering, total	5,590	6,412	6,741	6,658	6,200	5,749	6,310	5,977	6,025	5,594
Engineering, total	2,157	2,484	2,574	2,623	2,475	2,365	2,492	2,339	2,310	1,934
Chemical	234	259	308	309	301	297	354	300	313	240
Civil	271	337	330	358	360	314	338	289	278	227
Electrical	573	659	679	660	679	668	697	675	657	574
Mechanical	452	473	518	535	445	424	415	419	425	322
Other engineering	627	756	739	761	690	662	688	656	637	571
Sciences, total	3,433	3,928	4,167	4,035	3,725	3,384	3,818	3,638	3,715	3,660
Physical sciences, total	895	1,041	1,098	1,015	908	770	931	859	926	883
Astronomy	28	30	24	32	28	24	36	27	34	32
Chemistry	421	547	556	503	440	378	465	445	458	444
Physics	441	460	510	477	433	360	428	387	431	402
Other physical sciences	5	4	8	3	7	8	2	0	3	5
Earth, atmospheric, & ocean sciences	153	165	198	202	158	151	169	193	175	195
Mathematics	363	420	427	422	364	304	359	367	362	367
Computer sciences	256	317	329	322	302	322	335	292	306	282
Biological sciences	582	694	787	809	703	635	799	816	795	819
Agricultural sciences	359	366	391	357	366	340	340	298	355	343
Psychology	62	77	81	64	71	79	87	58	67	70
Social sciences	763	848	856	844	853	783	798	755	729	701
Non-S&E, total	1,042	1,105	1,222	1,205	1,129	1,110	1,090	998	1,005	1,046
Health	101	101	159	138	115	142	151	135	157	139
Humanities[1]	211	255	280	275	294	309	280	295	273	297
Education	306	288	299	306	269	244	242	203	249	245
Professional/other	424	461	484	486	451	415	417	365	326	365
Grand total, all fields	6,632	7,517	7,963	7,863	7,329	6,859	7,400	6,975	7,030	6,640
	Non-U.S. citizens with temporary visas, women									
Science and engineering, total	981	1,229	1,351	1,455	1,321	1,245	1,496	1,521	1,754	1,647
Engineering, total	120	149	169	161	178	159	228	211	274	259
Chemical	16	22	31	27	35	21	45	43	60	44
Civil	13	16	27	22	25	23	31	21	39	26
Electrical	29	31	46	43	56	44	52	36	52	62
Mechanical	13	20	20	19	14	13	16	29	29	31
Other engineering	49	60	45	50	48	58	84	82	94	96
Sciences, total	861	1,080	1,182	1,294	1,143	1,086	1,268	1,310	1,480	1,388
Physical sciences, total	178	216	248	248	199	160	209	223	279	247
Astronomy	2	7	4	2	4	4	6	10	18	7
Chemistry	109	142	173	172	157	115	148	153	203	180
Physics	66	65	71	73	38	39	54	58	56	60
Other physical sciences	1	2	0	1	0	2	1	2	2	0
Earth, atmospheric, & ocean sciences	18	20	38	33	39	22	36	36	41	47
Mathematics	61	86	84	95	84	78	83	75	85	77
Computer sciences	15	23	36	26	41	43	41	38	23	48
Biological sciences	271	365	372	437	355	334	441	504	538	467
Agricultural sciences	81	69	81	90	87	89	101	93	107	116
Psychology	55	56	75	84	80	85	94	79	101	84
Social sciences	182	245	248	281	258	275	263	262	306	302
Non-S&E, total	480	565	639	614	756	707	718	682	714	781
Health	65	70	67	76	115	104	116	138	130	148
Humanities[1]	143	189	215	191	235	239	242	234	259	243
Education	195	215	254	240	268	258	235	205	239	274
Professional/other	77	91	103	107	138	106	125	105	86	116
Grand total, all fields	1,461	1,794	1,990	2,069	2,077	1,952	2,214	2,203	2,468	2,428

[1] Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Total									
Science and engineering, total	22,868	24,023	24,675	25,443	26,205	26,535	27,229	27,245	27,309	25,953
Engineering, total	4,894	5,214	5,438	5,698	5,822	6,008	6,305	6,114	5,930	5,337
Aeronautical/astronautical	192	207	234	228	230	252	287	273	243	207
Chemical	658	691	725	737	725	708	798	767	775	678
Civil	553	575	594	624	684	656	697	656	651	585
Electrical	1,276	1,405	1,483	1,543	1,673	1,731	1,740	1,721	1,596	1,477
Industrial	151	165	196	236	228	284	258	246	230	209
Materials/metallurgical	440	489	485	535	539	588	572	581	565	470
Mechanical	884	875	987	1,030	1,015	1,025	1,052	1,021	1,023	853
Other engineering	740	807	734	765	728	764	901	849	847	858
Sciences, total	17,974	18,809	19,237	19,745	20,383	20,527	20,924	21,131	21,379	20,616
Physical sciences, total	3,524	3,626	3,781	3,699	3,977	3,841	3,837	3,768	3,829	3,582
Astronomy	128	125	134	145	144	173	192	198	208	160
Chemistry	2,100	2,194	2,214	2,137	2,257	2,162	2,148	2,147	2,219	2,134
Physics	1,265	1,286	1,403	1,399	1,548	1,479	1,484	1,401	1,378	1,271
Other physical sciences	31	21	30	18	28	27	13	22	24	17
Earth, atmospheric, and ocean sciences	738	815	794	771	824	780	794	878	814	807
Mathematics	892	1,039	1,058	1,146	1,118	1,190	1,122	1,125	1,177	1,085
Computer sciences	705	800	869	880	903	997	921	910	925	850
Biological sciences	4,328	4,650	4,799	5,092	5,203	5,376	5,723	5,786	5,854	5,600
Agricultural sciences	1,174	1,073	1,063	968	1,078	1,036	1,037	982	1,037	965
Psychology	3,281	3,250	3,263	3,420	3,379	3,429	3,491	3,571	3,685	3,667
Social sciences	3,332	3,556	3,610	3,769	3,901	3,878	3,999	4,111	4,058	4,060
Non-S&E, total	13,199	13,511	14,215	14,358	14,829	15,208	15,185	15,310	15,374	15,187
Health	956	1,041	1,112	1,197	1,296	1,330	1,324	1,423	1,503	1,410
Humanities[1]	3,535	3,720	4,036	4,092	4,374	4,690	4,713	5,037	5,114	5,045
Education	6,510	6,454	6,677	6,689	6,708	6,649	6,772	6,573	6,575	6,557
Professional/other	2,198	2,296	2,390	2,380	2,451	2,539	2,376	2,277	2,182	2,175
Grand total, all fields	36,067	37,534	38,890	39,801	41,034	41,743	42,414	42,555	42,683	41,140

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Citizenship known									
Science and engineering, total	21,935	23,555	24,034	24,686	25,708	25,990	26,445	25,900	26,047	24,669
Engineering, total	4,623	5,107	5,263	5,481	5,706	5,866	6,107	5,879	5,629	5,066
Aeronautical/astronautical	176	205	215	219	226	247	277	265	223	194
Chemical	642	680	717	713	716	699	790	752	746	658
Civil	525	566	572	607	677	646	674	637	614	563
Electrical	1,201	1,376	1,444	1,498	1,634	1,683	1,677	1,649	1,513	1,398
Industrial	148	162	192	230	228	280	252	237	222	207
Materials/metallurgical	424	481	469	516	530	575	556	558	541	452
Mechanical	833	852	964	988	997	1,000	1,019	985	970	813
Other engineering	674	785	690	710	698	736	862	796	800	781
Sciences, total	17,312	18,448	18,771	19,205	20,002	20,124	20,338	20,021	20,418	19,603
Physical sciences, total	3,414	3,557	3,703	3,593	3,896	3,771	3,709	3,579	3,660	3,393
Astronomy	126	123	134	145	144	169	191	195	200	155
Chemistry	2,027	2,150	2,170	2,075	2,213	2,117	2,075	2,037	2,127	2,024
Physics	1,232	1,264	1,371	1,356	1,515	1,458	1,430	1,328	1,310	1,197
Other physical sciences	29	20	28	17	24	27	13	19	23	17
Earth, atmospheric, and ocean sciences	706	803	777	739	810	767	763	835	778	763
Mathematics	846	1,024	1,018	1,107	1,105	1,153	1,090	1,072	1,116	1,049
Computer sciences	674	791	854	857	886	981	890	851	887	813
Biological sciences	4,233	4,584	4,727	4,998	5,146	5,298	5,605	5,574	5,646	5,404
Agricultural sciences	1,127	1,055	1,045	953	1,069	1,027	1,017	942	1,005	950
Psychology	3,109	3,151	3,142	3,309	3,287	3,348	3,409	3,275	3,449	3,384
Social sciences	3,203	3,483	3,505	3,649	3,803	3,779	3,855	3,893	3,877	3,847
Non-S&E, total	12,761	13,186	13,909	13,954	14,592	14,879	14,687	14,364	14,617	14,321
Health	922	1,010	1,081	1,153	1,280	1,290	1,283	1,301	1,442	1,330
Humanities[1]	3,436	3,638	3,935	3,978	4,295	4,603	4,567	4,764	4,857	4,817
Education	6,288	6,291	6,570	6,514	6,600	6,497	6,539	6,152	6,229	6,128
Professional/other	2,115	2,247	2,323	2,309	2,417	2,489	2,298	2,147	2,089	2,046
Grand total, all fields	34,696	36,741	37,943	38,640	40,300	40,869	41,132	40,264	40,664	38,990

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens									
Science and engineering, total	14,167	14,629	14,559	14,932	15,166	15,487	15,630	16,122	16,246	15,783
Engineering, total	1,957	2,086	2,109	2,228	2,215	2,386	2,594	2,736	2,566	2,474
Aeronautical/astronautical	82	103	95	114	110	140	166	155	139	103
Chemical	342	348	318	324	293	291	318	321	327	335
Civil	180	173	164	168	203	206	212	249	246	259
Electrical	491	554	597	630	634	683	707	751	638	637
Industrial	56	50	54	89	89	108	107	102	84	86
Materials/metallurgical	190	211	202	228	218	238	244	271	265	223
Mechanical	299	297	352	347	359	383	436	455	434	396
Other engineering	317	350	327	328	309	337	404	432	433	435
Sciences, total	12,210	12,543	12,450	12,704	12,951	13,101	13,036	13,386	13,680	13,309
Physical sciences, total	2,169	2,120	2,157	2,093	2,198	2,137	2,076	2,131	2,140	2,023
Astronomy	92	84	100	106	103	120	137	151	132	110
Chemistry	1,398	1,351	1,328	1,272	1,291	1,238	1,169	1,234	1,286	1,251
Physics	660	671	709	704	789	764	761	731	706	651
Other physical sciences	19	14	20	11	15	15	9	15	16	11
Earth, atmospheric, and ocean sciences	516	592	506	463	507	478	462	536	500	470
Mathematics	375	463	454	496	504	554	490	531	576	538
Computer sciences	348	388	422	425	426	484	422	430	474	412
Biological sciences	3,191	3,314	3,328	3,449	3,422	3,494	3,547	3,670	3,759	3,654
Agricultural sciences	630	564	511	457	519	492	473	468	464	440
Psychology	2,919	2,953	2,900	3,071	3,052	3,083	3,124	3,049	3,188	3,161
Social sciences	2,062	2,149	2,172	2,250	2,323	2,379	2,442	2,571	2,579	2,611
Non-S&E, total	10,738	10,944	11,451	11,517	11,981	12,253	12,121	12,034	12,216	11,839
Health	721	779	809	879	961	938	933	959	1,073	966
Humanities[1]	2,899	2,975	3,211	3,274	3,486	3,747	3,726	3,946	4,020	3,995
Education	5,634	5,614	5,852	5,791	5,864	5,777	5,866	5,579	5,570	5,429
Professional/other	1,484	1,576	1,579	1,573	1,670	1,791	1,596	1,550	1,553	1,449
Grand total, all fields	24,905	25,573	26,010	26,449	27,147	27,740	27,751	28,156	28,462	27,622

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Non-U.S. citizens									
Science and engineering, total	7,768	8,926	9,475	9,754	10,542	10,503	10,815	9,778	9,801	8,886
Engineering, total	2,666	3,021	3,154	3,253	3,491	3,480	3,513	3,143	3,063	2,592
Aeronautical/astronautical	94	102	120	105	116	107	111	110	84	91
Chemical	300	332	399	389	423	408	472	431	419	323
Civil	345	393	408	439	474	440	462	388	368	304
Electrical	710	822	847	868	1,000	1,000	970	898	875	761
Industrial	92	112	138	141	139	172	145	135	138	121
Materials/metallurgical	234	270	267	288	312	337	312	287	276	229
Mechanical	534	555	612	641	638	617	583	530	536	417
Other engineering	357	435	363	382	389	399	458	364	367	346
Sciences, total	5,102	5,905	6,321	6,501	7,051	7,023	7,302	6,635	6,738	6,294
Physical sciences, total	1,245	1,437	1,546	1,500	1,698	1,634	1,633	1,448	1,520	1,370
Astronomy	34	39	34	39	41	49	54	44	68	45
Chemistry	629	799	842	803	922	879	906	803	841	773
Physics	572	593	662	652	726	694	669	597	604	546
Other physical sciences	10	6	8	6	9	12	4	4	7	6
Earth, atmospheric, and ocean sciences	190	211	271	276	303	289	301	299	278	293
Mathematics	471	561	564	611	601	599	600	541	540	511
Computer sciences	326	403	432	432	460	497	468	421	413	401
Biological sciences	1,042	1,270	1,399	1,549	1,724	1,804	2,058	1,904	1,887	1,750
Agricultural sciences	497	491	534	496	550	535	544	474	541	510
Psychology	190	198	242	238	235	265	285	226	261	223
Social sciences	1,141	1,334	1,333	1,399	1,480	1,400	1,413	1,322	1,298	1,236
Non-S&E, total	2,023	2,242	2,458	2,437	2,611	2,626	2,566	2,330	2,401	2,482
Health	201	231	272	274	319	352	350	342	369	364
Humanities[1]	537	663	724	704	809	856	841	818	837	822
Education	654	677	718	723	736	720	673	573	659	699
Professional/other	631	671	744	736	747	698	702	597	536	597
Grand total, all fields	9,791	11,168	11,933	12,191	13,153	13,129	13,381	12,108	12,202	11,368

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Non-U.S. citizens with permanent visas									
Science and engineering, total	1,197	1,285	1,383	1,641	3,021	3,509	3,009	2,280	2,022	1,645
Engineering, total	389	388	411	469	838	956	793	593	479	399
Aeronautical/astronautical	8	11	8	6	20	13	18	13	13	8
Chemical	50	51	60	53	87	90	73	88	46	39
Civil	61	40	51	59	89	103	93	78	51	51
Electrical	108	132	122	165	265	288	221	187	166	125
Industrial	13	18	20	16	30	41	29	17	17	13
Materials/metallurgical	26	29	34	39	79	114	92	44	48	34
Mechanical	69	62	74	87	179	180	152	82	82	64
Other engineering	54	45	42	44	89	127	115	84	56	65
Sciences, total	808	897	972	1,172	2,183	2,553	2,216	1,687	1,543	1,246
Physical sciences, total	172	180	200	237	591	704	493	366	315	240
Astronomy	4	2	6	5	9	21	12	7	16	6
Chemistry	99	110	113	128	325	386	293	205	180	149
Physics	65	68	81	102	255	295	187	152	117	84
Other physical sciences	4	0	0	2	2	2	1	2	2	1
Earth, atmospheric, and ocean sciences	19	26	35	41	106	116	96	70	62	51
Mathematics	47	55	53	94	153	217	158	99	93	67
Computer sciences	55	63	67	84	117	132	92	91	84	71
Biological sciences	189	211	240	303	666	835	818	584	554	464
Agricultural sciences	57	56	62	49	97	106	103	83	79	51
Psychology	73	65	86	90	84	101	104	89	93	69
Social sciences	196	241	229	274	369	342	352	305	263	233
Non-S&E, total	501	572	597	618	726	809	758	650	682	655
Health	35	60	46	60	89	106	83	69	82	77
Humanities[1]	183	219	229	238	280	308	319	289	305	282
Education	153	174	165	177	199	218	196	165	171	180
Professional/other	130	119	157	143	158	177	160	127	124	116
Grand total, all fields	1,698	1,857	1,980	2,259	3,747	4,318	3,767	2,930	2,704	2,300

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Non-U.S. citizens with temporary visas									
Science and engineering, total	6,571	7,641	8,092	8,113	7,521	6,994	7,806	7,498	7,779	7,241
Engineering, total	2,277	2,633	2,743	2,784	2,653	2,524	2,720	2,550	2,584	2,193
Aeronautical/astronautical	86	91	112	99	96	94	93	97	71	83
Chemical	250	281	339	336	336	318	399	343	373	284
Civil	284	353	357	380	385	337	369	310	317	253
Electrical	602	690	725	703	735	712	749	711	709	636
Industrial	79	94	118	125	109	131	116	118	121	108
Materials/metallurgical	208	241	233	249	233	223	220	243	228	195
Mechanical	465	493	538	554	459	437	431	448	454	353
Other engineering	303	390	321	338	300	272	343	280	311	281
Sciences, total	4,294	5,008	5,349	5,329	4,868	4,470	5,086	4,948	5,195	5,048
Physical sciences, total	1,073	1,257	1,346	1,263	1,107	930	1,140	1,082	1,205	1,130
Astronomy	30	37	28	34	32	28	42	37	52	39
Chemistry	530	689	729	675	597	493	613	598	661	624
Physics	507	525	581	550	471	399	482	445	487	462
Other physical sciences	6	6	8	4	7	10	3	2	5	5
Earth, atmospheric, and ocean sciences	171	185	236	235	197	173	205	229	216	242
Mathematics	424	506	511	517	448	382	442	442	447	444
Computer sciences	271	340	365	348	343	365	376	330	329	330
Biological sciences	853	1,059	1,159	1,246	1,058	969	1,240	1,320	1,333	1,286
Agricultural sciences	440	435	472	447	453	429	441	391	462	459
Psychology	117	133	156	148	151	164	181	137	168	154
Social sciences	945	1,093	1,104	1,125	1,111	1,058	1,061	1,017	1,035	1,003
Non-S&E, total	1,522	1,670	1,861	1,819	1,885	1,817	1,808	1,680	1,719	1,827
Health	166	171	226	214	230	246	267	273	287	287
Humanities[1]	354	444	495	466	529	548	522	529	532	540
Education	501	503	553	546	537	502	477	408	488	519
Professional/other	501	552	587	593	589	521	542	470	412	481
Grand total, all fields	8,093	9,311	9,953	9,932	9,406	8,811	9,614	9,178	9,498	9,068

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Citizenship unknown									
Science and engineering, total	933	468	641	757	497	545	784	1,345	1,262	1,284
Engineering, total	271	107	175	217	116	142	198	235	301	271
Aeronautical/astronautical	16	2	19	9	4	5	10	8	20	13
Chemical	16	11	8	24	9	9	8	15	29	20
Civil	28	9	22	17	7	10	23	19	37	22
Electrical	75	29	39	45	39	48	63	72	83	79
Industrial	3	3	4	6	0	4	6	9	8	2
Materials/metallurgical	16	8	16	19	9	13	16	23	24	18
Mechanical	51	23	23	42	18	25	33	36	53	40
Other engineering	66	22	44	55	30	28	39	53	47	77
Sciences, total	662	361	466	540	381	403	586	1,110	961	1,013
Physical sciences, total	110	69	78	106	81	70	128	189	169	189
Astronomy	2	2	0	0	0	4	1	3	8	5
Chemistry	73	44	44	62	44	45	73	110	92	110
Physics	33	22	32	43	33	21	54	73	68	74
Other physical sciences	2	1	2	1	4	0	0	3	1	0
Earth, atmospheric, and ocean sciences	32	12	17	32	14	13	31	43	36	44
Mathematics	46	15	40	39	13	37	32	53	61	36
Computer sciences	31	9	15	23	17	16	31	59	38	37
Biological sciences	95	66	72	94	57	78	118	212	208	196
Agricultural sciences	47	18	18	15	9	9	20	40	32	15
Psychology	172	99	121	111	92	81	82	296	236	283
Social sciences	129	73	105	120	98	99	144	218	181	213
Non-S&E, total	438	325	306	404	237	329	498	946	757	866
Health	34	31	31	44	16	40	41	122	61	80
Humanities[1]	99	82	101	114	79	87	146	273	257	228
Education	222	163	107	175	108	152	233	421	346	429
Professional/other	83	49	67	71	34	50	78	130	93	129
Grand total, all fields	1,371	793	947	1,161	734	874	1,282	2,291	2,019	2,150

