



2018

Doctorate Recipients from U.S. Universities

Data Tables and Resources

National Center for Science and Engineering Statistics
Directorate for Social, Behavioral and Economic Sciences

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Data Tables

These tables present detailed data on the demographic characteristics, educational history, sources of financial support, and postgraduation plans of doctorate recipients. Explore the Survey of Earned Doctorates data further via NCSES's [interactive data tool](#).

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Doctorate recipients from U.S. colleges and universities

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TABLE 1

Doctorate recipients from U.S. colleges and universities: 1958–2018

(Number and percent)

Year	Doctorate recipients	% change from previous year
1958	8,773	-
1959	9,213	5.0
1960	9,733	5.6
1961	10,413	7.0
1962	11,500	10.4
1963	12,728	10.7
1964	14,325	12.5
1965	16,340	14.1
1966	17,949	9.8
1967	20,403	13.7
1968	22,937	12.4
1969	25,743	12.2
1970	29,498	14.6
1971	31,867	8.0
1972	33,041	3.7
1973	33,755	2.2
1974	33,047	-2.1
1975	32,952	-0.3
1976	32,946	*
1977	31,716	-3.7
1978	30,875	-2.7
1979	31,238	1.2
1980	31,019	-0.7
1981	31,355	1.1
1982	31,108	-0.8
1983	31,280	0.6
1984	31,334	0.2
1985	31,295	-0.1
1986	31,897	1.9
1987	32,365	1.5
1988	33,497	3.5
1989	34,325	2.5
1990	36,065	5.1
1991	37,530	4.1
1992	38,886	3.6
1993	39,800	2.4
1994	41,034	3.1
1995	41,747	1.7
1996	42,437	1.7
1997	42,539	0.2
1998	42,636	0.2
1999	41,100	-3.6
2000	41,369	0.7
2001	40,744	-1.5
2002	40,031	-1.7
2003	40,762	1.8
2004	42,122	3.3
2005	43,385	3.0
2006	45,620	5.2
2007	48,132	5.5

TABLE 1

Doctorate recipients from U.S. colleges and universities: 1958–2018

(Number and percent)

Year	Doctorate recipients	% change from previous year
2008	48,776	1.3
2009	49,552	1.6
2010	48,028	-3.1
2011	48,910	1.8
2012	50,943	4.2
2013	52,703	3.5
2014	53,989	2.4
2015	54,889	1.7
2016	54,798	-0.2
2017	54,559	-0.4
2018	55,195	1.2

* = value < |0.05%|.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 2

Doctorate-granting institutions and doctorate recipients per institution: 1973–2018

(Number, mean, and median)

Year	Doctorate-granting institutions	Doctorate recipients		
		Total	Mean (per institution)	Median (per institution)
1973	286	33,755	118.0	42.0
1974	292	33,047	113.2	39.5
1975	292	32,952	112.8	43.5
1976	294	32,946	112.1	43.5
1977	304	31,716	104.3	41.0
1978	311	30,875	99.3	36.0
1979	311	31,238	100.4	40.0
1980	320	31,019	96.9	37.0
1981	323	31,355	97.1	41.0
1982	328	31,108	94.8	35.0
1983	332	31,280	94.2	37.0
1984	331	31,334	94.7	39.0
1985	337	31,295	92.9	36.0
1986	340	31,897	93.8	36.0
1987	349	32,365	92.7	38.0
1988	351	33,497	95.4	36.0
1989	356	34,325	96.4	36.0
1990	354	36,065	101.9	42.5
1991	364	37,530	103.1	38.5
1992	367	38,886	106.0	42.0
1993	372	39,800	107.0	42.5
1994	374	41,034	109.7	43.0
1995	382	41,747	109.3	43.0
1996	390	42,437	108.8	44.0
1997	384	42,539	110.8	44.5
1998	388	42,636	109.9	43.5
1999	397	41,100	103.5	41.0
2000	409	41,369	101.1	40.0
2001	418	40,744	97.5	36.0
2002	416	40,031	96.2	38.0
2003	425	40,762	95.9	36.0
2004	419	42,122	100.5	38.0
2005	419	43,385	103.5	41.0
2006	419	45,620	108.9	40.0
2007	414	48,132	116.3	46.0
2008	421	48,776	115.9	43.0
2009	422	49,552	117.4	45.0
2010	418	48,028	114.9	42.0
2011	412	48,910	118.7	41.5
2012	418	50,943	121.9	45.0
2013	423	52,703	124.6	44.0
2014	428	53,989	126.1	46.5
2015	432	54,889	127.1	45.5
2016	436	54,798	125.7	47.0
2017	428	54,559	127.5	49.0
2018	431	55,195	128.1	48.0

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 3

Top 50 doctorate-granting institutions, ranked by number of doctorate recipients: 2018

(Number)

Institution	Rank	Doctorate recipients
U. Michigan, Ann Arbor	1	853
U. California, Berkeley	2	852
U. Wisconsin-Madison	3	770
U. Illinois, Urbana-Champaign	4	766
U. Texas, Austin	5	764
Ohio State U., Columbus	6	749
Walden U.	7	746
U. Florida	8	738
Purdue U., West Lafayette	9	730
Texas A&M U., College Station and Health Science Center	9	730
Stanford U.	11	726
Harvard U.	12	717
Pennsylvania State U., University Park and Hershey Medical Center	13	699
U. California, Los Angeles	14	688
U. Minnesota, Twin Cities	15	665
Columbia U. in the City of New York	16	659
Massachusetts Institute of Technology	17	645
U. Washington, Seattle	18	619
U. Maryland, College Park	19	586
U. California, Davis	20	546
Cornell U.	21	539
Georgia Institute of Technology	22	512
Johns Hopkins U.	23	507
Michigan State U.	24	497
North Carolina State U.	25	495
U. North Carolina, Chapel Hill	26	473
U. California, San Diego	27	471
U. Georgia	28	461
U. Pennsylvania	29	448
U. Southern California	30	435
Northwestern U.	31	432
U. Chicago	31	432
New York U.	33	429
Indiana U., Bloomington	34	427
Virginia Polytechnic Institute and State U.	35	426
Yale U.	36	413
CUNY, Graduate Center	37	410
U. Pittsburgh, Pittsburgh	38	404
Duke U.	39	400
Princeton U.	40	396
Iowa State U.	41	390
Rutgers, State U. New Jersey, New Brunswick	41	390
U. Arizona	43	389
U. Colorado Boulder	44	383
U. California, Irvine	45	380
U. Tennessee, Knoxville	46	374
Florida State U.	47	373
U. Missouri, Columbia	48	357
U. California, Santa Barbara	49	355
Boston U.	50	343

Note(s)

Tied institutions are listed alphabetically.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 4

Top 20 doctorate-granting institutions ranked by number of doctorate recipients, by broad field of study: 2018

(Number)

Field and institution	Rank	Doctorate recipients
Life sciences ^a	-	12,780
From top 20 institutions	-	3,629
Harvard U.	1	269
U. Florida	2	247
Johns Hopkins U.	3	244
U. Wisconsin-Madison	4	222
U. North Carolina, Chapel Hill	5	208
U. California, Davis	6	197
U. Washington, Seattle	7	195
U. Minnesota, Twin Cities	8	186
Ohio State U., Columbus	9	184
Texas A&M U., College Station and Health Science Center	10	179
U. Michigan, Ann Arbor	11	177
U. Georgia	12	176
Walden U.	12	176
U. California, Berkeley	14	156
U. California, Los Angeles	15	145
Purdue U., West Lafayette	16	140
Duke U.	17	136
Columbia U. in the City of New York	18	132
Cornell U.	19	130
Pennsylvania State U., University Park and Hershey Medical Center	19	130
Physical sciences and earth sciences	-	6,335
From top 20 institutions	-	1,959
U. Michigan, Ann Arbor	1	134
U. California, Berkeley	2	130
Stanford U.	3	121
U. Illinois, Urbana-Champaign	4	111
Harvard U.	5	108
Massachusetts Institute of Technology	6	107
U. Wisconsin-Madison	7	103
U. California, San Diego	8	99
U. Texas, Austin	9	97
U. Washington, Seattle	9	97
Cornell U.	11	94
Purdue U., West Lafayette	12	91
California Institute of Technology	13	89
Ohio State U., Columbus	13	89
U. Colorado Boulder	15	88
Texas A&M U., College Station and Health Science Center	16	85
Pennsylvania State U., University Park and Hershey Medical Center	17	81
U. California, Davis	18	79
Columbia U. in the City of New York	19	78
U. Minnesota, Twin Cities	19	78
Mathematics and computer sciences	-	4,030
From top 21 institutions	-	1,301
U. Illinois, Urbana-Champaign	1	96
U. California, Berkeley	2	78
Purdue U., West Lafayette	3	71
Massachusetts Institute of Technology	4	70

TABLE 4

Top 20 doctorate-granting institutions ranked by number of doctorate recipients, by broad field of study: 2018

(Number)

Field and institution	Rank	Doctorate recipients
North Carolina State U.	5	68
Carnegie Mellon U.	6	63
U. Washington, Seattle	7	62
Georgia Institute of Technology	8	59
U. Maryland, College Park	8	59
U. Michigan, Ann Arbor	10	58
U. California, Los Angeles	11	57
Ohio State U., Columbus	12	56
Cornell U.	13	55
Stanford U.	13	55
U. Texas, Austin	13	55
U. Wisconsin-Madison	16	54
Pennsylvania State U., University Park and Hershey Medical Center	17	50
Florida State U.	18	49
SUNY, Stony Brook U.	19	48
Columbia U. in the City of New York	20	46
Iowa State U.	20	46
U. Southern California	20	46
Psychology and social sciences	-	8,899
From top 20 institutions	-	2,334
Walden U.	1	298
Columbia U. in the City of New York	2	149
U. California, Los Angeles	3	140
CUNY, Graduate Center	4	139
U. California, Berkeley	5	137
Harvard U.	6	126
U. Michigan, Ann Arbor	7	116
U. Chicago	8	111
U. Maryland, College Park	9	108
U. Florida	10	102
U. Texas, Austin	11	98
U. Wisconsin-Madison	11	98
Pennsylvania State U., University Park and Hershey Medical Center	13	95
George Mason U.	14	91
U. Minnesota, Twin Cities	15	90
Alliant International U.	16	89
Indiana U., Bloomington	17	88
U. Illinois, Urbana-Champaign	17	88
Ohio State U., Columbus	19	87
Stanford U.	20	84
Engineering	-	10,183
From top 20 institutions	-	3,781
Georgia Institute of Technology	1	323
Massachusetts Institute of Technology	2	296
Purdue U., West Lafayette	3	272
U. Michigan, Ann Arbor	4	237
Texas A&M U., College Station and Health Science Center	5	230
Stanford U.	6	229
U. Illinois, Urbana-Champaign	7	211
U. Texas, Austin	8	195

TABLE 4

Top 20 doctorate-granting institutions ranked by number of doctorate recipients, by broad field of study: 2018

(Number)

Field and institution	Rank	Doctorate recipients
U. California, Berkeley	9	191
Pennsylvania State U., University Park and Hershey Medical Center	10	177
North Carolina State U.	11	171
Virginia Polytechnic Institute and State U.	12	165
U. Florida	13	151
U. Minnesota, Twin Cities	14	146
Carnegie Mellon U.	15	142
Ohio State U., Columbus	16	139
U. Maryland, College Park	17	133
U. California, San Diego	18	125
U. California, Los Angeles	19	124
U. Wisconsin-Madison	19	124
Education	-	4,834
From top 20 institutions	-	1,358
Walden U.	1	96
U. Georgia	2	91
Columbia U., Teachers C.	3	86
Michigan State U.	3	86
Ohio State U., Columbus	5	78
Pennsylvania State U., University Park and Hershey Medical Center	6	77
U. Texas, Austin	7	71
Texas Tech U.	8	70
Texas A&M U., College Station and Health Science Center	9	66
George Washington U.	10	64
Indiana U., Bloomington	11	61
Oklahoma State U., Stillwater	12	59
U. South Florida, Tampa	12	59
Florida State U.	14	58
Temple U.	14	58
U. Minnesota, Twin Cities	14	58
Indiana State U.	17	56
U. Memphis	18	55
U. Northern Colorado	18	55
U. Wisconsin-Madison	20	54
Humanities and arts	-	5,145
From top 20 institutions	-	1,718
CUNY, Graduate Center	1	118
U. Chicago	2	111
U. California, Berkeley	3	108
Harvard U.	4	106
Princeton U.	5	104
New York U.	6	100
Columbia U. in the City of New York	7	98
U. California, Los Angeles	8	97
U. Texas, Austin	9	91
Yale U.	9	91
Ohio State U., Columbus	11	83
U. Wisconsin-Madison	11	83
U. Michigan, Ann Arbor	13	75
U. Pennsylvania	13	75

TABLE 4

Top 20 doctorate-granting institutions ranked by number of doctorate recipients, by broad field of study: 2018

(Number)

Field and institution	Rank	Doctorate recipients
Indiana U., Bloomington	15	70
Florida State U.	16	65
U. Notre Dame	17	63
U. Virginia, Charlottesville	17	63
Cornell U.	19	60
Duke U.	20	57
Other ^b	-	2,989
From top 21 institutions	-	930
Walden U.	1	169
U. Texas, Austin	2	68
Indiana U., Bloomington	3	49
U. Pennsylvania	3	49
Pennsylvania State U., University Park and Hershey Medical Center	5	45
U. Illinois, Urbana-Champaign	6	44
U. Missouri, Columbia	6	44
Rutgers, State U. New Jersey, Newark	8	42
U. Southern California	8	42
U. Minnesota, Twin Cities	10	39
New York U.	11	38
Stanford U.	12	36
U. Florida	13	35
U. Georgia	13	35
Ohio State U., Columbus	15	33
U. North Carolina, Chapel Hill	15	33
U. South Carolina, Columbia	15	33
Harvard U.	18	32
Texas A&M U., College Station and Health Science Center	18	32
U. Wisconsin-Madison	18	32

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.

^b Includes other non-science and engineering fields not shown separately

Note(s)

Tied institutions are listed alphabetically.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 5

State or location, ranked by number of doctorate recipients: 2018

(Number)

State or location	Rank	Doctorate recipients
California	1	6,076
New York	2	4,260
Texas	3	4,074
Massachusetts	4	2,946
Pennsylvania	5	2,623
Illinois	6	2,517
Florida	7	2,346
Ohio	8	2,051
Michigan	9	1,953
North Carolina	10	1,736
Indiana	11	1,631
Virginia	12	1,518
Georgia	13	1,511
Minnesota	14	1,437
Maryland	15	1,365
New Jersey	16	1,124
Wisconsin	17	1,081
Colorado	18	1,052
Missouri	19	978
Washington	20	964
Tennessee	21	955
Connecticut	22	786
Arizona	23	764
Iowa	24	743
Alabama	25	667
District of Columbia	26	588
Louisiana	27	576
South Carolina	28	568
Oregon	29	537
Kansas	30	534
Utah	31	512
Oklahoma	32	504
Kentucky	33	494
Mississippi	34	471
Nebraska	35	341
Rhode Island	36	326
New Mexico	37	322
Arkansas	38	266
Nevada	39	240
Delaware	40	238
West Virginia	41	219
Hawaii	42	201
North Dakota	43	193
New Hampshire	44	165
Puerto Rico	45	148
South Dakota	46	114
Montana	47	112
Wyoming	48	102
Idaho	49	97
Vermont	50	63

TABLE 5

State or location, ranked by number of doctorate recipients: 2018

(Number)

State or location	Rank	Doctorate recipients
Alaska	51	56
Maine	52	50

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 6

Doctorates awarded, by state or location, broad field of study, and sex of doctorate recipients: 2018

(Number)

State or location	Total ^a		Life sciences ^b		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^c	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
United States ^d	29,798	25,368	5,659	7,114	4,214	2,118	3,043	983	3,641	5,256	7,726	2,453	1,496	3,337	2,567	2,575	1,452	1,532
Alabama	338	329	104	102	31	11	23	12	19	63	103	25	28	83	12	14	18	19
Alaska	29	27	12	5	7	8	0	0	D	D	D	D	D	D	0	0	D	D
Arizona	399	364	54	76	65	30	42	10	55	84	100	43	18	53	45	44	20	24
Arkansas	162	104	50	43	14	9	D	D	9	11	44	10	7	13	16	12	D	D
California	3,427	2,647	572	660	597	286	377	108	501	679	889	300	94	195	299	309	98	110
Colorado	574	478	101	120	122	59	45	17	55	86	160	60	32	75	35	27	24	34
Connecticut	422	363	80	123	79	37	40	10	58	69	79	33	5	12	57	62	24	17
Delaware	140	98	18	21	27	21	D	D	18	18	59	24	D	D	D	D	D	D
District of Columbia	292	296	24	51	18	20	28	5	69	99	52	14	26	55	50	38	25	14
Florida	1,252	1,094	226	291	180	96	142	59	131	217	327	87	95	193	94	84	57	67
Georgia	827	684	169	238	91	51	97	23	75	127	268	68	42	87	56	51	29	39
Hawaii	96	104	17	29	15	12	D	D	20	27	D	D	12	11	13	15	D	D
Idaho	56	41	15	13	D	D	D	D	6	6	19	6	7	9	D	D	D	D
Illinois	1,408	1,107	206	243	199	98	156	70	212	264	350	97	49	103	159	142	77	90
Indiana	923	708	150	192	116	64	108	34	99	110	255	78	67	95	81	95	47	40
Iowa	409	334	90	115	54	21	44	16	28	48	121	31	33	56	23	23	16	24
Kansas	284	250	69	63	34	28	21	11	36	58	57	11	25	42	21	22	21	15
Kentucky	271	223	66	91	27	11	16	10	31	41	45	10	10	25	64	22	12	13
Louisiana	295	281	75	58	34	25	27	13	35	59	66	21	12	52	31	34	15	19
Maine	22	28	9	13	D	D	0	0	D	D	D	D	D	D	D	D	D	D
Maryland	699	665	191	277	78	54	99	31	82	104	182	64	9	44	42	61	16	30
Massachusetts	1,616	1,330	293	428	258	139	161	38	212	248	428	178	45	83	149	145	70	71
Michigan	1,090	863	184	218	147	76	115	34	137	173	325	97	72	147	66	77	44	41
Minnesota	642	795	146	236	51	27	32	10	147	241	114	41	42	112	13	17	97	111
Mississippi	245	226	73	63	29	14	13	7	31	38	37	6	36	72	13	7	13	19
Missouri	546	430	103	113	70	21	40	15	62	91	159	43	32	62	48	42	32	43
Montana	56	56	24	14	10	6	D	D	D	D	D	D	10	21	D	D	D	D
Nebraska	177	164	62	69	25	8	18	10	23	25	27	7	D	D	14	20	D	D
Nevada	115	125	18	16	24	17	D	D	24	36	25	9	D	D	D	D	D	D
New Hampshire	92	73	22	26	21	12	D	D	5	9	25	15	5	5	D	D	D	D
New Jersey	595	529	70	118	89	38	82	19	70	106	153	57	18	50	71	100	42	41
New Mexico	161	161	15	32	40	15	D	D	13	32	42	15	17	36	11	19	D	D
New York	2,207	2,051	408	516	301	150	266	72	338	542	447	153	74	201	284	305	89	112

TABLE 6

Doctorates awarded, by state or location, broad field of study, and sex of doctorate recipients: 2018

(Number)

State or location	Total ^a		Life sciences ^b		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^c	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
North Carolina	890	843	208	332	111	67	113	44	81	128	235	74	36	94	66	63	40	41
North Dakota	89	104	29	45	14	7	D	D	6	18	18	8	8	19	D	D	D	D
Ohio	1,094	957	201	254	178	84	98	27	97	165	299	92	66	181	99	93	56	61
Oklahoma	269	235	45	60	36	11	D	D	34	46	67	15	36	54	D	D	17	26
Oregon	300	237	73	85	62	28	32	8	35	59	70	20	13	17	8	14	7	6
Pennsylvania	1,457	1,165	234	313	165	70	172	53	129	202	456	144	67	154	156	133	78	96
Puerto Rico	59	88	11	20	D	D	D	D	13	48	D	D	D	D	7	7	D	D
Rhode Island	186	140	35	37	33	20	26	9	20	25	30	9	D	D	35	34	D	D
South Carolina	306	262	52	105	40	16	25	11	26	27	103	36	14	32	22	11	24	24
South Dakota	63	51	18	24	D	D	D	D	8	6	16	8	D	D	D	D	D	D
Tennessee	488	467	98	128	57	17	39	11	53	78	134	58	41	97	39	56	27	22
Texas	2,297	1,771	414	460	325	132	213	76	215	318	702	193	113	300	178	176	137	116
Utah	311	200	82	55	38	23	27	15	29	47	92	18	24	23	8	8	11	11
Vermont	31	32	14	15	D	D	D	D	5	10	D	D	D	D	D	D	0	0
Virginia	826	687	115	153	103	48	92	26	120	141	236	79	70	152	44	53	46	35
Washington	501	463	139	162	68	50	51	21	66	102	104	31	24	42	21	30	28	25
West Virginia	123	96	28	18	14	6	5	6	13	20	32	6	12	24	10	8	9	8
Wisconsin	575	506	134	163	74	51	57	13	78	80	115	39	27	74	63	59	27	27
Wyoming	66	36	13	12	D	D	D	D	D	D	16	6	6	10	0	0	D	D

D = suppressed to avoid disclosure of confidential information.

^a Excludes doctorate recipients who did not report sex.^b Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^c Includes other non-science and engineering fields not shown separately.^d Includes the 50 states, the District of Columbia, and Puerto Rico.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences			Psychology and social sciences						Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering			
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics											Political science and government	Sociology	Other social sciences
All institutions	55,195	12,780	1,445	8,801	2,534	6,335	2,810	1,185	2,340	4,030	2,004	2,026	8,899	3,837	424	1,247	734	669	1,988	10,183	383	1,134	981	677	1,951	272	995	1,504	2,286
Alabama	667	206	29	129	48	42	15	8	19	35	20	15	82	63	1	6	5	2	5	128	7	6	14	15	19	13	16	21	17
Alabama A&M U.	8	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alabama State U.	8	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auburn U., Auburn	253	69	26	27	16	15	4	2	9	13	5	8	34	26	0	5	1	0	2	62	3	3	12	5	9	12	2	12	4
Tuskegee U.	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0
U. Alabama, Birmingham	165	111	0	82	29	5	2	1	2	6	5	1	16	14	0	0	0	2	0	15	0	3	0	1	0	0	6	1	4
U. Alabama, Huntsville	25	3	0	3	0	5	0	2	3	5	4	1	0	0	0	0	0	0	0	12	0	0	2	1	3	1	1	2	2
U. Alabama, Tuscaloosa	182	10	1	7	2	16	9	2	5	10	5	5	26	17	1	1	4	0	3	35	4	0	0	8	7	0	5	6	5
U. South Alabama	23	8	0	7	1	1	0	1	0	1	1	0	6	6	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Alaska	56	17	7	10	0	15	0	13	2	0	0	0	15	5	0	2	0	0	8	3	0	0	0	0	0	0	0	0	3
U. Alaska, Anchorage	2	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Alaska, Fairbanks	54	17	7	10	0	15	0	13	2	0	0	0	13	3	0	2	0	0	8	3	0	0	0	0	0	0	0	0	3
Arizona	764	130	15	84	31	95	24	31	40	52	22	30	139	38	8	8	10	3	72	144	3	13	14	5	37	7	15	13	37
Arizona State U.	338	43	5	31	7	17	5	6	6	31	18	13	56	20	5	2	4	0	25	96	1	8	7	3	28	7	12	9	21

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																			Engineering													
		Life sciences				Physical sciences and earth sciences				Mathematics and computer sciences			Psychology and social sciences								Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering				
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences															
Rosalind Franklin U. of Medicine and Science	18	7	0	7	0	0	0	0	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush U.	13	12	0	5	7	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Illinois U., Carbondale	165	28	6	19	3	4	1	1	2	10	4	6	35	20	1	8	2	2	2	30	0	0	0	1	17	0	1	2	9					
U. Chicago	432	74	0	67	7	64	27	7	30	37	12	25	111	19	17	34	13	9	19	7	0	2	3	0	0	0	1	0	1	0	1			
U. Illinois, Chicago	325	99	0	53	46	36	25	2	9	33	15	18	48	12	1	8	3	6	18	50	0	20	6	3	6	1	4	5	5					
U. Illinois, Urbana-Champaign	766	125	31	77	17	111	49	15	47	96	48	48	88	34	5	18	9	8	14	211	11	7	15	21	36	3	32	28	58					
Wheaton C., Wheaton	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indiana	1,631	342	51	229	62	180	108	20	52	142	87	55	209	67	9	28	35	21	49	333	41	26	32	26	60	16	15	49	68					
Ball State U.	29	4	1	0	3	0	0	0	0	0	0	0	16	14	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indiana State U.	80	7	0	7	0	1	0	1	0	2	2	0	2	1	0	0	0	0	1	7	0	0	0	0	0	1	0	0	6					
Indiana U., Bloomington	427	75	2	47	26	41	25	4	12	41	25	16	88	20	8	13	10	6	31	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Indiana U.-Purdue U., Indianapolis	91	72	0	58	14	3	2	1	0	4	2	2	6	4	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purdue U., West Lafayette	730	140	47	74	19	91	53	12	26	71	44	27	51	14	1	10	8	5	13	272	33	22	22	23	50	15	12	42	53					

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences		Psychology and social sciences						Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering				
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology											Economics	Political science and government	Sociology	Other social sciences
U. Notre Dame	274	44	1	43	0	44	28	2	14	24	14	10	46	14	0	5	17	10	0	52	8	4	10	3	10	0	1	7	9
Iowa	743	205	26	138	41	75	42	9	24	60	15	45	76	36	0	15	7	5	13	152	10	4	13	17	27	9	10	31	31
Iowa State U.	390	91	26	57	8	34	19	4	11	46	14	32	31	17	0	9	0	2	3	123	10	1	8	16	22	7	10	23	26
Maharishi U. of Management	6	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Ambrose U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Iowa	322	108	0	81	27	41	23	5	13	14	1	13	45	19	0	6	7	3	10	29	0	3	5	1	5	2	0	8	5
U. Northern Iowa	22	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas	534	132	24	80	28	62	42	5	15	32	9	23	94	58	3	9	5	3	16	68	3	5	6	5	12	11	0	14	12
Kansas State U.	170	58	24	31	3	19	12	0	7	13	2	11	25	15	0	3	1	2	4	20	0	0	3	3	3	1	0	5	5
U. Kansas	318	72	0	48	24	37	24	5	8	15	7	8	58	32	3	6	4	1	12	25	3	5	3	2	6	0	0	1	5
Wichita State U.	46	2	0	1	1	6	6	0	0	4	0	4	11	11	0	0	0	0	0	23	0	0	0	0	3	10	0	8	2
Kentucky	494	157	22	89	46	38	24	1	13	26	8	18	72	33	5	7	5	8	14	55	0	4	6	5	12	4	2	14	8
Asbury Theological Seminary	19	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Southern Baptist Theological Seminary	41	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Kentucky	285	105	22	48	35	27	16	1	10	13	1	12	45	20	5	7	5	3	5	33	0	4	5	2	3	0	2	10	7
U. Louisville	149	52	0	41	11	11	8	0	3	13	7	6	23	12	0	0	0	5	6	22	0	0	1	3	9	4	0	4	1
Louisiana	576	133	30	88	15	59	24	20	15	40	15	25	94	44	3	13	3	3	28	87	0	15	8	5	13	0	5	12	29

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences				Physical sciences and earth sciences				Mathematics and computer sciences			Psychology and social sciences							Engineering									
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
Grambling State U.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Louisiana State U., Baton Rouge	283	61	25	31	5	46	20	16	10	17	8	9	40	14	2	6	3	3	12	49	0	1	5	5	10	0	1	10	17
Louisiana State U., Health Sciences Center, New Orleans	13	13	0	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Louisiana State U., Health Sciences Center, Shreveport	9	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Louisiana Tech U.	32	1	0	1	0	0	0	0	0	7	2	5	5	5	0	0	0	0	0	14	0	6	0	0	1	0	2	1	4
New Orleans Baptist Theological Seminary	19	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern U. and A&M C., Baton Rouge	15	6	3	1	2	0	0	0	0	0	0	0	6	0	0	1	0	0	5	0	0	0	0	0	0	0	0	0	0
Tulane U.	91	24	0	23	1	12	3	4	5	7	0	7	18	9	1	2	0	0	6	11	0	8	3	0	0	0	0	0	0
U. Louisiana, Lafayette	41	11	1	8	2	0	0	0	0	7	3	4	1	1	0	0	0	0	0	6	0	0	0	0	0	1	0	0	5

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences		Psychology and social sciences						Engineering													
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
Uniformed Services U. of the Health Sciences	26	21	1	20	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts	2,946	721	21	550	150	397	168	49	180	199	108	91	460	130	14	108	45	45	118	606	20	85	68	17	89	11	57	95	164
Bentley U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Boston C.	137	6	0	3	3	22	15	0	7	5	0	5	26	13	0	9	0	4	0	0	0	0	0	0	0	0	0	0	0
Boston U.	343	98	1	68	29	34	10	2	22	12	7	5	69	19	5	19	7	7	12	49	0	22	0	0	7	0	5	7	8
Brandeis U.	81	20	0	19	1	11	8	0	3	13	7	6	23	6	1	1	2	2	11	0	0	0	0	0	0	0	0	0	0
Clark U.	14	3	0	3	0	3	1	0	2	0	0	0	7	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
Harvard U.	717	269	0	211	58	108	30	11	67	35	8	27	126	13	7	46	18	16	26	18	0	5	0	0	1	0	1	0	11
Massachusetts Institute of Technology	645	63	1	54	8	107	45	22	40	70	41	29	70	12	0	22	12	1	23	296	17	30	33	9	32	0	35	59	81
New England Conservatory	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northeastern U.	178	28	1	15	12	27	14	2	11	15	11	4	28	7	0	4	3	6	8	68	0	7	10	0	12	8	4	5	22
Simmons C.	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smith C.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Springfield C.	13	6	0	1	5	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Suffolk U.	15	0	0	0	0	0	0	0	0	0	0	0	13	12	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Tufts U., Medford	156	58	1	54	3	21	13	2	6	7	3	4	15	6	0	0	0	0	9	37	0	6	8	2	11	0	0	4	6

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences		Psychology and social sciences						Engineering													
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
Central Michigan U.	39	4	0	4	0	3	3	0	0	2	0	2	24	24	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0
Eastern Michigan U.	48	0	0	0	0	0	0	0	0	0	0	0	16	12	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Michigan State U.	497	126	26	84	16	44	26	0	18	37	18	19	75	24	10	10	3	7	21	69	0	1	5	3	17	0	6	19	18
Michigan Technological U.	93	18	6	12	0	5	2	2	1	12	4	8	5	1	0	0	0	0	4	45	0	1	6	2	7	0	4	20	5
Oakland U.	52	4	0	4	0	0	0	0	0	9	6	3	1	1	0	0	0	0	0	16	0	0	0	0	3	0	0	8	5
U. Detroit Mercy	7	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Michigan, Ann Arbor	853	177	6	132	39	134	65	17	52	58	32	26	116	27	16	33	14	12	14	237	34	23	22	11	51	3	22	34	37
U. Michigan, Dearborn	5	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	1	
U. Michigan, Flint	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Van Andel Institute	3	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wayne State U.	205	53	1	42	10	28	17	0	11	10	6	4	29	17	3	2	4	3	0	37	0	9	2	1	5	7	3	5	5
Western Michigan U.	124	16	0	9	7	9	5	3	1	19	7	12	34	25	0	3	4	2	0	12	0	0	1	3	7	0	0	1	0
Minnesota	1,437	382	26	146	210	78	36	9	33	42	26	16	388	224	6	20	12	5	121	155	10	26	27	7	29	3	13	21	19

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences			Psychology and social sciences						Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering			
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics											Political science and government	Sociology	Other social sciences
New Jersey Institute of Technology	72	2	0	2	0	9	3	0	6	18	8	10	0	0	0	0	0	0	0	42	0	7	6	3	8	2	4	8	4
Princeton Theological Seminary	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Princeton U.	396	39	1	38	0	69	24	9	36	41	15	26	73	9	4	19	21	9	11	65	3	2	15	1	13	0	4	9	18
Rowan U.	4	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rutgers School of Biomedical and Health Sciences	45	42	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0
Rutgers, State U. New Jersey, Camden	6	3	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Rutgers, State U. New Jersey, New Brunswick	390	67	14	48	5	34	19	4	11	37	15	22	73	15	9	12	9	6	22	71	0	7	12	7	7	4	13	9	12
Rutgers, State U. New Jersey, Newark	74	13	1	10	2	4	4	0	0	2	1	1	12	2	0	0	1	0	9	0	0	0	0	0	0	0	0	0	0
Seton Hall U.	33	16	0	2	14	2	2	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens Institute of Technology	50	1	0	1	0	9	5	1	3	2	0	2	0	0	0	0	0	0	0	29	0	4	1	0	1	0	3	5	15
New Mexico	322	47	4	30	13	55	13	12	30	16	9	7	45	21	3	7	1	2	11	57	0	5	6	12	13	2	4	3	12

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																			Engineering									
		Life sciences				Physical sciences and earth sciences				Mathematics and computer sciences			Psychology and social sciences								Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences											
New Mexico Institute of Mining and Technology	13	0	0	0	0	10	1	5	4	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	
New Mexico State U., Las Cruces	118	24	4	13	7	17	4	2	11	4	1	3	11	11	0	0	0	0	0	18	0	0	1	4	6	2	0	2	3	
U. New Mexico, Albuquerque	191	23	0	17	6	28	8	5	15	11	7	4	34	10	3	7	1	2	11	37	0	5	5	8	7	0	2	1	9	
New York	4,260	925	62	749	114	451	167	82	202	339	171	168	880	385	63	137	80	90	125	600	16	80	67	25	124	14	60	88	126	
Adelphi U.	28	4	0	0	4	0	0	0	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Albany Medical C.	5	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alfred U.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	
Clarkson U.	45	4	1	3	0	5	3	1	1	4	0	4	0	0	0	0	0	0	0	32	0	0	7	3	7	0	0	8	7	
Cold Spring Harbor Laboratory	5	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Columbia U. in the City of New York	659	132	1	105	26	78	18	19	41	46	22	24	149	52	16	36	21	13	11	83	0	14	9	4	20	0	3	8	25	
Columbia U., Teachers C.	98	6	0	2	4	0	0	0	0	0	0	0	3	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
Cornell U.	539	130	47	83	0	94	35	14	45	55	29	26	71	12	7	18	10	10	14	109	2	19	10	5	21	0	14	13	25	

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences				Physical sciences and earth sciences				Mathematics and computer sciences			Psychology and social sciences							Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences										
Rensselaer Polytechnic Institute, Troy	164	15	1	14	0	18	8	3	7	20	15	5	8	4	1	0	0	0	3	87	9	9	13	0	9	2	6	25	14
Rochester Institute of Technology	31	1	1	0	0	6	0	0	6	4	4	0	0	0	0	0	0	0	0	14	0	2	0	0	0	0	1	0	11
Rockefeller U.	30	26	0	26	0	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. John's U., Queens	33	7	0	5	2	2	2	0	0	0	0	0	11	9	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Syracuse U.	149	7	0	4	3	18	7	3	8	17	11	6	36	12	4	8	3	5	4	29	3	2	4	4	6	0	1	5	4
SUNY, Binghamton U.	150	14	0	10	4	11	6	1	4	19	6	13	38	17	5	3	6	5	2	29	0	1	0	0	6	8	2	7	5
SUNY, C. of Environmental Science and Forestry	21	12	6	6	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	6	0	3	1	0	0	0	1	0	1
SUNY, C. of Optometry	7	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, Downstate Medical Center	3	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
SUNY, Stony Brook U.	257	49	0	44	5	49	15	15	19	48	14	34	41	11	1	9	3	6	11	38	0	5	0	0	6	0	19	4	4
SUNY, U. Albany	168	26	1	21	4	28	7	14	7	6	4	2	46	23	3	3	2	7	8	16	0	0	0	0	1	0	4	0	11

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences			Psychology and social sciences						Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering			
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics											Political science and government	Sociology	Other social sciences
SUNY, U. Buffalo	332	70	1	46	23	32	19	5	8	27	15	12	45	8	1	6	3	5	22	65	2	6	14	4	17	4	1	9	8
SUNY, Upstate Medical U.	20	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Union Theological Seminary	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Rochester	207	63	0	60	3	38	8	1	29	15	8	7	27	14	0	6	7	0	0	28	0	6	3	0	7	0	5	3	4
Yeshiva U.	60	44	0	43	1	0	0	0	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Carolina	1,736	541	62	363	116	178	92	34	52	157	66	91	209	71	14	42	13	21	48	309	7	46	12	20	71	18	22	46	67
Duke U.	400	136	14	104	18	46	17	13	16	26	8	18	59	10	8	19	8	6	8	63	0	25	0	0	16	0	4	7	11
East Carolina U.	41	28	0	17	11	0	0	0	0	0	0	0	9	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
North Carolina Agricultural and Technical State U.	54	9	4	1	4	2	1	0	1	1	0	1	2	0	0	0	0	0	2	28	0	2	0	0	5	7	1	5	8
North Carolina State U.	495	100	37	63	0	52	35	10	7	68	26	42	37	19	0	9	0	7	2	171	7	11	12	17	41	11	14	19	39
Southeastern Baptist Theological Seminary	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. North Carolina, Chapel Hill	473	208	4	146	58	51	35	6	10	36	18	18	68	16	6	10	5	7	24	12	0	5	0	0	0	0	2	0	5

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																			Engineering								
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences		Psychology and social sciences						Engineering													
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
U. North Carolina, Charlotte	114	11	2	6	3	13	0	0	13	19	13	6	15	7	0	0	0	1	7	30	0	0	0	3	9	0	0	15	3
U. North Carolina, Greensboro	106	27	1	4	22	2	2	0	0	7	1	6	19	11	0	4	0	0	4	2	0	0	0	0	0	0	1	0	1
U. North Carolina, Wilmington	6	1	0	1	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wake Forest U.	31	21	0	21	0	7	2	0	5	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0
North Dakota	193	74	26	27	21	21	13	2	6	8	3	5	24	18	0	0	0	0	6	26	1	1	2	2	11	1	2	1	5
North Dakota State U.	120	60	25	18	17	10	8	0	2	8	3	5	9	5	0	0	0	0	4	17	0	0	0	8	1	2	1	5	
U. North Dakota	73	14	1	9	4	11	5	2	4	0	0	0	15	13	0	0	0	0	2	9	1	1	2	2	3	0	0	0	0
Ohio	2,051	455	52	311	92	262	133	18	111	125	60	65	262	151	10	14	17	25	45	391	21	40	48	21	74	8	34	53	92
Air Force Institute of Technology	36	0	0	0	0	9	0	0	9	11	6	5	0	0	0	0	0	0	0	14	5	0	0	0	4	0	0	0	5
Bowling Green State U., Bowling Green	89	12	1	8	3	5	5	0	0	8	1	7	29	19	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0
Case Western Reserve U.	200	69	0	61	8	24	13	2	9	5	4	1	7	5	0	0	0	2	0	55	1	14	6	1	4	0	7	7	15
Cleveland State U.	45	7	0	7	0	10	9	0	1	1	1	0	10	7	0	0	0	0	3	9	0	2	1	1	0	0	0	1	4