[1] Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Total									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	21.4	21.7	22.0	22.4	22.2	22.6	23.2	22.4	21.7	20.6
Aeronautical/astronautical	.8	.9	.9	.9	.9	.9	1.1	1.0	.9	.8
Chemical	2.9	2.9	2.9	2.9	2.8	2.7	2.9	2.8	2.8	2.6
Civil	2.4	2.4	2.4	2.5	2.6	2.5	2.6	2.4	2.4	2.3
Electrical	5.6	5.8	6.0	6.1	6.4	6.5	6.4	6.3	5.8	5.7
Industrial	.7	.7	.8	.9	.9	1.1	.9	.9	.8	.8
Materials/metallurgical	1.9	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	1.8
Mechanical	3.9	3.6	4.0	4.0	3.9	3.9	3.9	3.7	3.7	3.3
Other engineering	3.2	3.4	3.0	3.0	2.8	2.9	3.3	3.1	3.1	3.3
Sciences, total	78.6	78.3	78.0	77.6	77.8	77.4	76.8	77.6	78.3	79.4
Physical sciences, total	15.4	15.1	15.3	14.5	15.2	14.5	14.1	13.8	14.0	13.8
Astronomy	.6	.5	.5	.6	.5	.7	.7	.7	.8	.6
Chemistry	9.2	9.1	9.0	8.4	8.6	8.1	7.9	7.9	8.1	8.2
Physics	5.5	5.4	5.7	5.5	5.9	5.6	5.5	5.1	5.0	4.9
Other physical sciences	.1	.1	.1	.1	.1	.1	.0	.1	.1	.1
Earth, atmospheric, and ocean sciences	3.2	3.4	3.2	3.0	3.1	2.9	2.9	3.2	3.0	3.1
Mathematics	3.9	4.3	4.3	4.5	4.3	4.5	4.1	4.1	4.3	4.2
Computer sciences	3.1	3.3	3.5	3.5	3.4	3.8	3.4	3.3	3.4	3.3
Biological sciences	18.9	19.4	19.4	20.0	19.9	20.3	21.0	21.2	21.4	21.6
Agricultural sciences	5.1	4.5	4.3	3.8	4.1	3.9	3.8	3.6	3.8	3.7
Psychology	14.3	13.5	13.2	13.4	12.9	12.9	12.8	13.1	13.5	14.1
Social sciences	14.6	14.8	14.6	14.8	14.9	14.6	14.7	15.1	14.9	15.6
	Citizenship known									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	21.1	21.7	21.9	22.2	22.2	22.6	23.1	22.7	21.6	20.5
Aeronautical/astronautical	.8	.9	.9	.9	.9	1.0	1.0	1.0	.9	.8
Chemical	2.9	2.9	3.0	2.9	2.8	2.7	3.0	2.9	2.9	2.7
Civil	2.4	2.4	2.4	2.5	2.6	2.5	2.5	2.5	2.4	2.3
Electrical	5.5	5.8	6.0	6.1	6.4	6.5	6.3	6.4	5.8	5.7
Industrial	.7	.7	.8	.9	.9	1.1	1.0	.9	.9	.8
Materials/metallurgical	1.9	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.1	1.8
Mechanical	3.8	3.6	4.0	4.0	3.9	3.8	3.9	3.8	3.7	3.3
Other engineering	3.1	3.3	2.9	2.9	2.7	2.8	3.3	3.1	3.1	3.2
Sciences, total	78.9	78.3	78.1	77.8	77.8	77.4	76.9	77.3	78.4	79.5
Physical sciences, total	15.6	15.1	15.4	14.6	15.2	14.5	14.0	13.8	14.1	13.8
Astronomy	.6	.5	.6	.6	.6	.7	.7	.8	.8	.6
Chemistry	9.2	9.1	9.0	8.4	8.6	8.1	7.8	7.9	8.2	8.2
Physics	5.6	5.4	5.7	5.5	5.9	5.6	5.4	5.1	5.0	4.9
Other physical sciences	.1	.1	.1	.1	.1	.1	.0	.1	.1	.1
Earth, atmospheric, and ocean sciences	3.2	3.4	3.2	3.0	3.2	3.0	2.9	3.2	3.0	3.1
Mathematics	3.9	4.3	4.2	4.5	4.3	4.4	4.1	4.1	4.3	4.3
Computer sciences	3.1	3.4	3.6	3.5	3.4	3.8	3.4	3.3	3.4	3.3
Biological sciences	19.3	19.5	19.7	20.2	20.0	20.4	21.2	21.5	21.7	21.9
Agricultural sciences	5.1	4.5	4.3	3.9	4.2	4.0	3.8	3.6	3.9	3.9
Psychology	14.2	13.4	13.1	13.4	12.8	12.9	12.9	12.6	13.2	13.7
Social sciences	14.6	14.8	14.6	14.8	14.8	14.5	14.6	15.0	14.9	15.6

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	U.S. citizens									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	13.8	14.3	14.5	14.9	14.6	15.4	16.6	17.0	15.8	15.7
Aeronautical/astronautical	.6	.7	.7	.8	.7	.9	1.1	1.0	.9	.7
Chemical	2.4	2.4	2.2	2.2	1.9	1.9	2.0	2.0	2.0	2.1
Civil	1.3	1.2	1.1	1.1	1.3	1.3	1.4	1.5	1.5	1.6
Electrical	3.5	3.8	4.1	4.2	4.2	4.4	4.5	4.7	3.9	4.0
Industrial	.4	.3	.4	.6	.6	.7	.7	.6	.5	.5
Materials/metallurgical	1.3	1.4	1.4	1.5	1.4	1.5	1.6	1.7	1.6	1.4
Mechanical	2.1	2.0	2.4	2.3	2.4	2.5	2.8	2.8	2.7	2.5
Other engineering	2.2	2.4	2.2	2.2	2.0	2.2	2.6	2.7	2.7	2.8
Sciences, total	86.2	85.7	85.5	85.1	85.4	84.6	83.4	83.0	84.2	84.3
Physical sciences, total	15.3	14.5	14.8	14.0	14.5	13.8	13.3	13.2	13.2	12.8
Astronomy	.6	.6	.7	.7	.7	.8	.9	.9	.8	.7
Chemistry	9.9	9.2	9.1	8.5	8.5	8.0	7.5	7.7	7.9	7.9
Physics	4.7	4.6	4.9	4.7	5.2	4.9	4.9	4.5	4.3	4.1
Other physical sciences	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Earth, atmospheric, and ocean sciences	3.6	4.0	3.5	3.1	3.3	3.1	3.0	3.3	3.1	3.0
Mathematics	2.6	3.2	3.1	3.3	3.3	3.6	3.1	3.3	3.5	3.4
Computer sciences	2.5	2.7	2.9	2.8	2.8	3.1	2.7	2.7	2.9	2.6
Biological sciences	22.5	22.7	22.9	23.1	22.6	22.6	22.7	22.8	23.1	23.2
Agricultural sciences	4.4	3.9	3.5	3.1	3.4	3.2	3.0	2.9	2.9	2.8
Psychology	20.6	20.2	19.9	20.6	20.1	19.9	20.0	18.9	19.6	20.0
Social sciences	14.6	14.7	14.9	15.1	15.3	15.4	15.6	15.9	15.9	16.5
	Non-U.S. citizens									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	34.3	33.8	33.3	33.4	33.1	33.1	32.5	32.1	31.3	29.2
Aeronautical/astronautical	1.2	1.1	1.3	1.1	1.1	1.0	1.0	1.1	.9	1.0
Chemical	3.9	3.7	4.2	4.0	4.0	3.9	4.4	4.4	4.3	3.6
Civil	4.4	4.4	4.3	4.5	4.5	4.2	4.3	4.0	3.8	3.4
Electrical	9.1	9.2	8.9	8.9	9.5	9.5	9.0	9.2	8.9	8.6
Industrial	1.2	1.3	1.5	1.4	1.3	1.6	1.3	1.4	1.4	1.4
Materials/metallurgical	3.0	3.0	2.8	3.0	3.0	3.2	2.9	2.9	2.8	2.6
Mechanical	6.9	6.2	6.5	6.6	6.1	5.9	5.4	5.4	5.5	4.7
Other engineering	4.6	4.9	3.8	3.9	3.7	3.8	4.2	3.7	3.7	3.9
Sciences, total	65.7	66.2	66.7	66.6	66.9	66.9	67.5	67.9	68.7	70.8
Physical sciences, total	16.0	16.1	16.3	15.4	16.1	15.6	15.1	14.8	15.5	15.4
Astronomy	.4	.4	.4	.4	.4	.5	.5	.4	.7	.5
Chemistry	8.1	9.0	8.9	8.2	8.7	8.4	8.4	8.2	8.6	8.7
Physics	7.4	6.6	7.0	6.7	6.9	6.6	6.2	6.1	6.2	6.1
Other physical sciences	.1	.1	.1	.1	.1	.1	.0	.0	.1	.1
Earth, atmospheric, and ocean sciences	2.4	2.4	2.9	2.8	2.9	2.8	2.8	3.1	2.8	3.3
Mathematics	6.1	6.3	6.0	6.3	5.7	5.7	5.5	5.5	5.5	5.8
Computer sciences	4.2	4.5	4.6	4.4	4.4	4.7	4.3	4.3	4.2	4.5
Biological sciences	13.4	14.2	14.8	15.9	16.4	17.2	19.0	19.5	19.3	19.7
Agricultural sciences	6.4	5.5	5.6	5.1	5.2	5.1	5.0	4.8	5.5	5.7
Psychology	2.4	2.2	2.6	2.4	2.2	2.5	2.6	2.3	2.7	2.5
Social sciences	14.7	14.9	14.1	14.3	14.0	13.3	13.1	13.5	13.2	13.9

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Non-U.S. citizens with permanent visas									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	32.5	30.2	29.7	28.6	27.7	27.2	26.4	26.0	23.7	24.3
Aeronautical/astronautical	.7	.9	.6	.4	.7	.4	.6	.6	.6	.5
Chemical	4.2	4.0	4.3	3.2	2.9	2.6	2.4	3.9	2.3	2.4
Civil	5.1	3.1	3.7	3.6	2.9	2.9	3.1	3.4	2.5	3.1
Electrical	9.0	10.3	8.8	10.1	8.8	8.2	7.3	8.2	8.2	7.6
Industrial	1.1	1.4	1.4	1.0	1.0	1.2	1.0	.7	.8	.8
Materials/metallurgical	2.2	2.3	2.5	2.4	2.6	3.2	3.1	1.9	2.4	2.1
Mechanical	5.8	4.8	5.4	5.3	5.9	5.1	5.1	3.6	4.1	3.9
Other engineering	4.5	3.5	3.0	2.7	2.9	3.6	3.8	3.7	2.8	4.0
Sciences, total	67.5	69.8	70.3	71.4	72.3	72.8	73.6	74.0	76.3	75.7
Physical sciences, total	14.4	14.0	14.5	14.4	19.6	20.1	16.4	16.1	15.6	14.6
Astronomy	.3	.2	.4	.3	.3	.6	.4	.3	.8	.4
Chemistry	8.3	8.6	8.2	7.8	10.8	11.0	9.7	9.0	8.9	9.1
Physics	5.4	5.3	5.9	6.2	8.4	8.4	6.2	6.7	5.8	5.1
Other physical sciences	.3	.0	.0	.1	.1	.1	.0	.1	.1	.1
Earth, atmospheric, and ocean sciences	1.6	2.0	2.5	2.5	3.5	3.3	3.2	3.1	3.1	3.1
Mathematics	3.9	4.3	3.8	5.7	5.1	6.2	5.3	4.3	4.6	4.1
Computer sciences	4.6	4.9	4.8	5.1	3.9	3.8	3.1	4.0	4.2	4.3
Biological sciences	15.8	16.4	17.4	18.5	22.0	23.8	27.2	25.6	27.4	28.2
Agricultural sciences	4.8	4.4	4.5	3.0	3.2	3.0	3.4	3.6	3.9	3.1
Psychology	6.1	5.1	6.2	5.5	2.8	2.9	3.5	3.9	4.6	4.2
Social sciences	16.4	18.8	16.6	16.7	12.2	9.7	11.7	13.4	13.0	14.2
	Non-U.S. citizens with temporary visas									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	34.7	34.5	33.9	34.3	35.3	36.1	34.8	34.0	33.2	30.3
Aeronautical/astronautical	1.3	1.2	1.4	1.2	1.3	1.3	1.2	1.3	.9	1.1
Chemical	3.8	3.7	4.2	4.1	4.5	4.5	5.1	4.6	4.8	3.9
Civil	4.3	4.6	4.4	4.7	5.1	4.8	4.7	4.1	4.1	3.5
Electrical	9.2	9.0	9.0	8.7	9.8	10.2	9.6	9.5	9.1	8.8
Industrial	1.2	1.2	1.5	1.5	1.4	1.9	1.5	1.6	1.6	1.5
Materials/metallurgical	3.2	3.2	2.9	3.1	3.1	3.2	2.8	3.2	2.9	2.7
Mechanical	7.1	6.5	6.6	6.8	6.1	6.2	5.5	6.0	5.8	4.9
Other engineering	4.6	5.1	4.0	4.2	4.0	3.9	4.4	3.7	4.0	3.9
Sciences, total	65.3	65.5	66.1	65.7	64.7	63.9	65.2	66.0	66.8	69.7
Physical sciences, total	16.3	16.5	16.6	15.6	14.7	13.3	14.6	14.4	15.5	15.6
Astronomy	.5	.5	.3	.4	.4	.4	.5	.5	.7	.5
Chemistry	8.1	9.0	9.0	8.3	7.9	7.0	7.9	8.0	8.5	8.6
Physics	7.7	6.9	7.2	6.8	6.3	5.7	6.2	5.9	6.3	6.4
Other physical sciences	.1	.1	.1	.0	.1	.1	.0	.0	.1	.1
Earth, atmospheric, and ocean sciences	2.6	2.4	2.9	2.9	2.6	2.5	2.6	3.1	2.8	3.3
Mathematics	6.5	6.6	6.3	6.4	6.0	5.5	5.7	5.9	5.7	6.1
Computer sciences	4.1	4.4	4.5	4.3	4.6	5.2	4.8	4.4	4.2	4.6
Biological sciences	13.0	13.9	14.3	15.4	14.1	13.9	15.9	17.6	17.1	17.8
Agricultural sciences	6.7	5.7	5.8	5.5	6.0	6.1	5.6	5.2	5.9	6.3
Psychology	1.8	1.7	1.9	1.8	2.0	2.3	2.3	1.8	2.2	2.1
Social sciences	14.4	14.3	13.6	13.9	14.8	15.1	13.6	13.6	13.3	13.9

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1990-1999

Field of study	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Citizenship unknown									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	29.0	22.9	27.3	28.7	23.3	26.1	25.3	17.5	23.9	21.1
Aeronautical/astronautical	1.7	.4	3.0	1.2	.8	.9	1.3	.6	1.6	1.0
Chemical	1.7	2.4	1.2	3.2	1.8	1.7	1.0	1.1	2.3	1.6
Civil	3.0	1.9	3.4	2.2	1.4	1.8	2.9	1.4	2.9	1.7
Electrical	8.0	6.2	6.1	5.9	7.8	8.8	8.0	5.4	6.6	6.2
Industrial	.3	.6	.6	.8	.0	.7	.8	.7	.6	.2
Materials/metallurgical	1.7	1.7	2.5	2.5	1.8	2.4	2.0	1.7	1.9	1.4
Mechanical	5.5	4.9	3.6	5.5	3.6	4.6	4.2	2.7	4.2	3.1
Other engineering	7.1	4.7	6.9	7.3	6.0	5.1	5.0	3.9	3.7	6.0
Sciences, total	71.0	77.1	72.7	71.3	76.7	73.9	74.7	82.5	76.1	78.9
Physical sciences, total	11.8	14.7	12.2	14.0	16.3	12.8	16.3	14.1	13.4	14.7
Astronomy	.2	.4	.0	.0	.0	.7	.1	.2	.6	.4
Chemistry	7.8	9.4	6.9	8.2	8.9	8.3	9.3	8.2	7.3	8.6
Physics	3.5	4.7	5.0	5.7	6.6	3.9	6.9	5.4	5.4	5.8
Other physical sciences	.2	.2	.3	.1	.8	.0	.0	.2	.1	.0
Earth, atmospheric, and ocean sciences	3.4	2.6	2.7	4.2	2.8	2.4	4.0	3.2	2.9	3.4
Mathematics	4.9	3.2	6.2	5.2	2.6	6.8	4.1	3.9	4.8	2.8
Computer sciences	3.3	1.9	2.3	3.0	3.4	2.9	4.0	4.4	3.0	2.9
Biological sciences	10.2	14.1	11.2	12.4	11.5	14.3	15.1	15.8	16.5	15.3
Agricultural sciences	5.0	3.8	2.8	2.0	1.8	1.7	2.6	3.0	2.5	1.2
Psychology	18.4	21.2	18.9	14.7	18.5	14.9	10.5	22.0	18.7	22.0
Social sciences	13.8	15.6	16.4	15.9	19.7	18.2	18.4	16.2	14.3	16.6

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Total non-U.S. citizens, S&E									
Total foreign citizenship	7,768	8,926	9,475	9,754	10,542	10,503	10,815	9,778	9,801	8,886
North America, total	446	525	515	506	547	505	530	462	545	531
Canada	253	297	304	285	275	274	276	249	278	283
Caribbean	36	54	44	38	61	60	51	46	61	50
Central America	53	46	52	44	69	43	45	35	42	39
Mexico	104	128	115	139	142	128	158	132	164	159
South America, total	343	387	394	394	408	359	454	386	413	419
Argentina	65	62	86	53	56	49	66	67	72	52
Brazil	100	119	133	151	157	137	204	143	152	156
Chile	50	54	48	52	42	38	36	29	24	34
Colombia	40	49	37	35	48	45	42	38	26	45
South America, other	88	103	90	103	105	90	106	109	139	132
Europe, total	801	972	950	1,104	1,150	1,254	1,260	1,276	1,479	1,456
Belgium	31	43	42	24	21	32	25	17	17	21
England, United Kingdom	100	132	137	154	128	132	117	89	125	140
France	65	67	77	93	96	83	68	73	76	78
Germany	123	118	124	164	196	208	170	178	205	179
Europe, other	482	612	570	669	709	799	880	919	1,056	1,038
East Asia, total	3,604	4,486	4,865	5,010	5,484	5,487	5,597	4,556	4,537	4,075
Taiwan	1,012	1,127	1,242	1,213	1,301	1,240	1,149	1,023	891	734
China, People's Republic of	1,150	1,793	2,045	2,227	2,531	2,752	2,954	2,288	2,418	2,188
Hong Kong	94	121	109	109	95	90	110	84	83	53
Japan	147	125	132	132	182	155	167	149	152	156
Korea	979	1,114	1,127	1,123	1,150	1,005	979	848	794	739
Thailand	111	93	87	77	97	113	119	87	116	130
East Asia, other	111	113	123	129	128	132	119	77	83	75
West Asia, total	1,654	1,670	1,891	1,903	2,077	2,181	2,140	1,914	1,750	1,594
India	711	752	861	933	1,065	1,207	1,257	1,210	1,082	889
Iran	258	227	200	203	174	173	147	112	91	92
Iraq	27	24	34	17	22	14	9	7	5	5
Israel	79	89	87	89	109	86	84	59	58	47
Lebanon	45	55	62	50	73	56	53	30	37	24
Saudi Arabia	63	67	76	46	76	71	74	61	39	48
Turkey	106	100	132	136	144	166	147	160	161	186
West Asia, other	365	356	439	429	414	408	369	275	277	303
Pacific/Australasia, total	175	216	220	227	231	231	232	196	192	157
Australia	46	35	40	47	56	61	42	47	46	46
Indonesia	53	69	78	78	83	83	69	62	60	45
Pacific/Australasia, other	76	112	102	102	92	87	121	87	86	66
Africa, total	539	500	510	474	583	423	442	335	339	326
Egypt	160	112	101	88	104	78	89	70	84	60
Nigeria	83	83	68	55	60	53	39	23	34	34
Africa, other	296	305	341	331	419	292	314	242	221	232
Country unknown	206	170	130	136	62	63	160	653	546	328