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences			Physical sciences and earth sciences			Mathematics and computer sciences		Psychology and social sciences						Engineering													
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
Indiana U. Pennsylvania	59	2	0	0	2	0	0	0	0	0	0	0	17	1	0	0	0	4	12	0	0	0	0	0	0	0	0	0	0
Lehigh U.	110	9	0	9	0	12	5	1	6	5	1	4	9	8	0	1	0	0	0	58	0	1	10	1	7	3	7	22	7
Marywood U.	10	2	0	0	2	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pennsylvania State U., University Park and Hershey Medical Center	699	130	24	96	10	81	18	27	36	50	26	24	95	34	4	9	8	11	29	177	7	9	22	8	19	16	26	24	46
Temple U.	227	31	0	24	7	12	3	1	8	18	5	13	42	16	3	3	2	7	11	15	0	9	0	0	2	0	0	3	1
Thomas Jefferson U.	13	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Pennsylvania	448	123	1	106	16	40	29	0	11	29	19	10	69	15	3	16	4	4	27	53	0	15	11	0	8	0	8	5	6
U. Pittsburgh, Pittsburgh	404	127	0	86	41	38	28	1	9	39	23	16	35	9	5	6	2	5	8	79	0	31	8	4	13	2	5	6	10
U. of the Sciences Philadelphia	29	21	0	12	9	0	0	0	0	0	0	0	8	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
Villanova U.	32	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	2	0	2	0	0	2	4
Westminster Theological Seminary	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Widener U., Chester	23	7	0	0	7	0	0	0	0	0	0	0	5	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Puerto Rico	148	31	7	24	0	15	10	2	3	5	2	3	61	55	0	0	0	0	6	13	0	0	9	1	0	0	1	0	2

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

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		Life sciences				Physical sciences and earth sciences				Mathematics and computer sciences			Psychology and social sciences							Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering					
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences															
U. Texas Health Science Center, Houston ^a	129	124	0	97	27	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Texas Health Science Center, San Antonio	33	32	0	28	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
U. Texas Medical Branch	41	40	0	30	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
U. Texas Pan American	22	4	0	0	4	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
U. Texas Southwestern Medical Center	78	59	0	59	0	5	5	0	0	0	0	0	10	10	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	
U. Texas, Arlington	185	19	2	14	3	18	10	1	7	28	11	17	12	4	0	0	0	0	8	80	4	8	0	13	19	6	8	13	9					
U. Texas, Austin	764	89	0	63	26	97	24	31	42	55	25	30	98	30	7	11	13	11	26	195	6	6	22	21	46	0	10	29	55					
U. Texas, Dallas	222	19	0	16	3	29	9	8	12	30	21	9	35	8	0	7	2	0	18	68	0	4	0	0	36	0	11	10	7					
U. Texas, El Paso	75	11	0	9	2	7	5	2	0	6	2	4	8	8	0	0	0	0	0	21	0	1	0	3	4	0	6	6	1					
U. Texas, San Antonio	154	14	1	13	0	25	6	0	19	17	15	2	22	5	4	0	0	0	13	33	0	6	0	3	10	1	1	5	7					
West Texas A&M U.	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Utah	512	137	9	92	36	62	31	14	17	42	18	24	76	51	0	6	3	6	10	110	0	14	15	4	28	0	2	22	25					

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

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		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics											Political science and government	Sociology	Other social sciences
Brigham Young U., Provo	93	24	0	20	4	13	8	0	5	1	0	1	25	25	0	0	0	0	0	17	0	0	6	0	5	0	1	2	3
U. Utah	332	91	0	62	29	41	22	9	10	31	15	16	43	21	0	4	3	6	9	74	0	10	9	1	19	0	1	14	20
Utah State U., Logan	87	22	9	10	3	8	1	5	2	10	3	7	8	5	0	2	0	0	1	19	0	4	0	3	4	0	0	6	2
Vermont	63	29	7	19	3	5	5	0	0	2	1	1	15	12	0	2	0	0	1	9	0	0	0	1	1	0	0	4	3
Middlebury C.	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
U. Vermont	59	29	7	19	3	5	5	0	0	2	1	1	14	12	0	2	0	0	0	9	0	0	0	1	1	0	0	4	3
Virginia	1,518	270	47	158	65	151	53	40	58	119	77	42	261	91	11	44	17	15	83	315	14	31	17	27	58	6	26	44	92
C. of William and Mary	76	4	2	2	0	27	0	10	17	9	9	0	6	0	3	0	0	0	3	2	0	0	0	0	0	0	2	0	0
George Mason U.	272	36	10	19	7	24	2	18	4	36	28	8	91	23	0	19	6	6	37	24	0	2	0	4	6	1	0	0	11
Hampton U.	17	2	0	0	2	3	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
James Madison U.	13	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Norfolk State U.	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	0	0
Old Dominion U.	136	13	0	4	9	8	3	1	4	8	6	2	22	9	0	0	0	0	13	25	2	2	0	6	5	0	0	4	6
Regent U.	45	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Union Presbyterian Seminary	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Virginia, Charlottesville	324	64	5	50	9	32	12	2	18	23	8	15	56	17	8	17	9	5	0	65	1	8	9	3	12	0	12	4	16

TABLE 7

Doctorate-granting institutions, by state or location and major science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Science																		Engineering									
		Life sciences				Physical sciences and earth sciences				Mathematics and computer sciences			Psychology and social sciences							Engineering									
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences	Total	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy	Total	Computer and information sciences	Mathematics and statistics	Total	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
U. Wisconsin-Madison	770	222	30	152	40	103	54	22	27	54	20	34	98	29	3	26	9	14	17	124	0	10	15	2	27	8	22	15	25
U. Wisconsin-Milwaukee	184	30	0	13	17	14	8	1	5	11	4	7	51	22	2	9	1	4	13	21	0	1	0	0	9	1	1	6	3
Wyoming	102	25	7	18	0	20	5	11	4	9	3	6	8	3	1	2	0	0	2	22	0	0	3	6	4	0	0	2	7
U. Wyoming	102	25	7	18	0	20	5	11	4	9	3	6	8	3	1	2	0	0	2	22	0	0	3	6	4	0	0	2	7

^a Most degrees reported in "biological and biomedical sciences" fields of study for University of Texas, Health Science Center at Houston are awarded jointly with the M. D. Anderson Cancer Center through the U. of Texas Graduate School of Biomedical Sciences at Houston.

Note(s)

See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
All institutions	55,195	4,834	898	2,507	97	963	369	5,145	617	948	1,442	2,138	2,989	1,481	631	877	0
Alabama	667	111	19	57	8	23	4	26	3	9	10	4	37	19	8	10	0
Alabama A&M U.	8	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
Alabama State U.	8	6	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Auburn U., Auburn	253	42	6	24	7	1	4	5	0	3	2	0	13	9	0	4	0
Tuskegee U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Alabama, Birmingham	165	12	3	2	1	6	0	0	0	0	0	0	0	0	0	0	0
U. Alabama, Huntsville	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Alabama, Tuscaloosa	182	40	5	26	0	9	0	21	3	6	8	4	24	10	8	6	0
U. South Alabama	23	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Alaska	56	3	0	0	0	0	3	0	0	0	0	0	3	0	2	1	0
U. Alaska, Anchorage	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Alaska, Fairbanks	54	3	0	0	0	0	3	0	0	0	0	0	3	0	2	1	0
Arizona	764	71	4	23	1	32	11	89	15	8	21	45	44	21	13	10	0
Arizona State U.	338	23	0	10	0	9	4	46	4	3	6	33	26	11	6	9	0
Northern Arizona U.	27	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Prescott C.	10	8	1	0	0	3	4	0	0	0	0	0	0	0	0	0	0
U. Arizona	389	37	3	10	1	20	3	43	11	5	15	12	18	10	7	1	0
Arkansas	266	20	1	14	0	5	0	28	1	8	10	9	15	14	0	1	0
Arkansas State U., Jonesboro	8	0	0	0	0	0	0	2	0	1	0	1	0	0	0	0	0
U. Arkansas for Medical Sciences	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Arkansas, Fayetteville	197	18	1	14	0	3	0	26	1	7	10	8	14	14	0	0	0
U. Arkansas, Little Rock	28	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0
California	6,076	289	49	136	2	33	69	608	81	107	142	278	208	116	45	47	0
Alliant International U.	93	1	1	0	0	0	0	0	0	0	0	0	3	3	0	0	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Stanford U.	726	20	0	13	0	2	5	54	9	12	10	23	36	23	10	3	0
U. California, Berkeley	852	21	0	13	0	5	3	108	17	22	30	39	31	12	0	19	0
U. California, Davis	546	13	0	4	0	5	4	50	13	13	11	13	7	0	7	0	0
U. California, Irvine	380	18	0	8	0	1	9	33	6	4	14	9	6	6	0	0	0
U. California, Los Angeles	688	36	4	19	0	2	11	97	23	18	19	37	20	14	0	6	0
U. California, Merced	53	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
U. California, Riverside	299	15	0	14	0	0	1	40	7	5	12	16	1	1	0	0	0
U. California, San Diego	471	15	13	0	0	1	1	37	0	13	5	19	9	4	5	0	0
U. California, San Francisco	132	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
U. California, Santa Barbara	355	26	6	8	1	5	6	51	2	10	16	23	5	1	4	0	0
U. California, Santa Cruz	157	3	0	0	0	0	3	24	0	6	7	11	1	0	1	0	0
U. of the Pacific	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. of the West	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
U. San Diego	30	9	8	1	0	0	0	0	0	0	0	0	5	4	0	1	0
U. San Francisco	21	21	6	12	0	1	2	0	0	0	0	0	0	0	0	0	0
U. Southern California	435	10	4	6	0	0	0	38	4	2	14	18	42	15	17	10	0
Colorado	1,052	107	28	51	0	18	10	62	10	5	12	35	58	16	27	15	0
Colorado School of Mines	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colorado State U., Fort Collins	250	16	12	3	0	0	1	0	0	0	0	0	9	2	5	2	0
U. CO, Denver, Aurora, Anschutz Medical Campus	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Colorado Boulder	383	13	0	6	0	5	2	41	10	4	5	22	23	12	11	0	0
U. Colorado Colorado Springs	23	5	4	0	0	0	1	0	0	0	0	0	1	0	0	1	0
U. Colorado Denver	33	2	2	0	0	0	0	0	0	0	0	0	6	2	0	4	0
U. Denver	103	16	4	12	0	0	0	21	0	1	7	13	15	0	11	4	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Florida International U.	187	8	0	7	0	1	0	7	2	5	0	0	15	5	0	10	0
Florida State U.	373	58	1	40	3	14	0	65	2	4	21	38	19	7	4	8	0
Nova Southeastern U.	59	4	0	3	0	1	0	9	0	0	0	9	1	1	0	0	0
U. Central Florida	228	24	0	13	0	6	5	7	0	0	1	6	13	8	0	5	0
U. Florida	738	49	5	34	1	9	0	38	4	8	9	17	35	20	8	7	0
U. Miami	216	18	5	8	0	3	2	31	4	0	3	24	10	3	7	0	0
U. South Florida, Tampa	310	59	2	40	3	13	1	17	0	5	4	8	17	7	8	2	0
U. West Florida	5	5	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0
Georgia	1,511	129	7	59	9	42	12	107	7	16	48	36	68	31	8	29	0
Clark Atlanta U.	15	0	0	0	0	0	0	3	0	0	0	3	3	0	0	3	0
Emory U.	246	0	0	0	0	0	0	45	3	4	14	24	8	6	0	2	0
Georgia Institute of Technology	512	0	0	0	0	0	0	1	0	0	0	1	12	6	1	5	0
Georgia Regents U.	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Georgia State U.	225	38	1	19	3	15	0	30	0	8	22	0	10	7	3	0	0
Kennesaw State U.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mercer U.	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morehouse School of Medicine	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Georgia	461	91	6	40	6	27	12	28	4	4	12	8	35	12	4	19	0
Hawaii	201	23	3	11	0	4	5	28	6	5	6	11	14	8	1	5	0
U. Hawaii, Manoa	201	23	3	11	0	4	5	28	6	5	6	11	14	8	1	5	0
Idaho	97	16	5	9	0	1	1	3	0	0	3	0	1	0	0	1	0
Boise State U.	11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Idaho State U.	39	14	5	8	0	1	0	3	0	0	3	0	0	0	0	0	0
U. Idaho	47	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Illinois	2,517	152	14	106	1	24	7	301	35	59	78	129	167	81	29	57	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Benedictine U.	16	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	0
Chicago Theological Seminary	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
DePaul U.	22	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0
Garrett-Evangelical Theological Seminary	8	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0
Illinois Institute of Technology	90	2	0	0	0	2	0	0	0	0	0	0	4	1	0	3	0
Illinois State U.	32	7	3	3	0	1	0	10	0	0	10	0	0	0	0	0	0
Institute for Clinical Social Work, Chicago	11	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0
Loyola U., Chicago	73	16	0	15	0	0	1	21	0	6	5	10	2	0	0	2	0
Lutheran School of Theology, Chicago	6	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0
National Louis U.	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Illinois U.	82	23	0	18	0	5	0	7	0	3	3	1	0	0	0	0	0
Northwestern U.	432	8	0	6	0	1	1	56	8	13	13	22	22	17	5	0	0
Rosalind Franklin U. of Medicine and Science	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush U.	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Illinois U., Carbondale	165	22	5	7	0	6	4	14	0	3	3	8	22	9	12	1	0
U. Chicago	432	3	0	3	0	0	0	111	15	27	16	53	25	16	0	9	0
U. Illinois, Chicago	325	21	0	18	1	2	0	16	3	1	10	2	22	6	6	10	0
U. Illinois, Urbana-Champaign	766	50	6	36	0	7	1	41	9	6	18	8	44	17	6	21	0
Wheaton C., Wheaton	6	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0
Indiana	1,631	162	42	83	0	31	6	176	20	41	44	71	87	33	32	22	0
Ball State U.	29	7	0	5	0	2	0	2	0	0	2	0	0	0	0	0	0
Indiana State U.	80	56	32	20	0	1	3	0	0	0	0	0	5	3	1	1	0
Indiana U., Bloomington	427	61	2	42	0	15	2	70	14	14	17	25	49	12	21	16	0
Indiana U.-Purdue U., Indianapolis	91	1	1	0	0	0	0	1	0	1	0	0	4	1	0	3	0
Purdue U., West Lafayette	730	37	7	16	0	13	1	40	3	11	16	10	28	17	10	1	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
U. Notre Dame	274	0	0	0	0	0	0	63	3	15	9	36	1	0	0	1	0
Iowa	743	89	23	36	0	23	7	46	3	7	23	13	40	23	11	6	0
Iowa State U.	390	38	15	8	0	10	5	10	0	2	8	0	17	13	0	4	0
Maharishi U. of Management	6	0	0	0	0	0	0	1	0	0	0	1	2	2	0	0	0
St. Ambrose U.	3	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0
U. Iowa	322	33	2	20	0	11	0	35	3	5	15	12	17	5	11	1	0
U. Northern Iowa	22	18	6	8	0	2	2	0	0	0	0	0	1	0	0	1	0
Kansas	534	67	9	47	1	9	1	43	7	8	11	17	36	13	9	14	0
Kansas State U.	170	21	3	14	0	3	1	4	0	4	0	0	10	6	0	4	0
U. Kansas	318	46	6	33	1	6	0	39	7	4	11	17	26	7	9	10	0
Wichita State U.	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kentucky	494	35	9	21	0	4	1	86	3	10	14	59	25	9	5	11	0
Asbury Theological Seminary	19	0	0	0	0	0	0	16	0	0	0	16	0	0	0	0	0
Southern Baptist Theological Seminary	41	3	2	1	0	0	0	37	0	3	0	34	0	0	0	0	0
U. Kentucky	285	21	5	13	0	3	0	22	2	7	8	5	19	6	5	8	0
U. Louisville	149	11	2	7	0	1	1	11	1	0	6	4	6	3	0	3	0
Louisiana	576	64	19	33	0	10	2	65	12	7	20	26	34	26	5	3	0
Grambling State U.	10	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
Louisiana State U., Baton Rouge	283	31	10	14	0	6	1	20	3	3	8	6	19	12	5	2	0
Louisiana State U., Health Sciences Center, New Orleans	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Louisiana State U., Health Sciences Center, Shreveport	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Louisiana Tech U.	32	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0
New Orleans Baptist Theological Seminary	19	1	1	0	0	0	0	15	0	0	0	15	0	0	0	0	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Southern U. and A&M C., Baton Rouge	15	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Tulane U.	91	0	0	0	0	0	0	14	7	4	0	3	5	4	0	1	0
U. Louisiana, Lafayette	41	0	0	0	0	0	0	16	2	0	12	2	0	0	0	0	0
U. Louisiana, Monroe	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. New Orleans	48	19	8	9	0	1	1	0	0	0	0	0	5	5	0	0	0
Maine	50	5	0	2	0	2	1	2	0	1	0	1	2	0	1	1	0
U. Maine	50	5	0	2	0	2	1	2	0	1	0	1	2	0	1	1	0
Maryland	1,365	53	6	35	0	10	2	103	21	20	21	41	46	20	16	10	0
Bowie State U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Johns Hopkins U.	507	0	0	0	0	0	0	40	8	9	8	15	0	0	0	0	0
Loyola U., Maryland	6	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Morgan State U.	29	3	0	3	0	0	0	5	0	2	1	2	5	3	0	2	0
Notre Dame of Maryland U.	6	6	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Towson U.	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Maryland, Baltimore	82	1	0	0	0	1	0	0	0	0	0	0	6	0	0	6	0
U. Maryland, Baltimore County	93	0	0	0	0	0	0	5	1	1	1	2	0	0	0	0	0
U. Maryland, College Park	586	38	1	27	0	9	1	53	12	8	11	22	30	12	16	2	0
U. Maryland, Eastern Shore	13	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0
Uniformed Services U. of the Health Sciences	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts	2,946	128	22	66	2	29	9	294	27	57	73	137	141	80	10	51	0
Bentley U.	4	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0
Boston C.	137	23	0	20	0	2	1	41	2	7	8	24	14	5	0	9	0
Boston U.	343	14	6	8	0	0	0	49	5	8	15	21	18	11	0	7	0
Brandeis U.	81	0	0	0	0	0	0	12	0	5	3	4	2	2	0	0	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
U. Detroit Mercy	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Michigan, Ann Arbor	853	34	1	15	1	15	2	75	10	25	17	23	22	9	4	9	0
U. Michigan, Dearborn	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Michigan, Flint	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Van Andel Institute	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wayne State U.	205	16	3	13	0	0	0	13	3	2	6	2	19	7	6	6	0
Western Michigan U.	124	26	8	8	1	8	1	4	0	1	3	0	4	0	0	4	0
Minnesota	1,437	154	13	90	5	23	23	30	4	11	6	9	208	131	5	72	0
Mayo Clinic, Mayo Graduate School	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Minnesota, Twin Cities	665	58	4	34	2	9	9	29	4	11	6	8	39	19	5	15	0
Walden U.	746	96	9	56	3	14	14	1	0	0	0	1	169	112	0	57	0
Mississippi	471	108	59	31	2	11	5	20	0	12	8	0	32	18	6	8	0
Jackson State U.	59	29	27	2	0	0	0	0	0	0	0	0	7	2	1	4	0
Mississippi State U.	175	32	16	10	0	3	3	6	0	6	0	0	9	5	0	4	0
U. Mississippi, Jackson, Medical Center	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Mississippi, Oxford	88	20	8	7	2	3	0	8	0	4	4	0	5	5	0	0	0
U. Southern Mississippi	118	27	8	12	0	5	2	6	0	2	4	0	11	6	5	0	0
Missouri	978	95	13	56	0	19	7	90	8	12	30	40	76	20	27	29	0
Concordia Seminary	8	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0
Midwestern Baptist Theological Seminary	3	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0
Missouri U. of Science and Technology	116	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Saint Louis U.	131	38	6	27	0	1	4	20	0	4	6	10	4	2	0	2	0
U. Missouri, Columbia	357	35	4	16	0	14	1	38	1	7	15	15	44	7	27	10	0
U. Missouri, Kansas City	50	3	0	3	0	0	0	2	0	0	2	0	6	1	0	5	0
U. Missouri, Saint Louis	57	17	3	9	0	3	2	0	0	0	0	0	1	1	0	0	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Washington U., Saint Louis	256	1	0	0	0	1	0	19	7	1	7	4	21	9	0	12	0
Montana	112	31	13	12	0	4	2	1	0	1	0	0	1	0	0	1	0
Montana State U., Bozeman	71	19	6	8	0	3	2	1	0	1	0	0	1	0	0	1	0
Montana Tech of U. Montana	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Montana, Missoula	39	12	7	4	0	1	0	0	0	0	0	0	0	0	0	0	0
Nebraska	341	25	3	13	0	6	3	34	3	3	19	9	8	3	3	2	0
Creighton U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Nebraska, Lincoln	257	25	3	13	0	6	3	34	3	3	19	9	8	3	3	2	0
U. Nebraska, Medical Center	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Nebraska, Omaha	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nevada	240	41	4	19	1	10	7	14	0	4	10	0	6	3	0	3	0
U. Nevada, Las Vegas	116	26	1	16	1	7	1	5	0	1	4	0	6	3	0	3	0
U. Nevada, Reno	124	15	3	3	0	3	6	9	0	3	6	0	0	0	0	0	0
New Hampshire	165	10	3	5	0	1	1	4	0	1	3	0	3	3	0	0	0
Antioch U., Keene	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dartmouth C.	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern New Hampshire U.	3	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0
U. New Hampshire, Durham	75	10	3	5	0	1	1	4	0	1	3	0	0	0	0	0	0
New Jersey	1,124	68	12	31	1	18	6	171	25	41	39	66	83	47	13	23	0
Drew U.	13	0	0	0	0	0	0	12	0	4	1	7	0	0	0	0	0
Fairleigh Dickinson U., Teaneck	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montclair State U.	21	17	0	9	1	6	1	0	0	0	0	0	1	0	0	1	0
New Jersey Institute of Technology	72	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Princeton Theological Seminary	8	0	0	0	0	0	0	8	0	1	0	7	0	0	0	0	0
Princeton U.	396	0	0	0	0	0	0	104	16	24	26	38	5	0	1	4	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

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		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
CUNY, Graduate Center	410	22	14	6	0	1	1	118	23	12	30	53	13	8	0	5	0
Fordham U.	114	10	2	7	0	1	0	35	0	4	11	20	12	0	0	12	0
Hofstra U.	22	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Icahn School of Medicine at Mt. Sinai	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Juilliard School	2	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0
Long Island U., Brooklyn	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Long Island U., Brookville	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Memorial Sloan Kettering Cancer Center	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New School	71	0	0	0	0	0	0	14	0	0	0	14	0	0	0	0	0
New York Medical C.	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New York U.	429	27	4	11	0	12	0	100	17	25	13	45	38	12	8	18	0
Pace U.	12	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Rensselaer Polytechnic Institute, Troy	164	0	0	0	0	0	0	2	0	0	1	1	14	6	3	5	0
Rochester Institute of Technology	31	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0
Rockefeller U.	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. John's U., Queens	33	0	0	0	0	0	0	13	0	1	12	0	0	0	0	0	0
Syracuse U.	149	16	0	10	0	6	0	19	0	4	9	6	7	4	2	1	0
SUNY, Binghamton U.	150	4	0	1	0	1	2	29	1	4	18	6	6	5	0	1	0
SUNY, C. of Environmental Science and Forestry	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, C. of Optometry	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, Downstate Medical Center	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, Stony Brook U.	257	5	0	0	0	5	0	23	3	1	10	9	4	0	0	4	0
SUNY, U. Albany	168	20	2	14	0	3	1	12	5	5	2	0	14	0	0	14	0
SUNY, U. Buffalo	332	28	0	9	2	15	2	42	2	6	20	14	23	13	5	5	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
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SUNY, Upstate Medical U.	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Union Theological Seminary	3	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0
U. Rochester	207	9	1	5	0	1	2	19	0	3	2	14	8	8	0	0	0
Yeshiva U.	60	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
North Carolina	1,736	130	10	81	0	24	15	131	5	20	39	67	81	37	19	25	0
Duke U.	400	0	0	0	0	0	0	57	4	7	14	32	13	11	0	2	0
East Carolina U.	41	2	0	2	0	0	0	2	0	0	2	0	0	0	0	0	0
North Carolina Agricultural and Technical State U.	54	4	3	0	0	0	1	0	0	0	0	0	8	7	0	1	0
North Carolina State U.	495	49	1	30	0	16	2	1	0	0	1	0	17	2	4	11	0
Southeastern Baptist Theological Seminary	16	0	0	0	0	0	0	16	0	0	0	16	0	0	0	0	0
U. North Carolina, Chapel Hill	473	23	0	13	0	2	8	42	1	6	17	18	33	9	15	9	0
U. North Carolina, Charlotte	114	22	3	19	0	0	0	0	0	0	0	0	4	4	0	0	0
U. North Carolina, Greensboro	106	30	3	17	0	6	4	13	0	7	5	1	6	4	0	2	0
U. North Carolina, Wilmington	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wake Forest U.	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Dakota	193	27	6	16	4	1	0	6	0	1	4	1	7	3	4	0	0
North Dakota State U.	120	6	0	4	2	0	0	3	0	0	2	1	7	3	4	0	0
U. North Dakota	73	21	6	12	2	1	0	3	0	1	2	0	0	0	0	0	0
Ohio	2,051	247	36	134	1	53	23	192	32	29	67	64	117	58	36	23	0
Air Force Institute of Technology	36	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0
Bowling Green State U., Bowling Green	89	10	8	2	0	0	0	11	0	0	4	7	14	2	12	0	0
Case Western Reserve U.	200	1	0	0	0	1	0	15	0	4	1	10	24	21	0	3	0
Cleveland State U.	45	7	5	2	0	0	0	0	0	0	0	0	1	1	0	0	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
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Hebrew Union C.-Jewish Institute of Religion, Cincinnati	9	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0
Kent State U., Kent	159	35	2	30	0	3	0	14	3	2	7	2	12	10	1	1	0
Miami U., Oxford	49	9	5	2	0	1	1	5	0	0	5	0	0	0	0	0	0
Ohio State U., Columbus	749	78	4	27	0	30	17	83	24	14	26	19	33	12	8	13	0
Ohio U., Athens	130	31	0	29	0	2	0	17	0	4	9	4	17	1	15	1	0
U. Akron, Akron	137	6	0	6	0	0	0	3	0	3	0	0	1	0	0	1	0
U. Cincinnati, Uptown West Campus	240	30	4	14	0	9	3	30	5	2	15	8	9	5	0	4	0
U. Dayton	41	6	6	0	0	0	0	5	0	0	0	5	0	0	0	0	0
U. Toledo	117	33	2	22	1	6	2	0	0	0	0	0	4	4	0	0	0
Wright State U., Dayton	47	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Youngstown State U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oklahoma	504	90	23	40	2	11	14	44	3	8	15	18	43	29	7	7	0
Oklahoma City U.	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Oklahoma State U., Center for Health Sciences	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oklahoma State U., Stillwater	228	59	11	28	0	9	11	12	0	6	5	1	24	20	0	4	0
U. Oklahoma, Norman	233	30	12	12	2	1	3	26	3	2	4	17	19	9	7	3	0
U. Tulsa	36	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0
Oregon	537	30	7	16	0	5	2	22	6	2	7	7	13	3	3	7	0
Oregon Health and Science U.	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oregon State U., Corvallis	238	14	6	4	0	3	1	0	0	0	0	0	1	0	0	1	0
Portland State U.	78	1	0	0	0	1	0	0	0	0	0	0	5	1	0	4	0
U. Oregon	168	15	1	12	0	1	1	22	6	2	7	7	7	2	3	2	0
Pennsylvania	2,623	221	39	107	1	57	17	289	30	45	88	126	174	79	52	43	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

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		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Bryn Mawr C.	15	0	0	0	0	0	0	7	0	0	1	6	3	0	0	3	0
Carnegie Mellon U.	307	5	0	1	0	4	0	12	0	4	4	4	14	10	0	4	0
Drexel U.	163	1	1	0	0	0	0	0	0	0	0	0	12	7	1	4	0
Duquesne U.	77	9	0	9	0	0	0	31	0	0	12	19	2	0	2	0	0
Indiana U. Pennsylvania	59	8	0	1	0	7	0	26	0	0	25	1	6	0	4	2	0
Lehigh U.	110	14	0	13	0	0	1	3	1	1	1	0	0	0	0	0	0
Marywood U.	10	5	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Pennsylvania State U., University Park and Hershey Medical Center	699	77	6	48	1	11	11	44	11	7	17	9	45	15	24	6	0
Temple U.	227	58	26	14	0	16	2	37	2	7	8	20	14	11	3	0	0
Thomas Jefferson U.	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Pennsylvania	448	10	0	5	0	2	3	75	11	23	13	28	49	24	15	10	0
U. Pittsburgh, Pittsburgh	404	18	1	15	0	2	0	44	5	3	7	29	24	12	3	9	0
U. of the Sciences Philadelphia	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Villanova U.	32	10	1	0	0	9	0	3	0	0	0	3	0	0	0	0	0
Westminster Theological Seminary	7	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0
Widener U., Chester	23	6	0	1	0	5	0	0	0	0	0	0	5	0	0	5	0
Puerto Rico	148	1	0	1	0	0	0	14	5	4	0	5	8	6	0	2	0
Carlos Albizu U., San Juan	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inter American U. Puerto Rico, San Juan	16	1	0	1	0	0	0	8	0	3	0	5	3	3	0	0	0
Pontifical Catholic U. Puerto Rico, Ponce	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Central del Caribe	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Puerto Rico, Mayaguez	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Puerto Rico, Medical Sciences Campus	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Puerto Rico, Rio Piedras	59	0	0	0	0	0	0	6	5	1	0	0	5	3	0	2	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

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		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Rhode Island	326	7	2	2	0	1	2	69	7	9	15	38	6	5	1	0	0
Brown U.	208	0	0	0	0	0	0	47	7	9	6	25	1	0	1	0	0
Salve Regina U.	13	0	0	0	0	0	0	13	0	0	0	13	0	0	0	0	0
U. Rhode Island	105	7	2	2	0	1	2	9	0	0	9	0	5	5	0	0	0
South Carolina	568	46	15	21	1	9	0	33	6	4	20	3	48	25	7	16	0
Clemson U.	232	21	12	7	0	2	0	4	0	0	4	0	15	6	0	9	0
Medical U. South Carolina	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. South Carolina, Columbia	279	25	3	14	1	7	0	29	6	4	16	3	33	19	7	7	0
South Dakota	114	5	0	5	0	0	0	2	0	0	2	0	4	2	0	2	0
Dakota State U.	7	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0
South Dakota School of Mines and Technology	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Dakota State U.	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. South Dakota	37	5	0	5	0	0	0	2	0	0	2	0	2	0	0	2	0
Tennessee	955	138	24	67	12	25	10	95	17	18	26	34	49	27	7	15	0
East Tennessee State U.	29	10	0	0	5	3	2	0	0	0	0	0	2	0	0	2	0
Meharry Medical C.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mid-America Baptist Theological Seminary	8	2	0	1	0	0	1	6	0	0	0	6	0	0	0	0	0
Middle Tennessee State U.	48	8	0	1	0	7	0	13	1	4	6	2	1	0	0	1	0
Tennessee State U.	24	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0
Tennessee Technological U.	19	8	0	3	0	1	4	0	0	0	0	0	0	0	0	0	0
U. Memphis	151	55	19	30	4	2	0	22	0	2	8	12	12	11	1	0	0
U. Tennessee, Chattanooga	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Tennessee, Health Science Center	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Tennessee, Knoxville	374	35	4	16	3	9	3	26	9	7	6	4	31	16	6	9	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

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		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
Vanderbilt U.	280	18	0	15	0	3	0	28	7	5	6	10	0	0	0	0	0
Texas	4,074	413	73	231	16	79	14	354	34	61	114	145	255	152	57	46	0
Baylor C. of Medicine	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baylor U.	80	3	0	2	0	1	0	21	0	2	5	14	6	5	0	1	0
Brite Divinity S.	5	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0
Dallas Theological Seminary	10	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0
Lamar U.	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prairie View A&M U.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice U.	206	0	0	0	0	0	0	24	0	5	6	13	2	2	0	0	0
Sam Houston State U.	21	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Methodist U.	72	2	0	1	0	1	0	10	0	2	3	5	3	0	0	3	0
Southwestern Baptist Theological Seminary	22	1	0	0	0	0	1	21	0	0	0	21	0	0	0	0	0
St. Mary's U., San Antonio	9	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Stephen F. Austin State U.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas A&M U., College Station and Health Science Center	730	66	19	28	1	18	0	25	2	8	6	9	32	11	11	10	0
Texas A&M U.-Commerce	19	2	1	1	0	0	0	5	0	0	4	1	0	0	0	0	0
Texas A&M U.-Corpus Christi	20	17	0	16	0	0	1	0	0	0	0	0	0	0	0	0	0
Texas A&M U.-Kingsville	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas Christian U.	32	7	0	5	0	2	0	10	0	4	6	0	0	0	0	0	0
Texas Southern U.	25	11	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas State U.	51	31	5	6	10	5	5	0	0	0	0	0	0	0	0	0	0
Texas Tech U.	304	70	10	47	0	12	1	26	3	5	10	8	31	16	13	2	0
Texas Tech U., Health Sciences Center	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas Woman's U.	97	12	0	4	4	4	0	15	0	0	8	7	1	0	0	1	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
U. Dallas	5	0	0	0	0	0	0	4	0	0	2	2	0	0	0	0	0
U. Houston	325	19	0	17	0	2	0	26	5	4	17	0	20	14	0	6	0
U. North Texas, Denton	193	47	8	31	0	8	0	18	0	6	7	5	13	9	0	4	0
U. North Texas, Health Science Center	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. of St. Thomas, Houston	3	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0
U. of the Incarnate Word	12	8	2	4	0	0	2	0	0	0	0	0	4	4	0	0	0
U. Texas Health Science Center, Houston	129	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
U. Texas Health Science Center, San Antonio	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Texas Medical Branch	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Texas Pan American	22	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	0
U. Texas Southwestern Medical Center	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Texas, Arlington	185	5	4	1	0	0	0	6	0	3	3	0	17	14	0	3	0
U. Texas, Austin	764	71	18	35	0	17	1	91	24	17	23	27	68	24	30	14	0
U. Texas, Dallas	222	0	0	0	0	0	0	19	0	1	3	15	22	17	3	2	0
U. Texas, El Paso	75	7	0	2	0	4	1	12	0	4	8	0	3	3	0	0	0
U. Texas, San Antonio	154	23	2	13	1	5	2	3	0	0	3	0	17	17	0	0	0
West Texas A&M U.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utah	512	47	4	36	0	5	2	16	0	3	10	3	22	11	6	5	0
Brigham Young U., Provo	93	13	2	11	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Utah	332	15	1	11	0	3	0	15	0	3	9	3	22	11	6	5	0
Utah State U., Logan	87	19	1	14	0	2	2	1	0	0	1	0	0	0	0	0	0
Vermont	63	1	0	0	0	1	0	2	2	0	0	0	0	0	0	0	0
Middlebury C.	4	1	0	0	0	1	0	2	2	0	0	0	0	0	0	0	0
U. Vermont	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Virginia	1,518	222	46	135	4	21	16	98	12	23	26	37	82	38	12	32	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts					Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec	Unknown field
C. of William and Mary	76	18	6	11	0	0	1	10	0	6	0	4	0	0	0	0	0
George Mason U.	272	52	0	36	3	12	1	7	0	6	0	1	2	0	2	0	0
Hampton U.	17	10	9	0	1	0	0	0	0	0	0	0	2	2	0	0	0
James Madison U.	13	6	2	4	0	0	0	0	0	0	0	0	4	2	0	2	0
Norfolk State U.	12	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0
Old Dominion U.	136	44	16	20	0	1	7	3	0	0	3	0	13	8	1	4	0
Regent U.	45	12	3	8	0	0	1	6	0	0	0	6	23	12	9	2	0
Union Presbyterian Seminary	3	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0
U. Virginia, Charlottesville	324	17	2	13	0	2	0	63	12	10	20	21	4	0	0	4	0
Virginia Commonwealth U.	194	23	3	17	0	0	3	2	0	0	1	1	10	4	0	6	0
Virginia Polytechnic Institute and State U.	426	40	5	26	0	6	3	4	0	1	2	1	20	10	0	10	0
Washington	964	66	5	41	0	11	9	51	5	9	22	15	53	31	10	12	0
Gonzaga U.	16	0	0	0	0	0	0	1	0	0	0	1	12	10	0	2	0
Seattle Pacific U.	31	13	2	5	0	3	3	0	0	0	0	0	0	0	0	0	0
U. Washington, Seattle	619	39	3	30	0	4	2	42	5	6	17	14	22	9	3	10	0
Washington State U.	298	14	0	6	0	4	4	8	0	3	5	0	19	12	7	0	0
West Virginia	219	36	6	23	0	6	1	18	0	3	1	14	17	14	2	1	0
Marshall U.	19	14	5	9	0	0	0	0	0	0	0	0	3	2	0	1	0
West Virginia U.	200	22	1	14	0	6	1	18	0	3	1	14	14	12	2	0	0
Wisconsin	1,081	101	36	42	2	19	2	122	25	24	36	37	54	11	31	12	0
Cardinal Stritch U.	31	29	23	1	0	3	2	0	0	0	0	0	0	0	0	0	0
Marquette U.	64	2	1	1	0	0	0	20	0	0	3	17	0	0	0	0	0
Medical C. Wisconsin	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Wisconsin-Madison	770	54	6	33	1	14	0	83	25	22	18	18	32	4	22	6	0
U. Wisconsin-Milwaukee	184	16	6	7	1	2	0	19	0	2	15	2	22	7	9	6	0

TABLE 8

Doctorate-granting institutions, by state or location and major non-science and engineering fields of study: 2018

(Number)

State or location and institution	All fields	Education						Humanities and arts				Other ^a				
		Total	Education administration	Education research	Teacher education	Teaching fields	Other education	Total	Foreign languages and literature	History	Letters	Other humanities and arts	Total	Business management and administration	Communication	Non-S&E fields nec
Wyoming	102	16	2	12	0	2	0	0	0	0	0	2	2	0	0	0
U. Wyoming	102	16	2	12	0	2	0	0	0	0	0	2	2	0	0	0

nec = not elsewhere classified; S&E = science and engineering.