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Total non-U.S. citizens, engineering									
Total foreign citizenship	2,666	3,021	3,154	3,253	3,491	3,480	3,513	3,143	3,063	2,592
North America, total	84	84	73	82	90	82	96	81	92	109
Canada	41	54	46	42	36	41	45	44	35	51
Caribbean	7	3	5	4	14	7	8	12	15	12
Central America	11	5	6	9	10	8	6	2	6	5
Mexico	25	22	16	27	30	26	37	23	36	41
South America, total	84	86	87	97	111	88	117	91	97	91
Argentina	12	12	14	10	7	7	8	14	13	8
Brazil	31	34	31	46	49	46	65	42	47	40
Chile	11	8	10	5	8	8	8	1	1	6
Colombia	8	11	9	8	12	10	7	4	7	7
South America, other	22	21	23	28	35	17	29	30	29	30
Europe, total	205	200	202	244	257	297	236	233	295	272
Belgium	12	9	10	7	7	12	4	4	3	1
England, United Kingdom	14	14	17	18	14	20	10	12	12	13
France	27	19	25	32	32	24	25	11	23	23
Germany	15	8	18	23	29	37	16	27	29	36
Europe, other	137	150	132	164	175	204	181	179	228	199
East Asia, total	1,266	1,629	1,701	1,733	1,887	1,869	1,852	1,472	1,451	1,253
Taiwan	476	597	637	592	670	616	572	432	378	302
China, People's Republic of	328	477	508	543	656	773	804	636	668	583
Hong Kong	30	30	37	32	14	20	31	13	26	11
Japan	17	29	25	23	46	30	32	37	20	30
Korea	360	435	437	484	429	344	323	299	282	264
Thailand	21	20	21	18	34	38	43	38	52	51
East Asia, other	34	41	36	41	38	48	47	17	25	12
West Asia, total	740	768	863	889	908	961	982	907	805	656
India	314	357	405	448	480	572	617	586	518	368
Iran	139	123	110	95	92	85	66	60	43	42
Iraq	14	11	14	6	9	8	2	5	3	5
Israel	22	27	26	23	17	19	20	13	12	8
Lebanon	35	38	37	27	45	31	21	9	18	9
Saudi Arabia	22	26	31	19	28	25	34	30	17	24
Turkey	59	64	81	74	64	73	73	95	79	95
West Asia, other	135	122	159	197	173	148	149	109	115	105
Pacific/Australasia, total	25	45	48	43	50	44	38	46	46	25
Australia	3	7	11	6	11	7	6	8	4	8
Indonesia	14	19	24	29	28	29	15	22	27	14
Pacific/Australasia, other	8	19	13	8	11	8	17	16	15	3
Africa, total	187	155	138	121	168	122	143	105	106	94
Egypt	82	57	46	48	63	48	59	45	60	47
Nigeria	23	20	11	12	6	14	11	8	7	8
Africa, other	82	78	81	61	99	60	73	52	39	39
Country unknown	75	54	42	44	20	17	49	208	171	92

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Total non-U.S. citizens, sciences									
Total foreign citizenship	5,102	5,905	6,321	6,501	7,051	7,023	7,302	6,635	6,738	6,294
North America, total	362	441	442	424	457	423	434	381	453	422
Canada	212	243	258	243	239	233	231	205	243	232
Caribbean	29	51	39	34	47	53	43	34	46	38
Central America	42	41	46	35	59	35	39	33	36	34
Mexico	79	106	99	112	112	102	121	109	128	118
South America, total	259	301	307	297	297	271	337	295	316	328
Argentina	53	50	72	43	49	42	58	53	59	44
Brazil	69	85	102	105	108	91	139	101	105	116
Chile	39	46	38	47	34	30	28	28	23	28
Colombia	32	38	28	27	36	35	35	34	19	38
South America, other	66	82	67	75	70	73	77	79	110	102
Europe, total	596	772	748	860	893	957	1,024	1,043	1,184	1,184
Belgium	19	34	32	17	14	20	21	13	14	20
England, United Kingdom	86	118	120	136	114	112	107	77	113	127
France	38	48	52	61	64	59	43	62	53	55
Germany	108	110	106	141	167	171	154	151	176	143
Europe, other	345	462	438	505	534	595	699	740	828	839
East Asia, total	2,338	2,857	3,164	3,277	3,597	3,618	3,745	3,084	3,086	2,822
Taiwan	536	530	605	621	631	624	577	591	513	432
China, People's Republic of	822	1,316	1,537	1,684	1,875	1,979	2,150	1,652	1,750	1,605
Hong Kong	64	91	72	77	81	70	79	71	57	42
Japan	130	96	107	109	136	125	135	112	132	126
Korea	619	679	690	639	721	661	656	549	512	475
Thailand	90	73	66	59	63	75	76	49	64	79
East Asia, other	77	72	87	88	90	84	72	60	58	63
West Asia, total	914	902	1,028	1,014	1,169	1,220	1,158	1,007	945	938
India	397	395	456	485	585	635	640	624	564	521
Iran	119	104	90	108	82	88	81	52	48	50
Iraq	13	13	20	11	13	6	7	2	2	0
Israel	57	62	61	66	92	67	64	46	46	39
Lebanon	10	17	25	23	28	25	32	21	19	15
Saudi Arabia	41	41	45	27	48	46	40	31	22	24
Turkey	47	36	51	62	80	93	74	65	82	91
West Asia, other	230	234	280	232	241	260	220	166	162	198
Pacific/Australasia, total	150	171	172	184	181	187	194	150	146	132
Australia	43	28	29	41	45	54	36	39	42	38
Indonesia	39	50	54	49	55	54	54	40	33	31
Pacific/Australasia, other	68	93	89	94	81	79	104	71	71	63
Africa, total	352	345	372	353	415	301	299	230	233	232
Egypt	78	55	55	40	41	30	30	25	24	13
Nigeria	60	63	57	43	54	39	28	15	27	26
Africa, other	214	227	260	270	320	232	241	190	182	193
Country unknown	131	116	88	92	42	46	111	445	375	236

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Permanent visas, S&E									
Total foreign citizenship	1,197	1,285	1,383	1,641	3,021	3,509	3,009	2,280	2,022	1,645
North America, total	99	126	118	120	119	135	119	104	112	98
Canada	55	75	76	71	58	78	70	53	66	55
Caribbean	16	19	16	15	28	26	27	20	21	19
Central America	11	11	8	6	14	8	2	8	5	12
Mexico	17	21	18	28	19	23	20	23	20	12
South America, total	67	62	74	63	64	51	64	70	52	48
Argentina	11	16	17	17	13	9	17	20	8	8
Brazil	13	8	21	11	16	11	11	7	11	10
Chile	7	6	6	7	4	9	5	8	7	11
Colombia	11	11	9	5	13	8	10	6	5	4
South America, other	25	21	21	23	18	14	21	29	21	15
Europe, total	179	211	210	258	275	284	312	338	360	331
Belgium	6	8	8	8	4	7	8	8	3	6
England, United Kingdom	38	52	58	47	56	49	50	39	44	50
France	15	12	10	19	16	15	16	23	25	14
Germany	38	25	39	45	62	53	51	42	43	33
Europe, other	82	114	95	139	137	160	187	226	245	228
East Asia, total	323	407	486	663	2,001	2,487	1,937	1,237	1,079	747
Taiwan	147	160	172	155	178	165	136	148	103	78
China, People's Republic of	54	100	162	352	1,642	2,169	1,630	954	848	533
Hong Kong	12	16	28	20	20	15	18	15	14	11
Japan	23	20	18	20	30	19	23	24	22	27
Korea	70	91	83	91	99	87	93	80	71	79
Thailand	2	8	9	11	11	10	14	4	8	3
East Asia, other	15	12	14	14	21	22	23	12	13	16
West Asia, total	346	287	340	359	375	383	388	315	259	284
India	119	108	148	142	173	168	198	187	135	134
Iran	125	83	82	100	65	84	74	37	38	46
Iraq	3	3	8	4	7	5	4	1	3	3
Israel	11	18	15	22	41	21	17	17	17	16
Lebanon	18	10	6	11	12	11	11	6	7	9
Saudi Arabia	6	2	7	4	7	4	10	1	0	3
Turkey	17	11	20	18	15	19	23	21	17	22
West Asia, other	47	52	54	58	55	71	51	45	42	51
Pacific/Australasia, total	25	34	23	35	40	43	32	30	25	31
Australia	12	9	9	10	13	10	13	9	6	18
Indonesia	3	9	5	6	13	16	3	8	7	5
Pacific/Australasia, other	10	16	9	19	14	17	16	13	12	8
Africa, total	92	103	95	100	123	91	83	83	82	78
Egypt	14	13	9	9	12	12	11	12	12	9
Nigeria	30	35	34	30	33	32	17	7	15	20
Africa, other	48	55	52	61	78	47	55	64	55	49
Country unknown	66	55	37	43	24	35	74	103	53	28

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Permanent visas, engineering									
Total foreign citizenship	389	388	411	469	838	956	793	593	479	399
North America, total	20	17	13	16	14	23	15	14	17	19
Canada	9	14	8	9	6	9	6	7	8	10
Caribbean	4	0	2	2	4	3	5	4	5	5
Central America	3	2	2	1	2	4	0	1	0	2
Mexico	4	1	1	4	2	7	4	2	4	2
South America, total	12	12	14	8	13	7	9	12	7	6
Argentina	2	5	4	2	1	1	3	5	0	0
Brazil	2	2	2	1	2	2	3	2	2	3
Chile	0	0	1	0	1	1	0	0	0	2
Colombia	1	1	2	1	4	1	1	2	1	0
South America, other	7	4	5	4	5	2	2	3	4	1
Europe, total	31	33	33	42	49	68	58	70	69	53
Belgium	1	1	2	2	1	1	1	3	0	1
England, United Kingdom	5	3	8	4	7	9	4	4	6	6
France	6	4	3	4	5	3	5	3	6	4
Germany	4	0	5	3	11	8	6	6	4	3
Europe, other	15	25	15	29	25	47	42	54	53	39
East Asia, total	128	166	163	221	576	696	517	317	253	191
Taiwan	69	88	80	73	89	76	77	57	39	38
China, People's Republic of	19	25	39	88	426	566	380	215	182	108
Hong Kong	5	7	10	10	7	5	9	4	4	5
Japan	1	5	3	2	5	2	2	3	0	1
Korea	30	36	25	43	42	34	36	36	20	33
Thailand	0	1	2	1	1	4	3	0	5	2
East Asia, other	4	4	4	4	6	9	10	2	3	4
West Asia, total	150	118	144	151	140	119	151	121	96	99
India	42	44	57	56	61	55	77	65	43	38
Iran	61	42	44	43	28	29	29	17	19	19
Iraq	1	0	2	2	5	3	0	1	2	3
Israel	3	4	5	6	6	0	0	2	2	2
Lebanon	13	4	4	6	5	3	8	2	5	7
Saudi Arabia	2	0	1	2	3	3	3	0	0	2
Turkey	10	5	10	6	6	7	12	15	4	11
West Asia, other	18	19	21	30	26	19	22	19	21	17
Pacific/Australasia, total	5	5	7	6	12	9	4	7	7	6
Australia	0	2	4	1	4	0	2	1	0	4
Indonesia	3	3	2	4	7	7	0	4	6	1
Pacific/Australasia, other	2	0	1	1	1	2	2	2	1	1
Africa, total	21	25	23	14	28	28	24	22	20	21
Egypt	7	4	3	3	4	9	4	5	8	6
Nigeria	5	9	6	3	2	10	5	1	2	5
Africa, other	9	12	14	8	22	9	15	16	10	10
Country unknown	22	12	14	11	6	6	15	30	10	4

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Permanent visas, sciences									
Total foreign citizenship	808	897	972	1,172	2,183	2,553	2,216	1,687	1,543	1,246
North America, total	79	109	105	104	105	112	104	90	95	79
Canada	46	61	68	62	52	69	64	46	58	45
Caribbean	12	19	14	13	24	23	22	16	16	14
Central America	8	9	6	5	12	4	2	7	5	10
Mexico	13	20	17	24	17	16	16	21	16	10
South America, total	55	50	60	55	51	44	55	58	45	42
Argentina	9	11	13	15	12	8	14	15	8	8
Brazil	11	6	19	10	14	9	8	5	9	7
Chile	7	6	5	7	3	8	5	8	7	9
Colombia	10	10	7	4	9	7	9	4	4	4
South America, other	18	17	16	19	13	12	19	26	17	14
Europe, total	148	178	177	216	226	216	254	268	291	278
Belgium	5	7	6	6	3	6	7	5	3	5
England, United Kingdom	33	49	50	43	49	40	46	35	38	44
France	9	8	7	15	11	12	11	20	19	10
Germany	34	25	34	42	51	45	45	36	39	30
Europe, other	67	89	80	110	112	113	145	172	192	189
East Asia, total	195	241	323	442	1,425	1,791	1,420	920	826	556
Taiwan	78	72	92	82	89	89	59	91	64	40
China, People's Republic of	35	75	123	264	1,216	1,603	1,250	739	666	425
Hong Kong	7	9	18	10	13	10	9	11	10	6
Japan	22	15	15	18	25	17	21	21	22	26
Korea	40	55	58	48	57	53	57	44	51	46
Thailand	2	7	7	10	10	6	11	4	3	1
East Asia, other	11	8	10	10	15	13	13	10	10	12
West Asia, total	196	169	196	208	235	264	237	194	163	185
India	77	64	91	86	112	113	121	122	92	96
Iran	64	41	38	57	37	55	45	20	19	27
Iraq	2	3	6	2	2	2	4	0	1	0
Israel	8	14	10	16	35	21	17	15	15	14
Lebanon	5	6	2	5	7	8	3	4	2	2
Saudi Arabia	4	2	6	2	4	1	7	1	0	1
Turkey	7	6	10	12	9	12	11	6	13	11
West Asia, other	29	33	33	28	29	52	29	26	21	34
Pacific/Australasia, total	20	29	16	29	28	34	28	23	18	25
Australia	12	7	5	9	9	10	11	8	6	14
Indonesia	0	6	3	2	6	9	3	4	1	4
Pacific/Australasia, other	8	16	8	18	13	15	14	11	11	7
Africa, total	71	78	72	86	95	63	59	61	62	57
Egypt	7	9	6	6	8	3	7	7	4	3
Nigeria	25	26	28	27	31	22	12	6	13	15
Africa, other	39	43	38	53	56	38	40	48	45	39
Country unknown	44	43	23	32	18	29	59	73	43	24

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Temporary visas, S&E									
Total foreign citizenship	6,571	7,641	8,092	8,113	7,521	6,994	7,806	7,498	7,779	7,241
North America, total	347	399	397	386	428	370	411	358	433	433
Canada	198	222	228	214	217	196	206	196	212	228
Caribbean	20	35	28	23	33	34	24	26	40	31
Central America	42	35	44	38	55	35	43	27	37	27
Mexico	87	107	97	111	123	105	138	109	144	147
South America, total	276	325	320	331	344	308	390	316	361	371
Argentina	54	46	69	36	43	40	49	47	64	44
Brazil	87	111	112	140	141	126	193	136	141	146
Chile	43	48	42	45	38	29	31	21	17	23
Colombia	29	38	28	30	35	37	32	32	21	41
South America, other	63	82	69	80	87	76	85	80	118	117
Europe, total	622	761	740	846	875	970	948	938	1,119	1,125
Belgium	25	35	34	16	17	25	17	9	14	15
England, United Kingdom	62	80	79	107	72	83	67	50	81	90
France	50	55	67	74	80	68	52	50	51	64
Germany	85	93	85	119	134	155	119	136	162	146
Europe, other	400	498	475	530	572	639	693	693	811	810
East Asia, total	3,281	4,079	4,379	4,347	3,483	3,000	3,660	3,319	3,458	3,328
Taiwan	865	967	1,070	1,058	1,123	1,075	1,013	875	788	656
China, People's Republic of	1,096	1,693	1,883	1,875	889	583	1,324	1,334	1,570	1,655
Hong Kong	82	105	81	89	75	75	92	69	69	42
Japan	124	105	114	112	152	136	144	125	130	129
Korea	909	1,023	1,044	1,032	1,051	918	886	768	723	660
Thailand	109	85	78	66	86	103	105	83	108	127
East Asia, other	96	101	109	115	107	110	96	65	70	59
West Asia, total	1,308	1,383	1,551	1,544	1,702	1,798	1,752	1,599	1,491	1,310
India	592	644	713	791	892	1,039	1,059	1,023	947	755
Iran	133	144	118	103	109	89	73	75	53	46
Iraq	24	21	26	13	15	9	5	6	2	2
Israel	68	71	72	67	68	65	67	42	41	31
Lebanon	27	45	56	39	61	45	42	24	30	15
Saudi Arabia	57	65	69	42	69	67	64	60	39	45
Turkey	89	89	112	118	129	147	124	139	144	164
West Asia, other	318	304	385	371	359	337	318	230	235	252
Pacific/Australasia, total	150	182	197	192	191	188	200	166	167	126
Australia	34	26	31	37	43	51	29	38	40	28
Indonesia	50	60	73	72	70	67	66	54	53	40
Pacific/Australasia, other	66	96	93	83	78	70	105	74	74	58
Africa, total	447	397	415	374	460	332	359	252	257	248
Egypt	146	99	92	79	92	66	78	58	72	51
Nigeria	53	48	34	25	27	21	22	16	19	14
Africa, other	248	250	289	270	341	245	259	178	166	183
Country unknown	140	115	93	93	38	28	86	550	493	300

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Temporary visas, engineering									
Total foreign citizenship	2,277	2,633	2,743	2,784	2,653	2,524	2,720	2,550	2,584	2,193
North America, total	64	67	60	66	76	59	81	67	75	90
Canada	32	40	38	33	30	32	39	37	27	41
Caribbean	3	3	3	2	10	4	3	8	10	7
Central America	8	3	4	8	8	4	6	1	6	3
Mexico	21	21	15	23	28	19	33	21	32	39
South America, total	72	74	73	89	98	81	108	79	90	85
Argentina	10	7	10	8	6	6	5	9	13	8
Brazil	29	32	29	45	47	44	62	40	45	37
Chile	11	8	9	5	7	7	8	1	1	4
Colombia	7	10	7	7	8	9	6	2	6	7
South America, other	15	17	18	24	30	15	27	27	25	29
Europe, total	174	167	169	202	208	229	178	163	226	219
Belgium	11	8	8	5	6	11	3	1	3	0
England, United Kingdom	9	11	9	14	7	11	6	8	6	7
France	21	15	22	28	27	21	20	8	17	19
Germany	11	8	13	20	18	29	10	21	25	33
Europe, other	122	125	117	135	150	157	139	125	175	160
East Asia, total	1,138	1,463	1,538	1,512	1,311	1,173	1,335	1,155	1,198	1,062
Taiwan	407	509	557	519	581	540	495	375	339	264
China, People's Republic of	309	452	469	455	230	207	424	421	486	475
Hong Kong	25	23	27	22	7	15	22	9	22	6
Japan	16	24	22	21	41	28	30	34	20	29
Korea	330	399	412	441	387	310	287	263	262	231
Thailand	21	19	19	17	33	34	40	38	47	49
East Asia, other	30	37	32	37	32	39	37	15	22	8
West Asia, total	590	650	719	738	768	842	831	786	709	557
India	272	313	348	392	419	517	540	521	475	330
Iran	78	81	66	52	64	56	37	43	24	23
Iraq	13	11	12	4	4	5	2	4	1	2
Israel	19	23	21	17	11	19	20	11	10	6
Lebanon	22	34	33	21	40	28	13	7	13	2
Saudi Arabia	20	26	30	17	25	22	31	30	17	22
Turkey	49	59	71	68	58	66	61	80	75	84
West Asia, other	117	103	138	167	147	129	127	90	94	88
Pacific/Australasia, total	20	40	41	37	38	35	34	39	39	19
Australia	3	5	7	5	7	7	4	7	4	4
Indonesia	11	16	22	25	21	22	15	18	21	13
Pacific/Australasia, other	6	19	12	7	10	6	15	14	14	2
Africa, total	166	130	115	107	140	94	119	83	86	73
Egypt	75	53	43	45	59	39	55	40	52	41
Nigeria	18	11	5	9	4	4	6	7	5	3
Africa, other	73	66	67	53	77	51	58	36	29	29
Country unknown	53	42	28	33	14	11	34	178	161	88

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded doctorates in the sciences and in engineering, by country of citizenship, visa type, and year of doctorate: 1990-1999

Country of citizenship	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Temporary visas, sciences									
Total foreign citizenship	4,294	5,008	5,349	5,329	4,868	4,470	5,086	4,948	5,195	5,048
North America, total	283	332	337	320	352	311	330	291	358	343
Canada	166	182	190	181	187	164	167	159	185	187
Caribbean	17	32	25	21	23	30	21	18	30	24
Central America	34	32	40	30	47	31	37	26	31	24
Mexico	66	86	82	88	95	86	105	88	112	108
South America, total	204	251	247	242	246	227	282	237	271	286
Argentina	44	39	59	28	37	34	44	38	51	36
Brazil	58	79	83	95	94	82	131	96	96	109
Chile	32	40	33	40	31	22	23	20	16	19
Colombia	22	28	21	23	27	28	26	30	15	34
South America, other	48	65	51	56	57	61	58	53	93	88
Europe, total	448	594	571	644	667	741	770	775	893	906
Belgium	14	27	26	11	11	14	14	8	11	15
England, United Kingdom	53	69	70	93	65	72	61	42	75	83
France	29	40	45	46	53	47	32	42	34	45
Germany	74	85	72	99	116	126	109	115	137	113
Europe, other	278	373	358	395	422	482	554	568	636	650
East Asia, total	2,143	2,616	2,841	2,835	2,172	1,827	2,325	2,164	2,260	2,266
Taiwan	458	458	513	539	542	535	518	500	449	392
China, People's Republic of	787	1,241	1,414	1,420	659	376	900	913	1,084	1,180
Hong Kong	57	82	54	67	68	60	70	60	47	36
Japan	108	81	92	91	111	108	114	91	110	100
Korea	579	624	632	591	664	608	599	505	461	429
Thailand	88	66	59	49	53	69	65	45	61	78
East Asia, other	66	64	77	78	75	71	59	50	48	51
West Asia, total	718	733	832	806	934	956	921	813	782	753
India	320	331	365	399	473	522	519	502	472	425
Iran	55	63	52	51	45	33	36	32	29	23
Iraq	11	10	14	9	11	4	3	2	1	0
Israel	49	48	51	50	57	46	47	31	31	25
Lebanon	5	11	23	18	21	17	29	17	17	13
Saudi Arabia	37	39	39	25	44	45	33	30	22	23
Turkey	40	30	41	50	71	81	63	59	69	80
West Asia, other	201	201	247	204	212	208	191	140	141	164
Pacific/Australasia, total	130	142	156	155	153	153	166	127	128	107
Australia	31	21	24	32	36	44	25	31	36	24
Indonesia	39	44	51	47	49	45	51	36	32	27
Pacific/Australasia, other	60	77	81	76	68	64	90	60	60	56
Africa, total	281	267	300	267	320	238	240	169	171	175
Egypt	71	46	49	34	33	27	23	18	20	10
Nigeria	35	37	29	16	23	17	16	9	14	11
Africa, other	175	184	222	217	264	194	201	142	137	154
Country unknown	87	73	65	60	24	17	52	372	332	212

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
Total, all institutions	-	25,953	5,337	678	585	1,477	853	1,744	3,582	1,431	2,134	17
Alabama, total	26	299	63	9	3	12	11	28	34	19	15	0
Alabama A&M University	284	7	0	0	0	0	0	0	3	3	0	0
Auburn University	74	116	31	5	2	5	5	14	9	3	6	0
United States Sports Academy	332	0	0	0	0	0	0	0	0	0	0	0
University of Alabama	143	46	10	3	1	1	3	2	6	3	3	0
University of Alabama Birmingham	96	87	6	0	0	0	0	6	7	1	6	0
University of Alabama Huntsville	174	31	16	1	0	6	3	6	9	9	0	0
University of South Alabama	257	12	0	0	0	0	0	0	0	0	0	0
Alaska, total	49	23	1	0	1	0	0	0	4	3	1	0
University of Alaska Fairbanks	200	23	1	0	1	0	0	0	4	3	1	0
Arizona, total	18	445	95	7	5	32	15	36	71	32	35	4
Arizona State University Main	61	141	54	5	1	21	8	19	12	2	9	1
Northern Arizona University	231	16	0	0	0	0	0	0	0	0	0	0
University of Arizona	21	288	41	2	4	11	7	17	59	30	26	3
Arkansas, total	42	56	10	0	3	2	0	5	9	4	5	0
U of Arkansas	152	44	10	0	3	2	0	5	8	3	5	0
U of Arkansas Little Rock	324	1	0	0	0	0	0	0	1	1	0	0
U of Arkansas for Med Sciences	262	11	0	0	0	0	0	0	0	0	0	0
California, total	1	3,344	745	65	76	291	91	222	443	183	258	2
Azusa Pacific University	332	0	0	0	0	0	0	0	0	0	0	0
Biola University	277	8	0	0	0	0	0	0	0	0	0	0
CA Inst Integral Studies	244	14	0	0	0	0	0	0	0	0	0	0
CA Inst Technology	51	156	53	8	1	16	9	19	49	19	30	0
CA Sch Prof Psych Berkeley	125	59	0	0	0	0	0	0	0	0	0	0
CA Sch Prof Psych Fresno	133	51	0	0	0	0	0	0	0	0	0	0
CA Sch Prof Psych Los Angeles	118	63	0	0	0	0	0	0	0	0	0	0
CA Sch Prof Psych San Diego	112	67	0	0	0	0	0	0	0	0	0	0
Claremont Graduate University	162	37	0	0	0	0	0	0	0	0	0	0
Fielding Institute, The	129	54	0	0	0	0	0	0	0	0	0	0
Fuller Theological Seminary CA	177	30	0	0	0	0	0	0	0	0	0	0
Graduate Theological Union	332	0	0	0	0	0	0	0	0	0	0	0
Hebrew Union College CA	332	0	0	0	0	0	0	0	0	0	0	0
Loma Linda University	239	15	0	0	0	0	0	0	0	0	0	0
Loma Linda U La Sierra Campus	332	0	0	0	0	0	0	0	0	0	0	0
Naval Postgraduate School	292	6	3	0	0	1	2	0	0	0	0	0
Pacific Grad School of Psych	187	28	0	0	0	0	0	0	0	0	0	0
Pepperdine University Malibu	332	0	0	0	0	0	0	0	0	0	0	0
Rand Grad Sch of Policy Studies	284	7	0	0	0	0	0	0	0	0	0	0
San Diego State University	231	16	1	0	0	0	0	1	1	0	1	0
Santa Clara University	316	2	2	0	0	2	0	0	0	0	0	0
Saybrook Institute CA	231	16	0	0	0	0	0	0	0	0	0	0
School of Theology at Claremont	332	0	0	0	0	0	0	0	0	0	0	0
Scripps Research Institute, The	221	19	0	0	0	0	0	0	9	0	9	0
Stanford University	7	417	168	12	16	59	24	57	55	29	26	0
United States International U	272	9	0	0	0	0	0	0	0	0	0	0
U of California Berkeley	1	534	149	20	22	34	27	46	99	38	60	1
U of California Davis	23	269	53	5	8	18	9	13	31	12	19	0
U of California Irvine	52	153	34	3	6	15	2	8	23	6	17	0
U of California Los Angeles	13	367	73	6	15	34	5	13	52	23	29	0
U of California Riverside	107	73	0	0	0	0	0	0	10	5	5	0
U of California San Diego	25	251	54	0	3	24	5	22	44	27	17	0
U of California San Francisco	112	67	6	0	0	0	0	6	9	0	9	0
U of California Santa Barbara	54	150	39	6	0	18	7	8	22	9	12	1
U of California Santa Cruz	102	81	6	0	0	6	0	0	19	10	9	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
Total, all institutions	807	1,085	850	6,565	5,600	965	3,667	4,060	15,187	41,140
Alabama, total	4	16	9	106	82	24	40	27	195	494
Alabama A&M University	0	0	0	4	0	4	0	0	0	7
Auburn University	0	10	2	28	10	18	19	17	62	178
United States Sports Academy	0	0	0	0	0	0	0	0	13	13
University of Alabama	2	2	4	4	4	0	9	9	87	133
University of Alabama Birmingham	1	1	1	58	58	0	12	1	26	113
University of Alabama Huntsville	1	3	2	0	0	0	0	0	0	31
University of South Alabama	0	0	0	12	10	2	0	0	7	19
Alaska, total	6	0	0	9	7	2	0	3	4	27
University of Alaska Fairbanks	6	0	0	9	7	2	0	3	4	27
Arizona, total	34	13	15	105	86	19	34	78	284	729
Arizona State University Main	5	3	11	14	14	0	15	27	129	270
Northern Arizona University	0	0	0	7	7	0	0	9	29	45
University of Arizona	29	10	4	84	65	19	19	42	126	414
Arkansas, total	0	3	1	30	17	13	3	0	65	121
U of Arkansas	0	3	1	19	6	13	3	0	49	93
U of Arkansas Little Rock	0	0	0	0	0	0	0	0	16	17
U of Arkansas for Med Sciences	0	0	0	11	11	0	0	0	0	11
California, total	119	143	114	688	656	32	566	526	1,403	4,747
Azusa Pacific University	0	0	0	0	0	0	0	0	4	4
Biola University	0	0	0	0	0	0	7	1	7	15
CA Inst Integral Studies	0	0	0	0	0	0	13	1	20	34
CA Inst Technology	13	13	1	22	22	0	0	5	0	156
CA Sch Prof Psych Berkeley	0	0	0	0	0	0	59	0	1	60
CA Sch Prof Psych Fresno	0	0	0	0	0	0	51	0	0	51
CA Sch Prof Psych Los Angeles	0	0	0	0	0	0	63	0	3	66
CA Sch Prof Psych San Diego	0	0	0	0	0	0	67	0	0	67
Claremont Graduate University	0	4	2	1	1	0	9	21	67	104
Fielding Institute, The	0	0	0	1	1	0	36	17	21	75
Fuller Theological Seminary CA	0	0	0	0	0	0	23	7	35	65
Graduate Theological Union	0	0	0	0	0	0	0	0	20	20
Hebrew Union College CA	0	0	0	0	0	0	0	0	1	1
Loma Linda University	0	0	0	12	12	0	3	0	4	19
Loma Linda U La Sierra Campus	0	0	0	0	0	0	0	0	1	1
Naval Postgraduate School	0	2	1	0	0	0	0	0	0	6
Pacific Grad School of Psych	0	0	0	0	0	0	28	0	0	28
Pepperdine University Malibu	0	0	0	0	0	0	0	0	50	50
Rand Grad Sch of Policy Studies	0	0	0	0	0	0	0	7	0	7
San Diego State University	0	0	0	7	7	0	6	1	14	30
Santa Clara University	0	0	0	0	0	0	0	0	0	2
Saybrook Institute CA	0	0	0	2	2	0	14	0	2	18
School of Theology at Claremont	0	0	0	0	0	0	0	0	6	6
Scripps Research Institute, The	0	0	0	10	10	0	0	0	0	19
Stanford University	27	14	20	65	65	0	12	56	134	551
United States International U	0	0	0	0	0	0	9	0	16	25
U of California Berkeley	14	36	23	91	84	7	16	106	183	717
U of California Davis	7	10	2	132	118	14	17	17	43	312
U of California Irvine	2	5	12	37	37	0	14	26	46	199
U of California Los Angeles	11	21	13	82	82	0	28	87	221	588
U of California Riverside	3	9	2	32	22	10	4	13	30	103
U of California San Diego	19	11	10	67	67	0	14	32	31	282
U of California San Francisco	0	0	0	48	48	0	0	4	13	80
U of California Santa Barbara	10	6	3	23	23	0	15	32	77	227
U of California Santa Cruz	7	6	5	15	14	1	3	20	16	97

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
California, continued:												
University of La Verne	332	0	0	0	0	0	0	0	0	0	0	0
University of the Pacific	332	0	0	0	0	0	0	0	0	0	0	0
University of San Diego	332	0	0	0	0	0	0	0	0	0	0	0
University of San Francisco	292	6	0	0	0	0	0	0	0	0	0	0
University of Southern CA	20	289	104	5	5	64	1	29	20	5	15	0
Wright Institute, All Campuses	177	30	0	0	0	0	0	0	0	0	0	0
Colorado, total	16	565	135	23	36	28	11	37	67	26	41	0
Colorado School of Mines	143	46	21	6	1	0	0	14	6	5	1	0
Colorado State University	49	168	32	2	14	6	5	5	20	3	17	0
University of Colorado Health Science Center	177	30	0	0	0	0	0	0	1	0	1	0
University of Colorado Boulder	24	252	80	15	21	20	6	18	40	18	22	0
University of Colorado at Colorado Springs	316	2	2	0	0	2	0	0	0	0	0	0
University of Colorado at Denver	227	17	0	0	0	0	0	0	0	0	0	0
University of Denver	184	29	0	0	0	0	0	0	0	0	0	0
University of Northern Colorado	214	21	0	0	0	0	0	0	0	0	0	0
Connecticut, total	22	369	34	7	2	15	4	6	73	23	50	0
University of Connecticut	57	146	24	3	2	11	3	5	26	5	21	0
University of New Haven	332	0	0	0	0	0	0	0	0	0	0	0
Wesleyan University	257	12	0	0	0	0	0	0	4	0	4	0
Yale University	35	211	10	4	0	4	1	1	43	18	25	0
Delaware, total	36	121	41	16	6	8	10	1	14	4	10	0
University of Delaware	69	121	41	16	6	8	10	1	14	4	10	0
Wilmington College	332	0	0	0	0	0	0	0	0	0	0	0
District of Columbia, total	25	302	23	0	0	13	2	8	34	3	31	0
American University	143	46	0	0	0	0	0	0	7	0	7	0
Catholic University of America	196	26	6	0	0	3	2	1	3	1	2	0
Gallaudet University	316	2	0	0	0	0	0	0	0	0	0	0
George Washington University	88	96	14	0	0	7	0	7	8	2	6	0
Georgetown University	110	71	0	0	0	0	0	0	8	0	8	0
Howard University	121	61	3	0	0	3	0	0	8	0	8	0
Florida, total	9	899	188	16	23	68	21	60	107	39	68	0
Barry University	324	1	0	0	0	0	0	0	0	0	0	0
Carlos Albizu University	128	55	0	0	0	0	0	0	0	0	0	0
FL Agricultural and Mechanical U	308	3	0	0	0	0	0	0	0	0	0	0
Florida Atlantic University	205	22	9	0	0	4	3	2	0	0	0	0
Florida Institute of Technology	191	27	16	0	1	13	0	2	3	1	2	0
Florida International University	227	17	3	0	0	2	1	0	0	0	0	0
Florida State University	75	113	8	3	0	1	3	1	29	14	15	0
Nova Southeastern University	85	101	0	0	0	0	0	0	0	0	0	0
University of Central Florida	133	51	30	0	5	12	2	11	11	11	0	0
University of Florida	16	336	89	12	14	23	6	34	43	9	34	0
University of Miami	94	89	12	0	0	6	3	3	13	4	9	0
University of Sarasota	332	0	0	0	0	0	0	0	0	0	0	0
University of South Florida	99	84	21	1	3	7	3	7	8	0	8	0
Georgia, total	14	600	166	19	14	57	24	52	81	20	61	0
Clark Atlanta University	231	16	0	0	0	0	0	0	1	0	1	0
Emory University	96	87	0	0	0	0	0	0	15	2	13	0
Georgia Inst of Tech	32	222	162	18	14	57	24	49	23	10	13	0
Georgia Southern University	332	0	0	0	0	0	0	0	0	0	0	0
Georgia State University	120	62	0	0	0	0	0	0	16	4	12	0
Inst of Paper Science & Tech	292	6	3	1	0	0	0	2	0	0	0	0
Medical College of Georgia	268	10	0	0	0	0	0	0	0	0	0	0
Mercer University	332	0	0	0	0	0	0	0	0	0	0	0
University of Georgia	38	197	1	0	0	0	0	1	26	4	22	0
Hawaii, total	36	121	3	0	0	0	2	1	8	5	3	0
University of Hawaii at Manoa	69	121	3	0	0	0	2	1	8	5	3	0
Idaho, total	45	44	8	0	1	0	0	7	5	0	5	0
Idaho State University	262	11	1	0	0	0	0	1	1	0	1	0
University of Idaho	170	33	7	0	1	0	0	6	4	0	4	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
California, continued:										
University of La Verne	0	0	0	0	0	0	0	0	43	43
University of the Pacific	0	0	0	0	0	0	0	0	20	20
University of San Diego	0	0	0	0	0	0	0	0	19	19
University of San Francisco	0	0	0	0	0	0	4	2	79	85
University of Southern CA	6	6	20	41	41	0	21	71	176	465
Wright Institute, All Campuses	0	0	0	0	0	0	30	0	0	30
Colorado, total	33	34	16	132	107	25	68	80	189	754
Colorado School of Mines	5	3	1	0	0	0	0	10	3	49
Colorado State University	10	10	2	67	42	25	14	13	20	188
University of Colorado Health Science Center	0	0	0	29	29	0	0	0	9	39
University of Colorado Boulder	17	13	13	34	34	0	23	32	50	302
University of Colorado at Colorado Springs	0	0	0	0	0	0	0	0	0	2
University of Colorado at Denver	0	5	0	0	0	0	0	12	21	38
University of Denver	0	1	0	2	2	0	14	12	36	65
University of Northern Colorado	1	2	0	0	0	0	17	1	50	71
Connecticut, total	13	15	3	117	111	6	30	84	205	574
University of Connecticut	4	5	3	42	37	5	20	22	81	227
University of New Haven	0	0	0	0	0	0	0	0	1	1
Wesleyan University	0	4	0	4	4	0	0	0	1	13
Yale University	9	6	0	71	70	1	10	62	122	333
Delaware, total	5	7	3	16	13	3	12	23	45	166
University of Delaware	5	7	3	16	13	3	12	23	23	144
Wilmington College	0	0	0	0	0	0	0	0	22	22
District of Columbia, total	2	2	19	54	54	0	55	113	222	524
American University	0	1	0	1	1	0	11	26	15	61
Catholic University of America	0	0	0	1	1	0	10	6	73	99
Gallaudet University	0	0	0	0	0	0	2	0	5	7
George Washington University	1	1	19	15	15	0	13	25	78	174
Georgetown University	0	0	0	21	21	0	2	40	26	97
Howard University	1	0	0	16	16	0	17	16	25	86
Florida, total	23	19	57	172	136	36	227	106	1,045	1,944
Barry University	0	0	0	0	0	0	1	0	18	19
Carlos Albizu University	0	0	0	0	0	0	55	0	0	55
FL Agricultural and Mechanical U	0	0	0	3	3	0	0	0	2	5
Florida Atlantic University	0	1	0	1	1	0	5	6	16	38
Florida Institute of Technology	3	1	2	2	2	0	0	0	0	27
Florida International University	0	0	2	3	3	0	6	3	29	46
Florida State University	10	4	2	7	7	0	22	31	164	277
Nova Southeastern University	1	0	28	1	0	1	66	5	472	573
University of Central Florida	0	2	4	0	0	0	4	0	38	89
University of Florida	2	8	11	113	80	33	28	42	111	447
University of Miami	4	2	0	26	24	2	20	12	44	133
University of Sarasota	0	0	0	0	0	0	0	0	87	87
University of South Florida	3	1	8	16	16	0	20	7	64	148
Georgia, total	6	14	10	143	123	20	97	83	335	935
Clark Atlanta University	0	0	0	1	1	0	1	13	16	32
Emory University	0	4	0	36	36	0	10	22	45	132
Georgia Inst of Tech	4	4	10	6	6	0	11	2	6	228
Georgia Southern University	0	0	0	0	0	0	0	0	8	8
Georgia State University	0	0	0	11	11	0	27	8	88	150
Inst of Paper Science & Tech	0	0	0	3	0	3	0	0	0	6
Medical College of Georgia	0	0	0	10	10	0	0	0	3	13
Mercer University	0	0	0	0	0	0	0	0	1	1
University of Georgia	2	6	0	76	59	17	48	38	168	365
Hawaii, total	14	3	2	32	26	6	6	53	39	160
University of Hawaii at Manoa	14	3	2	32	26	6	6	53	39	160
Idaho, total	3	3	0	21	11	10	1	3	36	80
Idaho State University	0	3	0	4	4	0	1	1	10	21
University of Idaho	3	0	0	17	7	10	0	2	26	59