^a Includes other non-S&E fields not shown separately.**Note(s)**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 9

Top 20 doctorate-granting institutions ranked by number of minority U.S. citizen and permanent resident doctorate recipients, by ethnicity and race of recipient: 5-year total, 2014–18

(Number)

Institution	Rank	Doctorate recipients
Hispanic or Latino (377 institutions)	-	12,305
From top 20 institutions	-	3,710
U. California, Berkeley	1	278
U. California, Los Angeles	2	269
U. Texas, Austin	3	255
Texas A&M U., College Station and Health Science Center	4	213
U. Florida	5	212
CUNY, Graduate Center	6	189
U. Michigan, Ann Arbor	6	189
U. California, Davis	8	185
U. Arizona	9	184
U. Wisconsin-Madison	10	183
U. California, Irvine	11	175
Walden U.	12	170
U. Texas, El Paso	13	168
U. California, Santa Barbara	14	157
U. California, San Diego	15	156
U. Illinois, Urbana-Champaign	16	147
U. Washington, Seattle	16	147
Florida International U.	18	146
U. Puerto Rico, Rio Piedras	18	146
U. California, Riverside	20	141
Not Hispanic or Latino	-	-
American Indian or Alaska Native (189 institutions)	-	586
From top 24 institutions	-	269
Oklahoma State U., Stillwater	1	27
U. Arizona	2	25
U. Oklahoma, Norman	3	22
Arizona State U.	4	17
Walden U.	5	15
U. New Mexico, Albuquerque	6	13
U. Montana, Missoula	7	12
U. Washington, Seattle	7	12
U. Arkansas, Fayetteville	9	11
U. California, Davis	9	11
U. North Dakota	9	11
U. Minnesota, Twin Cities	12	9
U. Missouri, Columbia	12	9
U. Wisconsin-Madison	12	9
U. Alaska, Fairbanks	15	8
U. California, Berkeley	15	8
Cornell U.	17	7
U. Massachusetts, Amherst	17	7
Colorado State U., Fort Collins	19	6
U. Colorado Boulder	19	6
U. Florida	19	6
U. Illinois, Urbana-Champaign	19	6
U. Michigan, Ann Arbor	19	6
Washington State U.	19	6

TABLE 9

Top 20 doctorate-granting institutions ranked by number of minority U.S. citizen and permanent resident doctorate recipients, by ethnicity and race of recipient: 5-year total, 2014–18

(Number)

Institution	Rank	Doctorate recipients
Asian (385 institutions)	-	15,840
From top 20 institutions	-	5,697
U. California, Berkeley	1	499
U. California, Los Angeles	2	479
Harvard U.	3	386
U. Michigan, Ann Arbor	4	323
U. Washington, Seattle	5	296
U. California, San Diego	6	285
Columbia U. in the City of New York	7	283
U. California, Irvine	8	281
U. Pennsylvania	9	276
U. Illinois, Urbana-Champaign	10	270
Stanford U.	11	262
Massachusetts Institute of Technology	12	260
U. California, Davis	12	260
U. Southern California	14	251
U. Maryland, College Park	15	239
Johns Hopkins U.	16	232
Georgia Institute of Technology	17	220
U. Texas, Austin	18	210
U. Wisconsin-Madison	19	204
Purdue U., West Lafayette	20	181
Black or African American (377 institutions)	-	11,660
From top 20 institutions	-	3,706
Walden U.	1	1,098
Howard U.	2	317
Jackson State U.	3	166
U. Florida	4	157
U. North Carolina, Chapel Hill	5	141
Georgia State U.	6	138
U. Michigan, Ann Arbor	7	137
U. Georgia	8	132
Louisiana State U., Baton Rouge	9	131
Michigan State U.	10	127
George Washington U.	11	125
Texas A&M U., College Station and Health Science Center	12	123
U. Illinois, Urbana-Champaign	13	119
U. Maryland, College Park	14	116
U. Memphis	15	115
U. South Carolina, Columbia	15	115
Morgan State U.	17	114
Auburn U., Auburn	18	113
North Carolina Agricultural and Technical State U.	19	112
Texas Southern U.	20	110
More than one race (342 institutions)	-	4,932
From top 21 institutions	-	1,626
U. California, Berkeley	1	152
Harvard U.	2	117
U. California, Los Angeles	2	117

TABLE 9

Top 20 doctorate-granting institutions ranked by number of minority U.S. citizen and permanent resident doctorate recipients, by ethnicity and race of recipient: 5-year total, 2014–18

(Number)

Institution	Rank	Doctorate recipients
U. Washington, Seattle	4	95
U. California, Davis	5	90
U. Wisconsin-Madison	6	83
U. California, San Diego	7	82
Walden U.	8	79
U. Michigan, Ann Arbor	9	75
Stanford U.	10	74
Massachusetts Institute of Technology	11	72
U. Hawaii, Manoa	12	65
Ohio State U., Columbus	13	64
U. California, Irvine	13	64
U. Texas, Austin	15	63
Yale U.	16	62
Columbia U. in the City of New York	17	55
U. Florida	17	55
CUNY, Graduate Center	19	54
Pennsylvania State U., University Park and Hershey Medical Center	19	54
U. California, Santa Barbara	19	54

Note(s)

Tied institutions are listed alphabetically.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 10

Top 20 doctorate-granting institutions, ranked by number of doctorate recipients holding temporary visas: 2018

(Number)

Institution	Rank	Doctorate recipients
All institutions (431 institutions)	-	17,604
From top 20 institutions	-	5,143
Purdue U., West Lafayette	1	386
Texas A&M U., College Station and Health Science Center	2	340
U. Illinois, Urbana-Champaign	3	336
U. Florida	4	311
Pennsylvania State U., University Park and Hershey Medical Center	5	293
U. Michigan, Ann Arbor	6	284
Ohio State U., Columbus	7	282
Massachusetts Institute of Technology	8	262
Georgia Institute of Technology	9	245
U. Minnesota, Twin Cities	10	243
U. Wisconsin-Madison	11	240
Columbia U. in the City of New York	12	226
Cornell U.	13	225
U. California, Berkeley	13	225
Harvard U.	15	224
U. Texas, Austin	16	213
U. Maryland, College Park	17	208
U. Southern California	18	201
North Carolina State U.	19	200
U. California, Los Angeles	20	199

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 11

Doctorates awarded, by broad field of study and Carnegie category: 2009–18

(Number)

Field and Carnegie category	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All doctorate recipients	49,552	48,028	48,910	50,943	52,703	53,989	54,889	54,798	54,559	55,195
Doctoral: Highest research	37,666	36,679	37,753	39,220	40,484	41,062	41,424	41,227	41,144	41,405
Doctoral: Higher research	7,295	7,124	7,120	7,474	7,820	8,196	8,620	8,656	8,579	8,739
Doctoral: Moderate research	2,165	1,854	1,693	1,793	1,945	2,343	2,227	2,407	2,368	2,449
Other universities	2,426	2,371	2,344	2,456	2,454	2,388	2,618	2,508	2,468	2,602
Life sciences ^a	11,403	11,319	11,535	11,964	12,207	12,484	12,493	12,536	12,555	12,780
Doctoral: Highest research	8,552	8,570	8,633	8,934	9,085	9,064	9,058	9,136	9,255	9,293
Doctoral: Higher research	1,291	1,248	1,267	1,353	1,432	1,579	1,573	1,599	1,467	1,636
Doctoral: Moderate research	238	235	288	283	336	428	429	461	517	460
Other universities	1,322	1,266	1,347	1,394	1,354	1,413	1,433	1,340	1,316	1,391
Physical sciences and earth sciences	5,160	4,995	5,271	5,419	5,584	5,910	5,917	6,251	6,084	6,335
Doctoral: Highest research	4,415	4,248	4,433	4,560	4,699	4,890	4,957	5,226	5,121	5,299
Doctoral: Higher research	651	660	722	746	756	884	855	878	842	904
Doctoral: Moderate research	27	36	46	42	56	74	38	62	53	48
Other universities	67	51	70	71	73	62	67	85	68	84
Mathematics and computer sciences	3,163	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,030
Doctoral: Highest research	2,679	2,665	2,746	2,916	3,012	3,183	3,145	3,211	3,106	3,313
Doctoral: Higher research	418	487	446	495	558	583	566	628	602	593
Doctoral: Moderate research	43	42	57	52	44	60	51	68	74	71
Other universities	23	29	24	33	46	36	56	47	60	53
Psychology and social sciences	7,945	7,882	8,221	8,498	8,580	8,751	9,075	9,035	9,036	8,899
Doctoral: Highest research	5,768	5,711	5,948	6,121	6,167	6,144	6,371	6,345	6,336	6,207
Doctoral: Higher research	1,314	1,286	1,376	1,410	1,415	1,524	1,624	1,538	1,636	1,557
Doctoral: Moderate research	512	490	529	591	624	739	673	744	701	744
Other universities	351	395	368	376	374	344	407	408	363	391
Engineering	7,642	7,578	8,032	8,469	9,000	9,626	9,875	9,458	9,777	10,183
Doctoral: Highest research	6,497	6,394	6,762	7,128	7,476	8,092	8,101	7,779	8,071	8,255
Doctoral: Higher research	922	1,005	1,037	1,098	1,273	1,259	1,470	1,430	1,425	1,601
Doctoral: Moderate research	133	122	140	163	151	189	191	150	151	187
Other universities	90	57	93	80	100	86	113	99	130	140
Education	6,528	5,287	4,670	4,802	4,934	4,789	5,098	5,143	4,826	4,834
Doctoral: Highest research	3,704	2,996	2,999	3,014	3,113	3,001	3,053	3,035	2,856	2,847
Doctoral: Higher research	1,678	1,430	1,189	1,331	1,318	1,259	1,440	1,415	1,438	1,343
Doctoral: Moderate research	926	654	368	332	370	425	454	503	395	490
Other universities	220	207	114	125	133	104	151	190	137	154
Humanities and arts	4,904	5,015	5,225	5,561	5,715	5,524	5,594	5,480	5,286	5,145
Doctoral: Highest research	3,930	4,034	4,194	4,434	4,664	4,476	4,524	4,351	4,202	4,106
Doctoral: Higher research	601	590	658	670	616	634	635	713	652	625
Doctoral: Moderate research	92	105	104	164	133	134	124	154	136	119
Other universities	281	286	269	293	302	280	311	262	296	295
Other ^b	2,807	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,153	2,989
Doctoral: Highest research	2,121	2,061	2,038	2,113	2,268	2,212	2,215	2,144	2,197	2,085
Doctoral: Higher research	420	418	425	371	452	474	457	455	517	480
Doctoral: Moderate research	194	170	161	166	231	294	267	265	341	330
Other universities	72	80	59	84	72	63	80	77	98	94

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 12

Doctorate recipients, by major field of study: Selected years, 1988–2018

(Number and percent)

Field of study	1988		1993		1998		2003		2008		2013		2018	
	Number	Percent												
All fields	33,497	100.0	39,800	100.0	42,636	100.0	40,762	100.0	48,776	100.0	52,703	100.0	55,195	100.0
Life sciences	6,222	18.6	7,463	18.8	8,611	20.2	8,506	20.9	11,086	22.7	12,207	23.2	12,780	23.2
Agricultural sciences and natural resources	1,229	3.7	1,174	2.9	1,266	3.0	1,178	2.9	1,198	2.5	1,324	2.5	1,445	2.6
Biological and biomedical sciences	4,111	12.3	5,092	12.8	5,846	13.7	5,696	14.0	7,797	16.0	8,354	15.9	8,801	15.9
Health sciences	882	2.6	1,197	3.0	1,499	3.5	1,632	4.0	2,091	4.3	2,529	4.8	2,534	4.6
Physical sciences and earth sciences	3,986	11.9	4,402	11.1	4,566	10.7	3,971	9.7	4,946	10.1	5,584	10.6	6,335	11.5
Chemistry	2,014	6.0	2,137	5.4	2,216	5.2	2,041	5.0	2,246	4.6	2,484	4.7	2,810	5.1
Geosciences, atmospheric sciences, and ocean sciences	670	2.0	721	1.8	766	1.8	682	1.7	865	1.8	989	1.9	1,185	2.1
Physics and astronomy	1,302	3.9	1,544	3.9	1,584	3.7	1,248	3.1	1,835	3.8	2,111	4.0	2,340	4.2
Mathematics and computer sciences	1,264	3.8	2,026	5.1	2,104	4.9	1,859	4.6	3,187	6.5	3,660	6.9	4,030	7.3
Computer and information sciences	515	1.5	880	2.2	927	2.2	866	2.1	1,787	3.7	1,843	3.5	2,004	3.6
Mathematics and statistics	749	2.2	1,146	2.9	1,177	2.8	993	2.4	1,400	2.9	1,817	3.4	2,026	3.7
Psychology and social sciences	6,017	18.0	6,860	17.2	7,389	17.3	7,098	17.4	7,635	15.7	8,580	16.3	8,899	16.1
Psychology	3,074	9.2	3,420	8.6	3,673	8.6	3,277	8.0	3,357	6.9	3,592	6.8	3,837	7.0
Anthropology	325	1.0	342	0.9	425	1.0	472	1.2	483	1.0	550	1.0	424	0.8
Economics	852	2.5	930	2.3	1,001	2.3	932	2.3	1,091	2.2	1,183	2.2	1,247	2.3
Political science and government	392	1.2	507	1.3	662	1.6	661	1.6	628	1.3	803	1.5	734	1.3
Sociology	449	1.3	513	1.3	549	1.3	597	1.5	601	1.2	636	1.2	669	1.2
Other social sciences	925	2.8	1,148	2.9	1,079	2.5	1,159	2.8	1,475	3.0	1,816	3.4	1,988	3.6
Engineering	4,186	12.5	5,698	14.3	5,922	13.9	5,279	13.0	7,863	16.1	9,000	17.1	10,183	18.4
Aerospace, aeronautical, and astronautical engineering	150	0.4	228	0.6	241	0.6	200	0.5	266	0.5	348	0.7	383	0.7
Bioengineering and biomedical engineering	114	0.3	171	0.4	208	0.5	281	0.7	762	1.6	1,039	2.0	1,134	2.1
Chemical engineering	623	1.9	624	1.6	670	1.6	568	1.4	873	1.8	824	1.6	981	1.8
Civil engineering	488	1.5	563	1.4	587	1.4	551	1.4	713	1.5	542	1.0	677	1.2
Electrical, electronics, and communications engineering	886	2.6	1,354	3.4	1,345	3.2	1,237	3.0	1,888	3.9	1,897	3.6	1,951	3.5
Industrial and manufacturing engineering	127	0.4	236	0.6	229	0.5	214	0.5	279	0.6	241	0.5	272	0.5
Materials science engineering	252	0.8	416	1.0	482	1.1	437	1.1	636	1.3	815	1.5	995	1.8
Mechanical engineering	610	1.8	902	2.3	936	2.2	752	1.8	1,082	2.2	1,277	2.4	1,504	2.7
Other engineering	936	2.8	1,204	3.0	1,224	2.9	1,039	2.5	1,364	2.8	2,017	3.8	2,286	4.1
Education	6,361	19.0	6,689	16.8	6,569	15.4	6,651	16.3	6,561	13.5	4,934	9.4	4,834	8.8
Education administration	1,749	5.2	2,123	5.3	2,066	4.8	2,362	5.8	2,238	4.6	965	1.8	898	1.6
Education research	2,512	7.5	2,446	6.1	2,584	6.1	2,720	6.7	2,640	5.4	2,703	5.1	2,507	4.5

TABLE 12

Doctorate recipients, by major field of study: Selected years, 1988–2018

(Number and percent)

Field of study	1988		1993		1998		2003		2008		2013		2018	
	Number	Percent												
Teacher education	473	1.4	428	1.1	342	0.8	242	0.6	274	0.6	109	0.2	97	0.2
Teaching fields	988	2.9	943	2.4	954	2.2	714	1.8	912	1.9	892	1.7	963	1.7
Other education	639	1.9	749	1.9	623	1.5	613	1.5	497	1.0	265	0.5	369	0.7
Humanities and arts	3,570	10.7	4,409	11.1	5,352	12.6	5,272	12.9	4,736	9.7	5,715	10.8	5,145	9.3
Foreign languages and literature	430	1.3	575	1.4	643	1.5	623	1.5	627	1.3	701	1.3	617	1.1
History	603	1.8	726	1.8	990	2.3	941	2.3	971	2.0	1,148	2.2	948	1.7
Letters	1,008	3.0	1,328	3.3	1,599	3.8	1,416	3.5	1,420	2.9	1,606	3.0	1,442	2.6
Other humanities and arts	1,529	4.6	1,780	4.5	2,120	5.0	2,292	5.6	1,718	3.5	2,260	4.3	2,138	3.9
Other ^a	1,891	5.6	2,253	5.7	2,123	5.0	2,126	5.2	2,762	5.7	3,023	5.7	2,989	5.4
Business management and administration	1,033	3.1	1,281	3.2	1,175	2.8	1,036	2.5	1,421	2.9	1,551	2.9	1,481	2.7
Communication	247	0.7	321	0.8	373	0.9	415	1.0	557	1.1	645	1.2	631	1.1
Non-S&E fields nec	611	1.8	651	1.6	571	1.3	675	1.7	784	1.6	827	1.6	877	1.6
Unknown field	0	0.0	0	0.0	4	*	0	0.0	0	0.0	0	0.0	0	0.0

* = value between 0.00% and 0.05%.

nec = not elsewhere classified; S&E = science and engineering.

^a Includes other non-S&E fields not shown separately.**Note(s)**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields. Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All fields	49,552	48,028	48,910	50,943	52,703	53,989	54,889	54,798	54,559	55,195
Life sciences	11,403	11,319	11,535	11,964	12,207	12,484	12,493	12,536	12,555	12,780
Agricultural sciences and natural resources	1,283	1,100	1,206	1,255	1,324	1,338	1,434	1,378	1,494	1,445
Agricultural sciences	737	668	669	735	786	793	831	780	906	875
Agricultural economics	116	118	106	88	107	96	101	113	144	108
Agricultural and horticultural plant breeding	24	31	23	31	21	39	43	61	53	67
Agricultural animal breeding	12	7	7	6	8	na	na	na	na	na
Agronomy and crop science	77	69	54	73	86	80	81	82	100	80
Animal nutrition	34	34	48	57	54	50	40	42	27	36
Animal science, poultry or avian	17	12	25	22	23	25	31	21	20	32
Animal sciences, other	74	54	69	75	85	103	90	83	107	121
Food science	110	100	73	108	105	93	125	122	123	112
Food science and technology, other	30	37	39	35	48	39	47	40	49	51
Horticulture science	55	42	48	40	41	51	50	32	42	46
Plant pathology and phytopathology, agricultural	61	56	53	71	74	74	57	73	106	90
Plant sciences, other	60	49	51	77	67	78	95	50	63	66
Soil chemistry, microbiology	18	20	34	15	16	20	17	23	20	16
Soil sciences, other	49	39	39	37	51	45	54	38	52	50
Natural resources and conservation	524	414	514	501	509	501	566	504	536	503
Environmental science	201	155	195	182	204	213	182	193	228	223
Fishing and fisheries sciences and management	67	34	59	51	53	52	60	47	46	51
Forest management, forest resources management	52	41	34	29	44	28	36	35	25	18
Forest sciences and biology	43	23	26	25	19	22	37	15	32	22
Forestry, other	26	17	35	29	26	20	22	29	36	53
Natural resource and environmental policy	na	na	na	na	na	35	56	68	54	51
Natural resources and conservation	84	88	100	99	92	70	87	72	63	47
Natural resources and environmental economics (agricultural sciences)	na	na	na	31	22	28	39	23	21	27
Wildlife, range management	34	48	50	39	41	29	32	14	20	11
Wood science, pulp and paper technology	17	8	15	16	8	4	15	8	11	na
Agricultural sciences and natural resources, general ^a	8	2	9	8	9	25	21	73	38	38
Agricultural sciences and natural resources, other ^b	14	16	14	11	20	19	16	21	14	29
Biological and biomedical sciences	8,025	8,046	8,152	8,322	8,354	8,868	8,783	8,861	8,566	8,801
Anatomy	15	25	25	23	15	15	24	21	8	23
Bacteriology	20	24	22	23	28	25	22	18	12	13
Biochemistry (biological sciences)	858	861	867	847	826	820	749	831	818	811
Bioinformatics	175	123	140	145	166	183	174	193	184	203
Biomedical sciences	300	287	311	366	401	438	416	329	339	421
Biometrics and biostatistics	115	127	137	174	145	165	171	198	216	233
Biophysics (biological sciences)	195	171	192	193	179	186	181	165	181	152
Biotechnology	26	22	33	54	39	45	38	36	37	35
Botany and plant biology	113	110	110	110	91	93	97	111	97	120
Cancer biology	273	300	396	381	379	455	454	436	370	355
Cell, cellular biology, and histology	354	361	379	376	318	335	321	258	230	218
Computational biology	na	69	65	94	115	117	107	134	149	146
Developmental biology and embryology	185	193	205	174	197	198	187	162	133	135
Ecology	456	431	404	415	468	449	453	482	437	418
Endocrinology	33	23	32	26	39	26	22	11	17	21
Entomology	131	122	113	120	118	112	109	127	129	119
Environmental toxicology ^c	na	39	30	45	33	49	34	45	64	56

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Epidemiology ^d	na	na	na	na	na	292	378	343	351	401
Evolutionary biology	215	214	213	203	209	215	210	200	229	242
Genetics, genomics, human and animal	364	383	374	334	396	401	358	338	344	362
Immunology	434	452	449	455	471	456	471	397	402	422
Microbiology	586	490	462	451	455	463	480	465	431	478
Molecular biology	763	697	716	620	646	670	632	549	634	596
Molecular medicine	na	25	66	62						
Neurosciences, neurobiology ^e	983	954	958	1,053	1,016	1,048	1,089	996	984	1,037
Nutrition sciences	174	180	163	183	177	175	184	204	215	201
Parasitology	24	37	26	29	26	26	31	20	16	20
Pathology, human and animal	106	79	83	95	95	99	88	49	68	52
Pharmacology, human and animal	343	290	301	308	286	292	243	207	230	210
Physiology, human and animal	244	258	226	254	210	208	210	165	162	202
Plant genetics	48	52	45	41	37	48	57	67	50	72
Plant pathology and phytopathology (biological sciences)	26	19	18	25	21	29	20	13	11	11
Plant physiology	13	28	15	19	25	17	18	13	17	18
Structural biology	na	53	71	57	67	59	64	47	56	51
Toxicology	120	99	96	101	99	117	104	85	77	95
Virology	na	134	178	162	162	163	164	142	115	116
Wildlife biology	na	na	na	na	na	36	47	47	60	62
Zoology	79	72	65	51	40	32	46	38	40	29
Biological and biomedical sciences, general	173	184	168	223	256	245	258	771	469	468
Biological and biomedical sciences, other	81	83	64	92	103	66	72	123	118	115
Health sciences	2,095	2,173	2,177	2,387	2,529	2,278	2,276	2,297	2,495	2,534
Environmental health	42	66	56	67	70	77	79	76	84	83
Environmental toxicology ^c	37	na								
Epidemiology ^d	273	324	314	365	353	na	na	na	na	na
Gerontology (health sciences)	na	10	15	14	13	14	13	25	19	15
Health and behavior	na	na	na	na	na	88	125	119	84	60
Health services research	na	120	164	138						
Health systems administration	70	75	84	51	89	89	70	41	36	22
Kinesiology, exercise science ^f	211	215	198	228	214	249	264	231	267	268
Medical physics, radiological science	na	61	74	80	93	103	84	94	92	74
Nursing science	511	482	523	552	510	580	536	482	552	585
Oral biology, oral pathology	na	15	22	15	20	15	19	23	33	24
Pharmaceutical sciences ^g	277	274	271	295	332	279	270	274	292	345
Public health	299	295	266	349	431	400	437	379	439	421
Rehabilitation, therapeutic services	80	61	60	80	85	83	86	108	90	125
Speech-language pathology and audiology	121	100	110	119	110	114	117	116	128	112
Veterinary sciences	60	57	60	59	67	42	56	49	50	57
Health sciences, general	35	37	41	37	62	39	36	93	65	72
Health sciences, other	79	101	83	76	80	106	84	67	100	133
Physical sciences and earth sciences	5,160	4,995	5,271	5,419	5,584	5,910	5,917	6,251	6,084	6,335
Chemistry	2,391	2,304	2,432	2,416	2,484	2,673	2,667	2,703	2,701	2,810
Analytical chemistry	364	402	391	370	417	415	388	393	387	401
Chemical biology	na	120	150	160						
Inorganic chemistry	331	294	320	307	297	372	354	343	354	358
Medicinal chemistry ^h	na	na	na	na	na	86	79	72	70	86

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Organic chemistry	684	599	663	667	643	605	625	565	552	574
Physical chemistry	319	360	390	360	355	340	366	379	343	398
Polymer chemistry	119	126	123	125	125	127	135	151	160	132
Theoretical chemistry	86	86	69	78	74	103	111	88	88	106
Chemistry, general	298	269	289	290	364	416	399	411	433	430
Chemistry, other	190	168	187	219	209	209	210	181	164	165
Geosciences, atmospheric sciences, and ocean sciences	877	862	852	941	989	1,098	1,057	1,227	1,169	1,185
Atmospheric science and meteorology	167	170	178	205	205	200	213	245	248	265
Atmospheric chemistry and climatology	30	39	43	50	49	42	36	41	62	50
Atmospheric physics and dynamics	43	45	40	51	43	51	59	58	30	48
Meteorology	14	15	29	18	18	32	30	20	17	19
Atmospheric science and meteorology, general	55	47	47	61	77	55	62	108	105	123
Atmospheric science and meteorology, other	25	24	19	25	18	20	26	18	34	25
Geological sciences	492	463	451	462	489	579	554	618	572	591
Geochemistry	78	74	70	68	73	85	94	81	67	61
Geology	140	128	124	112	126	130	135	127	118	132
Geomorphology, glacial geology	22	28	23	16	32	25	27	24	22	18
Geophysics and seismology	102	94	95	95	113	151	123	138	124	129
Mineralogy and petrology	12	13	19	19	16	15	21	6	9	9
Paleontology	31	31	38	41	31	38	30	30	29	30
Stratigraphy and sedimentation	18	18	16	16	22	15	17	12	12	14
Geological and earth sciences, general	31	36	26	34	33	60	55	155	139	125
Geological and earth sciences, other	58	41	40	61	43	60	52	45	52	73
Ocean and marine sciences	218	229	223	274	295	319	290	364	349	329
Hydrology and water resources	38	47	48	52	51	63	76	130	99	107
Marine biology and biological oceanography	na	na	na	100	111	110	85	90	112	73
Marine sciences	79	79	69	36	26	41	42	54	53	56
Oceanography, chemical and physical	81	87	90	70	92	89	67	79	70	81
Ocean and marine sciences, other	20	16	16	16	15	16	20	11	15	12
Physics and astronomy	1,892	1,829	1,987	2,062	2,111	2,139	2,193	2,321	2,214	2,340
Astronomy and astrophysics	262	266	287	274	301	289	269	315	339	352
Astronomy	97	102	88	88	103	112	86	95	119	138
Astrophysics	165	155	185	175	184	171	174	211	216	204
Astronomy and astrophysics, other	na	9	14	11	14	6	9	9	4	10
Physics	1,630	1,563	1,700	1,788	1,810	1,850	1,924	2,006	1,875	1,988
Acoustics	21	15	20	10	22	20	19	17	16	19
Applied physics	133	143	144	138	180	157	146	229	171	200
Atomic, molecular, chemical physics	104	105	125	116	118	121	125	137	126	121
Biophysics (physics)	104	123	132	130	133	131	127	138	138	146
Condensed matter, low-temperature physics	401	379	383	390	413	389	439	350	354	443
Elementary particle physics	218	196	229	282	272	244	242	231	234	232
Nuclear physics	74	86	81	92	75	103	86	92	109	93
Optics, photonics	164	145	165	165	174	194	216	225	201	176
Plasma, high-temperature physics	58	50	83	66	71	83	88	79	69	60
Polymer physics	25	18	20	19	32	44	26	43	33	29
Physics, general	211	213	189	241	192	230	285	356	330	340
Physics, other	117	90	129	139	128	134	125	109	94	129
Mathematics and computer sciences	3,163	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,030
Computer and information sciences	1,610	1,633	1,667	1,793	1,843	1,988	2,003	2,082	1,998	2,004
Computer science	1,361	1,356	1,393	1,482	1,568	1,664	1,658	1,650	1,592	1,631

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Information science, systems	140	158	165	173	152	152	158	173	160	122
Computer and information sciences, general	na	na	na	na	na	94	117	161	123	141
Computer and information sciences, other	109	119	109	138	123	78	70	98	123	110
Mathematics and statistics	1,553	1,590	1,606	1,703	1,817	1,874	1,815	1,872	1,844	2,026
Algebra	139	150	152	149	151	174	146	83	109	107
Analysis and functional analysis	130	143	145	134	159	137	161	97	85	100
Applied mathematics	382	401	432	462	455	476	435	474	493	457
Computational mathematics	na	92								
Computing theory and practice	16	16	20	14	22	19	24	15	19	8
Geometry, geometric analysis	89	104	120	112	119	120	108	52	63	79
Logic	38	22	17	15	33	26	21	14	15	19
Number theory	64	71	73	63	79	82	89	48	54	62
Operations research (mathematics)	28	27	27	26	15	28	34	45	34	45
Statistics (mathematics)	353	327	332	365	364	407	381	265	368	413
Topology and foundations	73	84	73	74	78	77	86	41	47	58
Mathematics and statistics, general	173	163	143	192	234	235	243	686	493	520
Mathematics and statistics, other	68	82	72	97	108	93	87	52	64	66
Psychology and social sciences	7,945	7,882	8,221	8,498	8,580	8,751	9,075	9,035	9,036	8,899
Psychology	3,472	3,420	3,576	3,599	3,592	3,724	3,775	3,910	3,926	3,837
Behavioral analysis	na	na	na	44	54	51	63	65	53	63
Clinical psychology	1,201	1,151	1,229	1,228	1,140	1,220	1,172	1,207	1,193	1,267
Cognitive neuroscience	na	161	208	199						
Cognitive psychology and psycholinguistics	189	220	204	199	219	201	221	165	127	143
Community psychology	na	34	42	44						
Comparative psychology	9	na								
Counseling	422	408	427	392	425	378	417	310	319	290
Developmental and child psychology	182	191	218	205	227	245	190	236	207	163
Educational psychology (psychology)	73	70	62	67	60	65	60	108	118	116
Experimental psychology	145	142	147	134	141	143	144	144	159	137
Family psychology	34	45	33	41	33	41	55	12	5	2
Health, medical psychology	na	na	na	46	65	80	102	53	65	80
Human development and family studies	146	145	145	136	138	141	134	191	206	141
Industrial and organizational psychology	196	207	200	222	214	203	221	217	196	195
Marriage and family therapy, counseling	na	77	75	69						
Neuropsychology, physiological psychology ¹	87	82	77	101	112	122	130	69	47	40
Personality psychology	19	22	23	20	15	21	21	23	16	13
Psychometrics and quantitative psychology	29	36	35	34	44	33	48	49	51	42
School psychology (psychology)	122	107	110	118	114	110	116	125	146	148
Social psychology	226	210	228	246	211	242	220	219	219	218
Psychology, general	209	185	228	220	229	275	289	295	265	251
Psychology, other	183	199	210	146	151	153	172	150	209	216
Social sciences	4,473	4,462	4,645	4,899	4,988	5,027	5,300	5,125	5,110	5,062
Anthropology	503	507	553	547	550	523	492	460	446	424
Anthropology, cultural	na	na	na	na	na	267	317	290	272	276
Anthropology, general ¹	503	507	553	547	550	184	99	90	89	53
Anthropology, physical and biological	na	na	na	na	na	72	76	80	85	95
Economics	1,118	1,073	1,121	1,243	1,183	1,196	1,255	1,235	1,239	1,247
Econometrics	31	34	28	40	48	46	40	38	26	28
Natural resources and environmental economics (social sciences)	na	na	na	48	49	49	47	59	56	58

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Other economics ^k	1,087	1,039	1,093	1,155	1,086	1,101	1,168	1,138	1,157	1,161
Political science and government	682	728	685	724	803	777	859	745	743	734
Sociology	662	639	657	633	636	679	742	613	683	669
Other social sciences	1,508	1,515	1,629	1,752	1,816	1,852	1,952	2,072	1,999	1,988
American, U.S. studies	116	115	132	121	122	121	130	111	98	68
Applied linguistics	na	81	106	70						
Archaeology (social sciences)	na	119								
Area, ethnic, cultural studies ^l	112	111	110	113	98	90	80	188	175	133
Criminal justice and corrections	75	74	80	80	75	80	111	93	110	87
Criminology	61	52	101	86	76	78	103	104	94	96
Demography and population studies	18	13	30	17	27	32	21	37	22	31
Gender and women's studies	na	na	na	na	na	40	34	72	49	48
Geography	209	225	233	270	251	293	301	246	279	242
Gerontology (social sciences)	na	18	27	31	32	28	24	22	31	23
Health policy analysis	na	na	na	41	69	50	81	61	55	58
History, science and technology and society ^m	na	55								
International relations, international affairs	101	107	113	124	119	105	104	137	154	135
Linguistics	275	240	270	258	285	276	288	236	208	249
Public policy analysis	228	244	223	263	279	277	293	230	239	264
Statistics (social sciences)	17	21	22	19	24	20	22	44	15	21
Urban, city, community and regional planning	92	106	104	121	114	111	128	131	149	102
Urban studies, affairs	33	34	31	34	39	35	31	39	41	35
Social sciences, general	51	48	39	32	55	59	55	99	48	41
Social sciences, other	120	107	114	142	151	157	146	141	126	111
Engineering	7,642	7,578	8,032	8,469	9,000	9,626	9,875	9,458	9,777	10,183
Aerospace, aeronautical, and astronautical engineering	297	252	262	307	348	386	361	370	379	383
Bioengineering and biomedical engineering	834	824	898	943	1,039	1,046	1,125	1,089	1,032	1,134
Chemical engineering	807	822	823	840	824	973	1,002	921	931	981
Civil engineering	707	643	634	495	542	617	632	564	713	677
Electrical, electronics, and communications engineering	1,693	1,778	1,886	1,938	1,897	1,952	1,997	1,822	1,880	1,951
Industrial and manufacturing engineering	251	215	258	226	241	298	243	256	249	272
Materials science engineering	625	670	662	743	815	832	871	984	937	995
Mechanical engineering	1,095	983	1,084	1,220	1,277	1,331	1,466	1,297	1,399	1,504
Other engineering	1,333	1,391	1,525	1,757	2,017	2,191	2,178	2,155	2,257	2,286
Agricultural engineering	64	58	60	68	75	80	67	62	79	84
Ceramic sciences engineering	5	11	7	5	3	na	na	na	na	na
Communications engineering	26	15	16	24	31	29	30	19	16	14
Computer engineering	380	374	372	406	417	465	410	401	423	436
Engineering management, administration	40	38	37	44	59	44	45	29	54	36
Engineering mechanics	63	46	63	48	70	70	66	101	61	71
Engineering physics	31	31	32	17	34	30	36	24	27	38
Engineering science	42	52	51	45	41	60	72	33	65	58
Environmental, environmental health engineering ⁿ	120	112	144	214	269	270	282	216	240	247
Geotechnical and geoenvironmental engineering	na	na	na	49	51	72	68	81	75	65
Metallurgical engineering	26	11	30	16	25	24	34	31	25	26
Mining and mineral engineering	14	7	6	14	29	na	na	na	na	na
Nuclear engineering	73	91	107	101	119	156	130	131	156	178
Ocean engineering	29	23	26	21	30	30	36	26	25	24
Operations research (engineering)	79	85	83	90	119	117	88	130	115	107
Petroleum engineering	54	51	56	67	92	107	104	99	85	134

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Polymer, plastics engineering	60	57	71	67	61	63	80	60	90	54
Robotics	na	31	46	50	59	80	82	120	98	108
Structural engineering	na	66	69	81	81	101	125	117	103	95
Systems engineering	67	68	79	82	114	95	105	113	121	113
Transportation and highway engineering	na	na	na	76	80	101	106	109	85	96
Engineering, general	44	36	36	43	24	40	42	107	60	73
Engineering, other	116	128	134	129	134	157	170	146	254	229
Education	6,528	5,287	4,670	4,802	4,934	4,789	5,098	5,143	4,826	4,834
Education administration	2,146	1,439	924	1,057	965	893	920	823	922	898
Educational administration and supervision	585	320	217	219	187	170	169	148	184	168
Educational and human resource studies, development	na	na	na	78	93	62	68	61	71	47
Educational leadership	1,561	1,029	649	673	601	605	620	555	595	619
Urban education and leadership	na	90	58	87	84	56	63	59	72	64
Education research	2,663	2,443	2,438	2,568	2,703	2,560	2,772	2,383	2,418	2,507
Counseling education, counseling and guidance	233	211	223	223	257	229	292	275	273	281
Curriculum and instruction	782	617	590	583	586	552	585	380	502	533
Educational and instructional media design	150	121	133	30	17	18	30	26	19	15
Educational and instructional technology	na	na	na	163	241	192	201	224	233	200
Educational assessment, testing, measurement	89	65	73	57	63	53	65	66	42	57
Educational policy analysis	na	122	151	157	171	152	168	173	128	142
Educational psychology (education)	326	269	287	302	283	261	286	221	233	210
Educational statistics, research methods	60	68	79	70	84	74	92	76	83	95
Higher education evaluation and research	512	420	384	448	435	446	519	449	438	394
International education	na	65	60	52	65	70	55	56	45	43
Learning sciences	na	73								
School psychology (education)	116	132	128	117	131	145	132	117	120	116
Social and philosophical foundations of education	124	92	100	98	84	92	90	63	66	81
Special education	271	261	230	268	286	276	257	257	236	267
Teacher education	332	245	204	156	109	152	156	180	114	97
Adult and continuing teacher education	138	91	64	49	23	53	39	64	30	42
Elementary teacher education	66	48	45	40	26	36	37	36	30	12
Pre-elementary, early childhood teacher education	80	58	52	29	35	29	47	51	34	29
Secondary teacher education	48	48	43	38	25	34	33	29	20	14
Teaching fields	906	799	805	757	892	915	953	1,165	925	963
Agricultural education	29	34	28	30	27	25	30	36	34	43
Art education	46	35	48	36	30	42	42	37	34	41
Bilingual and multilingual education	na	na	na	35	50	30	27	52	36	30
Business education	13	na								
English as a second or foreign language	na	na	na	na	na	58	94	70	55	58
English education	51	61	64	32	35	31	33	39	36	33
Family, consumer, and human sciences	19	23	24	10	19	20	24	16	9	8
Foreign languages education	57	60	55	60	54	39	31	39	26	27
Health education	53	45	49	35	52	43	53	70	66	62
Literacy and reading education ^o	118	83	80	124	126	127	123	137	139	119
Mathematics education	161	144	142	114	138	142	133	182	150	148
Music education	68	83	86	69	91	104	114	87	75	82
Nursing education	13	30	23	18	33	30	32	73	53	55
Physical education and coaching	34	34	43	38	44	35	36	38	21	20
Science education	119	96	93	110	114	112	122	133	100	140
Social science education	21	21	27	20	22	16	24	28	19	14

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Teacher education and professional development, other	76	50	43	26	57	61	35	128	72	83
Trade and industrial education	28	na								
Other education	481	361	299	264	265	269	297	592	447	369
Workforce education and development	na	na	na	na	na	32	36	36	57	37
Education, general	209	152	122	121	128	135	140	369	216	170
Education, other	272	209	177	143	137	102	121	187	174	162
Humanities and arts	4,904	5,015	5,225	5,561	5,715	5,524	5,594	5,480	5,286	5,145
Foreign languages and literature	598	601	644	684	701	674	656	599	618	617
Arabic language and literature	5	14	8	12	9	14	6	5	8	6
Chinese language and literature	35	41	29	20	37	17	28	17	28	39
French language and literature	114	110	114	122	140	139	137	107	92	100
Germanic language and literature	70	64	71	90	74	84	72	67	72	62
Italian language and literature	39	35	38	50	44	39	40	34	45	31
Japanese language and literature	18	27	16	20	21	23	21	10	15	16
Latin American languages and literature	na	na	na	57	66	83	79	96	30	38
Russian language and literature	18	23	34	24	30	25	21	14	26	12
Slavic (other than Russian)	10	na								
Spanish language and literature	235	231	247	205	216	181	186	127	178	207
Foreign languages and literatures, other	54	56	87	84	64	69	66	122	124	106
History	1,045	1,005	1,065	1,086	1,148	1,186	1,146	1,148	1,058	948
African history	29	30	29	38	32	32	30	26	24	33
American history, United States and Canada	432	391	432	440	444	433	412	391	376	389
Asian history	55	59	68	73	85	78	89	73	59	73
European history	214	193	224	186	186	232	198	207	179	172
History, science and technology and society ^m	56	46	47	49	53	78	72	66	78	na
Latin American history	67	65	52	63	77	73	64	77	63	55
Middle, Near East history	61	65	63	60	71	68	82	63	70	44
History, general	64	78	68	93	105	121	108	155	120	107
History, other	67	78	82	84	95	71	91	90	89	75
Letters	1,413	1,516	1,513	1,638	1,606	1,551	1,583	1,529	1,462	1,442
American literature, United States and Canada	327	361	367	409	397	349	334	342	319	273
Classics	77	86	91	101	101	91	94	109	80	94
Comparative literature	179	197	192	201	218	196	165	172	164	172
Creative writing	76	81	84	93	79	87	97	79	84	86
English language	104	146	179	154	92	147	153	125	132	121
English literature, British and Commonwealth	388	419	354	423	399	396	412	414	381	383
Folklore	10	11	10	6	9	17	6	na	na	na
Rhetoric and composition	na	na	na	154	220	207	238	211	226	241
Speech and rhetorical studies	138	152	165	53	33	29	42	39	45	42
Letters, general	74	22	25	18	26	12	22	23	14	16
Letters, other	40	41	46	26	32	20	20	15	17	14
Other humanities and arts	1,848	1,893	2,003	2,153	2,260	2,113	2,209	2,204	2,148	2,138
African American studies, literature, and history	na	52								
Archaeology (humanities)	58	60	87	79	72	105	121	166	132	54
Art history, criticism, and conservation	226	248	242	227	265	263	272	278	247	220
Bible, biblical studies	74	97	103	95	106	86	87	62	84	113
Dance	na	13	11	17						
Drama, theater arts, performance studies ^p	104	104	106	111	120	104	86	74	87	96
Ethics	na	na	na	29	26	29	30	38	30	37
Film, cinema, media studies ^q	na	na	na	62	67	71	67	73	81	90

TABLE 13

Doctorate recipients, by fine field of study: 2009–18

(Number)

Fine field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Jewish, Judaic studies	na	na	na	17	33	27	27	27	28	23
Music	74	66	81	67	88	64	54	59	67	55
Musicology and ethnomusicology	127	135	137	138	128	140	148	127	158	131
Music performance	85	106	92	113	124	77	110	92	92	88
Music theory and composition	99	91	95	95	102	104	108	92	90	85
Music, other	18	18	22	21	29	20	23	19	16	14
Philosophy	422	431	462	497	494	454	463	454	419	477
Religion, religious studies	326	282	312	290	301	292	314	254	310	258
Theology, religious education	129	160	150	184	173	156	172	212	162	196
Humanities, general	49	28	43	16	31	34	27	106	60	53
Humanities, other	57	67	71	112	101	87	100	58	74	79
Other ^f	2,807	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,153	2,989
Business management and administration	1,405	1,366	1,327	1,404	1,551	1,584	1,582	1,509	1,565	1,481
Accounting	141	148	157	175	168	196	194	178	159	162
Banking/financial services	5	5	1	na						
Business administration and management	173	157	146	221	269	243	231	263	253	260
Business, managerial economics	24	29	26	31	24	22	43	26	15	23
Finance	213	210	200	232	260	265	241	251	201	193
Hospitality, food service and tourism management	na	36	59	57	71	65	46	66	74	56
Human resources development	74	70	70	44	44	68	51	30	29	29
International business, trade, commerce	37	25	28	21	33	30	24	24	21	19
Management information systems, business statistics	136	108	100	103	107	100	102	107	92	110
Marketing management and research	183	157	156	174	191	152	181	140	143	141
Operations research (business)	51	84	70	80	103	91	110	83	68	53
Organizational behavior	167	175	189	163	186	212	189	168	271	214
Business management and administration, general	90	102	67	50	40	68	68	114	140	125
Business management and administration, other	111	60	58	53	55	72	102	59	99	96
Communication	627	638	650	595	645	663	667	672	622	631
Communication research	129	120	125	126	155	149	149	183	120	143
Communication theory	38	34	29	31	30	39	41	63	37	26
Film, radio, TV and digital communication	64	73	77	43	30	35	37	23	34	16
Mass communication, media studies	206	214	212	199	239	251	242	211	230	228
Communication, general	120	119	117	117	107	123	119	143	131	155
Communication, other	70	78	90	79	84	66	79	49	70	63
Non-S&E fields nec	775	725	706	735	827	796	770	760	962	877
Architecture and environmental design	81	81	81	109	101	118	116	99	118	105
Family, consumer sciences and human sciences	59	48	54	50	57	51	47	39	79	64
Law	73	68	57	53	81	76	76	67	85	74
Library science	25	40	35	49	39	39	41	32	46	32
Parks, sports, recreation, leisure and fitness	69	54	63	61	76	67	52	83	46	53
Public administration	129	126	118	132	127	119	121	143	184	139
Social work	333	308	289	280	330	325	307	294	296	358
Other fields nec	6	0	9	1	16	1	10	3	108	52
Unknown field	0	0	0	0	0	0	0	0	4	0

na = not applicable; the field was not on questionnaire's specialties list for that year.

nec = not elsewhere classified; S&E = science and engineering.

^a This field was renamed from "Agriculture, general" in 2014.

^b This field was renamed from "Agricultural sciences, other" in 2014.

^c This field was moved from "Health sciences" to "Biological and biomedical sciences" in 2010.

^d This field was moved from "Health sciences" to "Biological and biomedical sciences" in 2014.

^e This field was renamed from "Neurosciences" in 2012.

^f This field was renamed from "Kinesiology/Exercise science" in 2012.

^g This field was renamed from "Medicinal/Pharmaceutical sciences" in 2014.

^h This field was "Medicinal/pharmaceutical chemistry" through 2006. It was removed from the taxonomy in 2007–13 and was reinstated in 2014 as "Medicinal chemistry."

ⁱ This field was renamed from "Physiological psychology/Psychobiology" in 2012.

^j This field was renamed from "Anthropology" in 2014.

^k This field is collected as "Economics."

^l This field was renamed from "Area/Ethnic/Cultural/Gender studies" and "Gender studies" was moved to a new field "Gender and women's studies" in 2014.

^m This field was moved from "History" to "Other social sciences" in 2018.

ⁿ This field was renamed from "Environmental health engineering" in 2012.

^o This field was renamed from "Reading education" in 2012.

^p This field was renamed from "Drama, theater arts" in 2018.

^q This field was renamed from "Film, cinema, video studies" in 2018.

^r Includes other non-S&E fields not shown separately.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 14

Doctorate recipients, by broad field of study and sex: Selected years, 1988–2018

(Number and percent)

Field of study and sex	1988		1993		1998		2003		2008		2013		2018	
	Number	Percent												
All fields ^a	33,496	100.0	39,505	100.0	42,475	100.0	40,762	100.0	48,765	100.0	52,691	100.0	55,166	100.0
Male	21,677	64.7	24,384	61.7	24,628	58.0	22,256	54.6	26,271	53.9	28,326	53.8	29,798	54.0
Female	11,819	35.3	15,121	38.3	17,847	42.0	18,506	45.4	22,494	46.1	24,365	46.2	25,368	46.0
Life sciences ^b	6,222	100.0	7,416	100.0	8,590	100.0	8,506	100.0	11,082	100.0	12,204	100.0	12,773	100.0
Male	3,935	63.2	4,312	58.1	4,682	54.5	4,398	51.7	5,223	47.1	5,492	45.0	5,659	44.3
Female	2,287	36.8	3,104	41.9	3,908	45.5	4,108	48.3	5,859	52.9	6,712	55.0	7,114	55.7
Physical sciences and earth sciences	3,986	100.0	4,354	100.0	4,544	100.0	3,971	100.0	4,945	100.0	5,581	100.0	6,332	100.0
Male	3,300	82.8	3,432	78.8	3,429	75.5	2,866	72.2	3,505	70.9	3,717	66.6	4,214	66.6
Female	686	17.2	922	21.2	1,115	24.5	1,105	27.8	1,440	29.1	1,864	33.4	2,118	33.4
Mathematics and computer sciences	1,264	100.0	2,004	100.0	2,094	100.0	1,859	100.0	3,186	100.0	3,660	100.0	4,026	100.0
Male	1,087	86.0	1,602	79.9	1,638	78.2	1,419	76.3	2,353	73.9	2,792	76.3	3,043	75.6
Female	177	14.0	402	20.1	456	21.8	440	23.7	833	26.1	868	23.7	983	24.4
Psychology and social sciences	6,016	100.0	6,825	100.0	7,359	100.0	7,098	100.0	7,635	100.0	8,578	100.0	8,897	100.0
Male	3,288	54.7	3,421	50.1	3,350	45.5	3,145	44.3	3,171	41.5	3,501	40.8	3,641	40.9
Female	2,728	45.3	3,404	49.9	4,009	54.5	3,953	55.7	4,464	58.5	5,077	59.2	5,256	59.1
Engineering	4,186	100.0	5,619	100.0	5,884	100.0	5,279	100.0	7,860	100.0	8,998	100.0	10,179	100.0
Male	3,900	93.2	5,097	90.7	5,111	86.9	4,368	82.7	6,167	78.5	6,946	77.2	7,726	75.9
Female	286	6.8	522	9.3	773	13.1	911	17.3	1,693	21.5	2,052	22.8	2,453	24.1
Education	6,361	100.0	6,669	100.0	6,552	100.0	6,651	100.0	6,560	100.0	4,934	100.0	4,833	100.0
Male	2,847	44.8	2,748	41.2	2,421	37.0	2,256	33.9	2,158	32.9	1,570	31.8	1,496	31.0
Female	3,514	55.2	3,921	58.8	4,131	63.0	4,395	66.1	4,402	67.1	3,364	68.2	3,337	69.0
Humanities and arts	3,570	100.0	4,385	100.0	5,343	100.0	5,272	100.0	4,736	100.0	5,714	100.0	5,142	100.0
Male	2,080	58.3	2,398	54.7	2,794	52.3	2,663	50.5	2,308	48.7	2,829	49.5	2,567	49.9
Female	1,490	41.7	1,987	45.3	2,549	47.7	2,609	49.5	2,428	51.3	2,885	50.5	2,575	50.1
Other ^c	1,891	100.0	2,233	100.0	2,109	100.0	2,126	100.0	2,761	100.0	3,022	100.0	2,984	100.0
Male	1,240	65.6	1,374	61.5	1,203	57.0	1,141	53.7	1,386	50.2	1,479	48.9	1,452	48.7
Female	651	34.4	859	38.5	906	43.0	985	46.3	1,375	49.8	1,543	51.1	1,532	51.3

^a Excludes respondents who did not report sex.^b Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^c Includes other non-science and engineering fields not shown separately.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 15

Doctorate recipients, by sex and major field of study: 2009–18

(Number and percent)

Sex and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
All doctorate recipients ^a	49,552	48,028	48,910	50,943	52,703	53,989	54,889	54,798	54,559	55,195	11.4
Life sciences	11,403	11,319	11,535	11,964	12,207	12,484	12,493	12,536	12,555	12,780	12.1
Agricultural sciences and natural resources	1,283	1,100	1,206	1,255	1,324	1,338	1,434	1,378	1,494	1,445	12.6
Biological and biomedical sciences	8,025	8,046	8,152	8,322	8,354	8,868	8,783	8,861	8,566	8,801	9.7
Health sciences	2,095	2,173	2,177	2,387	2,529	2,278	2,276	2,297	2,495	2,534	21.0
Physical sciences and earth sciences	5,160	4,995	5,271	5,419	5,584	5,910	5,917	6,251	6,084	6,335	22.8
Chemistry	2,391	2,304	2,432	2,416	2,484	2,673	2,667	2,703	2,701	2,810	17.5
Geosciences, atmospheric sciences, and ocean sciences	877	862	852	941	989	1,098	1,057	1,227	1,169	1,185	35.1
Physics and astronomy	1,892	1,829	1,987	2,062	2,111	2,139	2,193	2,321	2,214	2,340	23.7
Mathematics and computer sciences	3,163	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,030	27.4
Computer and information sciences	1,610	1,633	1,667	1,793	1,843	1,988	2,003	2,082	1,998	2,004	24.5
Mathematics and statistics	1,553	1,590	1,606	1,703	1,817	1,874	1,815	1,872	1,844	2,026	30.5
Psychology and social sciences	7,945	7,882	8,221	8,498	8,580	8,751	9,075	9,035	9,036	8,899	12.0
Psychology	3,472	3,420	3,576	3,599	3,592	3,724	3,775	3,910	3,926	3,837	10.5
Anthropology	503	507	553	547	550	523	492	460	446	424	-15.7
Economics	1,118	1,073	1,121	1,243	1,183	1,196	1,255	1,235	1,239	1,247	11.5
Political science and government	682	728	685	724	803	777	859	745	743	734	7.6
Sociology	662	639	657	633	636	679	742	613	683	669	1.1
Other social sciences	1,508	1,515	1,629	1,752	1,816	1,852	1,952	2,072	1,999	1,988	31.8
Engineering	7,642	7,578	8,032	8,469	9,000	9,626	9,875	9,458	9,777	10,183	33.3
Aerospace, aeronautical, and astronautical engineering	297	252	262	307	348	386	361	370	379	383	29.0
Bioengineering and biomedical engineering	834	824	898	943	1,039	1,046	1,125	1,089	1,032	1,134	36.0
Chemical engineering	807	822	823	840	824	973	1,002	921	931	981	21.6
Civil engineering	707	643	634	495	542	617	632	564	713	677	-4.2
Electrical, electronics, and communications engineering	1,693	1,778	1,886	1,938	1,897	1,952	1,997	1,822	1,880	1,951	15.2
Industrial and manufacturing engineering	251	215	258	226	241	298	243	256	249	272	8.4
Materials science engineering	625	670	662	743	815	832	871	984	937	995	59.2
Mechanical engineering	1,095	983	1,084	1,220	1,277	1,331	1,466	1,297	1,399	1,504	37.4
Other engineering	1,333	1,391	1,525	1,757	2,017	2,191	2,178	2,155	2,257	2,286	71.5
Education	6,528	5,287	4,670	4,802	4,934	4,789	5,098	5,143	4,826	4,834	-25.9
Education administration	2,146	1,439	924	1,057	965	893	920	823	922	898	-58.2
Education research	2,663	2,443	2,438	2,568	2,703	2,560	2,772	2,383	2,418	2,507	-5.9
Teacher education	332	245	204	156	109	152	156	180	114	97	-70.8
Teaching fields	906	799	805	757	892	915	953	1,165	925	963	6.3
Other education	481	361	299	264	265	269	297	592	447	369	-23.3
Humanities and arts	4,904	5,015	5,225	5,561	5,715	5,524	5,594	5,480	5,286	5,145	4.9
Foreign languages and literature	598	601	644	684	701	674	656	599	618	617	3.2
History	1,045	1,005	1,065	1,086	1,148	1,186	1,146	1,148	1,058	948	-9.3
Letters	1,413	1,516	1,513	1,638	1,606	1,551	1,583	1,529	1,462	1,442	2.1
Other humanities and arts	1,848	1,893	2,003	2,153	2,260	2,113	2,209	2,204	2,148	2,138	15.7
Other ^b	2,807	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,153	2,989	6.5
Business management and administration	1,405	1,366	1,327	1,404	1,551	1,584	1,582	1,509	1,565	1,481	5.4
Communication	627	638	650	595	645	663	667	672	622	631	0.6

TABLE 15

Doctorate recipients, by sex and major field of study: 2009–18

(Number and percent)

Sex and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
Non-S&E fields nec	775	725	706	735	827	796	770	760	962	877	13.2
Unknown field	0	0	0	0	0	0	0	0	4	0	0.0
Male	26,331	25,524	26,188	27,362	28,326	29,009	29,535	29,568	29,085	29,798	13.2
Life sciences	5,183	5,101	5,243	5,335	5,492	5,514	5,564	5,626	5,613	5,659	9.2
Agricultural sciences and natural resources	722	609	652	698	702	691	746	755	756	746	3.3
Biological and biomedical sciences	3,834	3,823	3,878	3,891	3,941	4,088	4,101	4,152	4,056	4,089	6.7
Health sciences	627	669	713	746	849	735	717	719	801	824	31.4
Physical sciences and earth sciences	3,533	3,379	3,629	3,684	3,717	3,968	3,929	4,285	4,069	4,214	19.3
Chemistry	1,490	1,440	1,508	1,521	1,497	1,642	1,593	1,712	1,668	1,743	17.0
Geosciences, atmospheric sciences, and ocean sciences	539	496	522	538	539	622	600	716	644	659	22.3
Physics and astronomy	1,504	1,443	1,599	1,625	1,681	1,704	1,736	1,857	1,757	1,812	20.5
Mathematics and computer sciences	2,327	2,409	2,456	2,638	2,792	2,912	2,877	2,994	2,867	3,043	30.8
Computer and information sciences	1,260	1,286	1,312	1,419	1,502	1,580	1,581	1,662	1,548	1,568	24.4
Mathematics and statistics	1,067	1,123	1,144	1,219	1,290	1,332	1,296	1,332	1,319	1,475	38.2
Psychology and social sciences	3,297	3,357	3,332	3,539	3,501	3,508	3,758	3,740	3,670	3,641	10.4
Psychology	991	1,031	1,003	1,040	997	1,063	1,057	1,133	1,123	1,097	10.7
Anthropology	195	201	223	187	188	195	185	171	155	126	-35.4
Economics	735	703	734	840	767	785	821	819	812	850	15.6
Political science and government	409	434	389	420	469	434	527	462	449	429	4.9
Sociology	263	250	254	230	259	247	284	257	263	250	-4.9
Other social sciences	704	738	729	822	821	784	884	898	868	889	26.3
Engineering	6,006	5,829	6,242	6,565	6,946	7,401	7,578	7,266	7,342	7,726	28.6
Aerospace, aeronautical, and astronautical engineering	255	215	228	268	293	330	308	314	336	337	32.2
Bioengineering and biomedical engineering	525	509	563	608	684	660	698	686	605	688	31.0
Chemical engineering	591	574	566	583	566	682	685	624	659	688	16.4
Civil engineering	559	473	486	388	417	465	457	437	508	507	-9.3
Electrical, electronics, and communications engineering	1,433	1,462	1,579	1,594	1,616	1,614	1,704	1,528	1,525	1,606	12.1
Industrial and manufacturing engineering	186	159	180	164	176	209	154	185	168	204	9.7
Materials science engineering	466	495	496	556	598	617	648	721	688	720	54.5
Mechanical engineering	942	858	934	1,042	1,081	1,126	1,265	1,096	1,160	1,286	36.5
Other engineering	1,049	1,084	1,210	1,362	1,515	1,698	1,659	1,675	1,693	1,690	61.1
Education	2,161	1,661	1,432	1,500	1,570	1,468	1,605	1,545	1,519	1,496	-30.8
Education administration	838	547	349	389	372	371	344	304	344	323	-61.5
Education research	819	706	699	761	826	723	849	718	772	764	-6.7
Teacher education	92	59	38	43	22	35	36	43	21	18	-80.4
Teaching fields	275	233	250	229	275	265	294	313	263	272	-1.1
Other education	137	116	96	78	75	74	82	167	119	119	-13.1
Humanities and arts	2,404	2,462	2,571	2,741	2,829	2,760	2,763	2,639	2,580	2,567	6.8
Foreign languages and literature	224	218	248	238	271	248	238	228	237	247	10.3
History	608	556	586	602	632	664	632	621	594	513	-15.6
Letters	524	625	615	659	665	657	647	600	591	585	11.6
Other humanities and arts	1,048	1,063	1,122	1,242	1,261	1,191	1,246	1,190	1,158	1,222	16.6
Other ^b	1,420	1,326	1,283	1,360	1,479	1,478	1,461	1,473	1,425	1,452	2.3

TABLE 15

Doctorate recipients, by sex and major field of study: 2009–18

(Number and percent)

Sex and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
Business management and administration	872	814	792	837	909	909	934	932	872	869	-0.3
Communication	263	247	233	244	244	277	256	261	197	234	-11.0
Non-S&E fields nec	285	265	258	279	326	292	271	280	353	349	22.5
Unknown field	0	0	0	0	0	0	0	0	3	0	0.0
Female	23,187	22,488	22,700	23,526	24,365	24,815	25,347	25,215	25,452	25,368	9.4
Life sciences	6,210	6,213	6,289	6,614	6,712	6,930	6,928	6,907	6,937	7,114	14.6
Agricultural sciences and natural resources	559	490	554	554	622	646	688	622	736	696	24.5
Biological and biomedical sciences	4,185	4,219	4,272	4,422	4,410	4,747	4,681	4,707	4,508	4,709	12.5
Health sciences	1,466	1,504	1,463	1,638	1,680	1,537	1,559	1,578	1,693	1,709	16.6
Physical sciences and earth sciences	1,618	1,615	1,640	1,730	1,864	1,924	1,987	1,963	2,014	2,118	30.9
Chemistry	895	864	922	894	985	1,021	1,074	991	1,032	1,067	19.2
Geosciences, atmospheric sciences, and ocean sciences	338	366	330	403	449	475	457	510	525	526	55.6
Physics and astronomy	385	385	388	433	430	428	456	462	457	525	36.4
Mathematics and computer sciences	832	814	813	855	868	934	939	959	974	983	18.1
Computer and information sciences	349	347	353	374	341	400	422	420	450	435	24.6
Mathematics and statistics	483	467	460	481	527	534	517	539	524	548	13.5
Psychology and social sciences	4,646	4,524	4,888	4,955	5,077	5,219	5,316	5,294	5,362	5,256	13.1
Psychology	2,481	2,389	2,573	2,558	2,594	2,648	2,718	2,776	2,803	2,740	10.4
Anthropology	308	306	330	360	362	328	307	289	291	298	-3.2
Economics	382	369	387	402	416	404	434	416	425	397	3.9
Political science and government	272	294	296	303	333	342	332	283	294	304	11.8
Sociology	399	389	403	402	377	432	458	356	419	419	5.0
Other social sciences	804	777	899	930	995	1,065	1,067	1,174	1,130	1,098	36.6
Engineering	1,631	1,746	1,782	1,887	2,052	2,184	2,297	2,189	2,429	2,453	50.4
Aerospace, aeronautical, and astronautical engineering	41	37	34	39	55	55	53	56	43	46	12.2
Bioengineering and biomedical engineering	308	315	335	335	355	384	427	403	427	445	44.5
Chemical engineering	216	248	256	256	258	290	317	296	271	293	35.6
Civil engineering	148	169	147	106	125	147	175	127	203	170	14.9
Electrical, electronics, and communications engineering	260	315	301	336	279	325	293	293	355	345	32.7
Industrial and manufacturing engineering	65	55	78	62	65	89	89	71	80	68	4.6
Materials science engineering	159	175	166	184	217	211	223	262	249	275	73.0
Mechanical engineering	152	125	150	177	196	197	201	201	239	216	42.1
Other engineering	282	307	315	392	502	486	519	480	562	595	111.0
Education	4,366	3,624	3,234	3,298	3,364	3,311	3,492	3,598	3,305	3,337	-23.6
Education administration	1,308	892	574	665	593	522	576	519	578	575	-56.0
Education research	1,844	1,736	1,736	1,807	1,877	1,828	1,922	1,665	1,645	1,742	-5.5
Teacher education	240	186	166	113	87	117	120	137	92	79	-67.1
Teaching fields	630	566	555	527	617	649	659	852	662	691	9.7
Other education	344	244	203	186	190	195	215	425	328	250	-27.3
Humanities and arts	2,499	2,552	2,654	2,818	2,885	2,760	2,830	2,840	2,705	2,575	3.0
Foreign languages and literature	374	382	396	446	430	424	418	371	381	370	-1.1
History	437	449	479	484	516	521	514	527	464	435	-0.5
Letters	888	891	898	978	941	894	936	929	871	856	-3.6
Other humanities and arts	800	830	881	910	998	921	962	1,013	989	914	14.3

TABLE 15

Doctorate recipients, by sex and major field of study: 2009–18

(Number and percent)

Sex and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
Other ^b	1,385	1,400	1,400	1,369	1,543	1,553	1,558	1,465	1,726	1,532	10.6
Business management and administration	533	550	535	564	641	669	648	575	692	609	14.3
Communication	364	390	417	350	401	383	411	410	425	396	8.8
Non-S&E fields nec	488	460	448	455	501	501	499	480	609	527	8.0
Unknown field	0	0	0	0	0	0	0	0	0	0	0.0

nec = not elsewhere classified; S&E = science and engineering.

^a Includes respondents who did not report sex.^b Includes other non-S&E fields not shown separately.**Note(s)**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 16

Doctorate recipients, by subfield of study and sex: 2018

(Number and percent)

Subfield of study	Total ^a	Male	Female	% female
All fields	55,195	29,798	25,368	46.0
Life sciences	12,780	5,659	7,114	55.7
Agricultural sciences and natural resources	1,445	746	696	48.2
Agricultural sciences	875	458	416	47.5
Agricultural economics	108	65	43	39.8
Agronomy, horticulture science, plant breeding, plant pathology, plant sciences-other	349	209	140	40.1
Animal nutrition, poultry science	68	36	31	45.6
Animal sciences, other	121	48	73	60.3
Food science, food technology-other	163	67	96	58.9
Soil chemistry and microbiology, soil sciences-other	66	33	33	50.0
Natural resources and conservation	503	255	246	48.9
Environmental science	223	98	125	56.1
Fishing and fisheries sciences and management	51	31	19	37.3
Forest biology, forest management, forestry sciences-other	93	60	32	34.4
Natural resources policy and environmental economics	78	36	42	53.8
Natural resources and conservation, wildlife and range management	58	30	28	48.3
Agricultural sciences, aggregated	67	33	34	50.7
Biological and biomedical sciences	8,801	4,089	4,709	53.5
Anatomy, developmental biology	158	67	91	57.6
Bacteriology, parasitology, and virology	149	65	84	56.4
Biochemistry (biological sciences)	811	398	413	50.9
Bioinformatics	203	133	70	34.5
Biomedical sciences	421	189	232	55.1
Biometrics and biostatistics	233	110	123	52.8
Biophysics (biological sciences)	152	103	49	32.2
Botany, plant pathology, plant physiology	149	78	69	46.3
Cancer biology	355	181	174	49.0
Cell, cellular biology, and histology	218	106	112	51.4
Computational biology	146	102	44	30.1
Ecology	418	209	209	50.0
Endocrinology, human/animal pathology	73	29	44	60.3
Entomology	119	68	51	42.9
Environmental toxicology	56	23	33	58.9
Epidemiology	401	112	289	72.1
Evolutionary biology	242	126	116	47.9
Genetics and genomics, human and animal	362	144	218	60.2
Immunology	422	192	230	54.5
Microbiology	478	215	263	55.0
Molecular biology	596	255	341	57.2
Molecular medicine	62	26	36	58.1
Neurosciences, neurobiology	1,037	469	568	54.8
Nutrition sciences	201	39	162	80.6
Pharmacology, human and animal	210	97	113	53.8
Physiology, human and animal	202	104	98	48.5
Plant genetics	72	36	36	50.0
Structural biology	51	38	13	25.5
Toxicology	95	39	56	58.9
Wildlife biology	62	28	34	54.8
Zoology	29	12	17	58.6
Biological and biomedical sciences, general	468	222	245	52.4

TABLE 16

Doctorate recipients, by subfield of study and sex: 2018

(Number and percent)

Subfield of study	Total ^a	Male	Female	% female
Biotechnology, biology/biomedical sciences-other	150	74	76	50.7
Health sciences	2,534	824	1,709	67.4
Environmental health	83	30	53	63.9
Health and behavior	60	13	47	78.3
Health services/systems administration	160	45	115	71.9
Kinesiology, exercise science	268	161	107	39.9
Medical physics, radiological science	74	54	20	27.0
Nursing science	585	52	533	91.1
Pharmaceutical sciences	345	190	155	44.9
Public health	421	108	313	74.3
Rehabilitation, therapeutic services	125	31	93	74.4
Speech-language pathology and audiology	112	29	83	74.1
Health sciences, aggregated	301	111	190	63.1
Physical sciences and earth sciences	6,335	4,214	2,118	33.4
Chemistry	2,810	1,743	1,067	38.0
Analytical chemistry	401	199	202	50.4
Chemical biology	160	85	75	46.9
Inorganic chemistry	358	220	138	38.5
Medicinal chemistry	86	48	38	44.2
Organic chemistry	574	411	163	28.4
Physical chemistry	398	264	134	33.7
Polymer chemistry	132	79	53	40.2
Theoretical chemistry	106	81	25	23.6
Chemistry, general	430	268	162	37.7
Chemistry, other	165	88	77	46.7
Geosciences, atmospheric sciences, and ocean sciences	1,185	659	526	44.4
Atmospheric science and meteorology	265	167	98	37.0
Atmospheric physics, meteorology	67	45	22	32.8
Atmospheric chemistry, atmospheric sciences-general, atmospheric sciences-other	198	122	76	38.4
Geological sciences	591	342	249	42.1
Geochemistry, mineralogy	70	38	32	45.7
Geology	132	76	56	42.4
Geomorphology, geological sciences-general, geological sciences-other	216	123	93	43.1
Geophysics and seismology	129	83	46	35.7
Paleontology, stratigraphy	44	22	22	50.0
Ocean and marine sciences	329	150	179	54.4
Marine biology and biological oceanography	73	19	54	74.0
Oceanography, chemical and physical	81	42	39	48.1
Ocean/marine sciences, aggregated	175	89	86	49.1
Physics and astronomy	2,340	1,812	525	22.4
Astronomy and astrophysics	352	246	106	30.1
Astronomy	138	86	52	37.7
Astrophysics	204	151	53	26.0
Astronomy and astrophysics, other	10	9	1	10.0
Physics	1,988	1,566	419	21.1
Acoustics, optics/photonics	195	159	36	18.5
Applied physics	200	143	57	28.5
Atomic physics, polymer physics	150	126	24	16.0
Biophysics (physics)	146	100	46	31.5
Condensed matter, low-temperature physics	443	355	88	19.9

TABLE 16

Doctorate recipients, by subfield of study and sex: 2018

(Number and percent)

Subfield of study	Total ^a	Male	Female	% female
Elementary particle physics	232	201	31	13.4
Nuclear physics	93	72	21	22.6
Plasma, high-temperature physics	60	52	8	13.3
Physics, general	340	273	64	18.8
Physics, other	129	85	44	34.1
Mathematics and computer sciences	4,030	3,043	983	24.4
Computer and information sciences	2,004	1,568	435	21.7
Computer science	1,631	1,334	296	18.1
Information science, systems	122	73	49	40.2
Computer and information sciences, general	141	91	50	35.5
Computer and information sciences, other	110	70	40	36.4
Mathematics and statistics	2,026	1,475	548	27.0
Algebra	107	85	22	20.6
Analysis and functional analysis	100	81	19	19.0
Applied mathematics, computing theory	465	339	125	26.9
Computational mathematics	92	63	29	31.5
Geometry, geometric analysis	79	70	9	11.4
Logic, topology/foundations	77	61	16	20.8
Number theory	62	53	9	14.5
Operations research, mathematics/statistics-general, mathematics/statistics-other	631	468	162	25.7
Statistics (mathematics)	413	255	157	38.0
Psychology and social sciences	8,899	3,641	5,256	59.1
Psychology	3,837	1,097	2,740	71.4
Behavioral analysis	63	22	41	65.1
Clinical psychology	1,267	276	991	78.2
Cognitive neuroscience	199	89	110	55.3
Cognitive psychology and psycholinguistics	143	70	73	51.0
Community psychology	44	7	37	84.1
Counseling	290	82	208	71.7
Developmental and child psychology	163	24	139	85.3
Educational psychology (psychology)	116	32	84	72.4
Experimental psychology	137	62	75	54.7
Family psychology, human development and family studies	143	33	110	76.9
Health, medical psychology	80	20	60	75.0
Industrial and organizational psychology	195	69	126	64.6
Marriage and family therapy, counseling	69	19	50	72.5
Neuropsychology, physiological psychology	40	16	24	60.0
School psychology (psychology)	148	23	125	84.5
Social psychology	218	86	132	60.6
Psychology, general	251	73	178	70.9
Psychology, aggregated	271	94	177	65.3
Social sciences	5,062	2,544	2,516	49.7
Anthropology	424	126	298	70.3
Anthropology, cultural	276	92	184	66.7
Anthropology, general	53	18	35	66.0
Anthropology, physical and biological	95	16	79	83.2
Economics	1,247	850	397	31.8
Econometrics, economics	1,189	813	376	31.6
Natural resources and environmental economics (social sciences)	58	37	21	36.2
Political science and government	734	429	304	41.4

TABLE 16

Doctorate recipients, by subfield of study and sex: 2018

(Number and percent)

Subfield of study	Total ^a	Male	Female	% female
Sociology	669	250	419	62.6
Other social sciences	1,988	889	1,098	55.2
American, U.S. studies	68	34	34	50.0
Applied linguistics	70	27	43	61.4
Archaeology (social sciences)	119	47	72	60.5
Area, ethnic, and cultural studies	133	49	83	62.4
Criminal justice and corrections	87	35	52	59.8
Criminology	96	37	59	61.5
Demography, gerontology, statistics, urban affairs, social sciences- general, social sciences-other	262	102	160	61.1
Gender and women's studies	48	5	43	89.6
Geography	242	134	108	44.6
Health policy analysis	58	21	37	63.8
History, science and technology and society	55	25	30	54.5
International relations, international affairs	135	75	60	44.4
Linguistics	249	101	148	59.4
Public policy analysis	264	138	126	47.7
Urban, city, community and regional planning	102	59	43	42.2
Engineering	10,183	7,726	2,453	24.1
Aerospace, aeronautical, and astronautical engineering	383	337	46	12.0
Bioengineering and biomedical engineering	1,134	688	445	39.2
Chemical engineering	981	688	293	29.9
Civil engineering	677	507	170	25.1
Electrical, electronics, and communications engineering	1,951	1,606	345	17.7
Industrial and manufacturing engineering	272	204	68	25.0
Materials science engineering	995	720	275	27.6
Mechanical engineering	1,504	1,286	216	14.4
Other engineering	2,286	1,690	595	26.0
Computer engineering	436	351	85	19.5
Environmental, environmental health engineering	247	117	130	52.6
Nuclear engineering	178	152	26	14.6
Robotics	108	95	13	12.0
Structural engineering	95	80	15	15.8
Systems engineering	113	78	35	31.0
Other engineering, aggregated	1,109	817	291	26.2
Education	4,834	1,496	3,337	69.0
Education administration	898	323	575	64.0
Educational administration and supervision	168	61	107	63.7
Educational and human resource studies, development	47	15	32	68.1
Educational leadership	619	228	391	63.2
Urban education and leadership	64	19	45	70.3
Education research	2,507	764	1,742	69.5
Counseling education, counseling and guidance	281	60	221	78.6
Curriculum and instruction	533	147	386	72.4
Educational assessment, testing, measurement	57	22	35	61.4
Educational policy analysis	142	52	90	63.4
Educational psychology (education)	210	64	146	69.5
Educational statistics, research methods	95	31	64	67.4
Educational/instructional technology, media design	215	78	137	63.7
Higher education evaluation and research	394	156	238	60.4
International education	43	11	32	74.4

TABLE 16

Doctorate recipients, by subfield of study and sex: 2018

(Number and percent)

Subfield of study	Total ^a	Male	Female	% female
Learning sciences	73	26	47	64.4
School psychology (education)	116	24	92	79.3
Social and philosophical foundations of education	81	32	48	59.3
Special education	267	61	206	77.2
Teacher education	97	18	79	81.4
Teaching fields	963	272	691	71.8
Health education	62	10	52	83.9
Literacy and reading education	119	12	107	89.9
Mathematics education	148	51	97	65.5
Music education	82	45	37	45.1
Science education	140	43	97	69.3
Teaching fields, aggregated	412	111	301	73.1
Other education	369	119	250	67.8
Workforce education and development	37	18	19	51.4
Education, general	170	57	113	66.5
Education, other	162	44	118	72.8
Humanities and arts	5,145	2,567	2,575	50.0
Foreign languages and literature	617	247	370	60.0
French	100	23	77	77.0
Germanic language and literature	62	29	33	53.2
Spanish language and literature	207	96	111	53.6
Other languages, aggregated	248	99	149	60.1
History	948	513	435	45.9
American history, United States and Canada	389	205	184	47.3
Asian history	73	39	34	46.6
European history	172	96	76	44.2
Latin American history	55	33	22	40.0
Middle, Near East history	44	26	18	40.9
History, general	107	62	45	42.1
History, aggregated	108	52	56	51.9
Letters	1,442	585	856	59.4
American literature, United States and Canada	273	139	134	49.1
Classics	94	48	46	48.9
Comparative literature	172	70	102	59.3
English language	121	47	74	61.2
English literature, British and Commonwealth	383	129	254	66.3
Rhetoric and composition	241	88	152	63.1
Speech and rhetorical studies	42	18	24	57.1
Letters, aggregated	116	46	70	60.3
Other humanities and arts	2,138	1,222	914	42.8
African American studies, literature, and history	52	21	31	59.6
Archaeology (humanities)	54	20	34	63.0
Art history, criticism, and conservation	220	51	169	76.8
Dance, drama	113	37	76	67.3
Film, cinema, video studies	90	52	38	42.2
Music	55	32	23	41.8
Musicology and ethnomusicology	131	65	66	50.4
Music performance	88	52	36	40.9
Music theory and composition	85	68	17	20.0
Philosophy, ethics	514	369	145	28.2

TABLE 16

Doctorate recipients, by subfield of study and sex: 2018

(Number and percent)

Subfield of study	Total ^a	Male	Female	% female
Religion/religious studies, Jewish/Judaic studies	281	176	103	36.7
Theology, religious education	196	141	55	28.1
Other humanities, aggregated	259	138	121	46.7
Other ^b	2,989	1,452	1,532	51.3
Business management and administration	1,481	869	609	41.1
Accounting	162	88	73	45.1
Business administration and management	260	162	97	37.3
Finance	193	131	61	31.6
Human resources, organizational behavior	243	107	136	56.0
Management information systems, business statistics	110	84	26	23.6
Marketing management and research	141	76	65	46.1
Other aggregated business fields	372	221	151	40.6
Communication	631	234	396	62.8
Communication research	143	56	86	60.1
Mass communication, media studies	228	94	134	58.8
Communication, general	155	40	115	74.2
Communication, aggregated	105	44	61	58.1
Non-S&E fields nec	877	349	527	60.1
Architecture and environmental design	105	58	47	44.8
Family, consumer sciences and human sciences	64	13	51	79.7
Parks, sports, recreation, leisure and fitness	53	31	22	41.5
Public administration	139	59	79	56.8
Social work	358	98	260	72.6
Fields nec, aggregated	158	90	68	43.0
Unknown field	0	0	0	0.0

nec = not elsewhere classified; S&E = science and engineering.