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
Illinois, total	5	1,313	273	33	45	79	46	70	170	76	94	0
De Paul University	231	16	0	0	0	0	0	0	0	0	0	0
Finch U Hlth Sci/Chgo Med Sch	200	23	0	0	0	0	0	0	1	1	0	0
Illinois Institute Technology	112	67	31	6	7	9	2	7	4	3	1	0
Illinois State University	272	9	0	0	0	0	0	0	0	0	0	0
Inst for Clinical Social Work	324	1	0	0	0	0	0	0	0	0	0	0
Loyola University of Chicago	139	49	0	0	0	0	0	0	1	0	1	0
Lutheran Sch Theology at Chicago	332	0	0	0	0	0	0	0	0	0	0	0
Northern Illinois University	152	44	0	0	0	0	0	0	4	0	4	0
Northwestern University	29	228	79	11	13	12	12	31	29	7	22	0
Roosevelt University	332	0	0	0	0	0	0	0	0	0	0	0
Rush University	300	4	0	0	0	0	0	0	1	1	0	0
Southern Illinois U Carbondale	143	46	3	0	0	1	0	2	7	1	6	0
Southern Illinois U Edwardsville	332	0	0	0	0	0	0	0	0	0	0	0
University of Chicago	30	224	1	0	0	0	0	1	37	21	16	0
U of Illinois Chicago	63	137	29	1	4	7	14	3	20	6	14	0
U of Illinois Urbana-Champaign	3	465	130	15	21	50	18	26	66	36	30	0
Indiana, total	12	670	155	16	31	46	23	39	108	37	71	0
Ball State University	248	13	0	0	0	0	0	0	0	0	0	0
Indiana State University	284	7	0	0	0	0	0	0	0	0	0	0
Indiana U Bloomington	43	183	0	0	0	0	0	0	28	12	16	0
Indiana U Purdue U Indianapolis	332	0	0	0	0	0	0	0	0	0	0	0
Purdue University	12	368	136	8	28	42	20	38	58	11	47	0
University of Notre Dame	87	99	19	8	3	4	3	1	22	14	8	0
Iowa, total	21	372	80	10	14	16	16	24	67	21	46	0
Drake University	332	0	0	0	0	0	0	0	0	0	0	0
Iowa State University	34	217	47	8	6	11	8	14	43	9	34	0
Maharishi U of Management	308	3	0	0	0	0	0	0	0	0	0	0
University of Iowa	54	150	31	2	8	5	8	8	24	12	12	0
University of Northern Iowa	316	2	2	0	0	0	0	2	0	0	0	0
Kansas, total	29	256	40	4	7	11	10	8	43	15	28	0
Kansas State University	94	89	9	1	2	0	2	4	13	6	7	0
University of Kansas	57	146	19	3	5	6	4	1	29	9	20	0
Wichita State University	214	21	12	0	0	5	4	3	1	0	1	0
Kentucky, total	34	166	25	6	1	3	6	9	11	2	9	0
Southern Baptist Theological Sem	332	0	0	0	0	0	0	0	0	0	0	0
Spalding University	332	0	0	0	0	0	0	0	0	0	0	0
University of Kentucky	72	120	16	4	1	1	6	4	7	2	5	0
University of Louisville	143	46	9	2	0	2	0	5	4	0	4	0
Louisiana, total	24	309	62	18	6	9	9	20	28	11	17	0
Grambling State University	332	0	0	0	0	0	0	0	0	0	0	0
LA St U & A&M College	53	152	26	8	5	4	3	6	19	9	10	0
LA St U Shreveport	248	13	0	0	0	0	0	0	0	0	0	0
LA St U Medical Center	284	7	0	0	0	0	0	0	0	0	0	0
Louisiana Tech University	244	14	13	1	0	0	2	10	0	0	0	0
New Orleans Baptist Theol Sem	332	0	0	0	0	0	0	0	0	0	0	0
Univ of Louisiana at Monroe	308	3	0	0	0	0	0	0	0	0	0	0
Southern U A&M Col Baton Rouge	332	0	0	0	0	0	0	0	0	0	0	0
Tulane University	101	82	19	9	1	2	3	4	5	2	3	0
University of New Orleans	231	16	1	0	0	0	1	0	4	0	4	0
Univ of Louisiana at Lafayette	205	22	3	0	0	3	0	0	0	0	0	0
Maine, total	48	27	6	3	0	0	0	3	4	3	1	0
University of Maine	191	27	6	3	0	0	0	3	4	3	1	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
Illinois, total	20	64	57	261	229	32	194	274	888	2,201
De Paul University	0	0	2	0	0	0	14	0	8	24
Finch U Hlth Sci/Chgo Med Sch	0	0	0	14	14	0	8	0	0	23
Illinois Institute Technology	0	0	17	2	2	0	13	0	2	69
Illinois State University	0	1	0	3	3	0	5	0	36	45
Inst for Clinical Social Work	0	0	0	0	0	0	1	0	4	5
Loyola University of Chicago	0	0	0	16	16	0	26	6	147	196
Lutheran Sch Theology at Chicago	0	0	0	0	0	0	0	0	9	9
Northern Illinois University	2	2	2	5	5	0	16	13	72	116
Northwestern University	3	8	4	34	34	0	26	45	81	309
Roosevelt University	0	0	0	0	0	0	0	0	19	19
Rush University	0	0	0	3	3	0	0	0	9	13
Southern Illinois U Carbondale	0	1	0	11	11	0	16	8	75	121
Southern Illinois U Edwardsville	0	0	0	0	0	0	0	0	5	5
University of Chicago	4	20	5	38	38	0	15	104	160	384
U of Illinois Chicago	2	13	3	41	41	0	9	20	83	220
U of Illinois Urbana-Champaign	9	19	24	94	62	32	45	78	178	643
Indiana, total	20	36	10	166	133	33	69	106	387	1,057
Ball State University	0	0	0	0	0	0	12	1	25	38
Indiana State University	1	0	0	2	2	0	4	0	10	17
Indiana U Bloomington	12	11	5	62	62	0	9	56	208	391
Indiana U Purdue U Indianapolis	0	0	0	0	0	0	0	0	8	8
Purdue University	6	19	5	86	53	33	31	27	100	468
University of Notre Dame	1	6	0	16	16	0	13	22	36	135
Iowa, total	4	19	11	114	81	33	30	47	211	583
Drake University	0	0	0	0	0	0	0	0	5	5
Iowa State University	4	7	3	72	39	33	10	31	40	257
Maharishi U of Management	0	0	0	1	1	0	2	0	1	4
University of Iowa	0	12	8	41	41	0	18	16	160	310
University of Northern Iowa	0	0	0	0	0	0	0	0	5	7
Kansas, total	6	7	3	72	44	28	58	27	177	433
Kansas State University	0	5	1	39	12	27	12	10	39	128
University of Kansas	6	1	2	32	31	1	40	17	132	278
Wichita State University	0	1	0	1	1	0	6	0	6	27
Kentucky, total	4	11	4	56	45	11	31	24	151	317
Southern Baptist Theological Sem	0	0	0	0	0	0	0	0	19	19
Spalding University	0	0	0	0	0	0	0	0	17	17
University of Kentucky	4	11	2	40	29	11	20	20	83	203
University of Louisville	0	0	2	16	16	0	11	4	32	78
Louisiana, total	14	18	19	94	75	19	33	41	248	557
Grambling State University	0	0	0	0	0	0	0	0	11	11
LA St U & A&M College	13	5	10	36	17	19	20	23	101	253
LA St U Shreveport	0	0	0	13	13	0	0	0	0	13
LA St U Medical Center	0	0	0	7	7	0	0	0	6	13
Louisiana Tech University	0	0	1	0	0	0	0	0	12	26
New Orleans Baptist Theol Sem	0	0	0	0	0	0	0	0	21	21
Univ of Louisiana at Monroe	0	0	0	3	3	0	0	0	3	6
Southern U A&M Col Baton Rouge	0	0	0	0	0	0	0	0	2	2
Tulane University	0	6	2	30	30	0	8	12	58	140
University of New Orleans	1	0	0	0	0	0	5	5	19	35
Univ of Louisiana at Lafayette	0	7	6	5	5	0	0	1	15	37
Maine, total	4	0	0	9	4	5	3	1	10	37
University of Maine	4	0	0	9	4	5	3	1	10	37

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
Maryland, total	11	687	137	14	13	35	29	46	67	44	23	0
Johns Hopkins University	31	223	47	6	6	6	12	17	18	12	6	0
Loyola College	308	3	0	0	0	0	0	0	0	0	0	0
Morgan State University	332	0	0	0	0	0	0	0	0	0	0	0
Peabody Inst of Johns Hopkins U	332	0	0	0	0	0	0	0	0	0	0	0
Uniformed Services U of Hlth Sci	257	12	0	0	0	0	0	0	0	0	0	0
U of Maryland Baltimore	157	40	0	0	0	0	0	0	3	0	3	0
U of Maryland Baltimore County	131	53	9	1	0	1	4	3	4	1	3	0
U of Maryland College Park	14	355	81	7	7	28	13	26	42	31	11	0
U of Maryland Eastern Shore	324	1	0	0	0	0	0	0	0	0	0	0
Massachusetts, total	4	1,498	312	47	17	82	66	100	277	131	146	0
American International College	332	0	0	0	0	0	0	0	0	0	0	0
Boston College	156	42	0	0	0	0	0	0	13	1	12	0
Boston University	47	172	17	0	0	6	4	7	25	16	9	0
Brandeis University	103	80	0	0	0	0	0	0	18	5	13	0
Clark University	191	27	0	0	0	0	0	0	5	2	3	0
Harvard University	17	328	14	0	0	2	3	9	47	19	28	0
MA Col Pharmacy & Allied Health	316	2	0	0	0	0	0	0	2	0	2	0
Massachusetts Institute of Tech	5	453	194	25	8	48	43	70	88	54	34	0
New England Conserv of Music	332	0	0	0	0	0	0	0	0	0	0	0
Northeastern University	104	75	16	0	1	9	3	3	22	9	13	0
Simmons College	332	0	0	0	0	0	0	0	0	0	0	0
Smith College	332	0	0	0	0	0	0	0	0	0	0	0
Springfield College	332	0	0	0	0	0	0	0	0	0	0	0
Tufts University	115	66	9	2	0	0	6	1	8	4	4	0
U of Massachusetts Amherst	42	185	39	17	5	8	2	7	33	16	17	0
U of Massachusetts Boston	248	13	0	0	0	0	0	0	0	0	0	0
U of Massachusetts Lowell	177	30	12	3	2	6	0	1	13	4	9	0
U of Massachusetts Worcester	277	8	0	0	0	0	0	0	0	0	0	0
Worcester Polytechnic Institute	227	17	11	0	1	3	5	2	3	1	2	0
Michigan, total	8	958	253	15	15	73	60	90	127	48	77	2
Andrews University	292	6	0	0	0	0	0	0	0	0	0	0
Central Michigan University	300	4	0	0	0	0	0	0	0	0	0	0
Eastern Michigan University	332	0	0	0	0	0	0	0	0	0	0	0
Michigan State University	22	279	45	3	6	15	13	8	37	14	23	0
Michigan Technological U	173	32	22	5	0	0	8	9	1	1	0	0
Oakland University	221	19	14	0	0	0	1	13	3	1	1	1
University of Detroit Mercy	268	10	2	1	0	1	0	0	0	0	0	0
University of Michigan Ann Arbor	6	446	145	2	7	50	32	54	61	25	35	1
Wayne State University	65	133	25	4	2	7	6	6	23	5	18	0
Western Michigan University	184	29	0	0	0	0	0	0	2	2	0	0
Minnesota, total	19	415	83	18	10	12	16	27	56	24	32	0
Luther NW Theological Seminary	332	0	0	0	0	0	0	0	0	0	0	0
Mayo Sch Health-Related Sciences	217	20	4	0	0	0	0	4	0	0	0	0
U of Minnesota Twin Cities	10	375	79	18	10	12	16	23	56	24	32	0
University of St Thomas	332	0	0	0	0	0	0	0	0	0	0	0
Walden University	217	20	0	0	0	0	0	0	0	0	0	0
Mississippi, total	35	164	17	4	1	2	3	7	27	0	27	0
Delta State University	332	0	0	0	0	0	0	0	0	0	0	0
Jackson State University	272	9	0	0	0	0	0	0	0	0	0	0
Mississippi State University	110	71	9	2	0	1	1	5	10	0	10	0
Reformed Theological Sem	332	0	0	0	0	0	0	0	0	0	0	0
U of Mississippi	160	38	6	0	1	1	2	2	6	0	6	0
U of Mississippi Med Ctr	248	13	0	0	0	0	0	0	0	0	0	0
U of Southern Mississippi	170	33	2	2	0	0	0	0	11	0	11	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
Maryland, total	21	37	35	194	184	10	62	134	319	1,006
Johns Hopkins University	3	10	1	94	94	0	6	44	118	341
Loyola College	0	0	0	0	0	0	3	0	0	3
Morgan State University	0	0	0	0	0	0	0	0	6	6
Peabody Inst of Johns Hopkins U	0	0	0	0	0	0	0	0	21	21
Uniformed Services U of Hlth Sci	0	0	0	8	8	0	4	0	0	12
U of Maryland Baltimore	0	0	0	36	36	0	0	1	21	61
U of Maryland Baltimore County	1	4	9	8	8	0	13	5	4	57
U of Maryland College Park	16	23	25	48	38	10	36	84	149	504
U of Maryland Eastern Shore	1	0	0	0	0	0	0	0	0	1
Massachusetts, total	45	57	39	333	318	15	104	331	634	2,132
American International College	0	0	0	0	0	0	0	0	4	4
Boston College	0	0	0	7	7	0	9	13	56	98
Boston University	1	6	4	49	48	1	27	43	128	300
Brandeis University	0	7	3	16	16	0	8	28	23	103
Clark University	0	0	0	4	4	0	5	13	2	29
Harvard University	7	20	3	113	112	1	9	115	236	564
MA Col Pharmacy & Allied Health	0	0	0	0	0	0	0	0	0	2
Massachusetts Institute of Tech	32	17	19	39	39	0	6	58	34	487
New England Conserv of Music	0	0	0	0	0	0	0	0	3	3
Northeastern University	0	0	0	15	15	0	9	13	5	80
Simmons College	0	0	0	0	0	0	0	0	4	4
Smith College	0	0	0	0	0	0	0	0	13	13
Springfield College	0	0	0	0	0	0	0	0	9	9
Tufts University	0	0	0	29	29	0	7	13	12	78
U of Massachusetts Amherst	3	7	6	48	35	13	21	28	84	269
U of Massachusetts Boston	2	0	0	1	1	0	3	7	5	18
U of Massachusetts Lowell	0	0	4	1	1	0	0	0	16	46
U of Massachusetts Worcester	0	0	0	8	8	0	0	0	0	8
Worcester Polytechnic Institute	0	0	0	3	3	0	0	0	0	17
Michigan, total	18	46	26	199	160	39	125	164	470	1,428
Andrews University	0	0	0	0	0	0	6	0	21	27
Central Michigan University	0	0	1	0	0	0	3	0	1	5
Eastern Michigan University	0	0	0	0	0	0	0	0	4	4
Michigan State University	1	17	5	79	48	31	36	59	109	388
Michigan Technological U	1	0	0	8	4	4	0	0	4	36
Oakland University	0	0	0	2	2	0	0	0	6	25
University of Detroit Mercy	0	0	0	0	0	0	8	0	0	10
University of Michigan Ann Arbor	15	22	17	69	65	4	40	77	209	655
Wayne State University	0	6	3	41	41	0	20	15	93	226
Western Michigan University	1	1	0	0	0	0	12	13	23	52
Minnesota, total	6	13	10	135	98	37	55	57	359	774
Luther NW Theological Seminary	0	0	0	0	0	0	0	0	1	1
Mayo Sch Health-Related Sciences	0	0	0	16	16	0	0	0	0	20
U of Minnesota Twin Cities	6	13	10	119	82	37	37	55	281	656
University of St Thomas	0	0	0	0	0	0	0	0	22	22
Walden University	0	0	0	0	0	0	18	2	55	75
Mississippi, total	6	3	2	67	35	32	29	13	208	372
Delta State University	0	0	0	0	0	0	0	0	7	7
Jackson State University	4	0	0	0	0	0	0	5	16	25
Mississippi State University	0	2	1	42	10	32	2	5	41	112
Reformed Theological Sem	0	0	0	0	0	0	0	0	3	3
U of Mississippi	1	0	1	10	10	0	11	3	68	106
U of Mississippi Med Ctr	0	0	0	13	13	0	0	0	0	13
U of Southern Mississippi	1	1	0	2	2	0	16	0	73	106