^a Includes respondents who did not report sex.^b Includes other non-S&E fields not shown separately.**Note(s)**

See table A-5 in the technical notes for a listing of aggregated fields and their constituent fine fields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 17

Doctorate recipients, by broad field of study and citizenship status: Selected years, 1993–2018

(Number)

Field of study and citizenship status	1993	1998	2003	2008	2013	2018
All fields	39,800	42,636	40,762	48,776	52,703	55,195
U.S. citizen or permanent resident	28,722	31,204	28,170	30,844	33,964	35,404
Temporary visa holder	9,964	9,461	10,597	15,261	15,674	17,604
Unknown	1,114	1,971	1,995	2,671	3,065	2,187
Life sciences ^a	7,463	8,611	8,506	11,086	12,207	12,780
U.S. citizen or permanent resident	5,305	6,150	5,898	7,279	8,352	9,041
Temporary visa holder	2,007	2,157	2,226	3,252	3,177	3,364
Unknown	151	304	382	555	678	375
Physical sciences and earth sciences	4,402	4,566	3,971	4,946	5,584	6,335
U.S. citizen or permanent resident	2,780	2,978	2,404	2,674	3,247	3,771
Temporary visa holder	1,489	1,395	1,417	2,027	2,032	2,375
Unknown	133	193	150	245	305	189
Mathematics and computer sciences	2,026	2,104	1,859	3,187	3,660	4,030
U.S. citizen or permanent resident	1,100	1,236	964	1,370	1,631	1,739
Temporary visa holder	866	770	819	1,656	1,833	2,130
Unknown	60	98	76	161	196	161
Psychology and social sciences	6,860	7,389	7,098	7,635	8,580	8,899
U.S. citizen or permanent resident	5,484	5,890	5,385	5,588	6,464	6,704
Temporary visa holder	1,171	1,101	1,310	1,618	1,634	1,771
Unknown	205	398	403	429	482	424
Engineering	5,698	5,922	5,279	7,863	9,000	10,183
U.S. citizen or permanent resident	2,700	3,048	2,180	2,958	3,767	4,218
Temporary visa holder	2,791	2,581	2,913	4,492	4,759	5,583
Unknown	207	293	186	413	474	382
Education	6,689	6,569	6,651	6,561	4,934	4,834
U.S. citizen or permanent resident	5,969	5,748	5,650	5,584	4,118	4,033
Temporary visa holder	554	487	588	567	515	613
Unknown	166	334	413	410	301	188
Humanities and arts	4,409	5,352	5,272	4,736	5,715	5,145
U.S. citizen or permanent resident	3,780	4,533	4,333	3,744	4,535	4,150
Temporary visa holder	514	564	703	723	779	738
Unknown	115	255	236	269	401	257
Other ^b	2,253	2,123	2,126	2,762	3,023	2,989
U.S. citizen or permanent resident	1,604	1,621	1,356	1,647	1,850	1,748
Temporary visa holder	572	406	621	926	945	1,030
Unknown	77	96	149	189	228	211

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.

^b Includes other non-science and engineering fields not shown separately.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 18

Doctorate recipients, by citizenship status and major field of study: 2009–18

(Number and percent)

Citizenship status and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
All doctorate recipients ^a	49,552	48,028	48,910	50,943	52,703	53,989	54,889	54,798	54,559	55,195	11.4
Life sciences	11,403	11,319	11,535	11,964	12,207	12,484	12,493	12,536	12,555	12,780	12.1
Agricultural sciences and natural resources	1,283	1,100	1,206	1,255	1,324	1,338	1,434	1,378	1,494	1,445	12.6
Biological and biomedical sciences	8,025	8,046	8,152	8,322	8,354	8,868	8,783	8,861	8,566	8,801	9.7
Health sciences	2,095	2,173	2,177	2,387	2,529	2,278	2,276	2,297	2,495	2,534	21.0
Physical sciences and earth sciences	5,160	4,995	5,271	5,419	5,584	5,910	5,917	6,251	6,084	6,335	22.8
Chemistry	2,391	2,304	2,432	2,416	2,484	2,673	2,667	2,703	2,701	2,810	17.5
Geosciences, atmospheric sciences, and ocean sciences	877	862	852	941	989	1,098	1,057	1,227	1,169	1,185	35.1
Physics and astronomy	1,892	1,829	1,987	2,062	2,111	2,139	2,193	2,321	2,214	2,340	23.7
Mathematics and computer sciences	3,163	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,030	27.4
Computer and information sciences	1,610	1,633	1,667	1,793	1,843	1,988	2,003	2,082	1,998	2,004	24.5
Mathematics and statistics	1,553	1,590	1,606	1,703	1,817	1,874	1,815	1,872	1,844	2,026	30.5
Psychology and social sciences	7,945	7,882	8,221	8,498	8,580	8,751	9,075	9,035	9,036	8,899	12.0
Psychology	3,472	3,420	3,576	3,599	3,592	3,724	3,775	3,910	3,926	3,837	10.5
Anthropology	503	507	553	547	550	523	492	460	446	424	-15.7
Economics	1,118	1,073	1,121	1,243	1,183	1,196	1,255	1,235	1,239	1,247	11.5
Political science and government	682	728	685	724	803	777	859	745	743	734	7.6
Sociology	662	639	657	633	636	679	742	613	683	669	1.1
Other social sciences	1,508	1,515	1,629	1,752	1,816	1,852	1,952	2,072	1,999	1,988	31.8
Engineering	7,642	7,578	8,032	8,469	9,000	9,626	9,875	9,458	9,777	10,183	33.3
Aerospace, aeronautical, and astronautical engineering	297	252	262	307	348	386	361	370	379	383	29.0
Bioengineering and biomedical engineering	834	824	898	943	1,039	1,046	1,125	1,089	1,032	1,134	36.0
Chemical engineering	807	822	823	840	824	973	1,002	921	931	981	21.6
Civil engineering	707	643	634	495	542	617	632	564	713	677	-4.2
Electrical, electronics, and communications engineering	1,693	1,778	1,886	1,938	1,897	1,952	1,997	1,822	1,880	1,951	15.2
Industrial and manufacturing engineering	251	215	258	226	241	298	243	256	249	272	8.4
Materials science engineering	625	670	662	743	815	832	871	984	937	995	59.2
Mechanical engineering	1,095	983	1,084	1,220	1,277	1,331	1,466	1,297	1,399	1,504	37.4
Other engineering	1,333	1,391	1,525	1,757	2,017	2,191	2,178	2,155	2,257	2,286	71.5
Education	6,528	5,287	4,670	4,802	4,934	4,789	5,098	5,143	4,826	4,834	-25.9
Education administration	2,146	1,439	924	1,057	965	893	920	823	922	898	-58.2
Education research	2,663	2,443	2,438	2,568	2,703	2,560	2,772	2,383	2,418	2,507	-5.9
Teacher education	332	245	204	156	109	152	156	180	114	97	-70.8
Teaching fields	906	799	805	757	892	915	953	1,165	925	963	6.3
Other education	481	361	299	264	265	269	297	592	447	369	-23.3
Humanities and arts	4,904	5,015	5,225	5,561	5,715	5,524	5,594	5,480	5,286	5,145	4.9
Foreign languages and literature	598	601	644	684	701	674	656	599	618	617	3.2
History	1,045	1,005	1,065	1,086	1,148	1,186	1,146	1,148	1,058	948	-9.3
Letters	1,413	1,516	1,513	1,638	1,606	1,551	1,583	1,529	1,462	1,442	2.1
Other humanities and arts	1,848	1,893	2,003	2,153	2,260	2,113	2,209	2,204	2,148	2,138	15.7
Other ^b	2,807	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,153	2,989	6.5
Business management and administration	1,405	1,366	1,327	1,404	1,551	1,584	1,582	1,509	1,565	1,481	5.4
Communication	627	638	650	595	645	663	667	672	622	631	0.6

TABLE 18

Doctorate recipients, by citizenship status and major field of study: 2009–18

(Number and percent)

Citizenship status and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
Non-S&E fields nec	775	725	706	735	827	796	770	760	962	877	13.2
Unknown field	0	0	0	0	0	0	0	0	4	0	0.0
U.S. citizen or permanent resident	32,327	31,602	31,725	32,981	33,964	34,004	35,071	35,671	35,738	35,404	9.5
Life sciences	7,803	7,812	7,892	8,184	8,352	8,390	8,470	8,682	8,826	9,041	15.9
Agricultural sciences and natural resources	712	618	697	675	737	754	774	771	822	793	11.4
Biological and biomedical sciences	5,528	5,585	5,614	5,790	5,768	5,993	6,029	6,214	6,147	6,406	15.9
Health sciences	1,563	1,609	1,581	1,719	1,847	1,643	1,667	1,697	1,857	1,842	17.9
Physical sciences and earth sciences	2,914	2,860	3,048	3,148	3,247	3,300	3,481	3,669	3,715	3,771	29.4
Chemistry	1,391	1,323	1,407	1,385	1,443	1,447	1,572	1,581	1,697	1,711	23.0
Geosciences, atmospheric sciences, and ocean sciences	559	573	555	623	654	722	704	803	790	760	36.0
Physics and astronomy	964	964	1,086	1,140	1,150	1,131	1,205	1,285	1,228	1,300	34.9
Mathematics and computer sciences	1,506	1,599	1,603	1,627	1,631	1,738	1,663	1,729	1,748	1,739	15.5
Computer and information sciences	734	761	790	785	758	807	774	783	801	743	1.2
Mathematics and statistics	772	838	813	842	873	931	889	946	947	996	29.0
Psychology and social sciences	5,714	5,803	6,070	6,319	6,464	6,390	6,685	6,797	6,846	6,704	17.3
Psychology	2,908	2,874	3,062	3,046	3,067	3,042	3,102	3,341	3,377	3,321	14.2
Anthropology	403	384	455	445	457	405	397	360	349	335	-16.9
Economics	418	459	428	517	505	469	552	521	547	484	15.8
Political science and government	483	522	488	536	593	574	621	579	572	543	12.4
Sociology	506	519	511	512	516	545	596	506	562	556	9.9
Other social sciences	996	1,045	1,126	1,263	1,326	1,355	1,417	1,490	1,439	1,465	47.1
Engineering	3,166	3,332	3,350	3,579	3,767	4,066	4,219	4,180	4,311	4,218	33.2
Aerospace, aeronautical, and astronautical engineering	160	141	145	181	194	246	216	233	241	221	38.1
Bioengineering and biomedical engineering	513	516	564	602	637	674	723	746	695	744	45.0
Chemical engineering	411	433	393	377	365	445	488	470	469	469	14.1
Civil engineering	262	231	216	159	182	229	231	219	231	200	-23.7
Electrical, electronics, and communications engineering	578	627	617	614	603	575	632	547	581	544	-5.9
Industrial and manufacturing engineering	70	62	100	75	77	91	65	82	85	62	-11.4
Materials science engineering	254	313	278	350	349	363	381	456	470	463	82.3
Mechanical engineering	421	403	440	505	547	558	620	585	591	608	44.4
Other engineering	497	606	597	716	813	885	863	842	948	907	82.5
Education	5,584	4,476	3,878	4,040	4,118	3,934	4,196	4,301	4,052	4,033	-27.8
Education administration	1,979	1,296	833	936	844	763	797	727	792	784	-60.4
Education research	2,230	2,059	1,989	2,143	2,216	2,104	2,273	1,980	2,029	2,060	-7.6
Teacher education	260	203	156	134	90	132	134	158	97	88	-66.2
Teaching fields	743	646	679	613	741	732	762	949	763	788	6.1
Other education	372	272	221	214	227	203	230	487	371	313	-15.9
Humanities and arts	3,893	4,029	4,191	4,434	4,535	4,361	4,478	4,448	4,297	4,150	6.6
Foreign languages and literature	385	389	426	472	467	469	463	399	430	406	5.5
History	880	843	893	889	947	968	944	950	890	800	-9.1
Letters	1,169	1,287	1,289	1,383	1,354	1,304	1,353	1,312	1,277	1,235	5.6
Other humanities and arts	1,459	1,510	1,583	1,690	1,767	1,620	1,718	1,787	1,700	1,709	17.1
Other ^b	1,747	1,691	1,693	1,650	1,850	1,825	1,879	1,865	1,943	1,748	0.1

TABLE 18

Doctorate recipients, by citizenship status and major field of study: 2009–18

(Number and percent)

Citizenship status and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
Business management and administration	780	746	755	736	831	849	892	845	858	744	-4.6
Communication	443	468	473	426	471	473	479	472	458	435	-1.8
Non-S&E fields nec	524	477	465	488	548	503	508	548	626	569	8.6
Unknown field	0	0	0	0	0	0	0	0	1	0	0.0
Temporary visa holder	14,736	13,636	14,235	14,784	15,674	15,839	16,129	16,474	16,290	17,604	19.5
Life sciences	3,097	2,926	3,029	3,197	3,177	3,169	3,264	3,350	3,332	3,364	8.6
Agricultural sciences and natural resources	509	412	472	529	516	504	555	560	608	609	19.6
Biological and biomedical sciences	2,190	2,084	2,124	2,166	2,154	2,229	2,266	2,303	2,180	2,160	-1.4
Health sciences	398	430	433	502	507	436	443	487	544	595	49.5
Physical sciences and earth sciences	2,028	1,884	1,955	1,959	2,032	2,196	2,099	2,313	2,161	2,375	17.1
Chemistry	889	847	907	880	888	1,000	929	1,000	920	1,022	15.0
Geosciences, atmospheric sciences, and ocean sciences	295	251	246	281	290	326	307	390	332	392	32.9
Physics and astronomy	844	786	802	798	854	870	863	923	909	961	13.9
Mathematics and computer sciences	1,504	1,446	1,449	1,617	1,833	1,850	1,917	2,053	1,926	2,130	41.6
Computer and information sciences	791	760	759	870	990	1,029	1,094	1,201	1,105	1,166	47.4
Mathematics and statistics	713	686	690	747	843	821	823	852	821	964	35.2
Psychology and social sciences	1,720	1,553	1,588	1,601	1,634	1,549	1,622	1,753	1,667	1,771	3.0
Psychology	258	270	238	254	282	249	260	305	286	285	10.5
Anthropology	81	88	73	74	76	86	68	76	65	70	-13.6
Economics	656	556	623	656	615	627	606	656	641	707	7.8
Political science and government	178	162	150	150	163	145	178	128	140	159	-10.7
Sociology	139	95	113	85	92	90	101	89	93	89	-36.0
Other social sciences	408	382	391	382	406	352	409	499	442	461	13.0
Engineering	4,221	3,866	4,164	4,355	4,759	4,961	5,108	4,842	5,038	5,583	32.3
Aerospace, aeronautical, and astronautical engineering	126	99	100	107	138	124	132	121	123	146	15.9
Bioengineering and biomedical engineering	280	290	291	292	352	318	348	301	300	362	29.3
Chemical engineering	383	359	379	414	409	482	461	401	426	478	24.8
Civil engineering	419	378	373	303	333	339	359	307	427	443	5.7
Electrical, electronics, and communications engineering	1,050	1,040	1,109	1,181	1,160	1,217	1,237	1,160	1,216	1,319	25.6
Industrial and manufacturing engineering	175	142	152	140	156	185	161	164	157	196	12.0
Materials science engineering	352	326	350	334	435	419	448	494	428	502	42.6
Mechanical engineering	646	519	568	631	664	686	783	652	742	831	28.6
Other engineering	790	713	842	953	1,112	1,191	1,179	1,242	1,219	1,306	65.3
Education	567	478	497	460	515	478	539	561	534	613	8.1
Education administration	47	35	41	46	44	39	35	32	51	53	12.8
Education research	315	277	294	278	319	265	327	279	308	367	16.5
Teacher education	32	19	26	13	17	14	13	13	12	8	-75.0
Teaching fields	119	112	96	101	116	134	145	181	132	155	30.3
Other education	54	35	40	22	19	26	19	56	31	30	-44.4
Humanities and arts	729	667	767	761	779	731	713	712	692	738	1.2
Foreign languages and literature	183	179	180	160	179	142	151	164	159	180	-1.6
History	131	113	131	136	134	147	131	142	125	112	-14.5
Letters	158	134	157	141	150	140	122	126	122	139	-12.0
Other humanities and arts	257	241	299	324	316	302	309	280	286	307	19.5

TABLE 18

Doctorate recipients, by citizenship status and major field of study: 2009–18

(Number and percent)

Citizenship status and major field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% change 2009–18
Other ^b	870	816	786	834	945	905	867	890	940	1,030	18.4
Business management and administration	530	499	477	542	600	589	546	553	588	644	21.5
Communication	145	131	132	107	133	137	137	160	122	165	13.8
Non-S&E fields nec	195	186	177	185	212	179	184	177	230	221	13.3
Unknown field	0	0	0	0	0	0	0	0	0	0	0.0

nec = not elsewhere classified; S&E = science and engineering.

^a Includes respondents who did not report citizenship status.^b Includes other non-S&E fields not shown separately.**Note(s)**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 19

Doctorate recipients, by ethnicity, race, and citizenship status: 2009–18

(Number)

Ethnicity, race, and citizenship status	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All doctorate recipients	49,552	48,028	48,910	50,943	52,703	53,989	54,889	54,798	54,559	55,195
U.S. citizen or permanent resident	32,327	31,602	31,725	32,981	33,964	34,004	35,071	35,671	35,738	35,404
Temporary visa holder	14,736	13,636	14,235	14,784	15,674	15,839	16,129	16,474	16,290	17,604
Unknown citizenship	2,489	2,790	2,950	3,178	3,065	4,146	3,689	2,653	2,531	2,187
Hispanic or Latino	2,815	2,702	2,915	3,064	3,073	3,147	3,421	3,572	3,566	3,603
U.S. citizen or permanent resident	1,880	1,842	1,989	2,144	2,135	2,190	2,448	2,548	2,537	2,582
Temporary visa holder	924	849	922	916	921	944	964	1,016	996	1,017
Unknown citizenship	11	11	4	4	17	13	9	8	33	4
Not Hispanic or Latino										
American Indian or Alaska Native	138	129	135	107	126	109	141	136	111	116
U.S. citizen or permanent resident	132	117	127	104	119	103	131	128	109	115
Temporary visa holder ^a	6	12	8	D	7	6	10	8	D	D
Unknown citizenship	0	0	0	D	0	0	0	0	D	D
Asian	12,131	11,583	12,311	12,850	13,430	13,556	13,834	14,048	14,262	14,815
U.S. citizen or permanent resident	2,612	2,738	2,832	2,943	2,892	2,881	3,073	3,082	3,499	3,305
Temporary visa holder	9,504	8,822	9,451	9,889	10,514	10,662	10,741	10,929	10,733	11,475
Unknown citizenship	15	23	28	18	24	13	20	37	30	35
Black or African American	2,617	2,380	2,313	2,528	2,655	2,654	2,773	2,866	2,951	3,058
U.S. citizen or permanent resident	2,168	1,939	1,899	2,055	2,172	2,172	2,275	2,358	2,399	2,456
Temporary visa holder	434	426	404	469	479	477	493	502	530	596
Unknown citizenship	15	15	10	4	4	5	5	6	22	6
White	26,630	25,964	26,173	26,982	27,871	27,948	28,620	28,760	28,349	28,585
U.S. citizen or permanent resident	23,616	23,100	23,278	24,010	24,749	24,830	25,375	25,497	24,846	24,951
Temporary visa holder	2,970	2,810	2,841	2,931	3,070	3,086	3,180	3,223	3,428	3,600
Unknown citizenship	44	54	54	41	52	32	65	40	75	34
More than one race	695	711	780	868	929	939	971	1,116	1,110	1,213
U.S. citizen or permanent resident	646	654	722	807	858	879	903	1,033	1,015	1,102
Temporary visa holder	49	54	58	61	71	60	67	83	D	D
Unknown citizenship	0	3	0	0	0	0	1	0	D	D
Other race or race not reported	554	441	464	462	447	411	458	470	788	862
U.S. citizen or permanent resident	338	272	248	293	279	272	249	272	471	371
Temporary visa holder	211	160	212	D	147	125	171	174	279	477
Unknown citizenship	5	9	4	D	21	14	38	24	38	14
Ethnicity not reported	3,972	4,118	3,819	4,082	4,172	5,225	4,671	3,830	3,422	2,943
U.S. citizen or permanent resident	935	940	630	625	760	677	617	753	862	522
Temporary visa holder	638	503	339	355	465	479	503	539	229	327
Unknown citizenship	2,399	2,675	2,850	3,102	2,947	4,069	3,551	2,538	2,331	2,094

D = suppressed to avoid disclosure of confidential information.

^a In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 20

Male doctorate recipients, by ethnicity, race, and citizenship status: 2009–18

(Number)

Ethnicity, race, and citizenship status	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All doctorate recipients	26,331	25,524	26,188	27,362	28,326	29,009	29,535	29,568	29,085	29,798
U.S. citizen or permanent resident	15,508	15,275	15,396	16,072	16,550	16,660	17,219	17,528	17,554	17,335
Temporary visa holder	9,564	8,768	9,179	9,556	10,103	10,204	10,395	10,670	10,602	11,322
Unknown citizenship	1,259	1,481	1,613	1,734	1,673	2,145	1,921	1,370	929	1,141
Hispanic or Latino	1,450	1,383	1,494	1,549	1,523	1,588	1,758	1,766	1,805	1,872
U.S. citizen or permanent resident	853	815	893	948	905	999	1,119	1,134	1,153	1,202
Temporary visa holder	595	563	598	599	612	580	634	630	633	667
Unknown citizenship	2	5	3	2	6	9	5	2	19	3
Not Hispanic or Latino										
American Indian or Alaska Native	60	64	56	42	62	54	64	63	49	44
U.S. citizen or permanent resident	56	58	50	41	56	49	58	57	48	43
Temporary visa holder ^a	D	6	D	D	D	D	D	6	D	D
Unknown citizenship	D	0	D	D	D	D	D	0	D	D
Asian	7,385	6,919	7,407	7,730	8,038	8,091	8,236	8,537	8,666	8,908
U.S. citizen or permanent resident	1,163	1,220	1,263	1,312	1,264	1,243	1,360	1,432	1,651	1,563
Temporary visa holder	6,216	5,687	6,131	6,405	6,761	6,842	6,867	7,080	6,999	7,320
Unknown citizenship	6	12	13	13	13	6	9	25	16	25
Black or African American	1,065	977	917	1,047	1,101	1,151	1,113	1,205	1,202	1,328
U.S. citizen or permanent resident	790	697	666	741	801	821	807	863	847	926
Temporary visa holder	272	274	248	303	297	329	306	341	347	399
Unknown citizenship	3	6	3	3	3	1	0	1	8	3
White	13,571	13,439	13,601	14,041	14,608	14,624	15,101	15,153	14,946	14,997
U.S. citizen or permanent resident	11,661	11,604	11,737	12,168	12,582	12,590	12,978	13,031	12,663	12,618
Temporary visa holder	1,898	1,809	1,838	1,859	2,005	2,021	2,101	2,103	2,246	2,365
Unknown citizenship	12	26	26	14	21	13	22	19	37	14
More than one race	325	293	381	384	432	451	436	511	517	557
U.S. citizen or permanent resident	300	263	346	347	388	411	394	455	462	486
Temporary visa holder	25	28	35	37	44	40	42	56	D	D
Unknown citizenship	0	2	0	0	0	0	0	0	D	D
Other race or race not reported	316	236	273	260	243	249	291	278	468	529
U.S. citizen or permanent resident	178	139	136	148	148	162	152	149	270	215
Temporary visa holder	D	94	D	D	D	D	D	118	191	306
Unknown citizenship	D	3	D	D	D	D	D	11	7	8
Ethnicity not reported	2,159	2,213	2,059	2,309	2,319	2,801	2,536	2,055	1,432	1,563
U.S. citizen or permanent resident	507	479	305	367	406	385	351	407	460	282
Temporary visa holder	417	307	189	243	290	305	320	336	130	193
Unknown citizenship	1,235	1,427	1,565	1,699	1,623	2,111	1,865	1,312	842	1,088

D = suppressed to avoid disclosure of confidential information.

^a In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 21

Female doctorate recipients, by ethnicity, race, and citizenship status: 2009–18

(Number)

Ethnicity, race, and citizenship status	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All doctorate recipients	23,187	22,488	22,700	23,526	24,365	24,815	25,347	25,215	25,452	25,368
U.S. citizen or permanent resident	16,818	16,327	16,329	16,909	17,414	17,344	17,852	18,142	18,183	18,068
Temporary visa holder	5,167	4,868	5,056	5,224	5,571	5,633	5,734	5,803	5,687	6,282
Unknown citizenship	1,202	1,293	1,315	1,393	1,380	1,838	1,761	1,270	1,582	1,018
Hispanic or Latino	1,365	1,319	1,421	1,515	1,550	1,559	1,663	1,806	1,761	1,730
U.S. citizen or permanent resident	1,027	1,027	1,096	1,196	1,230	1,191	1,329	1,414	1,384	1,379
Temporary visa holder	329	286	324	317	309	364	330	386	363	350
Unknown citizenship	9	6	1	2	11	4	4	6	14	1
Not Hispanic or Latino										
American Indian or Alaska Native	78	65	79	65	64	55	77	73	62	72
U.S. citizen or permanent resident	76	59	77	63	63	54	73	71	61	72
Temporary visa holder ^a	D	6	D	D	D	D	D	D	D	0
Unknown citizenship	D	0	D	D	D	D	D	D	D	0
Asian	4,741	4,662	4,904	5,117	5,392	5,465	5,598	5,510	5,594	5,907
U.S. citizen or permanent resident	1,449	1,518	1,569	1,631	1,628	1,638	1,713	1,650	1,847	1,742
Temporary visa holder	3,283	3,135	3,320	3,481	3,753	3,820	3,874	3,848	3,733	4,155
Unknown citizenship	9	9	15	5	11	7	11	12	14	10
Black or African American	1,552	1,403	1,396	1,481	1,554	1,503	1,660	1,661	1,749	1,730
U.S. citizen or permanent resident	1,378	1,242	1,233	1,314	1,371	1,351	1,468	1,495	1,552	1,530
Temporary visa holder	162	152	156	166	182	148	187	161	183	197
Unknown citizenship	12	9	7	1	1	4	5	5	14	3
White	13,058	12,525	12,572	12,941	13,263	13,324	13,519	13,607	13,403	13,588
U.S. citizen or permanent resident	11,954	11,496	11,541	11,842	12,167	12,240	12,397	12,466	12,183	12,333
Temporary visa holder	1,072	1,001	1,003	1,072	1,065	1,065	1,079	1,120	1,182	1,235
Unknown citizenship	32	28	28	27	31	19	43	21	38	20
More than one race	370	418	399	484	497	488	535	605	593	656
U.S. citizen or permanent resident	346	391	376	460	470	468	509	578	553	616
Temporary visa holder	24	26	23	24	27	20	25	27	D	40
Unknown citizenship	0	1	0	0	0	0	1	0	D	0
Other race or race not reported	238	205	191	202	204	162	167	192	320	333
U.S. citizen or permanent resident	160	133	112	145	131	110	97	123	201	156
Temporary visa holder	D	66	D	D	D	D	D	D	88	171
Unknown citizenship	D	6	D	D	D	D	D	D	31	6
Ethnicity not reported	1,785	1,891	1,738	1,721	1,841	2,259	2,128	1,761	1,970	1,352
U.S. citizen or permanent resident	428	461	325	258	354	292	266	345	402	240
Temporary visa holder	221	196	150	111	175	172	183	203	99	134
Unknown citizenship	1,136	1,234	1,263	1,352	1,312	1,795	1,679	1,213	1,469	978

D = suppressed to avoid disclosure of confidential information.

^a In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
All fields	55,195	17,604	35,404	2,582	115	3,305	2,456	24,951	1,102	371	522
Life sciences	12,780	3,364	9,041	663	21	997	587	6,277	285	104	107
Agricultural sciences and natural resources	1,445	609	793	50	1	44	45	608	24	7	14
Agricultural sciences	875	444	415	27	0	26	17	322	15	4	4
Agricultural economics	108	74	33	0	0	2	4	25	2	0	0
Agronomy, horticulture science, plant breeding, plant pathology, plant sciences-other	349	173	170	12	0	8	4	135	8	1	2
Animal nutrition, poultry science	68	29	36	3	0	1	0	29	1	2	0
Animal sciences, other	121	44	75	3	0	4	1	63	1	1	2
Food science, food technology-other	163	94	67	6	0	11	7	40	3	0	0
Soil chemistry and microbiology, soil sciences-other	66	30	34	3	0	0	1	30	0	0	0
Natural resources and conservation	503	139	340	22	1	16	25	255	9	3	9
Environmental science	223	57	147	13	1	10	17	92	6	2	6
Fishing and fisheries sciences and management	51	8	43	2	0	1	2	37	1	0	0
Forest biology, forest management, forestry sciences-other	93	34	58	3	0	2	3	47	0	1	2
Natural resources policy and environmental economics	78	27	50	2	0	3	2	42	1	0	0
Natural resources and conservation, wildlife and range management	58	13	42	2	0	0	1	37	1	0	1
Agricultural sciences, aggregated	67	26	38	1	0	2	3	31	0	0	1
Biological and biomedical sciences	8,801	2,160	6,406	499	11	778	306	4,461	210	77	64
Anatomy, developmental biology	158	43	111	12	0	16	4	73	5	0	1

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Bacteriology, parasitology, and virology	149	37	111	6	0	8	6	84	7	0	0
Biochemistry (biological sciences)	811	244	542	39	0	63	22	383	20	5	10
Bioinformatics	203	84	112	3	0	28	6	67	5	1	2
Biomedical sciences	421	118	297	30	0	39	26	183	12	4	3
Biometrics and biostatistics	233	118	113	5	0	33	4	67	1	2	1
Biophysics (biological sciences)	152	43	105	8	0	17	6	67	3	4	0
Botany, plant pathology, plant physiology	149	44	96	10	0	7	0	70	8	1	0
Cancer biology	355	101	246	28	0	41	17	149	7	2	2
Cell, cellular biology, and histology	218	64	145	8	0	18	8	103	3	3	2
Computational biology	146	50	94	5	0	16	2	65	3	3	0
Ecology	418	42	371	28	0	11	0	316	9	5	2
Endocrinology, human/animal pathology	73	15	57	6	1	3	2	41	3	0	1
Entomology	119	27	90	8	0	4	4	67	4	1	2
Environmental toxicology	56	15	40	1	0	2	5	27	1	0	4
Epidemiology	401	68	329	21	3	46	33	208	12	5	1
Evolutionary biology	242	40	202	17	0	13	6	154	7	1	4
Genetics and genomics, human and animal	362	73	277	15	0	40	11	193	9	5	4
Immunology	422	82	333	26	0	64	14	212	11	4	2
Microbiology	478	92	378	31	2	33	23	269	13	4	3
Molecular biology	596	177	410	33	1	54	9	290	20	1	2
Molecular medicine	62	13	47	3	0	7	6	30	1	0	0
Neurosciences, neurobiology	1,037	173	838	74	1	99	36	594	24	6	4
Nutrition sciences	201	59	140	8	1	14	11	100	3	2	1
Pharmacology, human and animal	210	62	144	8	0	21	13	96	4	2	0
Physiology, human and animal	202	48	146	14	1	15	3	105	5	2	1
Plant genetics	72	28	44	5	0	2	0	36	1	0	0
Structural biology	51	14	37	5	0	4	2	25	0	1	0
Toxicology	95	15	78	9	0	6	10	53	0	0	0
Wildlife biology	62	3	58	2	0	0	1	54	0	1	0
Zoology	29	4	25	1	0	1	0	23	0	0	0

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Biological and biomedical sciences, general	468	134	289	22	1	45	11	184	8	9	9
Biotechnology, biology/biomedical sciences-other	150	30	101	8	0	8	5	73	1	3	3
Health sciences	2,534	595	1,842	114	9	175	236	1,208	51	20	29
Environmental health	83	25	56	2	1	8	5	35	2	2	1
Health and behavior	60	15	44	6	0	3	4	29	2	0	0
Health services/systems administration	160	37	122	5	1	18	29	63	3	2	1
Kinesiology, exercise science	268	44	215	11	0	9	9	174	8	1	3
Medical physics, radiological science	74	19	54	5	0	4	3	39	3	0	0
Nursing science	585	70	485	31	4	28	57	345	7	4	9
Pharmaceutical sciences	345	192	132	3	0	36	11	76	5	0	1
Public health	421	76	340	32	3	30	75	179	14	5	2
Rehabilitation, therapeutic services	125	26	96	4	0	9	9	70	3	1	0
Speech-language pathology and audiology	112	17	90	8	0	4	5	70	2	0	1
Health sciences, aggregated	301	74	208	7	0	26	29	128	2	5	11
Physical sciences and earth sciences	6,335	2,375	3,771	221	9	356	103	2,906	101	26	49
Chemistry	2,810	1,022	1,711	106	4	176	77	1,268	42	12	26
Analytical chemistry	401	159	240	16	1	31	12	175	3	1	1
Chemical biology	160	44	113	6	0	15	2	85	4	1	0
Inorganic chemistry	358	99	253	21	0	26	10	192	3	1	0
Medicinal chemistry	86	31	52	0	0	4	5	41	2	0	0
Organic chemistry	574	203	371	23	2	42	23	270	8	0	3
Physical chemistry	398	158	239	10	0	17	7	198	5	1	1
Polymer chemistry	132	69	63	3	0	8	1	50	1	0	0
Theoretical chemistry	106	42	64	4	0	7	3	47	2	1	0
Chemistry, general	430	166	204	12	1	18	10	130	9	6	18
Chemistry, other	165	51	112	11	0	8	4	80	5	1	3
Geosciences, atmospheric sciences, and ocean sciences	1,185	392	760	49	3	42	11	617	27	4	7
Atmospheric science and meteorology	265	101	157	16	1	13	2	117	7	0	1

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Atmospheric physics, meteorology	67	25	41	2	1	5	0	31	2	0	0
Atmospheric chemistry, atmospheric sciences-general, atmospheric sciences-other	198	76	116	14	0	8	2	86	5	0	1
Geological sciences	591	185	383	23	1	16	4	317	16	3	3
Geochemistry, mineralogy	70	15	55	3	0	1	0	47	4	0	0
Geology	132	25	105	8	0	1	2	85	6	1	2
Geomorphology, geological sciences-general, geological sciences-other	216	69	130	7	0	9	1	107	5	0	1
Geophysics and seismology	129	68	57	4	1	3	1	45	1	2	0
Paleontology, stratigraphy	44	8	36	1	0	2	0	33	0	0	0
Ocean and marine sciences	329	106	220	10	1	13	5	183	4	1	3
Marine biology and biological oceanography	73	14	57	2	0	5	0	48	1	0	1
Oceanography, chemical and physical	81	33	48	3	0	1	0	42	0	0	2
Ocean/marine sciences, aggregated	175	59	115	5	1	7	5	93	3	1	0
Physics and astronomy	2,340	961	1,300	66	2	138	15	1,021	32	10	16
Astronomy and astrophysics	352	93	253	12	0	18	2	218	2	0	1
Astronomy	138	26	109	6	0	6	0	96	1	0	0
Astrophysics	204	60	141	6	0	12	2	119	1	0	1
Astronomy and astrophysics, other	10	7	3	0	0	0	0	3	0	0	0
Physics	1,988	868	1,047	54	2	120	13	803	30	10	15
Acoustics, optics/ photonics	195	104	88	5	0	15	1	62	3	1	1
Applied physics	200	80	105	7	0	17	5	72	2	0	2
Atomic physics, polymer physics	150	65	85	7	0	4	0	73	0	1	0
Biophysics (physics)	146	64	80	3	0	13	1	59	3	1	0

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Condensed matter, low-temperature physics	443	238	203	5	0	30	2	158	5	1	2
Elementary particle physics	232	92	138	5	0	10	1	113	7	1	1
Nuclear physics	93	33	60	5	0	4	1	50	0	0	0
Plasma, high-temperature physics	60	13	47	2	1	3	1	36	2	1	1
Physics, general	340	133	166	8	1	14	0	129	5	3	6
Physics, other	129	46	75	7	0	10	1	51	3	1	2
Mathematics and computer sciences	4,030	2,130	1,739	94	4	231	64	1,233	58	22	33
Computer and information sciences	2,004	1,166	743	43	2	112	39	496	21	10	20
Computer science	1,631	983	577	29	1	91	24	391	16	9	16
Information science, systems	122	40	70	7	1	4	5	47	3	0	3
Computer and information sciences, general	141	86	51	2	0	13	6	27	2	0	1
Computer and information sciences, other	110	57	45	5	0	4	4	31	0	1	0
Mathematics and statistics	2,026	964	996	51	2	119	25	737	37	12	13
Algebra	107	38	68	5	1	10	1	51	0	0	0
Analysis and functional analysis	100	49	50	2	0	4	0	40	1	2	1
Applied mathematics, computing theory	465	208	245	13	0	29	11	177	8	3	4
Computational mathematics	92	45	42	4	0	5	1	32	0	0	0
Geometry, geometric analysis	79	33	45	2	0	3	1	36	3	0	0
Logic, topology/foundations	77	21	56	5	0	4	0	41	5	1	0
Number theory	62	28	34	3	0	0	0	28	2	1	0
Operations research, mathematics/statistics-general, mathematics/statistics-other	631	302	295	13	0	33	6	220	13	5	5
Statistics (mathematics)	413	240	161	4	1	31	5	112	5	0	3
Psychology and social sciences	8,899	1,771	6,704	593	34	473	524	4,653	253	76	98
Psychology	3,837	285	3,321	328	12	200	244	2,342	114	29	52
Behavioral analysis	63	4	58	5	0	3	4	43	2	0	1

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Clinical psychology	1,267	39	1,142	129	5	73	65	807	41	9	13
Cognitive neuroscience	199	28	166	10	0	16	4	131	4	0	1
Cognitive psychology and psycholinguistics	143	24	119	11	0	4	2	94	4	3	1
Community psychology	44	3	32	3	1	0	9	19	0	0	0
Counseling	290	17	263	30	0	18	28	166	12	2	7
Developmental and child psychology	163	19	141	13	0	16	4	95	11	1	1
Educational psychology (psychology)	116	15	93	5	1	6	13	62	4	2	0
Experimental psychology	137	19	113	6	1	2	1	97	2	3	1
Family psychology, human development and family studies	143	25	113	8	0	7	10	82	5	1	0
Health, medical psychology	80	4	76	12	0	4	12	39	1	1	7
Industrial and organizational psychology	195	23	156	14	1	10	9	118	2	1	1
Marriage and family therapy, counseling	69	3	64	6	1	2	15	39	1	0	0
Neuropsychology, physiological psychology	40	1	34	5	0	2	2	25	0	0	0
School psychology (psychology)	148	4	142	12	0	8	23	93	5	1	0
Social psychology	218	25	190	21	0	14	4	141	7	3	0
Psychology, general	251	16	176	16	1	5	16	114	4	2	18
Psychology, aggregated	271	16	243	22	1	10	23	177	9	0	1
Social sciences	5,062	1,486	3,383	265	22	273	280	2,311	139	47	46
Anthropology	424	70	335	24	2	21	20	244	14	6	4
Anthropology, cultural	276	59	215	16	2	19	18	143	12	4	1
Anthropology, general	53	3	34	1	0	0	0	28	1	2	2
Anthropology, physical and biological	95	8	86	7	0	2	2	73	1	0	1
Economics	1,247	707	484	26	1	67	21	336	16	6	11
Econometrics, economics	1,189	684	451	24	0	64	19	313	15	6	10

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Natural resources and environmental economics (social sciences)	58	23	33	2	1	3	2	23	1	0	1
Political science and government	734	159	543	35	2	39	28	404	18	10	7
Sociology	669	89	556	53	3	40	57	360	31	1	11
Other social sciences	1,988	461	1,465	127	14	106	154	967	60	24	13
American, U.S. studies	68	5	62	10	2	6	7	31	4	1	1
Applied linguistics	70	28	42	0	0	7	0	34	1	0	0
Archaeology (social sciences)	119	12	107	3	2	3	1	95	3	0	0
Area, ethnic, and cultural studies	133	18	105	22	5	10	17	36	9	4	2
Criminal justice and corrections	87	11	66	3	2	3	11	45	1	1	0
Criminology	96	15	81	7	0	6	7	56	5	0	0
Demography, gerontology, statistics, urban affairs, social sciences- general, social sciences-other	262	61	191	29	0	14	31	107	5	5	0
Gender and women's studies	48	7	41	3	0	3	3	29	2	0	1
Geography	242	76	162	9	1	7	5	127	7	3	3
Health policy analysis	58	9	48	1	0	4	6	35	2	0	0
History, science and technology and society	55	7	45	2	0	1	2	35	3	0	2
International relations, international affairs	135	28	105	8	0	7	4	77	5	4	0
Linguistics	249	84	154	16	2	12	3	112	3	5	1
Public policy analysis	264	63	196	9	0	12	53	113	7	1	1
Urban, city, community and regional planning	102	37	60	5	0	11	4	35	3	0	2
Engineering	10,183	5,583	4,218	280	8	678	167	2,829	129	59	68
Aerospace, aeronautical, and astronautical engineering	383	146	221	17	0	19	9	161	6	3	6

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Bioengineering and biomedical engineering	1,134	362	744	48	1	157	32	461	26	9	10
Chemical engineering	981	478	469	35	2	78	7	318	18	5	6
Civil engineering	677	443	200	18	1	28	12	131	3	4	3
Electrical, electronics, and communications engineering	1,951	1,319	544	23	0	125	21	342	16	7	10
Industrial and manufacturing engineering	272	196	62	6	0	5	1	48	1	1	0
Materials science engineering	995	502	463	34	0	71	29	301	16	2	10
Mechanical engineering	1,504	831	608	35	2	76	17	439	19	10	10
Other engineering	2,286	1,306	907	64	2	119	39	628	24	18	13
Computer engineering	436	313	111	11	0	27	3	61	3	3	3
Environmental, environmental health engineering	247	98	143	8	1	17	7	104	5	1	0
Nuclear engineering	178	49	128	10	0	6	2	103	4	2	1
Robotics	108	49	58	4	0	7	0	43	0	3	1
Structural engineering	95	64	30	2	0	4	0	23	1	0	0
Systems engineering	113	37	75	9	1	9	9	45	1	1	0
Other engineering, aggregated	1,109	696	362	20	0	49	18	249	10	8	8
Education	4,834	613	4,033	302	23	205	584	2,714	117	28	60
Education administration	898	53	784	60	5	20	200	464	12	3	20
Educational administration and supervision	168	6	143	9	0	4	47	73	0	1	9
Educational and human resource studies, development	47	9	38	6	0	3	9	19	1	0	0
Educational leadership	619	37	551	40	5	10	127	347	9	2	11
Urban education and leadership	64	1	52	5	0	3	17	25	2	0	0
Education research	2,507	367	2,060	150	11	114	260	1,407	71	18	29
Counseling education, counseling and guidance	281	28	243	21	0	11	44	154	8	1	4
Curriculum and instruction	533	83	416	34	4	24	44	284	13	4	9

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Educational assessment, testing, measurement	57	21	35	0	0	5	1	27	1	0	1
Educational policy analysis	142	16	123	5	1	8	19	79	8	2	1
Educational psychology (education)	210	31	176	12	1	7	19	125	9	2	1
Educational statistics, research methods	95	30	63	2	1	6	7	43	4	0	0
Educational/instructional technology, media design	215	62	148	5	3	9	13	110	4	3	1
Higher education evaluation and research	394	21	370	38	0	17	66	231	12	3	3
International education	43	13	30	4	0	3	2	20	0	0	1
Learning sciences	73	7	63	2	0	3	10	42	5	0	1
School psychology (education)	116	3	111	7	0	6	11	83	3	0	1
Social and philosophical foundations of education	81	11	67	7	1	4	13	41	1	0	0
Special education	267	41	215	13	0	11	11	168	3	3	6
Teacher education	97	8	88	9	1	5	21	49	2	0	1
Teaching fields	963	155	788	49	1	51	62	594	20	6	5
Health education	62	7	51	5	0	5	4	33	3	0	1
Literacy and reading education	119	13	104	3	0	3	10	84	3	0	1
Mathematics education	148	25	122	10	0	7	7	94	2	2	0
Music education	82	4	78	0	0	6	3	63	4	1	1
Science education	140	14	124	2	1	14	11	90	5	1	0
Teaching fields, aggregated	412	92	309	29	0	16	27	230	3	2	2
Other education	369	30	313	34	5	15	41	200	12	1	5
Workforce education and development	37	8	29	0	0	1	7	21	0	0	0
Education, general	170	10	145	16	4	5	12	97	5	1	5
Education, other	162	12	139	18	1	9	22	82	7	0	0
Humanities and arts	5,145	738	4,150	348	12	203	205	3,167	112	29	74
Foreign languages and literature	617	180	406	106	0	17	9	257	8	5	4
French	100	20	75	5	0	2	4	58	2	1	3
Germanic language and literature	62	16	43	2	0	0	1	39	1	0	0

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Spanish language and literature	207	57	145	69	0	1	3	68	3	0	1
Other languages, aggregated	248	87	143	30	0	14	1	92	2	4	0
History	948	112	800	67	2	27	48	623	18	6	9
American history, United States and Canada	389	14	371	23	1	5	28	301	10	2	1
Asian history	73	31	41	1	0	11	0	29	0	0	0
European history	172	15	157	9	0	2	1	142	3	0	0
Latin American history	55	12	43	17	0	1	0	25	0	0	0
Middle, Near East history	44	13	30	2	1	2	0	23	2	0	0
History, general	107	10	69	4	0	4	6	47	1	0	7
History, aggregated	108	17	89	11	0	2	13	56	2	4	1
Letters	1,442	139	1,235	74	3	63	43	978	42	8	24
American literature, United States and Canada	273	18	254	15	1	10	8	207	9	3	1
Classics	94	12	80	4	0	5	2	67	1	0	1
Comparative literature	172	50	110	11	0	10	3	78	4	0	4
English language	121	11	76	2	1	4	5	55	0	2	7
English literature, British and Commonwealth	383	30	345	13	0	25	6	285	12	1	3
Rhetoric and composition	241	10	224	19	1	4	12	174	11	1	2
Speech and rhetorical studies	42	2	39	1	0	1	1	28	2	0	6
Letters, aggregated	116	6	107	9	0	4	6	84	3	1	0
Other humanities and arts	2,138	307	1,709	101	7	96	105	1,309	44	10	37
African American studies, literature, and history	52	3	48	2	0	5	30	10	1	0	0
Archaeology (humanities)	54	10	43	3	0	2	1	36	1	0	0
Art history, criticism, and conservation	220	26	183	10	2	14	8	144	3	1	1
Dance, drama	113	12	91	6	1	3	7	70	2	1	1
Film, cinema, video studies	90	15	74	6	1	7	1	52	5	2	0
Music	55	11	33	1	0	3	1	17	0	1	10
Musicology and ethnomusicology	131	19	111	8	0	3	3	93	3	0	1
Music performance	88	16	63	5	1	10	0	47	0	0	0

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents								
			Total	Hispanic or Latino	Not Hispanic or Latino					Ethnicity not reported	
					American Indian or Alaska Native	Asian	Black or African American	White	More than one race		Other race or race not reported
Music theory and composition	85	17	66	5	0	1	3	54	3	0	0
Philosophy, ethics	514	92	399	18	0	13	10	336	9	3	10
Religion/religious studies, Jewish/Judaic studies	281	22	241	10	1	15	22	177	9	2	5
Theology, religious education	196	25	163	16	1	6	11	123	3	0	3
Other humanities, aggregated	259	39	194	11	0	14	8	150	5	0	6
Other ^b	2,989	1,030	1,748	81	4	162	222	1,172	47	27	33
Business management and administration	1,481	644	744	31	1	102	109	456	16	13	16
Accounting	162	52	105	2	1	17	5	75	3	1	1
Business administration and management	260	114	127	4	0	14	16	82	3	3	5
Finance	193	107	75	5	0	11	5	51	0	3	0
Human resources, organizational behavior	243	46	175	6	0	8	41	110	5	2	3
Management information systems, business statistics	110	65	41	1	0	12	11	15	0	2	0
Marketing management and research	141	77	59	3	0	16	2	34	2	1	1
Other aggregated business fields	372	183	162	10	0	24	29	89	3	1	6
Communication	631	165	435	12	1	32	30	333	12	7	8
Communication research	143	36	100	3	0	8	10	75	4	0	0
Mass communication, media studies	228	84	136	3	0	11	7	105	6	2	2
Communication, general	155	28	117	2	0	11	4	91	1	3	5
Communication, aggregated	105	17	82	4	1	2	9	62	1	2	1
Non-S&E fields nec	877	221	569	38	2	28	83	383	19	7	9
Architecture and environmental design	105	56	46	2	0	2	1	38	2	1	0
Family, consumer sciences and human sciences	64	20	40	3	0	4	9	23	0	1	0

TABLE 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2018

(Number)

Subfield of study	All doctorate recipients ^a	Temporary visa holders	U.S. citizens and permanent residents									
			Total	Hispanic or Latino	Not Hispanic or Latino					More than one race	Other race or race not reported	Ethnicity not reported
					American Indian or Alaska Native	Asian	Black or African American	White				
Parks, sports, recreation, leisure and fitness	53	14	36	1	0	0	4	29	1	0	1	
Public administration	139	30	103	7	1	2	27	61	5	0	0	
Social work	358	54	275	22	1	16	32	185	10	3	6	
Fields nec, aggregated	158	47	69	3	0	4	10	47	1	2	2	
Unknown field	0	0	0	0	0	0	0	0	0	0	0	

nec = not elsewhere classified; S&E = science and engineering.

^a Includes respondents who did not report citizenship.^b Includes other non-S&E fields not shown separately.**Note(s)**

See table A-5 in the technical notes for a listing of aggregated fields and their constituent fine fields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 23

U.S. citizen and permanent resident doctorate recipients, by broad field of study, ethnicity, and race: Selected years, 1998–2018

(Number)

Field of study, ethnicity, and race	1998	2003	2008	2013	2018
All fields	31,204	28,170	30,844	33,964	35,404
Hispanic or Latino	1,332	1,435	1,773	2,135	2,582
Not Hispanic or Latino					
American Indian or Alaska Native	190	136	115	119	115
Asian ^a	2,728	2,033	2,507	2,892	3,305
Black or African American	1,603	1,723	1,961	2,172	2,456
White	24,284	21,162	22,835	24,749	24,951
More than one race	na	363	506	858	1,102
Other race or race not reported ^b	416	354	343	279	371
Ethnicity not reported	651	964	804	760	522
Life sciences ^c	6,150	5,898	7,279	8,352	9,041
Hispanic or Latino	244	251	399	545	663
Not Hispanic or Latino					
American Indian or Alaska Native	25	17	29	30	21
Asian ^a	812	642	768	877	997
Black or African American	201	210	318	523	587
White	4,696	4,485	5,423	5,977	6,277
More than one race	na	81	124	212	285
Other race or race not reported ^b	87	72	79	63	104
Ethnicity not reported	85	140	139	125	107
Physical sciences and earth sciences	2,978	2,404	2,674	3,247	3,771
Hispanic or Latino	72	86	117	168	221
Not Hispanic or Latino					
American Indian or Alaska Native	12	4	4	6	9
Asian ^a	379	206	237	227	356
Black or African American	61	67	74	90	103
White	2,344	1,907	2,108	2,584	2,906
More than one race	na	32	41	87	101
Other race or race not reported ^b	42	40	25	25	26
Ethnicity not reported	68	62	68	60	49
Mathematics and computer sciences	1,236	964	1,370	1,631	1,739
Hispanic or Latino	42	28	49	65	94
Not Hispanic or Latino					
American Indian or Alaska Native	7	4	0	0	4
Asian ^a	163	132	178	233	231
Black or African American	30	33	55	57	64
White	941	701	1,021	1,172	1,233
More than one race	na	19	13	40	58
Other race or race not reported ^b	16	15	15	17	22
Ethnicity not reported	37	32	39	47	33
Psychology and social sciences	5,890	5,385	5,588	6,464	6,704
Hispanic or Latino	323	317	436	456	593
Not Hispanic or Latino					
American Indian or Alaska Native	44	36	22	30	34
Asian ^a	325	275	343	409	473
Black or African American	325	326	340	470	524
White	4,666	4,093	4,091	4,675	4,653
More than one race	na	80	112	195	253

TABLE 23

U.S. citizen and permanent resident doctorate recipients, by broad field of study, ethnicity, and race: Selected years, 1998–2018

(Number)

Field of study, ethnicity, and race	1998	2003	2008	2013	2018
Other race or race not reported ^b	80	89	74	45	76
Ethnicity not reported	127	169	170	184	98
Engineering	3,048	2,180	2,958	3,767	4,218
Hispanic or Latino	111	104	134	190	280
Not Hispanic or Latino					
American Indian or Alaska Native	13	12	7	5	8
Asian ^a	557	346	487	570	678
Black or African American	81	77	110	171	167
White	2,169	1,544	2,065	2,596	2,829
More than one race	na	16	45	87	129
Other race or race not reported ^b	44	29	36	30	59
Ethnicity not reported	73	52	74	118	68
Education	5,748	5,650	5,584	4,118	4,033
Hispanic or Latino	290	341	351	270	302
Not Hispanic or Latino					
American Indian or Alaska Native	50	39	36	24	23
Asian ^a	177	148	202	219	205
Black or African American	655	707	714	518	584
White	4,409	3,994	4,001	2,876	2,714
More than one race	na	63	64	81	117
Other race or race not reported ^b	56	37	51	40	28
Ethnicity not reported	111	321	165	90	60
Humanities and arts	4,533	4,333	3,744	4,535	4,150
Hispanic or Latino	201	252	206	331	348
Not Hispanic or Latino					
American Indian or Alaska Native	22	15	11	20	12
Asian ^a	205	196	169	190	203
Black or African American	143	158	171	167	205
White	3,781	3,468	2,961	3,568	3,167
More than one race	na	58	85	115	112
Other race or race not reported ^b	70	57	38	42	29
Ethnicity not reported	111	129	103	102	74
Other ^d	1,621	1,356	1,647	1,850	1,748
Hispanic or Latino	49	56	81	110	81
Not Hispanic or Latino					
American Indian or Alaska Native	17	9	6	4	4
Asian ^a	110	88	123	167	162
Black or African American	107	145	179	176	222
White	1,278	970	1,165	1,301	1,172
More than one race	na	14	22	41	47
Other race or race not reported ^b	21	15	25	17	27
Ethnicity not reported	39	59	46	34	33

na = not applicable; respondents were instructed to indicate only one race.

^a Includes Native Hawaiians or Other Pacific Islanders who are not Hispanic through 2000, but excludes them since 2001.^b Before 2001, category included respondents who selected more than one race; Native Hawaiians or Other Pacific Islanders who are not Hispanic were included in the category Asian. Since 2001, category has included Native Hawaiians or Other Pacific Islanders who are not Hispanic.^c Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^d Includes other non-science and engineering fields not shown separately.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 24

U.S. citizen and permanent resident doctorate recipients, by major field of study, ethnicity, and race: 2018

(Number and percent distribution)

Field of study	All U.S. citizen and permanent resident doctorate recipients (number)	Total	U.S. citizen or permanent resident								
			Hispanic or Latino	Not Hispanic or Latino						Other race or race not reported	Ethnicity not reported
				American Indian or Alaska Native	Asian	Black or African American	White	More than one race			
All fields	35,404	100.0	7.3	0.3	9.3	6.9	70.5	3.1	1.0	1.5	
Life sciences	9,041	100.0	7.3	0.2	11.0	6.5	69.4	3.2	1.2	1.2	
Agricultural sciences and natural resources	793	100.0	6.3	0.1	5.5	5.7	76.7	3.0	0.9	1.8	
Biological and biomedical sciences	6,406	100.0	7.8	0.2	12.1	4.8	69.6	3.3	1.2	1.0	
Health sciences	1,842	100.0	6.2	0.5	9.5	12.8	65.6	2.8	1.1	1.6	
Physical sciences and earth sciences	3,771	100.0	5.9	0.2	9.4	2.7	77.1	2.7	0.7	1.3	
Chemistry	1,711	100.0	6.2	0.2	10.3	4.5	74.1	2.5	0.7	1.5	
Geosciences, atmospheric sciences, and ocean sciences	760	100.0	6.4	0.4	5.5	1.4	81.2	3.6	0.5	0.9	
Physics and astronomy	1,300	100.0	5.1	0.2	10.6	1.2	78.5	2.5	0.8	1.2	
Mathematics and computer sciences	1,739	100.0	5.4	0.2	13.3	3.7	70.9	3.3	1.3	1.9	
Computer and information sciences	743	100.0	5.8	0.3	15.1	5.2	66.8	2.8	1.3	2.7	
Mathematics and statistics	996	100.0	5.1	0.2	11.9	2.5	74.0	3.7	1.2	1.3	
Psychology and social sciences	6,704	100.0	8.8	0.5	7.1	7.8	69.4	3.8	1.1	1.5	
Psychology	3,321	100.0	9.9	0.4	6.0	7.3	70.5	3.4	0.9	1.6	
Anthropology	335	100.0	7.2	0.6	6.3	6.0	72.8	4.2	1.8	1.2	
Economics	484	100.0	5.4	0.2	13.8	4.3	69.4	3.3	1.2	2.3	
Political science and government	543	100.0	6.4	0.4	7.2	5.2	74.4	3.3	1.8	1.3	
Sociology	556	100.0	9.5	0.5	7.2	10.3	64.7	5.6	0.2	2.0	
Other social sciences	1,465	100.0	8.7	1.0	7.2	10.5	66.0	4.1	1.6	0.9	
Engineering	4,218	100.0	6.6	0.2	16.1	4.0	67.1	3.1	1.4	1.6	
Aerospace, aeronautical, and astronautical engineering	221	100.0	7.7	0.0	8.6	4.1	72.9	2.7	1.4	2.7	
Bioengineering and biomedical engineering	744	100.0	6.5	0.1	21.1	4.3	62.0	3.5	1.2	1.3	
Chemical engineering	469	100.0	7.5	0.4	16.6	1.5	67.8	3.8	1.1	1.3	
Civil engineering	200	100.0	9.0	0.5	14.0	6.0	65.5	1.5	2.0	1.5	
Electrical, electronics, and communications engineering	544	100.0	4.2	0.0	23.0	3.9	62.9	2.9	1.3	1.8	

TABLE 24

U.S. citizen and permanent resident doctorate recipients, by major field of study, ethnicity, and race: 2018

(Number and percent distribution)

Field of study	All U.S. citizen and permanent resident doctorate recipients (number)	Total	U.S. citizen or permanent resident							
			Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
				American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Industrial and manufacturing engineering	62	100.0	9.7	0.0	8.1	1.6	77.4	1.6	1.6	0.0
Materials science engineering	463	100.0	7.3	0.0	15.3	6.3	65.0	3.5	0.4	2.2
Mechanical engineering	608	100.0	5.8	0.3	12.5	2.8	72.2	3.1	1.6	1.6
Other engineering	907	100.0	7.1	0.2	13.1	4.3	69.2	2.6	2.0	1.4
Education	4,033	100.0	7.5	0.6	5.1	14.5	67.3	2.9	0.7	1.5
Education administration	784	100.0	7.7	0.6	2.6	25.5	59.2	1.5	0.4	2.6
Education research	2,060	100.0	7.3	0.5	5.5	12.6	68.3	3.4	0.9	1.4
Teacher education	88	100.0	10.2	1.1	5.7	23.9	55.7	2.3	0.0	1.1
Teaching fields	788	100.0	6.2	0.1	6.5	7.9	75.4	2.5	0.8	0.6
Other education	313	100.0	10.9	1.6	4.8	13.1	63.9	3.8	0.3	1.6
Humanities and arts	4,150	100.0	8.4	0.3	4.9	4.9	76.3	2.7	0.7	1.8
Foreign languages and literature	406	100.0	26.1	0.0	4.2	2.2	63.3	2.0	1.2	1.0
History	800	100.0	8.4	0.3	3.4	6.0	77.9	2.3	0.8	1.1
Letters	1,235	100.0	6.0	0.2	5.1	3.5	79.2	3.4	0.6	1.9
Other humanities and arts	1,709	100.0	5.9	0.4	5.6	6.1	76.6	2.6	0.6	2.2
Other ^a	1,748	100.0	4.6	0.2	9.3	12.7	67.0	2.7	1.5	1.9
Business management and administration	744	100.0	4.2	0.1	13.7	14.7	61.3	2.2	1.7	2.2
Communication	435	100.0	2.8	0.2	7.4	6.9	76.6	2.8	1.6	1.8
Non-S&E fields nec	569	100.0	6.7	0.4	4.9	14.6	67.3	3.3	1.2	1.6
Unknown field	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

nec = not elsewhere classified; S&E = science and engineering.

^a Includes other non-S&E fields not shown separately.**Note(s)**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields. Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 25

Top 40 countries or economies of origin of temporary visa holders earning doctorates at U.S. colleges and universities, ranked by number of doctorate recipients: 2018

(Number)

Country or economy	Rank	Doctorate recipients
All temporary visa holders (162 countries or economies) ^a	-	17,124
Top 40 countries or economies of origin	-	15,903
China ^b	1	6,182
India	2	2,040
South Korea	3	1,035
Iran	4	935
Taiwan	5	513
Turkey	6	452
Canada	7	424
Saudi Arabia	8	404
Bangladesh	9	280
Nepal	10	225
Colombia	11	205
Mexico	12	185
Brazil	13	178
Thailand	14	177
Egypt	15	156
Russian Federation (former USSR)	16	154
Sri Lanka	17	148
Nigeria	18	146
Germany	19	144
Italy	20	138
France	21	133
Vietnam	22	122
Iraq	23	121
Japan	24	117
Greece	25	113
Pakistan	26	110
United Kingdom	27	109
Spain	28	104
Ghana	29	103
Chile	30	91
Malaysia	31	84
Indonesia	32	82
Singapore	33	81
Jordan	34	76
Israel	35	64
Argentina	36	60
Philippines	37	56
Libya	38	55
Lebanon	39	51
Kenya	40	50

^a Excludes cases with unknown country or economy of origin.^b Includes Hong Kong.**Note(s)**

Tied countries or economies are listed alphabetically.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 26

Doctorates awarded for 10 largest countries of origin of temporary visa holders earning doctorates at U.S. colleges and universities, by country or economy of citizenship and field: 2009–18

(Number)

Country or economy and field	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
China ^a	4,101	3,744	3,988	4,222	4,796	4,982	5,374	5,526	5,555	6,182
Science and engineering	3,753	3,457	3,652	3,906	4,443	4,650	4,970	5,140	5,149	5,689
Non-science and engineering	348	287	336	316	353	332	404	386	406	493
India	2,272	2,142	2,165	2,248	2,204	2,316	2,229	2,195	1,969	2,040
Science and engineering	2,112	1,994	2,036	2,142	2,074	2,208	2,119	2,085	1,883	1,919
Non-science and engineering	160	148	129	106	130	108	110	110	86	121
South Korea	1,526	1,381	1,445	1,472	1,383	1,284	1,234	1,229	1,127	1,035
Science and engineering	1,179	1,076	1,085	1,132	1,012	928	920	891	814	725
Non-science and engineering	347	305	360	340	371	356	314	338	313	310
Taiwan	735	650	693	719	699	668	614	592	520	513
Science and engineering	544	501	570	581	571	558	514	499	435	444
Non-science and engineering	191	149	123	138	128	110	100	93	85	69
Turkey	527	477	493	439	478	426	469	472	496	452
Science and engineering	445	405	422	352	391	360	386	380	392	362
Non-science and engineering	82	72	71	87	87	66	83	92	104	90
Iran	141	147	198	287	409	483	629	695	767	935
Science and engineering	D	D	193	278	380	463	608	664	728	869
Non-science and engineering	D	D	5	9	29	20	21	31	39	66
Canada	516	469	455	423	485	488	454	408	408	424
Science and engineering	387	339	307	299	332	321	318	272	288	301
Non-science and engineering	129	130	148	124	153	167	136	136	120	123
Thailand	242	222	266	260	264	231	220	185	171	177
Science and engineering	220	182	235	240	227	200	193	168	153	155
Non-science and engineering	22	40	31	20	37	31	27	17	18	22
Mexico	215	201	185	213	177	193	194	221	180	185
Science and engineering	171	169	159	185	146	161	155	191	145	156
Non-science and engineering	44	32	26	28	31	32	39	30	35	29
Japan	256	236	244	240	217	173	164	166	117	117
Science and engineering	193	173	179	179	166	129	120	129	92	93
Non-science and engineering	63	63	65	61	51	44	44	37	25	24

D = suppressed to avoid disclosure of confidential information.

^a Includes Hong Kong.**Note(s)**

Rank is based on the total number of doctorate recipients from 2009 to 2018.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 27

Median age and age distribution of doctorate recipients, by broad field of study, sex, citizenship status, ethnicity, and race: 2018

(Median age and percent distribution)

Broad field of study and demographic characteristic	Median age at doctorate (years) ^a	All ages	25 and under	26–30	31–35	36–40	41–45	Over 45
All fields	31.4	100.0	0.7	45.0	30.4	11.7	5.0	7.2
Life sciences ^b	30.9	100.0	0.8	49.6	30.5	9.9	3.9	5.3
Physical sciences and earth sciences	29.5	100.0	0.9	66.9	24.0	5.4	1.6	1.3
Mathematics and computer sciences	30.2	100.0	D	56.2	28.7	7.5	D	3.3
Psychology and social sciences	32.3	100.0	0.3	37.3	34.6	14.7	5.5	7.6
Engineering	29.9	100.0	1.4	60.3	27.1	6.7	2.3	2.2
Education	38.2	100.0	0.1	12.7	27.0	20.7	13.5	25.9
Humanities and arts	34.3	100.0	D	21.9	40.7	20.5	D	9.5
Other ^c	34.7	100.0	0.2	25.0	31.9	17.9	9.6	15.3
Sex								
Male	31.2	100.0	0.8	47.1	30.7	11.5	4.6	5.3
Female	31.8	100.0	0.7	42.5	29.9	12.1	5.5	9.4
Citizenship status								
U.S. citizen or permanent resident	31.8	100.0	0.6	43.0	28.2	12.4	5.9	9.8
Temporary visa holder	30.9	100.0	0.9	49.3	34.8	10.2	3.1	1.8
Ethnicity and race (U.S. citizens and permanent residents)								
Hispanic or Latino	32.3	100.0	0.5	40.3	29.6	13.6	7.0	9.0
Not Hispanic or Latino								
American Indian or Alaska Native	36.3	100.0	0.0	24.8	23.0	16.8	9.7	25.7
Asian	31.1	100.0	0.6	47.8	29.6	11.1	5.7	5.3
Black or African American	36.0	100.0	0.4	26.5	22.9	16.1	11.4	22.7
White	31.6	100.0	0.7	44.4	28.3	12.1	5.3	9.2
More than one race	31.3	100.0	0.9	46.5	28.3	12.5	4.5	7.2
Other race or race not reported	32.3	100.0	0.6	35.0	34.1	14.1	8.0	8.0
Ethnicity not reported	32.8	100.0	0.5	37.3	28.8	13.2	7.8	12.4

D = suppressed to avoid disclosure of confidential information.

^a Includes only doctorate recipients with valid year of birth.^b Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^c Includes other non-science and engineering fields not shown separately.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 28

Doctorate recipients reporting one or more functional limitations, by broad field of study, sex, and citizenship status: 2018

(Number and percent)

Demographic characteristic	One or more limitations of any type		Visual limitations		Hearing limitations		Walking limitations		Lifting limitations		Cognitive limitations	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All doctorate recipients	4,156	7.5	1,662	3.0	664	1.2	273	0.5	396	0.7	2,048	3.7
Field of study												
Life sciences ^a	935	7.3	330	2.6	152	1.2	43	0.3	77	0.6	517	4.0
Physical sciences and earth sciences	470	7.4	170	2.7	57	0.9	22	0.3	33	0.5	262	4.1
Mathematics and computer sciences	284	7.0	117	2.9	48	1.2	18	0.4	28	0.7	126	3.1
Psychology and social sciences	736	8.3	220	2.5	117	1.3	59	0.7	82	0.9	418	4.7
Engineering	629	6.2	399	3.9	90	0.9	39	0.4	55	0.5	190	1.9
Education	398	8.2	180	3.7	94	1.9	46	1.0	51	1.1	147	3.0
Humanities and arts	474	9.2	126	2.4	68	1.3	26	0.5	40	0.8	292	5.7
Other ^b	230	7.7	120	4.0	38	1.3	20	0.7	30	1.0	96	3.2
Sex												
Male	2,114	7.1	899	3.0	398	1.3	129	0.4	159	0.5	1,007	3.4
Female	2,042	8.0	763	3.0	266	1.0	144	0.6	237	0.9	1,041	4.1
Citizenship status ^c												
U.S. citizen or permanent resident	2,980	8.4	834	2.4	539	1.5	196	0.6	252	0.7	1,733	4.9
Temporary visa holder	1,169	6.6	823	4.7	124	0.7	76	0.4	143	0.8	314	1.8

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.

^b Includes other non-science and engineering fields not shown separately.

^c Excludes doctorate recipients who did not report citizenship status.

Note(s)

Individual doctorate recipients could report more than one functional limitation. Survey asks degree of difficulty—none, slight, moderate, severe, or unable to do—an individual has in seeing (with glasses), hearing (with hearing aid), walking without assistance, lifting 10 pounds, or concentrating, remembering, or making decisions. Those respondents who answered "moderate," "severe," or "unable to do" for any activity were classified as having a functional limitation.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 29

Doctorate recipients who earned a master's degree related to doctorate, by sex, citizenship status, ethnicity, race, and broad field of doctoral study: 2018

(Percent)

Demographic characteristic	All fields		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Master's	Related master's	Master's	Related master's	Master's	Related master's	Master's	Related master's	Master's	Related master's	Master's	Related master's	Master's	Related master's	Master's	Related master's	Master's	Related master's
All doctorate recipients	69.6	54.7	50.8	33.9	53.7	45.4	72.4	61.6	82.6	65.1	71.2	65.0	88.8	57.8	84.2	67.7	79.8	59.9
Sex																		
Male	68.6	55.5	48.5	31.8	55.3	46.9	71.5	61.2	82.0	64.2	72.3	66.2	87.8	54.8	83.8	69.4	79.7	59.0
Female	70.9	53.7	52.6	35.6	50.4	42.4	75.2	63.3	83.1	65.8	68.0	61.3	89.3	59.2	84.7	66.1	80.2	60.8
Citizenship status																		
U.S. citizen or permanent resident	70.6	54.7	46.9	31.8	50.4	43.8	75.1	64.6	86.1	68.0	68.0	62.4	92.5	60.2	88.6	71.8	85.6	64.5
Temporary visa holder	75.4	60.6	66.4	43.0	62.7	51.2	74.8	63.3	87.9	68.7	77.9	70.9	88.3	58.1	85.6	65.3	84.9	63.2
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	71.3	55.4	44.2	30.5	54.8	45.7	79.8	70.2	84.1	67.3	68.6	63.9	94.4	58.3	87.4	71.6	88.9	71.6
Not Hispanic or Latino																		
American Indian or Alaska Native	77.4	55.7	85.7	71.4	D	D	D	D	79.4	52.9	62.5	D	87.0	56.5	91.7	75.0	D	D
Asian	67.4	53.6	47.0	32.6	55.1	43.5	76.2	62.8	84.6	68.9	72.4	67.7	91.7	57.6	87.2	70.9	80.2	62.3
Black or African American	81.2	53.0	63.7	40.5	48.5	37.9	75.0	60.9	90.8	56.9	71.9	61.7	94.2	56.8	87.3	54.6	88.7	63.5
White	70.8	55.8	46.1	31.3	50.1	44.4	76.0	66.0	87.2	70.2	67.8	62.0	93.1	62.2	90.3	74.6	87.1	66.0
More than one race	72.7	55.5	43.5	30.9	52.5	45.5	77.6	70.7	91.3	73.1	66.7	60.5	97.4	59.0	94.6	70.5	89.4	55.3
Other race or race not reported	61.5	46.1	43.3	26.9	D	D	D	D	69.7	55.3	55.9	D	96.4	60.7	82.8	55.2	D	D
Ethnicity not reported	27.2	20.9	20.6	13.1	20.4	16.3	21.2	18.2	27.6	22.4	38.2	36.8	36.7	25.0	18.9	10.8	42.4	33.3

D = suppressed to avoid disclosure of confidential information.

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.**Note(s)**

Percentages based on total number of doctorate recipients. A master's degree is counted as "related master's" if the fields of study of doctorate recipient's first or most recent master's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 30

Doctorate recipients who had attended community college, by sex, citizenship status, ethnicity, race, and broad field of study: 2018

(Percent)

Demographic characteristic	All doctorate recipients	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
All doctorate recipients	17.8	21.2	15.5	11.3	19.4	12.5	27.0	17.2	16.7
Sex									
Male	16.6	20.7	15.0	11.2	19.1	12.5	28.7	18.4	16.0
Female	19.4	21.7	16.5	11.9	19.6	12.7	26.3	16.1	17.4
Citizenship status									
U.S. citizen or permanent resident	24.3	26.3	22.1	19.7	24.2	20.9	31.1	20.4	25.1
Temporary visa holder	6.6	9.2	6.2	5.0	5.3	6.9	6.7	4.5	5.3
Ethnicity and race (U.S. citizens and permanent residents)									
Hispanic or Latino	33.1	35.4	29.9	30.9	32.5	27.9	45.0	27.3	28.4
Not Hispanic or Latino									
American Indian or Alaska Native	42.6	38.1	D	D	47.1	D	39.1	58.3	D
Asian	16.8	17.5	19.1	13.0	18.8	14.6	22.4	12.3	14.8
Black or African American	25.4	29.0	22.3	18.8	24.6	25.1	26.2	18.0	26.6
White	24.3	26.7	22.0	20.8	23.5	21.6	31.4	20.1	25.3
More than one race	29.3	28.4	25.7	19.0	28.1	27.1	35.0	33.9	42.6
Other race or race not reported	20.8	19.2	D	D	23.7	D	25.0	24.1	D
Ethnicity not reported	10.5	15.0	6.1	0.0	12.2	7.4	18.3	5.4	12.1

D = suppressed to avoid disclosure of confidential information.