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
Missouri, total	20	389	66	13	5	11	10	27	42	9	33	0
Concordia Seminary	332	0	0	0	0	0	0	0	0	0	0	0
St Louis University	133	51	0	0	0	0	0	0	0	0	0	0
University Missouri Columbia	67	129	17	4	0	4	2	7	11	3	8	0
University Missouri Kansas City	205	22	2	0	0	0	1	1	5	2	3	0
University Missouri Rolla	152	44	30	4	4	2	5	15	10	1	9	0
University Missouri St Louis	205	22	0	0	0	0	0	0	3	0	3	0
Washington University	69	121	17	5	1	5	2	4	13	3	10	0
Montana, total	40	58	6	0	5	0	1	0	16	5	11	0
Montana St University Bozeman	177	30	6	0	5	0	1	0	11	5	6	0
University of Montana	187	28	0	0	0	0	0	0	5	0	5	0
Nebraska, total	32	174	14	1	1	2	0	10	24	9	15	0
Creighton University	277	8	0	0	0	0	0	0	0	0	0	0
U of Nebraska at Lincoln	60	142	14	1	1	2	0	10	22	9	13	0
U of Nebraska at Omaha	308	3	0	0	0	0	0	0	0	0	0	0
U of Nebraska Medical Center	214	21	0	0	0	0	0	0	2	0	2	0
Nevada, total	41	57	8	1	5	0	1	1	10	7	3	0
University of Nevada-Las Vegas	284	7	1	0	1	0	0	0	0	0	0	0
University of Nevada-Reno	136	50	7	1	4	0	1	1	10	7	3	0
New Hampshire, total	38	78	11	2	0	3	1	5	14	6	8	0
Dartmouth College	140	48	8	1	0	2	0	5	8	2	6	0
University of New Hampshire	177	30	3	1	0	1	1	0	6	4	2	0
New Jersey, total	16	565	112	15	8	38	11	40	105	51	54	0
Drew University	332	0	0	0	0	0	0	0	0	0	0	0
Fairleigh Dickinson U	244	14	0	0	0	0	0	0	0	0	0	0
New Jersey Institute Technology	160	38	15	1	5	7	1	1	3	1	2	0
Princeton Theological Seminary	332	0	0	0	0	0	0	0	0	0	0	0
Princeton University	41	187	36	7	1	20	4	4	54	33	21	0
Rutgers St U NJ New Brunswick	28	238	48	6	1	6	5	30	26	12	14	0
Rutgers St U NJ Newark Campus	197	25	0	0	0	0	0	0	7	1	6	0
Seton Hall University	217	20	0	0	0	0	0	0	11	0	11	0
Stevens Institute of Technology	225	18	13	1	1	5	1	5	4	4	0	0
U of Medicine & Dentistry of NJ	197	25	0	0	0	0	0	0	0	0	0	0
New Mexico, total	33	167	28	4	5	10	3	6	35	22	13	0
New Mexico Inst Mining & Tech	284	7	1	1	0	0	0	0	2	1	1	0
New Mexico State University	127	56	12	0	4	5	1	2	15	11	4	0
U of New Mexico, All Campuses	81	104	15	3	1	5	2	4	18	10	8	0
New York, total	2	2,223	317	31	35	101	56	94	306	150	154	2
Adelphi University	205	22	0	0	0	0	0	0	0	0	0	0
Albany Medical College	217	20	0	0	0	0	0	0	0	0	0	0
Alfred University	272	9	9	0	0	0	0	9	0	0	0	0
Clarkson University	221	19	11	2	5	1	3	0	7	2	5	0
Columbia U in City of New York	26	250	38	4	2	13	6	13	35	13	22	0
Cornell U Endowed Colleges	8	379	57	4	6	20	11	16	65	35	29	1
Cornell U Medical Campus	170	33	0	0	0	0	0	0	0	0	0	0
CUNY Grad School & U Center	40	190	23	4	2	9	4	4	28	10	18	0
Fordham University	157	40	0	0	0	0	0	0	0	0	0	0
Hebrew Union Col-Jewish Inst Rel	324	1	0	0	0	0	0	0	0	0	0	0
Hofstra University	167	34	0	0	0	0	0	0	0	0	0	0
Jewish Theological Sem America	332	0	0	0	0	0	0	0	0	0	0	0
Juilliard School	332	0	0	0	0	0	0	0	0	0	0	0
Long Island University Brooklyn	239	15	0	0	0	0	0	0	0	0	0	0
New School University	140	48	0	0	0	0	0	0	0	0	0	0
New York Medical College	262	11	0	0	0	0	0	0	0	0	0	0
New York University	45	177	0	0	0	0	0	0	14	9	5	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
Missouri, total	5	15	7	136	122	14	54	64	277	666
Concordia Seminary	0	0	0	0	0	0	0	0	2	2
St Louis University	1	0	0	25	25	0	13	12	81	132
University Missouri Columbia	0	6	0	48	34	14	22	25	101	230
University Missouri Kansas City	0	0	2	6	6	0	3	4	43	65
University Missouri Rolla	2	2	0	0	0	0	0	0	0	44
University Missouri St Louis	0	0	0	5	5	0	7	7	7	29
Washington University	2	7	5	52	52	0	9	16	43	164
Montana, total	2	2	0	22	14	8	10	0	25	83
Montana St University Bozeman	1	1	0	11	7	4	0	0	13	43
University of Montana	1	1	0	11	7	4	10	0	12	40
Nebraska, total	2	5	1	76	46	30	26	26	117	291
Creighton University	0	0	0	8	8	0	0	0	0	8
U of Nebraska at Lincoln	2	5	1	49	19	30	26	23	109	251
U of Nebraska at Omaha	0	0	0	0	0	0	0	3	1	4
U of Nebraska Medical Center	0	0	0	19	19	0	0	0	7	28
Nevada, total	5	0	0	11	10	1	18	5	28	85
University of Nevada-Las Vegas	0	0	0	2	1	1	0	4	16	23
University of Nevada-Reno	5	0	0	9	9	0	18	1	12	62
New Hampshire, total	3	5	3	31	30	1	6	5	19	97
Dartmouth College	1	4	3	22	22	0	2	0	1	49
University of New Hampshire	2	1	0	9	8	1	4	5	18	48
New Jersey, total	26	31	32	130	112	18	47	82	257	822
Drew University	0	0	0	0	0	0	0	0	26	26
Fairleigh Dickinson U	0	0	0	0	0	0	14	0	0	14
New Jersey Institute Technology	3	4	13	0	0	0	0	0	1	39
Princeton Theological Seminary	0	0	0	0	0	0	0	0	18	18
Princeton University	8	13	8	22	22	0	5	41	67	254
Rutgers St U NJ New Brunswick	15	13	11	74	57	17	18	33	109	347
Rutgers St U NJ Newark Campus	0	0	0	9	8	1	1	8	10	35
Seton Hall University	0	0	0	0	0	0	9	0	26	46
Stevens Institute of Technology	0	1	0	0	0	0	0	0	0	18
U of Medicine & Dentistry of NJ	0	0	0	25	25	0	0	0	0	25
New Mexico, total	3	15	7	39	28	11	19	21	109	276
New Mexico Inst Mining & Tech	3	0	1	0	0	0	0	0	0	7
New Mexico State University	0	4	2	16	5	11	7	0	22	78
U of New Mexico, All Campuses	0	11	4	23	23	0	12	21	87	191
New York, total	44	99	85	585	527	58	411	376	1,288	3,511
Adelphi University	0	1	0	0	0	0	21	0	6	28
Albany Medical College	0	0	0	20	20	0	0	0	0	20
Alfred University	0	0	0	0	0	0	0	0	0	9
Clarkson University	0	0	0	1	1	0	0	0	0	19
Columbia U in City of New York	10	10	8	51	51	0	42	56	166	416
Cornell U Endowed Colleges	3	19	14	143	89	54	12	66	106	485
Cornell U Medical Campus	0	0	0	33	33	0	0	0	0	33
CUNY Grad School & U Center	5	5	8	37	37	0	45	39	85	275
Fordham University	0	0	0	2	2	0	30	8	58	98
Hebrew Union Col-Jewish Inst Rel	0	0	0	0	0	0	1	0	3	4
Hofstra University	0	0	0	0	0	0	34	0	13	47
Jewish Theological Sem America	0	0	0	0	0	0	0	0	2	2
Juilliard School	0	0	0	0	0	0	0	0	14	14
Long Island University Brooklyn	0	0	0	0	0	0	15	0	0	15
New School University	0	0	0	0	0	0	27	21	9	57
New York Medical College	0	0	0	11	11	0	0	0	1	12
New York University	0	16	18	55	55	0	43	31	233	410

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
New York, continued:												
Pace University New York Campus	332	0	0	0	0	0	0	0	0	0	0	0
Polytechnic University	187	28	21	0	4	13	0	4	6	2	4	0
Rensselaer Polytechnic Institute	81	104	65	5	4	13	14	29	17	11	6	0
Rockefeller University	225	18	0	0	0	0	0	0	1	1	0	0
St John's U (Jamaica, NY)	191	27	0	0	0	0	0	0	2	0	2	0
SUNY at Albany	78	108	1	0	0	0	0	1	17	10	7	0
SUNY at Binghamton	152	44	6	0	0	1	1	4	5	0	5	0
SUNY at Buffalo	48	169	34	4	11	9	6	4	26	10	16	0
SUNY at Stony Brook	46	175	19	0	0	7	6	6	39	22	16	1
SUNY Col Environ Sci & Forestry	262	11	1	0	1	0	0	0	1	0	1	0
SUNY Col of Optometry	332	0	0	0	0	0	0	0	0	0	0	0
SUNY Health Sci Ctr Brooklyn	244	14	0	0	0	0	0	0	0	0	0	0
SUNY Health Sci Ctr Syracuse	300	4	0	0	0	0	0	0	0	0	0	0
Syracuse University	91	92	13	5	0	3	4	1	9	3	6	0
Teachers College Columbia U	332	0	0	0	0	0	0	0	0	0	0	0
Union Theological Seminary	332	0	0	0	0	0	0	0	0	0	0	0
University of Rochester	65	133	19	3	0	12	1	3	34	22	12	0
Yeshiva University	140	48	0	0	0	0	0	0	0	0	0	0
North Carolina, total	10	761	167	16	16	50	22	63	98	27	71	0
Duke University	44	179	34	0	1	13	6	14	25	11	14	0
East Carolina University	268	10	0	0	0	0	0	0	0	0	0	0
North Carolina A&T State U	296	5	5	0	0	3	2	0	0	0	0	0
North Carolina State U Raleigh	19	297	112	16	12	29	13	42	21	3	18	0
U of North Carolina Chapel Hill	33	220	11	0	3	1	0	7	42	11	31	0
U of North Carolina Charlotte	277	8	5	0	0	4	1	0	0	0	0	0
U of North Carolina Greensboro	257	12	0	0	0	0	0	0	0	0	0	0
Wake Forest University	177	30	0	0	0	0	0	0	10	2	8	0
North Dakota, total	44	48	3	0	0	1	0	2	11	0	11	0
North Dakota State University	197	25	3	0	0	1	0	2	9	0	9	0
University of North Dakota	200	23	0	0	0	0	0	0	2	0	2	0
Ohio, total	7	966	257	37	9	60	34	117	148	45	100	3
Air Force Institute Technology	205	22	17	0	0	9	1	7	3	3	0	0
Bowling Green State University	149	45	0	0	0	0	0	0	7	0	5	2
Case Western Reserve University	68	124	43	7	1	5	6	24	22	4	18	0
Cleveland State University	239	15	2	1	0	1	0	0	3	0	3	0
Hebrew Union Col-Jewish Inst Rel	332	0	0	0	0	0	0	0	0	0	0	0
Kent State University Geauga	109	72	0	0	0	0	0	0	6	5	1	0
Medical College of Ohio	248	13	0	0	0	0	0	0	0	0	0	0
Miami University Oxford Campus	187	28	0	0	0	0	0	0	5	0	5	0
Ohio State University	18	323	74	7	1	17	14	35	29	7	21	1
Ohio University	136	50	9	0	0	5	2	2	17	11	6	0
University of Akron	96	87	33	18	3	3	5	4	32	10	22	0
University of Cincinnati	62	138	56	2	3	12	4	35	20	5	15	0
University of Dayton	268	10	9	0	0	3	2	4	0	0	0	0
University of Toledo	174	31	13	2	1	4	0	6	4	0	4	0
Wright State University	277	8	1	0	0	1	0	0	0	0	0	0
Youngstown State University	332	0	0	0	0	0	0	0	0	0	0	0
Oklahoma, total	31	196	40	17	1	5	7	10	21	9	12	0
Oklahoma State University	89	93	19	4	1	4	4	6	9	4	5	0
University of Oklahoma Norman	92	91	17	9	0	1	3	4	12	5	7	0
University of Tulsa	257	12	4	4	0	0	0	0	0	0	0	0
Oregon, total	27	287	49	3	4	25	5	12	27	11	15	1
Oregon Grad Inst Science & Tech	239	15	9	0	0	3	1	5	0	0	0	0
Oregon Health Sciences U	205	22	0	0	0	0	0	0	0	0	0	0
Oregon State University	63	137	35	3	4	18	4	6	13	5	7	1
Portland State University	205	22	4	0	0	4	0	0	1	0	1	0
University of Oregon	92	91	1	0	0	0	0	1	13	6	7	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
New York, continued:										
Pace University New York Campus	0	0	0	0	0	0	0	0	1	1
Polytechnic University	0	0	1	0	0	0	0	0	0	28
Rensselaer Polytechnic Institute	4	5	4	4	4	0	0	5	11	115
Rockefeller University	0	0	0	17	17	0	0	0	0	18
St John's U (Jamaica, NY)	0	0	0	7	7	0	18	0	40	67
SUNY at Albany	5	9	8	7	7	0	27	34	43	151
SUNY at Binghamton	1	3	1	1	1	0	11	16	32	76
SUNY at Buffalo	1	6	3	48	48	0	23	28	100	269
SUNY at Stony Brook	13	14	3	39	39	0	24	24	44	219
SUNY Col Environ Sci & Forestry	1	0	0	8	4	4	0	0	1	12
SUNY Col of Optometry	0	0	0	0	0	0	0	0	1	1
SUNY Health Sci Ctr Brooklyn	0	0	0	14	14	0	0	0	0	14
SUNY Health Sci Ctr Syracuse	0	0	0	4	4	0	0	0	1	5
Syracuse University	1	4	13	6	6	0	17	29	62	154
Teachers College Columbia U	0	0	0	0	0	0	0	0	183	183
Union Theological Seminary	0	0	0	0	0	0	0	0	8	8
University of Rochester	0	7	4	42	42	0	10	17	53	186
Yeshiva University	0	0	0	35	35	0	11	2	12	60
North Carolina, total	25	38	21	251	212	39	66	95	344	1,105
Duke University	4	6	4	53	52	1	22	31	70	249
East Carolina University	0	0	0	10	10	0	0	0	11	21
North Carolina A&T State U	0	0	0	0	0	0	0	0	0	5
North Carolina State U Raleigh	13	17	7	98	60	38	15	14	57	354
U of North Carolina Chapel Hill	8	12	10	70	70	0	17	50	154	374
U of North Carolina Charlotte	0	3	0	0	0	0	0	0	2	10
U of North Carolina Greensboro	0	0	0	0	0	0	12	0	49	61
Wake Forest University	0	0	0	20	20	0	0	0	1	31
North Dakota, total	0	1	3	15	9	6	15	0	20	68
North Dakota State University	0	1	3	9	3	6	0	0	1	26
University of North Dakota	0	0	0	6	6	0	15	0	19	42
Ohio, total	20	33	16	227	204	23	160	105	672	1,638
Air Force Institute Technology	0	1	1	0	0	0	0	0	0	22
Bowling Green State University	0	0	0	4	4	0	22	12	48	93
Case Western Reserve University	0	0	2	42	41	1	9	6	40	164
Cleveland State University	0	0	0	5	5	0	2	3	23	38
Hebrew Union Col-Jewish Inst Rel	0	0	0	0	0	0	0	0	4	4
Kent State University Geauga	3	3	3	12	12	0	38	7	69	141
Medical College of Ohio	0	0	0	13	13	0	0	0	1	14
Miami University Oxford Campus	1	0	0	9	9	0	10	3	21	49
Ohio State University	10	17	9	96	75	21	31	57	226	549
Ohio University	0	7	0	7	6	1	10	0	81	131
University of Akron	0	1	0	2	2	0	15	4	21	108
University of Cincinnati	6	2	0	26	26	0	15	13	89	227
University of Dayton	0	0	0	1	1	0	0	0	10	20
University of Toledo	0	2	0	4	4	0	8	0	37	68
Wright State University	0	0	1	6	6	0	0	0	0	8
Youngstown State University	0	0	0	0	0	0	0	0	2	2
Oklahoma, total	13	7	2	49	42	7	28	36	187	383
Oklahoma State University	4	4	2	20	13	7	14	21	105	198
University of Oklahoma Norman	9	3	0	28	28	0	7	15	80	171
University of Tulsa	0	0	0	1	1	0	7	0	2	14
Oregon, total	20	11	13	108	71	37	24	35	99	386
Oregon Grad Inst Science & Tech	2	0	1	3	3	0	0	0	0	15
Oregon Health Sciences U	0	0	0	21	21	0	1	0	3	25
Oregon State University	7	6	6	61	24	37	4	5	25	162
Portland State University	3	0	0	1	1	0	2	11	10	32
University of Oregon	8	5	6	22	22	0	17	19	61	152

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
Pennsylvania, total	6	1,279	348	47	34	63	51	153	173	66	107	0
Allegheny Univ of the Hlth Sci	167	34	0	0	0	0	0	0	0	0	0	0
Bryn Mawr College	272	9	0	0	0	0	0	0	2	2	0	0
Carnegie Mellon University	56	147	76	11	8	22	4	31	11	6	5	0
Drexel University	136	50	25	2	2	7	5	9	5	2	3	0
Duquesne University	231	16	0	0	0	0	0	0	0	0	0	0
Indiana University of PA	248	13	0	0	0	0	0	0	0	0	0	0
Lehigh University	115	66	35	8	4	4	6	13	9	4	5	0
Pennsylvania State U	11	374	142	16	13	22	25	66	59	23	36	0
Philadelphia Col Pharmacy & Sci	324	1	0	0	0	0	0	0	1	0	1	0
Temple University	83	103	2	0	1	1	0	0	10	3	7	0
Thomas Jefferson University	191	27	0	0	0	0	0	0	0	0	0	0
University of Pennsylvania	27	243	38	4	0	3	7	24	38	20	18	0
University of Pittsburgh	39	192	30	6	6	4	4	10	34	6	28	0
Villanova University	300	4	0	0	0	0	0	0	4	0	4	0
Westminster Theological Seminary	332	0	0	0	0	0	0	0	0	0	0	0
Widener U Pennsylvania Campus	332	0	0	0	0	0	0	0	0	0	0	0
Rhode Island, total	32	174	24	1	0	14	6	3	24	13	11	0
Brown University	76	112	13	0	0	7	4	2	19	13	6	0
Salve Regina University	316	2	0	0	0	0	0	0	0	0	0	0
University of Rhode Island	124	60	11	1	0	7	2	1	5	0	5	0
South Carolina, total	30	241	54	13	6	13	10	12	34	5	29	0
Clemson University	89	93	37	1	6	9	9	12	14	3	11	0
Medical U South Carolina	184	29	0	0	0	0	0	0	0	0	0	0
South Carolina State University	332	0	0	0	0	0	0	0	0	0	0	0
U of South Carolina at Columbia	73	119	17	12	0	4	1	0	20	2	18	0
South Dakota, total	47	30	3	0	0	0	0	3	6	0	6	0
South Dakota Sch of Mines & Tech	308	3	3	0	0	0	0	3	0	0	0	0
South Dakota State University	231	16	0	0	0	0	0	0	6	0	6	0
University of South Dakota	262	11	0	0	0	0	0	0	0	0	0	0
Tennessee, total	23	360	67	10	13	7	12	25	29	6	23	0
East Tennessee State University	300	4	0	0	0	0	0	0	0	0	0	0
Meharry Medical College	248	13	0	0	0	0	0	0	0	0	0	0
Mid-America Baptist Theol Sem	332	0	0	0	0	0	0	0	0	0	0	0
Middle Tennessee State U	296	5	0	0	0	0	0	0	2	0	2	0
Tennessee State University	262	11	0	0	0	0	0	0	0	0	0	0
Tennessee Technological U	277	8	8	1	0	2	4	1	0	0	0	0
University of Memphis	149	45	7	0	5	0	1	1	2	0	2	0
University Tennessee Knoxville	50	161	32	6	2	2	4	18	18	4	14	0
University Tennessee Memphis	248	13	0	0	0	0	0	0	0	0	0	0
Vanderbilt University	86	100	20	3	6	3	3	5	7	2	5	0
Texas, total	3	1,670	398	74	61	105	53	105	223	96	126	1
Baylor College of Medicine	143	46	0	0	0	0	0	0	0	0	0	0
Baylor University	248	13	0	0	0	0	0	0	5	2	3	0
Dallas Theological Seminary	332	0	0	0	0	0	0	0	0	0	0	0
Lamar University	316	2	2	1	1	0	0	0	0	0	0	0
Rice University	84	102	29	7	1	8	5	8	25	11	13	1
Sam Houston State University	284	7	0	0	0	0	0	0	0	0	0	0
Southern Methodist University	162	37	20	0	0	8	3	9	1	1	0	0
Southwestern Baptist Theol Sem	300	4	0	0	0	0	0	0	0	0	0	0
St Mary's University	308	3	0	0	0	0	0	0	0	0	0	0
Stephen F Austin State U	324	1	0	0	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
Pennsylvania, total	22	49	62	268	249	19	178	179	836	2,115
Allegheny Univ of the Hlth Sci	0	0	0	16	16	0	18	0	5	39
Bryn Mawr College	0	0	0	1	1	0	3	3	13	22
Carnegie Mellon University	0	9	25	8	8	0	6	12	15	162
Drexel University	1	0	4	6	6	0	9	0	6	56
Duquesne University	0	0	0	0	0	0	16	0	13	29
Indiana University of PA	0	0	0	0	0	0	7	6	43	56
Lehigh University	0	4	2	5	5	0	8	3	29	95
Pennsylvania State U	13	9	1	80	61	19	35	35	206	580
Philadelphia Col Pharmacy & Sci	0	0	0	0	0	0	0	0	6	7
Temple University	0	9	0	19	19	0	42	21	148	251
Thomas Jefferson University	0	0	0	27	27	0	0	0	0	27
University of Pennsylvania	4	9	17	64	64	0	13	60	141	384
University of Pittsburgh	4	9	13	42	42	0	21	39	168	360
Villanova University	0	0	0	0	0	0	0	0	3	7
Westminster Theological Seminary	0	0	0	0	0	0	0	0	11	11
Widener U Pennsylvania Campus	0	0	0	0	0	0	0	0	29	29
Rhode Island, total	15	22	4	25	24	1	25	35	63	237
Brown University	6	16	4	17	17	0	7	30	41	153
Salve Regina University	0	0	0	0	0	0	0	2	3	5
University of Rhode Island	9	6	0	8	7	1	18	3	19	79
South Carolina, total	10	12	5	80	71	9	16	30	175	416
Clemson University	1	5	2	26	17	9	1	7	19	112
Medical U South Carolina	0	0	0	29	29	0	0	0	1	30
South Carolina State University	0	0	0	0	0	0	0	0	5	5
U of South Carolina at Columbia	9	7	3	25	25	0	15	23	150	269
South Dakota, total	0	0	0	11	6	5	7	3	47	77
South Dakota Sch of Mines & Tech	0	0	0	0	0	0	0	0	0	3
South Dakota State University	0	0	0	7	2	5	0	3	0	16
University of South Dakota	0	0	0	4	4	0	7	0	47	58
Tennessee, total	1	11	5	120	109	11	82	45	307	667
East Tennessee State University	0	0	0	4	4	0	0	0	26	30
Meharry Medical College	0	0	0	13	13	0	0	0	0	13
Mid-America Baptist Theol Sem	0	0	0	0	0	0	0	0	8	8
Middle Tennessee State U	0	0	0	1	1	0	0	2	7	12
Tennessee State University	0	0	0	0	0	0	9	2	34	45
Tennessee Technological U	0	0	0	0	0	0	0	0	0	8
University of Memphis	0	6	1	1	1	0	26	2	51	96
University Tennessee Knoxville	1	4	4	45	34	11	29	28	95	256
University Tennessee Memphis	0	0	0	13	13	0	0	0	4	17
Vanderbilt University	0	1	0	43	43	0	18	11	82	182
Texas, total	70	52	61	460	402	58	209	197	1,027	2,697
Baylor College of Medicine	0	0	0	46	46	0	0	0	0	46
Baylor University	1	3	0	3	3	0	0	1	30	43
Dallas Theological Seminary	0	0	0	0	0	0	0	0	7	7
Lamar University	0	0	0	0	0	0	0	0	1	3
Rice University	6	7	1	14	14	0	3	17	20	122
Sam Houston State University	0	0	0	0	0	0	0	7	0	7
Southern Methodist University	2	4	2	3	3	0	2	3	3	40
Southwestern Baptist Theol Sem	0	0	0	0	0	0	4	0	48	52
St Mary's University	0	0	0	0	0	0	3	0	1	4
Stephen F Austin State U	0	0	0	1	0	1	0	0	0	1