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.**Note(s)**

Percentages based on total number of doctorate recipients.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 31

Median years to doctorate, by broad field of study: Selected years, 1993–2018

(Median years)

Field of study and time to degree	1993	1998	2003	2008	2013	2018
All fields						
Since bachelor's	10.7	10.5	10.2	9.4	9.0	8.6
Since starting graduate school	8.7	8.3	8.5	7.7	7.5	7.3
Since starting doctoral program ^a	na	na	na	na	na	5.8
Life sciences ^b						
Since bachelor's	9.5	9.3	8.9	8.6	8.3	8.2
Since starting graduate school	7.7	7.5	7.2	6.9	6.9	6.8
Since starting doctoral program ^a	na	na	na	na	na	5.5
Physical sciences and earth sciences						
Since bachelor's	8.0	7.6	7.5	7.4	7.0	6.9
Since starting graduate school	6.7	6.7	6.7	6.4	6.3	6.3
Since starting doctoral program ^a	na	na	na	na	na	5.7
Mathematics and computer sciences						
Since bachelor's	9.1	9.0	8.6	8.3	7.7	7.6
Since starting graduate school	7.7	7.4	7.7	7.0	6.9	6.8
Since starting doctoral program ^a	na	na	na	na	na	5.7
Psychology and social sciences						
Since bachelor's	10.6	10.0	10.0	9.7	9.5	9.3
Since starting graduate school	8.7	7.9	8.2	7.7	7.7	7.8
Since starting doctoral program ^a	na	na	na	na	na	6.0
Engineering						
Since bachelor's	9.0	8.9	8.6	7.9	7.4	7.3
Since starting graduate school	7.2	7.2	7.3	6.7	6.7	6.7
Since starting doctoral program ^a	na	na	na	na	na	5.3
Education						
Since bachelor's	19.3	20.0	18.1	17.0	15.0	14.7
Since starting graduate school	15.7	15.0	13.2	12.7	11.7	11.9
Since starting doctoral program ^a	na	na	na	na	na	5.8
Humanities and arts						
Since bachelor's	12.0	11.7	11.5	11.4	11.0	11.0
Since starting graduate school	10.2	9.7	9.7	9.3	9.3	9.4
Since starting doctoral program ^a	na	na	na	na	na	6.8
Other ^c						
Since bachelor's	13.1	13.4	13.1	12.0	11.4	11.2
Since starting graduate school	10.5	10.2	10.2	9.1	9.0	9.2
Since starting doctoral program ^a	na	na	na	na	na	5.2

na = not applicable; not available prior to 2015.

^a Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.^b Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^c Includes other non-science and engineering fields not shown separately.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 32

Median years to doctorate, by sex, citizenship status, ethnicity, race, and broad field of study: 2018

(Median years and number)

Time to degree and demographic characteristic	All fields		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number
Years since bachelor's																		
All doctorate recipients ^c	8.6	52,342	8.2	12,214	7.0	6,072	7.6	3,825	9.3	8,401	7.3	9,666	14.7	4,600	11.0	4,848	11.2	2,716
Sex																		
Male	8.3	28,276	8.1	5,397	7.0	4,032	7.6	2,896	9.4	3,452	7.4	7,348	14.4	1,416	11.0	2,406	11.3	1,329
Female	9.1	24,065	8.3	6,816	6.7	2,040	8.0	929	9.3	4,949	7.0	2,318	15.0	3,184	11.0	2,442	11.0	1,387
Citizenship status																		
U.S. citizen or permanent resident	9.0	34,813	8.0	8,874	6.6	3,731	7.3	1,710	9.3	6,568	7.0	4,170	15.3	3,975	11.0	4,071	12.3	1,714
Temporary visa holder	8.3	17,004	8.6	3,244	7.3	2,305	7.9	2,070	9.3	1,729	7.6	5,420	12.0	581	10.9	692	9.9	963
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	8.9	2,534	8.0	646	6.5	217	7.1	92	9.3	580	6.7	276	13.7	300	11.0	342	12.0	81
Not Hispanic or Latino																		
American Indian or Alaska Native	11.3	110	11.1	20	7.6	9	D	D	10.0	31	8.1	7	16.7	23	12.9	12	D	D
Asian	8.6	3,247	8.3	974	7.0	351	7.9	226	9.5	468	7.3	672	15.9	198	12.1	197	11.3	161
Black or African American	11.6	2,413	9.6	577	7.8	102	8.0	64	11.1	515	7.6	166	16.0	573	12.0	199	15.6	217
White	8.7	24,645	8.0	6,188	6.5	2,882	7.3	1,224	9.3	4,574	6.6	2,804	15.3	2,691	11.0	3,127	12.0	1,155
More than one race	8.6	1,095	7.6	284	6.5	101	7.2	58	9.3	252	6.4	129	13.0	114	10.8	112	12.5	45

TABLE 32

Median years to doctorate, by sex, citizenship status, ethnicity, race, and broad field of study: 2018

(Median years and number)

Time to degree and demographic characteristic	All fields		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number
Other race or race not reported	9.6	344	9.2	95	7.6	26	D	D	9.8	72	7.3	55	19.3	27	13.0	27	D	D
Ethnicity not reported	9.4	425	8.3	90	6.6	43	8.0	23	9.5	76	7.4	61	14.3	49	12.6	55	11.4	28
Years since entering graduate school																		
All doctorate recipients ^d	7.3	50,736	6.8	11,945	6.3	5,933	6.8	3,731	7.8	8,025	6.7	9,416	11.9	4,429	9.4	4,673	9.2	2,584
Sex																		
Male	7.3	27,469	6.8	5,287	6.3	3,939	6.8	2,821	7.9	3,305	6.8	7,162	11.5	1,365	9.6	2,320	9.2	1,270
Female	7.8	23,260	6.9	6,655	6.0	1,994	6.9	910	7.8	4,719	6.3	2,253	12.0	3,064	9.3	2,353	9.3	1,312
Citizenship status																		
U.S. citizen or permanent resident	7.3	33,736	6.7	8,683	6.0	3,640	6.8	1,673	7.8	6,303	6.3	4,055	12.3	3,836	9.3	3,942	9.8	1,604
Temporary visa holder	7.5	16,595	7.7	3,188	6.9	2,264	7.0	2,015	8.7	1,665	6.9	5,283	9.3	555	9.8	682	8.7	943
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	7.5	2,454	6.8	642	6.0	212	6.8	90	7.8	539	6.0	273	11.3	293	9.2	330	9.8	75
Not Hispanic or Latino																		
American Indian or Alaska Native	9.3	100	9.3	20	D	D	D	D	8.7	28	D	D	13.2	20	13.8	11	D	D
Asian	7.3	3,187	6.9	969	6.3	347	7.1	227	7.9	453	6.7	658	12.7	193	10.3	190	9.5	150

TABLE 32

Median years to doctorate, by sex, citizenship status, ethnicity, race, and broad field of study: 2018

(Median years and number)

Time to degree and demographic characteristic	All fields		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number
Black or African American	9.7	2,340	7.8	563	6.8	98	7.6	63	9.3	499	6.8	162	13.3	559	9.8	194	12.8	202
White	7.3	24,081	6.5	6,085	5.9	2,840	6.6	1,202	7.3	4,438	6.0	2,756	12.3	2,603	9.2	3,066	9.3	1,091
More than one race	7.0	1,101	6.3	285	5.8	101	6.0	58	7.8	252	6.0	129	10.7	117	9.5	112	9.0	47
Other race or race not reported	8.3	296	7.3	83	D	D	D	D	8.0	63	D	D	17.7	27	11.8	24	D	D
Ethnicity not reported	8.0	177	7.0	36	6.0	16	6.8	12	8.2	31	7.8	28	12.1	24	11.7	15	8.0	15
Years since entering doctoral program ^e																		
All doctorate recipients ^f	5.8	49,521	5.5	11,718	5.7	5,807	5.7	3,652	6.0	7,805	5.3	9,166	5.8	4,312	6.8	4,561	5.2	2,500
Sex																		
Male	5.7	26,775	5.5	5,171	5.8	3,853	5.7	2,766	5.9	3,213	5.3	6,967	5.7	1,327	6.8	2,258	5.0	1,220
Female	5.8	22,739	5.5	6,544	5.4	1,954	5.8	886	6.0	4,591	5.2	2,198	5.8	2,985	6.8	2,303	5.3	1,278
Citizenship status																		
U.S. citizen or permanent resident	5.8	32,906	5.7	8,511	5.7	3,567	5.8	1,643	6.0	6,113	5.3	3,946	5.8	3,731	6.8	3,847	5.3	1,548
Temporary visa holder	5.3	16,225	5.3	3,136	5.6	2,211	5.3	1,966	5.8	1,638	5.0	5,146	5.0	545	6.3	667	5.0	916
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	5.9	2,383	5.8	629	5.8	204	5.8	89	6.0	515	5.3	265	5.8	285	6.8	325	5.3	71

TABLE 32

Median years to doctorate, by sex, citizenship status, ethnicity, race, and broad field of study: 2018

(Median years and number)

Time to degree and demographic characteristic	All fields		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number
Not Hispanic or Latino																		
American Indian or Alaska Native	6.0	96	5.3	19	6.5	7	D	D	6.6	26	D	D	D	D	6.8	11	D	D
Asian	5.8	3,100	5.7	939	5.8	341	5.8	222	6.1	440	5.6	642	5.8	185	7.7	185	5.8	146
Black or African American	5.9	2,240	5.8	546	5.5	94	5.9	63	6.0	477	5.0	156	6.0	528	6.8	188	6.0	188
White	5.8	23,566	5.5	5,987	5.7	2,787	5.8	1,182	6.0	4,327	5.3	2,683	5.8	2,550	6.8	2,989	5.2	1,061
More than one race	5.8	1,079	5.3	281	5.8	100	5.8	55	6.0	245	5.4	127	6.6	115	7.0	111	5.0	45
Other race or race not reported	5.8	272	5.6	75	4.8	19	D	D	6.3	54	D	D	D	D	8.0	23	D	D
Ethnicity not reported	5.9	170	5.7	35	5.9	15	5.5	12	6.8	29	5.3	26	5.7	24	8.6	15	6.2	14

D = suppressed to avoid disclosure of confidential information.

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.^c Includes only cases with valid year of bachelor's award.^d Includes only cases with valid year of entry into graduate school.^e Years since entering doctoral program is based on master's degree program entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.^f Includes only cases with valid year of entry into master's program if master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, includes only cases with valid year of doctoral program entry.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 33

Educational attainment of doctorate recipients' parents, by sex, citizenship status, ethnicity, race, and broad field of study: 2018

(Number and percent distribution)

Demographic characteristic and broad field of study	Total (number)	Parental education attainment (%)						
		All	High school or less	Some college ^a	Bachelor's degree	Master's degree	Professional degree ^b	Research doctoral degree
All doctorate recipients								
Father's education ^c	47,823	100.0	22.9	13.5	27.6	17.5	8.4	10.1
Mother's education ^d	48,129	100.0	27.0	17.2	29.1	17.8	4.4	4.5
Sex								
Male								
Father's education	25,815	100.0	23.4	12.6	27.9	17.3	8.2	10.6
Mother's education	25,909	100.0	28.8	16.4	29.2	17.1	4.5	4.0
Female								
Father's education	22,008	100.0	22.3	14.5	27.2	17.8	8.6	9.5
Mother's education	22,220	100.0	24.9	18.1	29.0	18.6	4.4	5.0
Citizenship status								
U.S. citizen or permanent resident								
Father's education	32,205	100.0	20.6	14.2	24.9	19.0	10.3	10.9
Mother's education	32,529	100.0	21.4	18.8	28.4	21.2	5.2	5.1
Temporary visa holder								
Father's education	15,598	100.0	27.5	11.9	33.1	14.5	4.5	8.5
Mother's education	15,579	100.0	38.8	13.8	30.4	10.8	2.9	3.3
Ethnicity and race (U.S. citizens and permanent residents)								
Hispanic or Latino								
Father's education	2,305	100.0	36.0	16.9	18.9	12.5	8.7	7.1
Mother's education	2,354	100.0	35.4	21.5	21.5	13.5	4.0	4.1
Not Hispanic or Latino								
American Indian or Alaska Native								
Father's education	96	100.0	D	30.2	15.6	8.3	6.3	D
Mother's education	97	100.0	41.2	17.5	18.6	18.6	D	D
Asian								
Father's education	3,012	100.0	18.2	9.6	25.2	19.0	7.2	20.9
Mother's education	3,022	100.0	27.0	13.0	28.6	18.9	6.2	6.4
Black or African American								
Father's education	2,062	100.0	39.4	21.6	17.4	12.6	4.3	4.8
Mother's education	2,163	100.0	33.2	24.7	19.2	15.9	3.2	3.8
White								
Father's education	23,321	100.0	17.9	13.8	26.4	20.3	11.3	10.3
Mother's education	23,467	100.0	18.2	18.8	30.1	22.7	5.2	5.0
More than one race								
Father's education	1,045	100.0	18.0	15.3	21.2	19.0	11.2	15.2
Mother's education	1,064	100.0	18.7	18.8	27.2	21.5	D	D
Other race or race not reported								
Father's education	246	100.0	D	14.6	21.5	16.3	16.3	D
Mother's education	242	100.0	20.7	18.2	31.4	17.8	5.8	6.2
Ethnicity not reported								
Father's education	118	100.0	25.4	9.3	22.0	20.3	10.2	12.7

TABLE 33

Educational attainment of doctorate recipients' parents, by sex, citizenship status, ethnicity, race, and broad field of study: 2018

(Number and percent distribution)

Demographic characteristic and broad field of study	Total (number)	Parental education attainment (%)						
		All	High school or less	Some college ^a	Bachelor's degree	Master's degree	Professional degree ^b	Research doctoral degree
Mother's education	120	100.0	25.8	20.0	20.0	25.8	5.0	3.3
Field of study								
Life sciences ^e								
Father's education	11,369	100.0	22.5	13.5	27.0	17.8	9.3	9.9
Mother's education	11,441	100.0	25.7	17.5	29.2	18.0	5.0	4.6
Physical sciences and earth sciences								
Father's education	5,630	100.0	22.6	13.3	29.4	17.4	7.0	10.3
Mother's education	5,649	100.0	26.3	17.4	30.1	17.3	4.4	4.4
Mathematics and computer sciences								
Father's education	3,474	100.0	22.5	12.7	29.0	17.0	6.9	11.8
Mother's education	3,489	100.0	29.3	14.3	29.8	17.3	4.1	5.2
Psychology and social sciences								
Father's education	7,527	100.0	22.7	13.4	25.5	17.9	10.2	10.3
Mother's education	7,646	100.0	24.8	17.5	28.0	19.3	5.2	5.2
Engineering								
Father's education	8,859	100.0	20.7	12.2	32.7	18.0	5.8	10.6
Mother's education	8,853	100.0	28.9	15.7	32.4	15.8	3.6	3.6
Education								
Father's education	4,151	100.0	31.8	17.9	22.9	14.8	6.9	5.7
Mother's education	4,198	100.0	34.5	21.1	22.8	16.2	2.2	3.1
Humanities and arts								
Father's education	4,440	100.0	19.5	12.5	24.4	19.3	13.4	10.9
Mother's education	4,459	100.0	21.1	17.1	28.7	21.9	6.1	5.1
Other ^f								
Father's education	2,373	100.0	25.6	13.7	25.7	16.2	7.0	11.8
Mother's education	2,394	100.0	29.5	17.3	27.9	16.9	3.5	4.9

D = suppressed to avoid disclosure of confidential information.

^a Includes those who attended college but did not earn a bachelor's.^b Includes professional doctorate such as MD, DDS, DVM, JD, PsyD, DDiv.^c Total count excludes those who did not report father's education and those who reported "not applicable/unknown."^d Total count excludes those who did not report mother's education and those who reported "not applicable/unknown."^e Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^f Includes other non-science and engineering fields not shown separately.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 34

Highest educational attainment of either parent of doctorate recipients: Selected years, 1993–2018

(Percent)

Year	High school or less	Some college ^a	Bachelor's degree	Master's degree	Professional degree ^b	Research doctoral degree
1993	31.2	15.1	20.8	12.8	8.6	11.4
1998	25.8	13.7	22.4	15.5	8.9	13.7
2003	23.2	13.3	23.2	17.2	9.0	14.0
2008	20.8	13.3	25.4	20.4	9.3	10.3
2013	18.5	12.7	25.4	22.4	10.0	10.6
2018	16.2	12.9	26.4	22.1	9.6	12.3

^a Includes those who attended college but did not earn a bachelor's degree.

^b Includes professional doctorate such as MD, DDS, DVM, JD, PsyD, DDiv.

Note(s)

Percentages may not sum to 100 due to rounding and doctorate recipients who reported "not applicable/unknown" for both father's and mother's education.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 35

Doctorate recipients' primary source of financial support, by broad field of study, sex, citizenship status, ethnicity, and race: 2018

(Number and percent)

Broad field of study and primary source of support	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents							
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
All fields (number)	49,005	26,522	22,483	32,726	16,110	2,367	98	3,075	2,213	23,468	1,074	272	159
Teaching assistantships	21.5	21.9	21.1	20.6	23.5	18.3	8.2	18.8	10.8	22.1	19.2	18.4	18.2
Research assistantships or traineeships ^b	33.0	38.0	27.1	26.4	46.4	18.8	D	33.7	15.0	27.5	25.0	D	26.4
Fellowships, scholarships, or dissertation grants	25.3	23.6	27.2	27.8	20.1	37.3	37.8	32.0	27.9	26.0	34.2	26.5	24.5
Own resources	15.2	11.3	19.8	20.7	4.0	21.3	32.7	12.3	41.2	19.8	17.8	30.1	23.3
Employer	2.9	2.7	3.1	4.0	0.6	3.5	D	2.8	4.4	4.2	3.0	D	6.9
Other	2.1	2.5	1.6	0.5	5.4	0.8	0.0	0.4	0.8	0.5	0.9	1.5	0.6
Life sciences (number) ^c	11,581	5,117	6,464	8,441	3,113	621	20	926	539	5,947	280	74	34
Teaching assistantships	13.4	14.4	12.6	12.3	16.1	8.2	D	11.6	5.9	13.5	D	8.1	8.8
Research assistantships or traineeships ^b	35.9	38.4	34.0	32.9	44.2	25.0	25.0	35.3	23.2	34.3	32.1	28.4	29.4
Fellowships, scholarships, or dissertation grants	33.7	33.6	33.9	36.3	26.9	50.6	25.0	40.9	36.5	33.9	40.4	35.1	32.4
Own resources	11.9	8.6	14.5	14.8	3.9	13.0	D	9.3	31.4	14.3	D	25.7	20.6
Employer	2.6	2.1	3.0	3.2	1.0	2.6	0.0	2.6	2.6	3.4	2.1	1.4	8.8
Other	2.5	3.0	2.1	0.5	7.9	0.6	0.0	0.3	0.4	0.6	0.7	1.4	0.0
Physical sciences and earth sciences (number)	5,775	3,832	1,943	3,560	2,201	203	7	340	92	2,786	99	19	14
Teaching assistantships	25.4	25.2	25.7	23.5	28.4	18.2	D	27.4	D	23.3	22.2	21.1	21.4
Research assistantships or traineeships ^b	50.8	53.3	46.0	48.0	55.5	35.5	D	D	25.0	50.0	39.4	52.6	64.3
Fellowships, scholarships, or dissertation grants	18.6	16.0	23.7	22.6	12.1	39.4	D	19.1	44.6	20.9	D	10.5	14.3
Own resources	3.1	3.1	3.1	4.5	0.7	D	0.0	5.0	D	4.4	5.1	10.5	0.0

TABLE 35

Doctorate recipients' primary source of financial support, by broad field of study, sex, citizenship status, ethnicity, and race: 2018

(Number and percent)

Broad field of study and primary source of support	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents							
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Employer	0.9	1.0	0.7	1.3	0.4	D	0.0	D	D	1.4	D	0.0	0.0
Other	1.2	1.4	0.8	0.1	2.9	0.0	0.0	0.3	0.0	*	0.0	5.3	0.0
Mathematics and computer sciences (number)	3,612	2,744	868	1,632	1,961	89	D	220	62	1,176	54	D	11
Teaching assistantships	38.2	37.2	41.1	39.0	37.6	36.0	D	35.0	19.4	41.6	D	31.3	9.1
Research assistantships or traineeships ^b	35.1	36.7	30.0	27.0	41.7	22.5	0.0	33.6	21.0	26.9	20.4	18.8	27.3
Fellowships, scholarships, or dissertation grants	17.3	16.4	20.2	20.2	14.9	27.0	0.0	17.3	40.3	18.2	35.2	31.3	36.4
Own resources	5.1	5.1	5.0	9.0	1.8	6.7	0.0	10.0	D	8.6	D	D	18.2
Employer	2.1	2.4	1.2	4.3	0.3	6.7	D	4.1	D	4.2	D	0.0	0.0
Other	2.3	2.2	2.6	0.6	3.7	1.1	0.0	0.0	0.0	0.6	0.0	0.0	9.1
Psychology and social sciences (number)	7,738	3,186	4,552	6,096	1,619	511	27	437	472	4,322	244	55	28
Teaching assistantships	29.0	31.2	27.4	27.1	35.9	24.5	D	27.7	14.0	28.9	D	36.4	35.7
Research assistantships or traineeships ^b	16.6	15.5	17.4	16.6	17.0	12.7	D	14.9	10.2	18.2	D	9.1	0.0
Fellowships, scholarships, or dissertation grants	27.2	28.3	26.4	25.4	33.9	32.7	40.7	34.1	21.4	23.7	31.6	23.6	25.0
Own resources	23.7	20.5	25.9	28.0	7.2	28.2	33.3	20.1	50.2	26.3	26.6	30.9	35.7
Employer	2.0	2.2	1.8	D	D	D	D	2.5	3.4	2.3	D	0.0	3.6
Other	1.6	2.3	1.1	D	D	D	0.0	0.7	0.8	0.6	1.2	0.0	0.0
Engineering (number)	9,070	6,895	2,175	3,925	5,112	264	6	639	153	2,670	127	41	25
Teaching assistantships	11.3	11.6	10.5	7.8	14.1	6.4	0.0	9.7	7.8	7.7	4.7	2.4	8.0

TABLE 35

Doctorate recipients' primary source of financial support, by broad field of study, sex, citizenship status, ethnicity, and race: 2018

(Number and percent)

Broad field of study and primary source of support	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents							
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Research assistantships or traineeships ^b	58.6	59.6	55.4	48.2	66.7	33.3	D	53.8	33.3	48.9	52.8	D	60.0
Fellowships, scholarships, or dissertation grants	19.9	18.1	25.6	30.8	11.5	44.3	D	27.2	42.5	29.4	D	34.1	20.0
Own resources	4.6	4.7	4.6	7.5	2.4	9.5	D	D	9.8	7.9	D	9.8	8.0
Employer	2.5	2.7	1.9	5.2	0.5	4.9	0.0	D	6.5	5.5	5.5	D	4.0
Other	2.9	3.2	2.0	0.5	4.8	1.5	0.0	0.3	0.0	0.5	0.8	0.0	0.0
Education (number)	4,233	1,298	2,935	3,687	531	284	19	182	518	2,524	114	25	21
Teaching assistantships	11.6	12.9	11.0	10.7	17.7	9.5	0.0	15.4	4.4	11.6	14.0	16.0	14.3
Research assistantships or traineeships ^b	16.4	15.3	16.9	14.8	28.1	11.6	26.3	21.4	10.2	15.5	17.5	8.0	14.3
Fellowships, scholarships, or dissertation grants	13.5	13.3	13.5	11.9	23.7	13.4	36.8	16.5	14.3	10.4	20.2	8.0	19.0
Own resources	45.5	43.0	46.6	49.8	15.8	52.8	36.8	39.6	61.4	48.5	36.8	68.0	28.6
Employer	10.6	11.9	10.0	11.9	1.3	10.6	0.0	5.5	8.5	13.4	9.6	0.0	23.8
Other	2.5	3.5	2.0	0.9	13.4	2.1	0.0	1.6	1.2	0.6	1.8	0.0	0.0
Humanities and arts (number)	4,538	2,244	2,294	3,847	667	324	11	185	188	2,989	112	24	14
Teaching assistantships	40.0	38.3	41.5	39.7	41.2	41.0	D	34.1	D	41.6	31.3	25.0	42.9
Research assistantships or traineeships ^b	1.9	2.0	1.7	1.9	1.6	D	0.0	D	3.2	1.9	D	0.0	7.1
Fellowships, scholarships, or dissertation grants	36.9	36.2	37.5	35.5	45.1	38.3	45.5	47.0	45.2	33.6	44.6	29.2	21.4
Own resources	19.0	20.8	17.3	21.0	7.2	17.9	D	D	26.1	21.0	19.6	41.7	28.6
Employer	1.4	1.4	1.3	D	D	1.5	0.0	D	D	1.6	D	0.0	0.0

TABLE 35

Doctorate recipients' primary source of financial support, by broad field of study, sex, citizenship status, ethnicity, and race: 2018

(Number and percent)

Broad field of study and primary source of support	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents							
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
Other	1.0	1.3	0.6	D	D	D	0.0	0.0	2.1	0.3	0.0	4.2	0.0
Other (number) ^d	2,458	1,206	1,252	1,538	906	71	D	146	189	1,054	44	D	12
Teaching assistantships	23.9	22.1	25.6	21.9	27.5	16.9	0.0	19.2	13.8	24.2	25.0	22.2	8.3
Research assistantships or traineeships ^b	17.7	18.6	16.9	13.7	24.5	D	0.0	15.8	6.3	15.4	D	0.0	8.3
Fellowships, scholarships, or dissertation grants	25.1	28.4	21.9	21.3	31.3	25.4	D	42.5	15.3	19.0	D	16.7	25.0
Own resources	27.2	24.0	30.2	36.9	10.5	D	D	D	59.8	34.5	43.2	D	50.0
Employer	3.6	3.9	3.4	5.3	0.8	D	0.0	D	3.7	6.1	0.0	0.0	8.3
Other	2.6	3.0	2.2	0.9	5.4	0.0	0.0	0.0	1.1	0.9	4.5	5.6	0.0

* = value between 0.00% and 0.05%; D = suppressed to avoid disclosure of confidential information.

^a Includes doctorate recipients with missing citizenship information and who did not report sex.^b Includes research assistantships, other assistantships, traineeships, and internships or clinical residencies.^c Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^d Includes other non-science and engineering fields not shown separately.**Note(s)**

Includes only doctorate recipients who reported primary source of support. Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 36

Doctorate recipients' sources of financial support, by broad field of study and sex: 2018

(Number and percent)

Financial resource	All fields		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Unduplicated total ^c	26,595	22,582	5,128	6,487	3,836	1,949	2,752	872	3,197	4,574	6,917	2,183	1,303	2,957	2,251	2,302	1,211	1,258
Fellowship or scholarship	64.3	68.6	69.2	71.2	60.6	71.8	59.9	61.8	71.1	70.5	57.3	66.7	49.0	49.9	84.3	84.6	66.4	66.5
Dissertation grant	15.4	22.7	14.9	18.4	9.3	11.4	7.9	10.6	28.7	33.0	7.2	10.1	13.3	15.9	41.3	47.7	20.8	26.6
Assistantship																		
Teaching	69.5	65.9	52.0	52.0	86.8	87.5	83.2	86.8	79.6	77.6	63.5	62.4	40.4	39.7	85.8	90.2	67.2	69.0
Research	70.2	61.5	66.2	62.7	89.5	89.8	74.3	71.1	60.3	60.8	84.4	83.9	37.5	39.0	37.3	38.5	58.5	63.0
Other	7.4	10.4	5.3	5.4	4.6	5.0	4.8	4.8	13.6	16.5	5.4	5.2	15.7	16.5	12.0	16.3	9.0	11.3
Traineeship	3.7	5.5	11.5	12.2	1.8	3.0	1.5	1.7	3.2	4.7	2.1	4.3	1.1	1.3	0.8	1.0	1.2	1.3
Internship or clinical residency	9.2	9.9	3.1	3.9	4.5	5.2	22.5	24.3	12.5	23.2	13.3	12.8	5.0	6.0	2.2	4.0	4.8	4.2
Loan (any source)	21.7	31.3	20.4	23.8	12.0	12.6	10.9	12.4	38.6	44.8	10.5	9.3	52.3	51.4	40.9	40.1	34.0	37.8
Personal sources																		
Savings	48.6	55.2	46.3	50.8	35.5	42.9	44.0	40.5	61.6	63.2	42.2	39.8	66.5	67.3	62.8	62.0	66.4	63.4
Other earnings during graduate school	27.1	36.9	22.6	28.0	14.9	17.3	21.7	17.9	40.9	46.4	15.6	14.4	60.9	60.1	55.2	55.7	37.2	40.9
Spouse's, partner's, or family's earnings or savings	35.5	46.9	33.6	42.7	26.3	33.5	28.3	36.9	46.4	56.2	31.5	36.5	41.2	52.4	52.4	55.4	45.2	52.3
Employer reimbursement or assistance	11.0	11.8	10.2	11.7	6.9	6.6	11.3	7.9	10.4	8.4	9.3	7.0	33.1	27.7	10.3	7.6	14.8	13.8
Foreign (non-U.S.) support	8.0	5.5	7.2	5.4	5.9	4.0	8.2	9.1	7.8	4.9	10.4	8.1	6.0	3.7	7.2	6.5	8.9	6.9
Other	1.1	1.2	1.0	1.0	0.5	0.8	0.5	0.8	1.8	1.6	0.7	0.8	2.8	1.9	1.8	1.3	2.0	1.0

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.^c Excludes doctorate recipients who did not report sources of support and those who did not report sex. Percentages based on known responses.**Note(s)**

In this table a respondent counts once in each source category from which he or she received support. Because students indicate multiple sources of support, percentages sum to more than 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 37

Doctorate recipients' sources of financial support, by sex and broad field of study: 2018

(Number and percent distribution)

Sex and financial resource	All fields (number)	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
Male doctorate recipients										
Unduplicated total ^c	26,595	100.0	19.3	14.4	10.3	12.0	26.0	4.9	8.5	4.6
Fellowship or scholarship	17,092	100.0	20.8	13.6	9.6	13.3	23.2	3.7	11.1	4.7
Dissertation grant	4,107	100.0	18.7	8.6	5.3	22.4	12.1	4.2	22.6	6.1
Assistantship										
Teaching	18,495	100.0	14.4	18.0	12.4	13.8	23.8	2.8	10.4	4.4
Research	18,680	100.0	18.2	18.4	11.0	10.3	31.3	2.6	4.5	3.8
Other	1,966	100.0	13.7	9.0	6.7	22.1	18.9	10.4	13.7	5.5
Traineeship	993	100.0	59.2	7.0	4.2	10.3	14.7	1.4	1.7	1.4
Internship or clinical residency	2,441	100.0	6.4	7.0	25.3	16.4	37.7	2.7	2.0	2.4
Loan (any source)	5,778	100.0	18.1	8.0	5.2	21.4	12.5	11.8	15.9	7.1
Personal sources										
Savings	12,920	100.0	18.4	10.5	9.4	15.2	22.6	6.7	10.9	6.2
Other earnings during graduate school	7,201	100.0	16.1	7.9	8.3	18.2	15.0	11.0	17.3	6.2
Spouse's, partner's, or family's earnings or savings	9,439	100.0	18.3	10.7	8.3	15.7	23.1	5.7	12.5	5.8
Employer reimbursement or assistance	2,918	100.0	18.0	9.1	10.7	11.4	22.0	14.8	7.9	6.1
Foreign (non-U.S.) support	2,139	100.0	17.3	10.6	10.5	11.6	33.7	3.6	7.6	5.0
Other	288	100.0	17.7	6.3	4.5	20.1	16.0	12.8	14.2	8.3
Female doctorate recipients										
Unduplicated total ^c	22,582	100.0	28.7	8.6	3.9	20.3	9.7	13.1	10.2	5.6
Fellowship or scholarship	15,491	100.0	29.8	9.0	3.5	20.8	9.4	9.5	12.6	5.4
Dissertation grant	5,137	100.0	23.2	4.3	1.8	29.4	4.3	9.1	21.4	6.5
Assistantship										
Teaching	14,871	100.0	22.7	11.5	5.1	23.9	9.2	7.9	14.0	5.8
Research	13,885	100.0	29.3	12.6	4.5	20.0	13.2	8.3	6.4	5.7
Other	2,359	100.0	14.8	4.1	1.8	32.0	4.8	20.6	15.9	6.0
Traineeship	1,251	100.0	63.5	4.6	1.2	17.1	7.4	3.1	1.8	1.3
Internship or clinical residency	2,230	100.0	11.4	4.6	9.5	47.6	12.6	7.9	4.1	2.4
Loan (any source)	7,069	100.0	21.8	3.5	1.5	29.0	2.9	21.5	13.0	6.7

TABLE 37

Doctorate recipients' sources of financial support, by sex and broad field of study: 2018

(Number and percent distribution)

Sex and financial resource	All fields (number)	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
Personal sources										
Savings	12,463	100.0	26.5	6.7	2.8	23.2	7.0	16.0	11.5	6.4
Other earnings during graduate school	8,324	100.0	21.9	4.0	1.9	25.5	3.8	21.3	15.4	6.2
Spouse's, partner's, or family's earnings or savings	10,595	100.0	26.1	6.2	3.0	24.3	7.5	14.6	12.0	6.2
Employer reimbursement or assistance	2,661	100.0	28.5	4.8	2.6	14.4	5.7	30.8	6.6	6.5
Foreign (non-U.S.) support	1,252	100.0	28.1	6.2	6.3	17.7	14.1	8.6	12.0	6.9
Other	278	100.0	23.0	5.8	2.5	26.3	6.5	20.5	11.2	4.3

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.^c Excludes doctorate recipients who did not report sources of support.**Note(s)**

In this table a recipient counts once in each source category from which he or she received support. Because students indicate multiple sources of support, sum of individual sources of support exceeds unduplicated total. Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 38

Education-related debt of doctorate recipients, by broad field of study: 2018

(Mean debt, number, and percent)

Debt level	Total		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Cumulative debt																		
Mean	\$22,254		\$20,625		\$12,364		\$9,624		\$34,961		\$10,068		\$41,217		\$29,190		\$30,749	
No debt	28,747	57.1	6,668	56.2	3,896	66.0	2,764	74.8	3,575	44.8	6,673	71.4	1,753	39.9	2,104	45.4	1,314	51.5
\$10,000 or less	4,222	8.4	1,030	8.7	508	8.6	245	6.6	623	7.8	822	8.8	342	7.8	467	10.1	185	7.3
\$10,001–\$20,000	3,095	6.1	822	6.9	384	6.5	177	4.8	518	6.5	472	5.0	243	5.5	362	7.8	117	4.6
\$20,001–\$30,000	2,473	4.9	712	6.0	300	5.1	124	3.4	395	5.0	356	3.8	200	4.6	261	5.6	125	4.9
\$30,001–\$40,000	1,780	3.5	444	3.7	222	3.8	82	2.2	292	3.7	243	2.6	199	4.5	215	4.6	83	3.3
\$40,001–\$50,000	1,393	2.8	366	3.1	141	2.4	51	1.4	275	3.4	165	1.8	162	3.7	147	3.2	86	3.4
\$50,001–\$60,000	1,009	2.0	233	2.0	77	1.3	48	1.3	210	2.6	106	1.1	127	2.9	140	3.0	68	2.7
\$60,001–\$70,000	972	1.9	235	2.0	71	1.2	43	1.2	192	2.4	85	0.9	152	3.5	125	2.7	69	2.7
\$70,001–\$80,000	818	1.6	199	1.7	55	0.9	25	0.7	193	2.4	66	0.7	124	2.8	107	2.3	49	1.9
\$80,001–\$90,000	966	1.9	227	1.9	56	0.9	30	0.8	231	2.9	79	0.8	169	3.9	99	2.1	75	2.9
\$90,001 or more	4,902	9.7	933	7.9	197	3.3	108	2.9	1,471	18.4	285	3.0	918	20.9	610	13.2	380	14.9
Total	50,377	100.0	11,869	100.0	5,907	100.0	3,697	100.0	7,975	100.0	9,352	100.0	4,389	100.0	4,637	100.0	2,551	100.0
Graduate debt																		
Mean	\$14,126		\$11,676		\$4,780		\$5,515		\$24,936		\$5,322		\$29,149		\$19,776		\$21,980	
No debt	33,877	67.6	8,402	71.2	4,826	82.2	3,049	82.9	4,173	52.6	7,494	80.6	1,956	44.8	2,554	55.3	1,423	56.1
\$10,000 or less	3,839	7.7	879	7.5	446	7.6	215	5.8	613	7.7	715	7.7	340	7.8	457	9.9	174	6.9
\$10,001–\$20,000	2,170	4.3	457	3.9	181	3.1	106	2.9	421	5.3	313	3.4	255	5.8	303	6.6	134	5.3
\$20,001–\$30,000	1,557	3.1	360	3.1	88	1.5	65	1.8	316	4.0	205	2.2	225	5.2	180	3.9	118	4.7
\$30,001–\$40,000	1,188	2.4	255	2.2	72	1.2	47	1.3	260	3.3	120	1.3	188	4.3	157	3.4	89	3.5
\$40,001–\$50,000	1,026	2.0	243	2.1	50	0.9	33	0.9	236	3.0	94	1.0	175	4.0	120	2.6	75	3.0
\$50,001–\$60,000	929	1.9	185	1.6	49	0.8	33	0.9	226	2.8	77	0.8	154	3.5	131	2.8	74	2.9
\$60,001–\$70,000	762	1.5	154	1.3	30	0.5	26	0.7	196	2.5	51	0.5	152	3.5	103	2.2	50	2.0
\$70,001–\$80,000	649	1.3	139	1.2	32	0.5	19	0.5	173	2.2	42	0.5	118	2.7	82	1.8	44	1.7

TABLE 38

Education-related debt of doctorate recipients, by broad field of study: 2018

(Mean debt, number, and percent)