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
Texas, continued:												
Texas A&M University	9	377	104	22	13	19	19	31	51	12	39	0
Texas A&M University Commerce	284	7	0	0	0	0	0	0	0	0	0	0
Texas A&M University Kingsville	324	1	0	0	0	0	0	0	0	0	0	0
Texas Christian University	227	17	0	0	0	0	0	0	8	3	5	0
Texas Southern University	296	5	0	0	0	0	0	0	0	0	0	0
Texas Tech University	80	105	20	8	3	4	2	3	10	1	9	0
Texas Woman's University	205	22	0	0	0	0	0	0	0	0	0	0
University of Dallas	316	2	0	0	0	0	0	0	0	0	0	0
University of Houston	77	109	27	7	5	1	3	11	19	5	14	0
U North TX	115	66	1	0	0	0	0	1	7	7	0	0
U North TX Hlth Sci Ctr Ft Worth	300	4	0	0	0	0	0	0	0	0	0	0
University of St Thomas	332	0	0	0	0	0	0	0	0	0	0	0
U Texas at Arlington	131	53	20	0	0	11	1	8	8	3	5	0
U Texas at Austin	4	463	162	29	38	45	20	30	77	44	33	0
U Texas at Dallas	162	37	4	0	0	3	0	1	9	4	5	0
U Texas at El Paso	239	15	9	0	0	6	0	3	0	0	0	0
U Texas Hlth Sci Ctr	121	61	0	0	0	0	0	0	0	0	0	0
U Texas Hlth Sci Ctr San Antonio	200	23	0	0	0	0	0	0	3	3	0	0
U Texas Med Branch Galveston	174	31	0	0	0	0	0	0	0	0	0	0
U Texas SW Med Ctr Dallas	126	57	0	0	0	0	0	0	0	0	0	0
Utah, total	28	268	54	7	9	6	12	20	51	11	40	0
Brigham Young University	121	61	15	3	3	4	5	0	8	2	6	0
University of Utah	59	144	32	4	2	0	7	19	37	6	31	0
Utah State University	118	63	7	0	4	2	0	1	6	3	3	0
Vermont, total	46	34	6	0	1	2	1	2	1	0	1	0
Middlebury College	332	0	0	0	0	0	0	0	0	0	0	0
University of Vermont	167	34	6	0	1	2	1	2	1	0	1	0
Virginia, total	13	647	153	15	14	26	34	64	80	42	37	1
College of William and Mary	162	37	0	0	0	0	0	0	12	11	1	0
George Mason University	100	83	10	0	0	2	0	8	5	4	1	0
Hampton University	296	5	0	0	0	0	0	0	5	5	0	0
Old Dominion University	149	45	15	0	1	4	4	6	3	2	0	1
Regent University	332	0	0	0	0	0	0	0	0	0	0	0
Union Theol Seminary (PSCE)	332	0	0	0	0	0	0	0	0	0	0	0
University of Virginia	37	201	49	7	4	10	8	20	32	15	17	0
Virginia Commonwealth University	107	73	2	0	0	0	0	2	5	0	5	0
Virginia Polytechnic Inst & St U	36	203	77	8	9	10	22	28	18	5	13	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
Texas, continued:										
Texas A&M University	26	11	14	109	66	43	19	43	124	501
Texas A&M University Commerce	0	0	0	0	0	0	7	0	37	44
Texas A&M University Kingsville	0	0	0	1	0	1	0	0	23	24
Texas Christian University	0	0	0	0	0	0	9	0	13	30
Texas Southern University	2	0	0	3	3	0	0	0	20	25
Texas Tech University	1	4	1	29	16	13	32	8	84	189
Texas Woman's University	0	0	0	4	4	0	15	3	44	66
University of Dallas	0	0	0	0	0	0	0	2	3	5
University of Houston	3	3	10	13	13	0	24	10	91	200
U North TX	2	4	8	11	11	0	30	3	108	174
U North TX Hlth Sci Ctr Ft Worth	0	0	0	4	4	0	0	0	0	4
University of St Thomas	0	0	0	0	0	0	0	0	1	1
U Texas at Arlington	1	4	3	5	5	0	6	6	27	80
U Texas at Austin	14	11	19	56	56	0	37	87	289	752
U Texas at Dallas	6	1	3	6	6	0	4	4	16	53
U Texas at El Paso	6	0	0	0	0	0	0	0	0	15
U Texas Hlth Sci Ctr	0	0	0	59	59	0	0	2	22	83
U Texas Hlth Sci Ctr San Antonio	0	0	0	20	20	0	0	0	9	32
U Texas Med Branch Galveston	0	0	0	30	30	0	0	1	6	37
U Texas SW Med Ctr Dallas	0	0	0	43	43	0	14	0	0	57
Utah, total	6	9	7	72	55	17	50	19	97	365
Brigham Young University	0	2	1	8	8	0	25	2	32	93
University of Utah	5	7	6	32	32	0	12	13	50	194
Utah State University	1	0	0	32	15	17	13	4	15	78
Vermont, total	0	1	0	17	16	1	9	0	19	53
Middlebury College	0	0	0	0	0	0	0	0	3	3
University of Vermont	0	1	0	17	16	1	9	0	16	50
Virginia, total	28	25	25	135	108	27	100	101	379	1,026
College of William and Mary	9	1	5	8	8	0	0	2	25	62
George Mason University	2	2	14	11	11	0	23	16	31	114
Hampton University	0	0	0	0	0	0	0	0	0	5
Old Dominion University	3	4	3	6	6	0	5	6	17	62
Regent University	0	0	0	0	0	0	0	0	9	9
Union Theol Seminary (PSCE)	0	0	0	0	0	0	0	0	8	8
University of Virginia	9	11	1	39	38	1	27	33	132	333
Virginia Commonwealth University	0	0	0	27	27	0	24	15	26	99
Virginia Polytechnic Inst & St U	5	7	2	44	18	26	21	29	131	334

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	S&E rank*	Total S&E	Engineering						Physical sciences			
			Total	Chemi-cal	Civil	Elec-trical	Mechan-ical	Other engi-neering	Total	Physics & astron-omy	Chem-istry	Other physi-cal sci-ences
Washington, total	17	446	72	10	7	18	15	22	59	32	27	0
Gonzaga University	332	0	0	0	0	0	0	0	0	0	0	0
Seattle Pacific University	332	0	0	0	0	0	0	0	0	0	0	0
Seattle University	332	0	0	0	0	0	0	0	0	0	0	0
University of Washington Seattle	15	339	56	10	5	14	7	20	50	27	23	0
Washington State University	79	107	16	0	2	4	8	2	9	5	4	0
West Virginia, total	39	77	17	1	2	2	5	7	2	0	2	0
Marshall University	308	3	0	0	0	0	0	0	0	0	0	0
West Virginia University	105	74	17	1	2	2	5	7	2	0	2	0
Wisconsin, total	15	592	95	9	9	17	25	35	89	34	54	1
Marquette University	200	23	7	0	1	1	2	3	5	0	5	0
Medical College of Wisconsin	221	19	0	0	0	0	0	0	0	0	0	0
U of Wisconsin Madison	2	476	83	9	8	14	20	32	72	31	40	1
U of Wisconsin Milwaukee	105	74	5	0	0	2	3	0	12	3	9	0
Wyoming, total	43	54	10	1	2	4	3	0	9	1	8	0
University of Wyoming	129	54	10	1	2	4	3	0	9	1	8	0
Puerto Rico, total	37	89	3	0	3	0	0	0	10	1	9	0
Carlos Albizu University	157	40	0	0	0	0	0	0	0	0	0	0
Inter American U PR Metropolitan	332	0	0	0	0	0	0	0	0	0	0	0
U of PR Mayaguez Campus	277	8	3	0	3	0	0	0	0	0	0	0
U of PR Medical Science Campus	300	4	0	0	0	0	0	0	0	0	0	0
U of PR Rio Piedras	162	37	0	0	0	0	0	0	10	1	9	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1999

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

State and institution	Earth, atmos., & ocean sci-ences	Mathe-matics	Com-puter sci-ences	Biological & agricultural sciences			Psy-chology	Social sci-ences	Non-S&E, total	Grand total, all fields
				Total	Bio-logical	Agri-cul-tural				
Washington, total	26	21	9	144	110	34	32	83	260	706
Gonzaga University	0	0	0	0	0	0	0	0	12	12
Seattle Pacific University	0	0	0	0	0	0	0	0	10	10
Seattle University	0	0	0	0	0	0	0	0	18	18
University of Washington Seattle	26	20	7	102	82	20	20	58	182	521
Washington State University	0	1	2	42	28	14	12	25	38	145
West Virginia, total	2	4	1	19	18	1	24	8	63	140
Marshall University	0	0	0	3	3	0	0	0	0	3
West Virginia University	2	4	1	16	15	1	24	8	63	137
Wisconsin, total	19	28	16	183	151	32	52	110	281	873
Marquette University	0	1	0	4	4	0	6	0	36	59
Medical College of Wisconsin	0	0	0	19	19	0	0	0	0	19
U of Wisconsin Madison	18	20	14	151	119	32	32	86	209	685
U of Wisconsin Milwaukee	1	7	2	9	9	0	14	24	36	110
Wyoming, total	6	6	0	16	10	6	6	1	10	64
University of Wyoming	6	6	0	16	10	6	6	1	10	64
Puerto Rico, total	4	0	0	10	9	1	61	1	52	141
Carlos Albizu University	0	0	0	0	0	0	40	0	0	40
Inter American U PR Metropolitan	0	0	0	0	0	0	0	0	27	27
U of PR Mayaguez Campus	4	0	0	1	0	1	0	0	0	8
U of PR Medical Science Campus	0	0	0	4	4	0	0	0	0	4
U of PR Rio Piedras	0	0	0	5	5	0	21	1	25	62

KEY: - = Not applicable
* = States are ranked 1 to 49 and institutions are ranked 1 to 332.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1999

Field of study	Total	Definite plans							
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All recipients								
Science and engineering, total	25,953	16,547	14,877	6,485	2,985	3,777	1,630	1,605	65
Engineering, total	5,337	3,277	2,922	659	317	1,673	273	342	13
Aeronautical/astronautical	207	106	92	24	4	40	24	14	0
Chemical	678	446	398	100	20	264	14	47	1
Civil	585	346	286	78	46	124	38	57	3
Electrical	1,477	923	854	94	97	591	72	65	4
Industrial	209	131	113	7	29	64	13	17	1
Materials/metallurgical	470	278	243	79	12	137	15	35	0
Mechanical	853	527	473	126	54	252	41	51	3
Other engineering	858	520	463	151	55	201	56	56	1
Sciences, total	20,616	13,270	11,955	5,826	2,668	2,104	1,357	1,263	52
Physical sciences, total	3,582	2,381	2,187	1,247	186	655	99	183	11
Astronomy	160	124	104	74	10	13	7	20	0
Chemistry	2,134	1,424	1,351	755	114	436	46	66	7
Physics	1,271	820	720	412	60	204	44	96	4
Other physical sciences	17	13	12	6	2	2	2	1	0
Earth, atmospheric, and ocean sciences	807	512	433	208	61	92	72	76	3
Mathematics	1,085	723	633	215	256	130	32	89	1
Computer sciences	850	574	515	53	167	251	44	57	2
Biological sciences	5,600	3,852	3,598	2,856	308	257	177	231	23
Agricultural sciences	965	588	430	182	101	98	49	156	2
Psychology	3,667	2,150	2,098	798	461	340	499	49	3
Social sciences	4,060	2,490	2,061	267	1,128	281	385	422	7
Non-S&E, total	15,187	9,428	8,636	605	4,937	697	2,397	745	47
Grand total, all fields	41,140	25,975	23,513	7,090	7,922	4,474	4,027	2,350	112

See explanatory information, if any, and SOURCE at end of table.

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1999

Field of study	Total	Definite plans							
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	U.S. citizens								
Science and engineering, total	15,783	10,939	10,537	4,298	2,462	2,320	1,457	372	30
Engineering, total	2,474	1,718	1,665	321	233	862	249	45	8
Aeronautical/astronautical	103	68	66	14	2	26	24	2	0
Chemical	335	249	241	50	17	163	11	8	0
Civil	259	168	163	29	41	58	35	3	2
Electrical	637	452	447	43	62	278	64	3	2
Industrial	86	66	64	4	20	28	12	1	1
Materials/metallurgical	223	144	134	34	11	74	15	10	0
Mechanical	396	269	260	62	41	118	39	7	2
Other engineering	435	302	290	85	39	117	49	11	1
Sciences, total	13,309	9,221	8,872	3,977	2,229	1,458	1,208	327	22
Physical sciences, total	2,023	1,479	1,404	729	158	434	83	69	6
Astronomy	110	88	78	52	9	10	7	10	0
Chemistry	1,251	928	892	449	100	308	35	31	5
Physics	651	455	426	225	47	115	39	28	1
Other physical sciences	11	8	8	3	2	1	2	0	0
Earth, atmospheric, and ocean sciences	470	322	301	127	50	60	64	19	2
Mathematics	538	392	373	99	187	63	24	18	1
Computer sciences	412	304	297	20	117	124	36	7	0
Biological sciences	3,654	2,676	2,570	1,962	264	192	152	97	9
Agricultural sciences	440	293	287	83	93	70	41	6	0
Psychology	3,161	2,018	1,996	755	433	323	485	21	1
Social sciences	2,611	1,737	1,644	202	927	192	323	90	3
Non-S&E, total	11,839	7,976	7,779	463	4,416	594	2,306	159	38
Grand total, all fields	27,622	18,915	18,316	4,761	6,878	2,914	3,763	531	68

See explanatory information, if any, and SOURCE at end of table.

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1999

Field of study	Total	Definite plans							
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Non-U.S. citizens with permanent visas								
Science and engineering, total	1,645	1,033	966	443	142	316	65	61	6
Engineering, total	399	250	238	50	19	163	6	10	2
Aeronautical/astronautical	8	4	4	1	0	3	0	0	0
Chemical	39	20	19	5	0	14	0	1	0
Civil	51	27	26	10	1	14	1	1	0
Electrical	125	81	78	9	6	62	1	2	1
Industrial	13	7	6	0	1	5	0	1	0
Materials/metallurgical	34	18	17	3	1	13	0	1	0
Mechanical	64	46	43	8	4	30	1	2	1
Other engineering	65	47	45	14	6	22	3	2	0
Sciences, total	1,246	783	728	393	123	153	59	51	4
Physical sciences, total	240	156	151	71	10	64	6	4	1
Astronomy	6	5	5	4	0	1	0	0	0
Chemistry	149	89	86	41	4	38	3	3	0
Physics	84	61	59	26	6	24	3	1	1
Other physical sciences	1	1	1	0	0	1	0	0	0
Earth, atmospheric, and ocean sciences	51	31	26	16	5	0	5	5	0
Mathematics	67	43	39	14	12	10	3	4	0
Computer sciences	71	52	51	4	12	32	3	1	0
Biological sciences	464	299	285	238	19	17	11	11	3
Agricultural sciences	51	29	27	19	2	6	0	2	0
Psychology	69	44	42	16	11	6	9	2	0
Social sciences	233	129	107	15	52	18	22	22	0
Non-S&E, total	655	380	324	40	206	34	44	53	3
Grand total, all fields	2,300	1,413	1,290	483	348	350	109	114	9

See explanatory information, if any, and SOURCE at end of table.

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1999

Field of study	Total	Definite plans							
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Non-U.S. citizens with temporary visas								
Science and engineering, total	7,241	4,553	3,359	1,739	377	1,136	107	1,172	22
Engineering, total	2,193	1,306	1,016	287	65	646	18	287	3
Aeronautical/astronautical	83	33	21	9	2	10	0	12	0
Chemical	284	177	138	45	3	87	3	38	1
Civil	253	150	96	38	4	52	2	53	1
Electrical	636	389	328	42	29	250	7	60	1
Industrial	108	58	43	3	8	31	1	15	0
Materials/metallurgical	195	116	92	42	0	50	0	24	0
Mechanical	353	212	170	56	9	104	1	42	0
Other engineering	281	171	128	52	10	62	4	43	0
Sciences, total	5,048	3,247	2,343	1,452	312	490	89	885	19
Physical sciences, total	1,130	743	629	445	18	157	9	110	4
Astronomy	39	31	21	18	1	2	0	10	0
Chemistry	624	406	372	264	10	90	8	32	2
Physics	462	302	233	160	7	65	1	67	2
Other physical sciences	5	4	3	3	0	0	0	1	0
Earth, atmospheric, and ocean sciences	242	159	106	65	6	32	3	52	1
Mathematics	444	288	221	102	57	57	5	67	0
Computer sciences	330	215	165	29	37	94	5	49	1
Biological sciences	1,286	871	740	654	24	48	14	123	8
Agricultural sciences	459	266	116	80	6	22	8	148	2
Psychology	154	88	60	27	17	11	5	26	2
Social sciences	1,003	617	306	50	147	69	40	310	1
Non-S&E, total	1,827	1,067	531	102	315	68	46	532	4
Grand total, all fields	9,068	5,620	3,890	1,841	692	1,204	153	1,704	26

NOTE: Details may not add to totals because of persons with unknown citizenship.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 8. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1999

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All recipients							
Science and engineering, total	100.0	89.9	39.2	18.0	22.8	9.9	9.7	0.4
Engineering, total	100.0	89.2	20.1	9.7	51.1	8.3	10.4	.4
Aeronautical/astronautical	100.0	86.8	22.6	3.8	37.7	22.6	13.2	0
Chemical	100.0	89.2	22.4	4.5	59.2	3.1	10.5	.2
Civil	100.0	82.7	22.5	13.3	35.8	11.0	16.5	.9
Electrical	100.0	92.5	10.2	10.5	64.0	7.8	7.0	.4
Industrial	100.0	86.3	5.3	22.1	48.9	9.9	13.0	.8
Materials/metallurgical	100.0	87.4	28.4	4.3	49.3	5.4	12.6	0
Mechanical	100.0	89.8	23.9	10.2	47.8	7.8	9.7	.6
Other engineering	100.0	89.0	29.0	10.6	38.7	10.8	10.8	.2
Sciences, total	100.0	90.1	43.9	20.1	15.9	10.2	9.5	.4
Physical sciences, total	100.0	91.9	52.4	7.8	27.5	4.2	7.7	.5
Astronomy	100.0	83.9	59.7	8.1	10.5	5.6	16.1	0
Chemistry	100.0	94.9	53.0	8.0	30.6	3.2	4.6	.5
Physics	100.0	87.8	50.2	7.3	24.9	5.4	11.7	.5
Other physical sciences	100.0	92.3	46.2	15.4	15.4	15.4	7.7	0
Earth, atmospheric, and ocean sciences	100.0	84.6	40.6	11.9	18.0	14.1	14.8	.6
Mathematics	100.0	87.6	29.7	35.4	18.0	4.4	12.3	.1
Computer sciences	100.0	89.7	9.2	29.1	43.7	7.7	9.9	.3
Biological sciences	100.0	93.4	74.1	8.0	6.7	4.6	6.0	.6
Agricultural sciences	100.0	73.1	31.0	17.2	16.7	8.3	26.5	.3
Psychology	100.0	97.6	37.1	21.4	15.8	23.2	2.3	.1
Social sciences	100.0	82.8	10.7	45.3	11.3	15.5	16.9	.3
Non-S&E, total	100.0	91.6	6.4	52.4	7.4	25.4	7.9	.5
Grand total, all fields	100.0	90.5	27.3	30.5	17.2	15.5	9.0	.4
	U.S. citizens							
Science and engineering, total	100.0	96.3	39.3	22.5	21.2	13.3	3.4	0.3
Engineering, total	100.0	96.9	18.7	13.6	50.2	14.5	2.6	.5
Aeronautical/astronautical	100.0	97.1	20.6	2.9	38.2	35.3	2.9	0
Chemical	100.0	96.8	20.1	6.8	65.5	4.4	3.2	0
Civil	100.0	97.0	17.3	24.4	34.5	20.8	1.8	1.2
Electrical	100.0	98.9	9.5	13.7	61.5	14.2	.7	.4
Industrial	100.0	97.0	6.1	30.3	42.4	18.2	1.5	1.5
Materials/metallurgical	100.0	93.1	23.6	7.6	51.4	10.4	6.9	0
Mechanical	100.0	96.7	23.0	15.2	43.9	14.5	2.6	.7
Other engineering	100.0	96.0	28.1	12.9	38.7	16.2	3.6	.3
Sciences, total	100.0	96.2	43.1	24.2	15.8	13.1	3.5	.2
Physical sciences, total	100.0	94.9	49.3	10.7	29.3	5.6	4.7	.4
Astronomy	100.0	88.6	59.1	10.2	11.4	8.0	11.4	0
Chemistry	100.0	96.1	48.4	10.8	33.2	3.8	3.3	.5
Physics	100.0	93.6	49.5	10.3	25.3	8.6	6.2	.2
Other physical sciences	100.0	100.0	37.5	25.0	12.5	25.0	0	0
Earth, atmospheric, and ocean sciences	100.0	93.5	39.4	15.5	18.6	19.9	5.9	.6
Mathematics	100.0	95.2	25.3	47.7	16.1	6.1	4.6	.3
Computer sciences	100.0	97.7	6.6	38.5	40.8	11.8	2.3	0
Biological sciences	100.0	96.0	73.3	9.9	7.2	5.7	3.6	.3
Agricultural sciences	100.0	98.0	28.3	31.7	23.9	14.0	2.0	0
Psychology	100.0	98.9	37.4	21.5	16.0	24.0	1.0	.0
Social sciences	100.0	94.6	11.6	53.4	11.1	18.6	5.2	.2
Non-S&E, total	100.0	97.5	5.8	55.4	7.4	28.9	2.0	.5
Grand total, all fields	100.0	96.8	25.2	36.4	15.4	19.9	2.8	.4

See explanatory information, if any, and SOURCE at end of table.

Table 8. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1999

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Non-U.S. citizens with permanent visas							
Science and engineering, total	100.0	93.5	42.9	13.7	30.6	6.3	5.9	0.6
Engineering, total	100.0	95.2	20.0	7.6	65.2	2.4	4.0	.8
Aeronautical/astronautical	100.0	100.0	25.0	0	75.0	0	0	0
Chemical	100.0	95.0	25.0	0	70.0	0	5.0	0
Civil	100.0	96.3	37.0	3.7	51.9	3.7	3.7	0
Electrical	100.0	96.3	11.1	7.4	76.5	1.2	2.5	1.2
Industrial	100.0	85.7	0	14.3	71.4	0	14.3	0
Materials/metallurgical	100.0	94.4	16.7	5.6	72.2	0	5.6	0
Mechanical	100.0	93.5	17.4	8.7	65.2	2.2	4.3	2.2
Other engineering	100.0	95.7	29.8	12.8	46.8	6.4	4.3	0
Sciences, total	100.0	93.0	50.2	15.7	19.5	7.5	6.5	.5
Physical sciences, total	100.0	96.8	45.5	6.4	41.0	3.8	2.6	.6
Astronomy	100.0	100.0	80.0	0	20.0	0	0	0
Chemistry	100.0	96.6	46.1	4.5	42.7	3.4	3.4	0
Physics	100.0	96.7	42.6	9.8	39.3	4.9	1.6	1.6
Other physical sciences	100.0	100.0	0	0	100.0	0	0	0
Earth, atmospheric, and ocean sciences	100.0	83.9	51.6	16.1	0	16.1	16.1	0
Mathematics	100.0	90.7	32.6	27.9	23.3	7.0	9.3	0
Computer sciences	100.0	98.1	7.7	23.1	61.5	5.8	1.9	0
Biological sciences	100.0	95.3	79.6	6.4	5.7	3.7	3.7	1.0
Agricultural sciences	100.0	93.1	65.5	6.9	20.7	0	6.9	0
Psychology	100.0	95.5	36.4	25.0	13.6	20.5	4.5	0
Social sciences	100.0	82.9	11.6	40.3	14.0	17.1	17.1	0
Non-S&E, total	100.0	85.3	10.5	54.2	8.9	11.6	13.9	.8
Grand total, all fields	100.0	91.3	34.2	24.6	24.8	7.7	8.1	.6
	Non-U.S. citizens with temporary visas							
Science and engineering, total	100.0	73.8	38.2	8.3	25.0	2.4	25.7	0.5
Engineering, total	100.0	77.8	22.0	5.0	49.5	1.4	22.0	.2
Aeronautical/astronautical	100.0	63.6	27.3	6.1	30.3	0	36.4	0
Chemical	100.0	78.0	25.4	1.7	49.2	1.7	21.5	.6
Civil	100.0	64.0	25.3	2.7	34.7	1.3	35.3	.7
Electrical	100.0	84.3	10.8	7.5	64.3	1.8	15.4	.3
Industrial	100.0	74.1	5.2	13.8	53.4	1.7	25.9	0
Materials/metallurgical	100.0	79.3	36.2	0	43.1	0	20.7	0
Mechanical	100.0	80.2	26.4	4.2	49.1	.5	19.8	0
Other engineering	100.0	74.9	30.4	5.8	36.3	2.3	25.1	0
Sciences, total	100.0	72.2	44.7	9.6	15.1	2.7	27.3	.6
Physical sciences, total	100.0	84.7	59.9	2.4	21.1	1.2	14.8	.5
Astronomy	100.0	67.7	58.1	3.2	6.5	0	32.3	0
Chemistry	100.0	91.6	65.0	2.5	22.2	2.0	7.9	.5
Physics	100.0	77.2	53.0	2.3	21.5	.3	22.2	.7
Other physical sciences	100.0	75.0	75.0	0	0	0	25.0	0
Earth, atmospheric, and ocean sciences	100.0	66.7	40.9	3.8	20.1	1.9	32.7	.6
Mathematics	100.0	76.7	35.4	19.8	19.8	1.7	23.3	0
Computer sciences	100.0	76.7	13.5	17.2	43.7	2.3	22.8	.5
Biological sciences	100.0	85.0	75.1	2.8	5.5	1.6	14.1	.9
Agricultural sciences	100.0	43.6	30.1	2.3	8.3	3.0	55.6	.8
Psychology	100.0	68.2	30.7	19.3	12.5	5.7	29.5	2.3
Social sciences	100.0	49.6	8.1	23.8	11.2	6.5	50.2	.2
Non-S&E, total	100.0	49.8	9.6	29.5	6.4	4.3	49.9	.4
Grand total, all fields	100.0	69.2	32.8	12.3	21.4	2.7	30.3	.5

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients (U.S. citizens and non-U.S. citizens with permanent visas), by sex and major field: 1999

Field of study	Total	Definite plans							
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All recipients								
Science and engineering, total	17,428	11,972	11,503	4,741	2,604	2,636	1,522	433	36
Engineering, total	2,873	1,968	1,903	371	252	1,025	255	55	10
Aeronautical/astronautical	111	72	70	15	2	29	24	2	0
Chemical	374	269	260	55	17	177	11	9	0
Civil	310	195	189	39	42	72	36	4	2
Electrical	762	533	525	52	68	340	65	5	3
Industrial	99	73	70	4	21	33	12	2	1
Materials/metallurgical	257	162	151	37	12	87	15	11	0
Mechanical	460	315	303	70	45	148	40	9	3
Other engineering	500	349	335	99	45	139	52	13	1
Sciences, total	14,555	10,004	9,600	4,370	2,352	1,611	1,267	378	26
Physical sciences, total	2,263	1,635	1,555	800	168	498	89	73	7
Astronomy	116	93	83	56	9	11	7	10	0
Chemistry	1,400	1,017	978	490	104	346	38	34	5
Physics	735	516	485	251	53	139	42	29	2
Other physical sciences	12	9	9	3	2	2	2	0	0
Earth, atmospheric, and ocean sciences	521	353	327	143	55	60	69	24	2
Mathematics	605	435	412	113	199	73	27	22	1
Computer sciences	483	356	348	24	129	156	39	8	0
Biological sciences	4,118	2,975	2,855	2,200	283	209	163	108	12
Agricultural sciences	491	322	314	102	95	76	41	8	0
Psychology	3,230	2,062	2,038	771	444	329	494	23	1
Social sciences	2,844	1,866	1,751	217	979	210	345	112	3
Non-S&E, total	12,494	8,356	8,103	503	4,622	628	2,350	212	41
Grand total, all fields	29,922	20,328	19,606	5,244	7,226	3,264	3,872	645	77

See explanatory information, if any, and SOURCE at end of table.

Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients (U.S. citizens and non-U.S. citizens with permanent visas), by sex and major field: 1999

Field of study	Total	Definite plans							
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Women								
Science and engineering, total	6,994	4,593	4,444	1,954	1,155	700	635	139	10
Engineering, total	490	325	311	74	61	150	26	12	2
Aeronautical/astronautical	10	5	5	3	0	1	1	0	0
Chemical	76	54	53	12	6	33	2	1	0
Civil	61	41	41	9	15	11	6	0	0
Electrical	81	48	47	7	5	28	7	0	1
Industrial	31	24	24	1	9	12	2	0	0
Materials/metallurgical	53	37	32	6	1	22	3	5	0
Mechanical	60	35	32	5	11	14	2	2	1
Other engineering	118	81	77	31	14	29	3	4	0
Sciences, total	6,504	4,268	4,133	1,880	1,094	550	609	127	8
Physical sciences, total	552	393	375	165	56	128	26	17	1
Astronomy	25	20	19	13	3	0	3	1	0
Chemistry	426	311	299	125	44	113	17	11	1
Physics	95	57	52	26	8	14	4	5	0
Other physical sciences	6	5	5	1	1	1	2	0	0
Earth, atmospheric, and ocean sciences	151	94	89	42	21	16	10	5	0
Mathematics	192	136	129	32	72	16	9	7	0
Computer sciences	104	83	81	10	35	29	7	2	0
Biological sciences	1,862	1,283	1,239	955	126	85	73	39	5
Agricultural sciences	160	96	95	38	22	21	14	1	0
Psychology	2,177	1,348	1,333	526	285	199	323	14	1
Social sciences	1,306	835	792	112	477	56	147	42	1
Non-S&E, total	7,170	4,793	4,669	300	2,648	330	1,391	98	26
Grand total, all fields	14,164	9,386	9,113	2,254	3,803	1,030	2,026	237	36

See explanatory information, if any, and SOURCE at end of table.

Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients (U.S. citizens and non-U.S. citizens with permanent visas), by sex and major field: 1999

Field of study	Total	Definite plans							
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Men								
Science and engineering, total	10,434	7,379	7,059	2,787	1,449	1,936	887	294	26
Engineering, total	2,383	1,643	1,592	297	191	875	229	43	8
Aeronautical/astronautical	101	67	65	12	2	28	23	2	0
Chemical	298	215	207	43	11	144	9	8	0
Civil	249	154	148	30	27	61	30	4	2
Electrical	681	485	478	45	63	312	58	5	2
Industrial	68	49	46	3	12	21	10	2	1
Materials/metallurgical	204	125	119	31	11	65	12	6	0
Mechanical	400	280	271	65	34	134	38	7	2
Other engineering	382	268	258	68	31	110	49	9	1
Sciences, total	8,051	5,736	5,467	2,490	1,258	1,061	658	251	18
Physical sciences, total	1,711	1,242	1,180	635	112	370	63	56	6
Astronomy	91	73	64	43	6	11	4	9	0
Chemistry	974	706	679	365	60	233	21	23	4
Physics	640	459	433	225	45	125	38	24	2
Other physical sciences	6	4	4	2	1	1	0	0	0
Earth, atmospheric, and ocean sciences	370	259	238	101	34	44	59	19	2
Mathematics	413	299	283	81	127	57	18	15	1
Computer sciences	379	273	267	14	94	127	32	6	0
Biological sciences	2,256	1,692	1,616	1,245	157	124	90	69	7
Agricultural sciences	331	226	219	64	73	55	27	7	0
Psychology	1,053	714	705	245	159	130	171	9	0
Social sciences	1,538	1,031	959	105	502	154	198	70	2
Non-S&E, total	5,324	3,563	3,434	203	1,974	298	959	114	15
Grand total, all fields	15,758	10,942	10,493	2,990	3,423	2,234	1,846	408	41

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients (U.S. citizens and non-U.S. citizens with permanent visas), by sex and major field: 1999

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All recipients							
Science and engineering, total	100.0	96.1	39.6	21.8	22.0	12.7	3.6	0.3
Engineering, total	100.0	96.7	18.9	12.8	52.1	13.0	2.8	.5
Aeronautical/astronautical	100.0	97.2	20.8	2.8	40.3	33.3	2.8	0
Chemical	100.0	96.7	20.4	6.3	65.8	4.1	3.3	0
Civil	100.0	96.9	20.0	21.5	36.9	18.5	2.1	1.0
Electrical	100.0	98.5	9.8	12.8	63.8	12.2	.9	.6
Industrial	100.0	95.9	5.5	28.8	45.2	16.4	2.7	1.4
Materials/metallurgical	100.0	93.2	22.8	7.4	53.7	9.3	6.8	0
Mechanical	100.0	96.2	22.2	14.3	47.0	12.7	2.9	1.0
Other engineering	100.0	96.0	28.4	12.9	39.8	14.9	3.7	.3
Sciences, total	100.0	96.0	43.7	23.5	16.1	12.7	3.8	.3
Physical sciences, total	100.0	95.1	48.9	10.3	30.5	5.4	4.5	.4
Astronomy	100.0	89.2	60.2	9.7	11.8	7.5	10.8	0
Chemistry	100.0	96.2	48.2	10.2	34.0	3.7	3.3	.5
Physics	100.0	94.0	48.6	10.3	26.9	8.1	5.6	.4
Other physical sciences	100.0	100.0	33.3	22.2	22.2	22.2	0	0
Earth, atmospheric, and ocean sciences	100.0	92.6	40.5	15.6	17.0	19.5	6.8	.6
Mathematics	100.0	94.7	26.0	45.7	16.8	6.2	5.1	.2
Computer sciences	100.0	97.8	6.7	36.2	43.8	11.0	2.2	0
Biological sciences	100.0	96.0	73.9	9.5	7.0	5.5	3.6	.4
Agricultural sciences	100.0	97.5	31.7	29.5	23.6	12.7	2.5	0
Psychology	100.0	98.8	37.4	21.5	16.0	24.0	1.1	.0
Social sciences	100.0	93.8	11.6	52.5	11.3	18.5	6.0	.2
Non-S&E, total	100.0	97.0	6.0	55.3	7.5	28.1	2.5	.5
Grand total, all fields	100.0	96.4	25.8	35.5	16.1	19.0	3.2	.4

See explanatory information, if any, and SOURCE at end of table.

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients (U.S. citizens and non-U.S. citizens with permanent visas), by sex and major field: 1999

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Women							
Science and engineering, total	100.0	96.8	42.5	25.1	15.2	13.8	3.0	0.2
Engineering, total	100.0	95.7	22.8	18.8	46.2	8.0	3.7	.6
Aeronautical/astronautical	100.0	100.0	60.0	0	20.0	20.0	0	0
Chemical	100.0	98.1	22.2	11.1	61.1	3.7	1.9	0
Civil	100.0	100.0	22.0	36.6	26.8	14.6	0	0
Electrical	100.0	97.9	14.6	10.4	58.3	14.6	0	2.1
Industrial	100.0	100.0	4.2	37.5	50.0	8.3	0	0
Materials/metallurgical	100.0	86.5	16.2	2.7	59.5	8.1	13.5	0
Mechanical	100.0	91.4	14.3	31.4	40.0	5.7	5.7	2.9
Other engineering	100.0	95.1	38.3	17.3	35.8	3.7	4.9	0
Sciences, total	100.0	96.8	44.0	25.6	12.9	14.3	3.0	.2
Physical sciences, total	100.0	95.4	42.0	14.2	32.6	6.6	4.3	.3
Astronomy	100.0	95.0	65.0	15.0	0	15.0	5.0	0
Chemistry	100.0	96.1	40.2	14.1	36.3	5.5	3.5	.3
Physics	100.0	91.2	45.6	14.0	24.6	7.0	8.8	0
Other physical sciences	100.0	100.0	20.0	20.0	20.0	40.0	0	0
Earth, atmospheric, and ocean sciences	100.0	94.7	44.7	22.3	17.0	10.6	5.3	0
Mathematics	100.0	94.9	23.5	52.9	11.8	6.6	5.1	0
Computer sciences	100.0	97.6	12.0	42.2	34.9	8.4	2.4	0
Biological sciences	100.0	96.6	74.4	9.8	6.6	5.7	3.0	.4
Agricultural sciences	100.0	99.0	39.6	22.9	21.9	14.6	1.0	0
Psychology	100.0	98.9	39.0	21.1	14.8	24.0	1.0	.1
Social sciences	100.0	94.9	13.4	57.1	6.7	17.6	5.0	.1
Non-S&E, total	100.0	97.4	6.3	55.2	6.9	29.0	2.0	.5
Grand total, all fields	100.0	97.1	24.0	40.5	11.0	21.6	2.5	.4

See explanatory information, if any, and SOURCE at end of table.

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients (U.S. citizens and non-U.S. citizens with permanent visas), by sex and major field: 1999

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Men							
Science and engineering, total	100.0	95.7	37.8	19.6	26.2	12.0	4.0	0.4
Engineering, total	100.0	96.9	18.1	11.6	53.3	13.9	2.6	.5
Aeronautical/astronautical	100.0	97.0	17.9	3.0	41.8	34.3	3.0	0
Chemical	100.0	96.3	20.0	5.1	67.0	4.2	3.7	0
Civil	100.0	96.1	19.5	17.5	39.6	19.5	2.6	1.3
Electrical	100.0	98.6	9.3	13.0	64.3	12.0	1.0	.4
Industrial	100.0	93.9	6.1	24.5	42.9	20.4	4.1	2.0
Materials/metallurgical	100.0	95.2	24.8	8.8	52.0	9.6	4.8	0
Mechanical	100.0	96.8	23.2	12.1	47.9	13.6	2.5	.7
Other engineering	100.0	96.3	25.4	11.6	41.0	18.3	3.4	.4
Sciences, total	100.0	95.3	43.4	21.9	18.5	11.5	4.4	.3
Physical sciences, total	100.0	95.0	51.1	9.0	29.8	5.1	4.5	.5
Astronomy	100.0	87.7	58.9	8.2	15.1	5.5	12.3	0
Chemistry	100.0	96.2	51.7	8.5	33.0	3.0	3.3	.6
Physics	100.0	94.3	49.0	9.8	27.2	8.3	5.2	.4
Other physical sciences	100.0	100.0	50.0	25.0	25.0	0	0	0
Earth, atmospheric, and ocean sciences	100.0	91.9	39.0	13.1	17.0	22.8	7.3	.8
Mathematics	100.0	94.6	27.1	42.5	19.1	6.0	5.0	.3
Computer sciences	100.0	97.8	5.1	34.4	46.5	11.7	2.2	0
Biological sciences	100.0	95.5	73.6	9.3	7.3	5.3	4.1	.4
Agricultural sciences	100.0	96.9	28.3	32.3	24.3	11.9	3.1	0
Psychology	100.0	98.7	34.3	22.3	18.2	23.9	1.3	0
Social sciences	100.0	93.0	10.2	48.7	14.9	19.2	6.8	.2
Non-S&E, total	100.0	96.4	5.7	55.4	8.4	26.9	3.2	.4
Grand total, all fields	100.0	95.9	27.3	31.3	20.4	16.9	3.7	.4

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Earned Doctorates

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