Debt level	Total		Life sciences ^a		Physical sciences and earth sciences		Mathematics and computer sciences		Psychology and social sciences		Engineering		Education		Humanities and arts		Other ^b	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
\$80,001–\$90,000	931	1.9	175	1.5	29	0.5	23	0.6	263	3.3	63	0.7	176	4.0	117	2.5	85	3.4
\$90,001 or more	3,166	6.3	549	4.7	70	1.2	63	1.7	1,056	13.3	122	1.3	626	14.3	411	8.9	269	10.6
Total	50,094	100.0	11,798	100.0	5,873	100.0	3,679	100.0	7,933	100.0	9,296	100.0	4,365	100.0	4,615	100.0	2,535	100.0
Undergraduate debt																		
Mean	\$8,219		\$9,032		\$7,620		\$4,140		\$10,173		\$4,784		\$12,249		\$9,519		\$8,927	
No debt	36,211	72.0	8,144	68.7	4,308	73.0	3,093	83.8	5,293	66.5	7,660	82.0	2,798	63.9	3,062	66.1	1,853	72.8
\$10,000 or less	3,466	6.9	893	7.5	366	6.2	163	4.4	615	7.7	522	5.6	352	8.0	388	8.4	167	6.6
\$10,001–\$20,000	3,028	6.0	821	6.9	366	6.2	146	4.0	563	7.1	352	3.8	292	6.7	368	7.9	120	4.7
\$20,001–\$30,000	2,400	4.8	664	5.6	284	4.8	107	2.9	464	5.8	254	2.7	250	5.7	274	5.9	103	4.0
\$30,001–\$40,000	1,657	3.3	440	3.7	216	3.7	70	1.9	323	4.1	179	1.9	166	3.8	171	3.7	92	3.6
\$40,001–\$50,000	1,035	2.1	258	2.2	119	2.0	30	0.8	217	2.7	112	1.2	134	3.1	106	2.3	59	2.3
\$50,001–\$60,000	700	1.4	173	1.5	75	1.3	31	0.8	122	1.5	89	1.0	91	2.1	82	1.8	37	1.5
\$60,001–\$70,000	474	0.9	124	1.0	42	0.7	24	0.6	74	0.9	43	0.5	78	1.8	63	1.4	26	1.0
\$70,001–\$80,000	339	0.7	99	0.8	36	0.6	7	0.2	77	1.0	30	0.3	50	1.1	26	0.6	14	0.6
\$80,001–\$90,000	313	0.6	76	0.6	29	0.5	7	0.2	73	0.9	30	0.3	54	1.2	27	0.6	17	0.7
\$90,001 or more	682	1.4	160	1.3	59	1.0	15	0.4	140	1.8	70	0.7	116	2.6	65	1.4	57	2.2
Total	50,305	100.0	11,852	100.0	5,900	100.0	3,693	100.0	7,961	100.0	9,341	100.0	4,381	100.0	4,632	100.0	2,545	100.0

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.**Note(s)**

Mean calculations are based on all valid responses to debt item. See technical notes for details on calculations of means. Percentages may not sum to 100 due to rounding.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 39

Graduate education-related debt of doctorate recipients, by broad field of study: 2009–18

(Number)

Debt level and broad field of study	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All doctorate recipients	45,137	43,898	44,781	46,490	46,449	46,819	48,759	49,767	49,229	50,094
No debt	28,442	28,105	28,663	29,297	28,883	29,333	30,891	31,978	32,606	33,877
\$10,000 or less	3,915	3,510	3,697	4,030	3,931	3,842	4,190	4,069	3,799	3,839
\$10,001–\$30,000	4,582	4,238	4,314	4,565	4,609	4,435	4,464	4,376	3,896	3,727
\$30,001 or more	8,198	8,045	8,107	8,598	9,026	9,209	9,214	9,344	8,928	8,651
Life sciences ^a	10,507	10,466	10,673	11,115	10,867	10,917	11,306	11,633	11,616	11,798
No debt	7,158	7,268	7,451	7,658	7,318	7,427	7,812	8,098	8,214	8,402
\$10,000 or less	930	849	853	943	904	860	941	913	913	879
\$10,001–\$30,000	1,019	944	909	1,001	1,016	997	943	940	817	817
\$30,001 or more	1,400	1,405	1,460	1,513	1,629	1,633	1,610	1,682	1,672	1,700
Physical sciences and earth sciences	4,749	4,629	4,900	5,009	5,005	5,203	5,328	5,748	5,626	5,873
No debt	3,591	3,575	3,734	3,833	3,831	4,023	4,164	4,530	4,585	4,826
\$10,000 or less	434	384	401	426	421	404	460	484	392	446
\$10,001–\$30,000	348	333	353	377	380	365	324	335	298	269
\$30,001 or more	376	337	412	373	373	411	380	399	351	332
Mathematics and computer sciences	2,911	2,956	2,999	3,149	3,273	3,415	3,407	3,589	3,468	3,679
No debt	2,335	2,358	2,381	2,505	2,633	2,685	2,747	2,885	2,835	3,049
\$10,000 or less	193	174	217	202	204	238	222	190	218	215
\$10,001–\$30,000	164	171	178	187	182	189	175	217	175	171
\$30,001 or more	219	253	223	255	254	303	263	297	240	244
Psychology and social sciences	7,105	7,095	7,363	7,598	7,442	7,435	7,853	8,071	7,957	7,933
No debt	3,444	3,415	3,523	3,560	3,446	3,431	3,636	3,964	4,057	4,173
\$10,000 or less	603	556	630	657	615	609	670	687	643	613
\$10,001–\$30,000	865	866	882	983	880	860	947	881	840	737
\$30,001 or more	2,193	2,258	2,328	2,398	2,501	2,535	2,600	2,539	2,417	2,410
Engineering	7,034	6,989	7,363	7,747	7,964	8,445	8,827	8,548	8,854	9,296
No debt	5,340	5,347	5,654	5,907	5,981	6,426	6,787	6,554	7,035	7,494
\$10,000 or less	609	581	635	692	706	746	774	759	678	715
\$10,001–\$30,000	550	528	504	549	615	617	613	568	520	518
\$30,001 or more	535	533	570	599	662	656	653	667	621	569
Education	5,898	4,766	4,255	4,397	4,300	4,079	4,490	4,618	4,299	4,365
No debt	2,967	2,445	2,152	2,115	1,898	1,725	1,942	2,036	1,893	1,956
\$10,000 or less	488	365	312	373	361	347	396	368	340	340
\$10,001–\$30,000	727	556	542	534	574	502	555	557	483	480
\$30,001 or more	1,716	1,400	1,249	1,375	1,467	1,505	1,597	1,657	1,583	1,589
Humanities and arts	4,449	4,577	4,808	5,059	4,974	4,771	4,939	4,951	4,734	4,615
No debt	2,264	2,383	2,459	2,451	2,431	2,325	2,437	2,549	2,544	2,554
\$10,000 or less	472	434	477	539	525	450	543	466	444	457
\$10,001–\$30,000	612	569	657	671	667	629	633	611	509	483
\$30,001 or more	1,101	1,191	1,215	1,398	1,351	1,367	1,326	1,325	1,237	1,121
Other ^b	2,484	2,420	2,420	2,416	2,624	2,554	2,609	2,609	2,675	2,535
No debt	1,343	1,314	1,309	1,268	1,345	1,291	1,366	1,362	1,443	1,423
\$10,000 or less	186	167	172	198	195	188	184	202	171	174
\$10,001–\$30,000	297	271	289	263	295	276	274	267	254	252
\$30,001 or more	658	668	650	687	789	799	785	778	807	686

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 40

Education-related debt of doctorate recipients, by sex, citizenship status, ethnicity, and race: 2018

(Mean debt, number, and percent)

Debt level	Sex				Citizenship status				U.S. citizens and permanent residents															
									Not Hispanic or Latino												Other race or race not reported		Ethnicity not reported	
	Male		Female		U.S. citizen or permanent resident		Temporary visa holder		Hispanic or Latino		American Indian or Alaska Native		Asian		Black or African American		White		More than one race					
Mean	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Mean	\$7,398		\$9,189		\$11,255		\$2,044		\$14,198		\$14,307		\$5,147		\$22,214		\$10,715		\$10,917		\$9,827		\$12,267	
No debt	20,090	73.7	16,121	69.9	21,174	63.0	14,903	90.2	1,321	54.2	52	51.5	2,493	78.6	990	42.6	15,298	63.7	703	63.9	213	73.7	104	64.6
\$10,000 or less	1,863	6.8	1,603	7.0	2,703	8.0	756	4.6	261	10.7	16	15.8	204	6.4	237	10.2	1,863	7.8	96	8.7	13	4.5	13	8.1
\$10,001–\$20,000	1,555	5.7	1,473	6.4	2,724	8.1	299	1.8	230	9.4	7	6.9	189	6.0	197	8.5	1,987	8.3	91	8.3	16	5.5	7	4.3
\$20,001–\$30,000	1,211	4.4	1,189	5.2	2,199	6.5	194	1.2	175	7.2	7	6.9	112	3.5	206	8.9	1,620	6.7	56	5.1	15	5.2	8	5.0
\$30,001–\$40,000	857	3.1	800	3.5	1,522	4.5	127	0.8	133	5.5	5	5.0	52	1.6	178	7.7	1,097	4.6	43	3.9	6	2.1	8	5.0
\$40,001–\$50,000	514	1.9	521	2.3	958	2.9	73	0.4	98	4.0	D	D	39	1.2	114	4.9	659	2.7	D	D	4	1.4	6	3.7
\$50,001–\$60,000	355	1.3	345	1.5	641	1.9	59	0.4	66	2.7	D	D	28	0.9	86	3.7	427	1.8	D	D	4	1.4	7	4.3
\$60,001–\$70,000	211	0.8	263	1.1	445	1.3	27	0.2	39	1.6	5	5.0	14	0.4	73	3.1	296	1.2	16	1.5	1	0.3	1	0.6
\$70,001–\$80,000	168	0.6	171	0.7	320	1.0	19	0.1	28	1.1	D	D	9	0.3	54	2.3	208	0.9	D	D	6	2.1	2	1.2
\$80,001–\$90,000	119	0.4	194	0.8	290	0.9	23	0.1	19	0.8	0	0.0	16	0.5	65	2.8	179	0.7	8	0.7	1	0.3	2	1.2
\$90,001 or more	312	1.1	370	1.6	628	1.9	48	0.3	69	2.8	D	D	17	0.5	126	5.4	380	1.6	D	D	10	3.5	3	1.9
Total	27,255	100.0	23,050	100.0	33,604	100.0	16,528	100.0	2,439	100.0	101	100.0	3,173	100.0	2,326	100.0	24,014	100.0	1,101	100.0	289	100.0	161	100.0

D = suppressed to avoid disclosure of confidential information.

Note(s)

Mean calculations are based on all valid responses to debt item. See technical notes for details on calculations of means.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 41

U.S. citizen and permanent resident doctorate recipients with graduate-school debt, by ethnicity, race, and broad field of study: 2018

(Number and percent)

Ethnicity, race, and debt level	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
All U.S. citizen and permanent resident doctorate recipients									
Total (number) ^c	33,495	8,624	3,622	1,659	6,259	4,030	3,799	3,913	1,589
Debt > \$30,000 (%)	23.3	17.5	7.4	9.3	36.4	8.0	40.3	27.9	39.5
Hispanic or Latino									
Total (number) ^c	2,435	636	212	90	535	272	290	326	74
Debt > \$30,000 (%)	30.1	20.4	11.3	14.4	44.7	11.8	51.4	32.2	54.1
Not Hispanic or Latino									
American Indian or Alaska Native									
Total (number) ^c	100	20	7	D	28	6	20	11	D
Debt > \$30,000 (%)	45.0	65.0	0.0	D	42.9	D	40.0	45.5	D
Asian									
Total (number) ^c	3,166	962	347	224	452	654	192	188	147
Debt > \$30,000 (%)	10.1	8.2	2.6	3.6	22.8	4.9	24.0	11.7	13.6
Black or African American									
Total (number) ^c	2,309	557	95	63	496	161	551	190	196
Debt > \$30,000 (%)	54.0	46.1	18.9	30.2	66.3	18.6	67.9	47.4	66.8
White									
Total (number) ^c	23,945	6,048	2,829	1,194	4,408	2,743	2,585	3,049	1,089
Debt > \$30,000 (%)	21.0	15.7	7.1	9.0	33.2	7.7	34.1	27.0	36.2
More than one race									
Total (number) ^c	1,092	284	99	58	251	126	115	112	47
Debt > \$30,000 (%)	28.6	20.8	12.1	8.6	42.2	7.1	53.0	32.1	51.1
Other race or race not reported									
Total (number) ^c	287	82	19	D	61	42	25	23	D
Debt > \$30,000 (%)	21.3	20.7	10.5	D	26.2	D	28.0	30.4	D
Ethnicity not reported									
Total (number) ^c	161	35	14	9	28	26	21	14	14
Debt > \$30,000 (%)	26.7	25.7	7.1	0.0	50.0	15.4	23.8	21.4	50.0

D = suppressed to avoid disclosure of confidential information.

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.

^b Includes other non-science and engineering fields not shown separately.

^c Includes all persons who responded to the graduate-school debt question, even if they reported they had no debt.

Note(s)

Percentages were calculated based on the number of cases in each category.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 42

Postgraduation commitment of doctorate recipients, by broad field of study: Selected years, 1998–2018

(Number and percent)

Commitment status and year	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
All doctorate recipients (number)									
1998	42,636	8,611	4,566	2,104	7,389	5,922	6,569	5,352	2,123
2003	40,762	8,506	3,971	1,859	7,098	5,279	6,651	5,272	2,126
2008	48,776	11,086	4,946	3,187	7,635	7,863	6,561	4,736	2,762
2013	52,703	12,207	5,584	3,660	8,580	9,000	4,934	5,715	3,023
2018	55,195	12,780	6,335	4,030	8,899	10,183	4,834	5,145	2,989
All responses to postgraduation commitment									
1998	38,244	7,817	4,156	1,897	6,491	5,335	5,792	4,862	1,894
2003	36,868	7,865	3,696	1,701	6,328	4,872	5,749	4,818	1,839
2008	44,018	10,143	4,509	2,900	6,809	7,095	5,856	4,273	2,433
2013	47,836	11,244	5,149	3,341	7,697	8,149	4,441	5,124	2,691
2018	50,390	11,868	5,904	3,701	7,978	9,340	4,402	4,641	2,556
Definite commitment for employment or postdoctoral study (%) ^c									
1998	69.7	71.8	72.4	69.7	67.8	69.8	73.7	58.6	77.1
2003	71.3	72.1	73.5	73.8	73.2	64.6	75.7	64.2	77.6
2008	69.2	65.8	71.3	70.9	72.7	65.1	73.7	64.6	77.1
2013	62.6	58.5	64.0	68.6	68.9	59.5	65.8	55.0	71.1
2018	68.2	65.5	67.0	75.1	73.8	65.5	71.0	59.1	76.7
No definite commitment for employment or postdoctoral study (%) ^{c,d}									
1998	30.3	28.2	27.6	30.3	32.2	30.2	26.3	41.4	22.9
2003	28.7	27.9	26.5	26.2	26.8	35.4	24.3	35.8	22.4
2008	30.8	34.2	28.7	29.1	27.3	34.9	26.3	35.4	22.9
2013	37.4	41.5	36.0	31.4	31.1	40.5	34.2	45.0	28.9
2018	31.8	34.5	33.0	24.9	26.2	34.5	29.0	40.9	23.3

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.^c Percentages based on number responding to the survey item on postgraduation commitment.^d Includes respondents who indicated "other" in all years, respondents who indicated "do not plan to work or study" in 2004 and later years, and respondents who indicated definite plans for "other full-time degree program" in 2007 and later years.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 43

Postgraduation commitment of doctorate recipients, by sex, citizenship status, ethnicity, and race: Selected years, 1998–2018

(Number and percent)

Commitment status and year	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents							Ethnicity not reported	
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino							
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported		
All doctorate recipients (number)														
1998	42,636	24,628	17,847	31,204	9,461	1,332	190	2,728	1,603	24,284	na	416	651	
2003	40,762	22,256	18,506	28,170	10,597	1,435	136	2,033	1,723	21,162	363	354	964	
2008	48,776	26,271	22,494	30,844	15,261	1,773	115	2,507	1,961	22,835	506	343	804	
2013	52,703	28,326	24,365	33,964	15,674	2,135	119	2,892	2,172	24,749	858	279	760	
2018	55,195	29,798	25,368	35,404	17,604	2,582	115	3,305	2,456	24,951	1,102	371	522	
All responses to postgraduation commitment														
1998	38,244	22,168	16,041	29,377	8,799	1,212	173	2,579	1,487	23,250	na	388	288	
2003	36,868	20,192	16,676	26,824	9,980	1,364	124	1,979	1,614	20,700	362	335	346	
2008	44,018	23,611	20,407	29,566	14,377	1,647	111	2,404	1,873	22,311	496	317	407	
2013	47,836	25,717	22,118	32,771	14,925	2,052	115	2,845	2,110	24,305	852	250	242	
2018	50,390	27,287	23,103	33,689	16,545	2,443	101	3,183	2,338	24,061	1,101	294	168	
Definite commitment for employment or postdoctoral study (%) ^b														
1998	69.7	70.5	68.5	71.0	65.5	70.3	62.4	66.2	65.6	72.2	na	63.1	63.9	
2003	71.3	72.3	70.2	72.5	68.2	70.6	66.1	65.9	69.0	73.8	70.7	63.6	68.2	
2008	69.2	70.1	68.2	70.6	66.4	65.9	73.9	61.9	65.0	72.5	67.9	64.7	64.4	
2013	62.6	64.0	61.1	63.7	60.3	58.0	58.3	55.0	55.6	66.1	60.4	60.4	59.5	
2018	68.2	69.0	67.2	68.2	68.0	66.7	66.3	63.8	62.5	69.5	69.7	69.0	64.3	
No definite commitment for employment or postdoctoral study (%) ^{b,c}														
1998	30.3	29.5	31.5	29.0	34.5	29.7	37.6	33.8	34.4	27.8	na	36.9	36.1	
2003	28.7	27.7	29.8	27.5	31.8	29.4	33.9	34.1	31.0	26.2	29.3	36.4	31.8	
2008	30.8	29.9	31.8	29.4	33.6	34.1	26.1	38.1	35.0	27.5	32.1	35.3	35.6	
2013	37.4	36.0	38.9	36.3	39.7	42.0	41.7	45.0	44.4	33.9	39.6	39.6	40.5	
2018	31.8	31.0	32.8	31.8	32.0	33.3	33.7	36.2	37.5	30.5	30.3	31.0	35.7	

na = not applicable; respondents were instructed to indicate only one race.

^a Includes respondents who did not report sex and respondents who did not report citizenship status.

^b Percentages based on number responding to the survey item on postgraduation commitment.

^c Includes respondents who indicated "other" in all years, respondents who indicated "do not plan to work or study" in 2004 and later years, and respondents who indicated definite plans for "other full-time degree program" in 2007 and later years.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 44

Postgraduation plans of doctorate recipients with definite commitments, by broad field of study: Selected years, 1998–2018

(Number and percent)

Definite commitment, plan, and year	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
All definite commitments (number)									
1998	26,644	5,609	3,011	1,322	4,404	3,722	4,266	2,849	1,461
2003	26,299	5,669	2,717	1,256	4,634	3,148	4,354	3,094	1,427
2008	30,467	6,675	3,216	2,057	4,947	4,619	4,315	2,761	1,877
2013	29,969	6,577	3,295	2,293	5,301	4,850	2,922	2,818	1,913
2018	34,343	7,770	3,956	2,778	5,891	6,120	3,124	2,744	1,960
Reported type of plan									
1998	26,141	5,545	2,989	1,307	4,321	3,693	4,096	2,762	1,428
2003	26,213	5,653	2,714	1,250	4,625	3,138	4,325	3,087	1,421
2008	29,533	6,511	3,153	2,005	4,777	4,484	4,122	2,672	1,809
2013	27,703	6,185	3,151	2,173	4,851	4,531	2,643	2,496	1,673
2018	34,289	7,754	3,950	2,775	5,880	6,109	3,121	2,742	1,958
Employment (%) ^c									
1998	71.0	39.1	44.0	77.7	75.9	80.3	95.5	91.9	95.7
2003	67.2	37.3	38.8	65.0	72.2	68.4	94.0	89.5	94.1
2008	64.2	34.5	35.2	66.0	67.8	69.7	94.9	86.8	93.1
2013	60.6	35.7	33.5	64.8	63.8	64.7	92.2	84.9	92.1
2018	61.4	40.5	41.6	68.0	60.8	65.8	91.0	79.6	91.0
Postdoctoral study (%) ^c									
1998	29.0	60.9	56.0	22.3	24.1	19.7	4.5	8.1	4.3
2003	32.8	62.7	61.2	35.0	27.8	31.6	6.0	10.5	5.9
2008	35.8	65.5	64.8	34.0	32.2	30.3	5.1	13.2	6.9
2013	39.4	64.3	66.5	35.2	36.2	35.3	7.8	15.1	7.9
2018	38.6	59.5	58.4	32.0	39.2	34.2	9.0	20.4	9.0

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.^c Percentages based on number reporting definite postgraduation commitments with response to type of plan (employment or postdoctoral study).**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 45

**Postgraduation plans of doctorate recipients with definite commitments, by sex, citizenship status, ethnicity, and race:
Selected years, 1998–2018**

(Number and percent)

Definite commitment, plan, and year	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents							Ethnicity not reported
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino						
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported	
All definite commitments (number)													
1998	26,644	15,635	10,987	20,848	5,762	852	108	1,708	975	16,776	na	245	184
2003	26,299	14,595	11,704	19,449	6,804	963	82	1,304	1,114	15,281	256	213	236
2008	30,467	16,547	13,920	20,860	9,552	1,085	82	1,489	1,218	16,182	337	205	262
2013	29,969	16,459	13,509	20,880	8,994	1,190	67	1,565	1,173	16,075	515	151	144
2018	34,343	18,818	15,525	22,982	11,244	1,630	67	2,031	1,462	16,714	767	203	108
Reported type of plan													
1998	26,141	15,386	10,736	20,459	5,654	832	105	1,691	928	16,488	na	240	175
2003	26,213	14,549	11,664	19,402	6,772	960	82	1,298	1,110	15,254	255	211	232
2008	29,533	16,102	13,431	20,174	9,305	1,042	77	1,452	1,164	15,664	324	199	252
2013	27,703	15,302	12,400	19,161	8,448	1,047	59	1,436	1,072	14,800	476	140	131
2018	34,289	18,786	15,503	22,944	11,229	1,627	67	2,028	1,459	16,688	766	201	108
Employment (%) ^b													
1998	71.0	69.7	72.9	73.7	61.3	75.0	82.9	61.6	83.4	74.3	na	66.7	76.0
2003	67.2	64.7	70.4	70.9	56.7	72.9	81.7	59.2	77.7	71.6	62.4	63.5	66.8
2008	64.2	62.4	66.3	67.4	57.3	63.3	D	60.9	73.6	67.9	64.5	63.3	65.5
2013	60.6	60.5	60.7	63.1	54.9	59.4	62.7	58.6	70.7	63.4	56.3	66.4	64.9
2018	61.4	61.5	61.4	63.0	58.2	60.4	80.6	57.8	73.0	62.9	61.6	72.6	69.4
Postdoctoral study (%) ^b													
1998	29.0	30.3	27.1	26.3	38.7	25.0	17.1	38.4	16.6	25.7	na	33.3	24.0
2003	32.8	35.3	29.6	29.1	43.3	27.1	18.3	40.8	22.3	28.4	37.6	36.5	33.2
2008	35.8	37.6	33.7	32.6	42.7	36.7	D	39.1	26.4	32.1	35.5	36.7	34.5
2013	39.4	39.5	39.3	36.9	45.1	40.6	37.3	41.4	29.3	36.6	43.7	33.6	35.1
2018	38.6	38.5	38.6	37.0	41.8	39.6	19.4	42.2	27.0	37.1	38.4	27.4	30.6

D = suppressed to avoid disclosure of confidential information; na = not applicable; respondents were instructed to indicate only one race.

^a Includes respondents who did not report sex and respondents who did not report citizenship status.

^b Percentages based on number reporting definite commitments and type of plan (employment or postdoctoral study).

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 46

Employment sector of doctorate recipients with definite postgraduation commitments for employment in the United States, by broad field of study: Selected years, 1998–2018

(Number and percent)

Employment commitment, sector, and year	Total	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
All U.S. employment commitments (number)									
1998	16,603	1,817	1,204	917	2,881	2,586	3,678	2,305	1,215
2003	15,636	1,755	970	725	2,889	1,744	3,829	2,564	1,160
2008	17,273	1,995	1,021	1,219	2,835	2,805	3,760	2,148	1,490
2013	15,033	1,971	965	1,310	2,639	2,595	2,321	1,932	1,300
2018	18,922	2,817	1,515	1,721	3,072	3,626	2,656	1,993	1,522
Academe (%) ^c									
1998	45.7	41.8	19.8	43.9	51.4	11.5	46.5	78.6	72.8
2003	54.4	50.7	25.8	63.6	58.2	21.7	48.5	81.4	77.5
2008	51.1	48.6	26.0	39.7	62.4	15.1	50.8	85.1	78.9
2013	50.2	46.2	24.5	35.2	60.0	13.6	58.6	82.2	81.3
2018	43.2	39.7	18.7	30.8	54.5	12.9	55.3	74.5	75.4
Government (%) ^c									
1998	7.1	11.1	7.4	6.1	10.8	10.8	4.1	1.8	4.8
2003	7.5	13.4	11.9	5.7	9.8	12.6	4.4	1.7	5.8
2008	6.2	12.0	8.3	3.6	9.5	7.3	3.7	1.8	3.7
2013	7.5	12.3	9.3	4.1	11.9	9.5	3.2	2.3	4.8
2018	6.8	9.3	7.1	4.1	10.4	7.5	4.7	2.8	5.2
Industry or business (%) ^{c,d}									
1998	28.7	28.6	66.1	44.8	19.0	73.7	6.9	7.3	14.0
2003	20.8	25.0	58.4	28.7	17.2	62.7	4.7	5.2	11.4
2008	27.0	28.1	59.2	53.1	14.1	73.7	4.0	3.1	11.7
2013	30.1	29.3	62.2	57.0	15.1	73.2	4.5	4.5	8.2
2018	36.8	37.5	67.7	61.2	21.2	74.4	6.5	6.9	11.6
Nonprofit organization (%) ^c									
1998	5.3	6.8	1.5	1.6	10.5	2.2	4.8	5.1	5.1
2003	6.0	8.5	2.9	2.1	9.8	2.5	4.4	7.7	4.0
2008	4.7	7.5	2.9	1.8	8.3	2.4	4.1	4.8	2.9
2013	5.6	9.3	2.1	2.3	9.2	2.9	5.1	5.8	4.0
2018	6.4	10.0	3.2	2.4	8.6	3.4	7.9	8.3	4.3
Other or unknown (%) ^{c,e}									
1998	13.1	11.7	5.2	3.5	8.3	1.8	37.6	7.2	3.3

TABLE 46

Employment sector of doctorate recipients with definite postgraduation commitments for employment in the United States, by broad field of study: Selected years, 1998–2018

(Number and percent)

Employment commitment, sector, and year	Total	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
2003	11.4	2.3	1.1	0.0	5.0	0.5	38.0	4.1	1.4
2008	11.0	3.8	3.6	1.8	5.7	1.5	37.4	5.2	2.8
2013	6.6	2.8	2.0	1.4	3.8	0.7	28.5	5.2	1.8
2018	6.8	3.5	3.4	1.5	5.5	1.8	25.6	7.5	3.5

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.

^b Includes other non-science and engineering fields not shown separately.

^c Percentages based on number reporting definite employment commitments in the United States.

^d Includes doctorate recipients who indicated self-employment.

^e "Other" is mainly composed of elementary and secondary schools.

Note(s)

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 47

Employment sector of doctorate recipients with definite postgraduation commitments for employment in the United States, by sex, citizenship status, ethnicity, and race: Selected years, 1998–2018

(Number and percent)

Employment commitment, sector, and year	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents								
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported	
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported		
All U.S. employment commitments (number)														
1998	16,603	9,334	7,266	14,568	2,022	590	85	957	754	11,909	na	151	122	
2003	15,636	8,097	7,539	13,424	2,192	681	66	717	852	10,674	156	131	147	
2008	17,273	9,001	8,272	13,283	3,961	644	D	843	849	10,407	D	123	160	
2013	15,033	8,133	6,900	11,774	3,200	603	37	802	750	9,155	259	88	80	
2018	18,922	10,161	8,761	14,132	4,727	973	54	1,124	1,053	10,260	458	139	71	
Academe (%) ^b														
1998	45.7	39.6	53.6	48.1	28.9	55.8	52.9	27.3	49.7	49.2	na	49.0	46.7	
2003	54.4	50.4	58.6	54.9	51.1	58.7	48.5	42.0	54.0	55.5	60.9	53.4	59.2	
2008	51.1	44.6	58.2	55.0	37.8	56.7	D	41.9	51.2	56.5	D	53.7	51.3	
2013	50.2	43.2	58.6	54.5	34.8	57.0	62.2	42.3	54.0	55.6	54.8	45.5	45.0	
2018	43.2	36.8	50.6	47.5	30.3	54.0	59.3	35.3	43.9	48.5	51.1	38.8	46.5	
Government (%) ^b														
1998	7.1	8.2	5.8	7.9	1.6	7.1	D	6.7	7.7	8.1	na	D	12.3	
2003	7.5	8.6	6.3	8.5	1.6	7.0	D	9.6	8.8	8.4	D	11.5	5.4	
2008	6.2	6.8	5.6	7.7	1.5	6.5	D	7.9	9.9	7.4	D	6.5	6.9	
2013	7.5	8.2	6.8	9.2	1.4	9.6	D	7.0	11.7	9.2	6.9	D	10.0	
2018	6.8	7.0	6.5	8.7	1.2	8.7	9.3	7.4	13.7	8.2	10.3	9.4	9.9	
Industry or business (%) ^{b,c}														
1998	28.7	38.1	16.7	23.9	63.8	14.2	16.5	52.7	12.9	22.7	na	25.8	24.6	
2003	20.8	27.7	13.3	17.2	42.4	12.5	16.7	38.1	10.3	16.8	13.5	19.8	12.2	
2008	27.0	36.5	16.7	18.4	55.8	15.8	D	40.0	10.7	17.4	D	19.5	19.4	
2013	30.1	39.4	19.1	21.9	60.1	19.1	D	41.6	13.6	21.0	22.4	D	22.5	
2018	36.8	46.1	26.0	27.8	63.8	21.2	D	45.6	17.6	27.7	24.5	D	26.8	
Nonprofit organization (%) ^b														
1998	5.3	4.3	6.5	5.7	2.1	5.6	D	5.2	4.5	5.8	na	D	3.3	
2003	6.0	5.4	6.6	6.5	2.7	6.6	D	6.6	5.0	6.7	D	6.1	4.1	
2008	4.7	4.0	5.5	5.4	2.4	5.9	D	5.0	6.6	5.3	D	6.5	6.3	
2013	5.6	4.5	6.8	6.4	2.5	6.0	13.5	5.5	6.1	6.4	8.1	10.2	12.5	
2018	6.4	5.2	7.7	7.4	3.0	6.5	D	7.7	8.5	7.4	7.0	D	2.8	
Other or unknown (%) ^{b,d}														
1998	13.1	9.9	17.3	14.5	3.6	17.3	18.8	8.2	25.2	14.2	na	13.2	13.1	
2003	11.4	7.9	15.1	12.9	2.2	15.1	16.7	3.8	21.8	12.6	12.2	9.2	19.0	
2008	11.0	8.2	14.0	13.5	2.5	15.1	D	5.2	21.6	13.5	D	13.8	16.3	
2013	6.6	4.8	8.8	8.0	1.3	8.3	5.4	3.6	14.5	7.8	7.7	14.8	10.0	

TABLE 47

Employment sector of doctorate recipients with definite postgraduation commitments for employment in the United States, by sex, citizenship status, ethnicity, and race: Selected years, 1998–2018

(Number and percent)

Employment commitment, sector, and year	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents							Ethnicity not reported	
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino					More than one race		Other race or race not reported
							American Indian or Alaska Native	Asian	Black or African American	White				
2018	6.8	4.8	9.2	8.6	1.6	9.7	7.4	4.0	16.3	8.1	7.2	10.8	14.1	

D = suppressed to avoid disclosure of confidential information.

na = not applicable; respondents were instructed to indicate only one race.

^a Includes respondents who did not report sex and respondents who did not report citizenship.^b Percentages based on number reporting definite employment commitments and sector.^c Includes doctorate recipients who indicated self-employment.^d "Other" is mainly composed of elementary and secondary schools.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 48

Median expected basic annual salary for doctorate recipients with definite postgraduation plans in the United States, by field of study, type of postgraduation plans, and sex: 2018

(Dollars)

Field of study	Total ^a		Employment			Postdoctoral study		
	Male	Female	Total	Male	Female	Total	Male	Female
All fields	65,000	58,000	80,000	90,000	70,000	48,500	50,000	48,000
Science and engineering	66,605	55,500	90,000	98,000	78,000	48,435	50,000	48,000
Life sciences	50,000	50,000	78,000	80,000	75,000	48,000	48,000	48,000
Agricultural sciences and natural resources	52,000	50,000	70,000	75,000	65,000	48,000	48,000	47,500
Biological and biomedical sciences	50,000	50,000	78,000	85,000	72,000	48,000	48,000	48,000
Health sciences	60,000	66,000	80,000	82,000	80,000	48,000	48,000	49,000
Physical sciences and earth sciences	60,000	59,080	90,000	97,000	80,000	50,000	50,000	50,000
Chemistry	50,000	56,000	85,000	90,000	80,000	48,000	48,000	48,000
Geosciences, atmospheric sciences, and ocean sciences	55,000	56,000	70,000	80,000	66,000	52,000	50,273	53,000
Physics and astronomy	67,800	64,000	103,820	102,350	105,000	55,000	54,000	56,000
Mathematics and computer sciences	90,000	82,500	113,000	115,000	102,500	60,000	60,000	60,000
Psychology and social sciences	62,500	53,000	70,000	75,000	66,500	47,700	48,000	47,500
Psychology	50,000	48,000	66,000	68,000	65,000	47,400	47,484	47,000
Economics	105,500	92,000	110,000	114,500	100,000	65,000	65,000	65,000
Social sciences ^b	60,000	60,000	64,500	65,000	63,000	50,000	50,000	50,000
Engineering	88,200	80,000	100,000	102,000	98,000	50,000	50,000	50,000
Non-science and engineering	63,000	60,000	65,000	66,500	64,000	50,000	50,000	49,000
Education	70,000	65,000	68,000	70,000	66,500	50,000	50,000	50,000
Humanities and arts	50,000	50,252	53,000	52,750	53,000	47,000	47,000	47,000
Business management and administration	125,000	120,000	125,000	125,000	122,488	65,000	65,000	65,000
Other non-S&E fields ^c	64,000	63,000	65,000	65,000	65,000	50,000	50,000	50,000

S&E = science and engineering.

^a Includes doctorate recipients who did not report type of postgraduation plan.^b Excludes economics, which is usually included within social sciences.^c Excludes business management and administration, which is usually included within other non-S&E fields.**Note(s)**

Basic annual salary is based on the job or postdoctoral study expected to hold in the next year. Median salaries in this table are the exact salary values of respondents at the 50th percentile of their frequency distribution; salary values are rounded to the nearest dollar. See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 49

Median expected basic annual salary for doctorate recipients with definite postgraduation plans for employment in the United States, by field of study and employment sector: 2018

(Dollars)

Field of study	Total ^a	Academe	Industry or business ^b	Government	Nonprofit organization	Other or unknown ^c
All fields	80,000	63,000	105,000	83,000	80,000	70,000
Science and engineering	90,000	65,000	108,922	84,142	85,000	65,000
Life sciences	78,000	65,000	95,000	73,232	83,100	59,000
Agricultural sciences and natural resources	70,000	62,000	85,000	65,000	62,000	70,000
Biological and biomedical sciences	78,000	58,500	96,500	70,000	73,500	50,000
Health sciences	80,000	70,000	100,000	82,500	100,000	81,000
Physical sciences and earth sciences	90,000	53,930	100,000	72,200	95,000	54,500
Chemistry	85,000	51,250	95,000	72,000	58,500	54,500
Geosciences, atmospheric sciences, and ocean sciences	70,000	57,000	115,000	66,000	66,000	53,000
Physics and astronomy	103,820	52,500	110,000	85,000	116,500	56,000
Mathematics and computer sciences	113,000	72,000	130,000	100,000	114,500	66,250
Psychology and social sciences	70,000	63,000	98,000	80,000	75,000	65,500
Psychology	66,000	60,000	87,500	70,000	67,000	64,122
Economics	110,000	90,000	136,875	105,500	120,000	116,340
Social sciences ^d	64,500	60,000	90,000	80,000	75,000	65,000
Engineering	100,000	81,000	108,000	100,000	100,000	75,000
Non-science and engineering	65,000	61,000	80,000	80,000	70,000	74,000
Education	68,000	62,000	81,000	81,500	76,944	77,000
Humanities and arts	53,000	52,000	50,400	69,000	56,700	55,000
Business management and administration	125,000	125,000	130,000	107,500	117,000	119,500
Other non-S&E fields ^e	65,000	63,000	80,000	80,000	75,000	62,000

S&E = science and engineering.

^a Includes doctorate recipients who did not report employment sector.^b Includes doctorate recipients who indicated self-employment.^c "Other" is mainly composed of elementary and secondary schools.^d Excludes economics, which is usually included within social sciences.^e Excludes business management and administration, which is usually included within other non-S&E fields.**Note(s)**

Basic annual salary is based on the job expected to hold in the next year. Median salaries in this table are the exact salary values of respondents at the 50th percentile of their frequency distribution; salary values are rounded to the nearest dollar. See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 50

Sources of support for doctorate recipients with postgraduation commitments for postdoctoral study, by sex, citizenship status, ethnicity, and race: Selected years, 1998–2018

(Number and percent)

Postgraduate study commitments, source of support, and year	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents								
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino						Ethnicity not reported	
							American Indian or Alaska Native	Asian	Black or African American	White	More than one race	Other race or race not reported		
All postgraduate study commitments (number)														
1998	7,581	4,664	2,914	5,383	2,186	208	18	649	154	4,232	na	80	42	
2003	8,588	5,141	3,447	5,642	2,933	260	15	530	248	4,339	96	77	77	
2008	10,573	6,050	4,523	6,581	3,976	382	D	568	307	5,027	D	73	87	
2013	10,913	6,044	4,869	7,079	3,811	425	22	595	314	5,422	208	47	46	
2018	13,219	7,238	5,981	8,487	4,692	644	13	855	394	6,199	294	55	33	
U.S. government (%) ^b														
1998	36.4	36.6	36.0	42.3	22.0	34.6	50.0	39.1	36.4	43.6	na	27.5	45.2	
2003	32.9	33.7	31.8	39.8	19.8	36.2	53.3	40.0	28.2	40.9	42.7	27.3	29.9	
2008	29.2	28.9	29.5	35.3	19.1	35.6	D	34.2	32.2	36.2	D	30.1	17.2	
2013	31.3	30.5	32.3	37.2	20.4	34.1	D	32.9	36.6	37.9	40.4	D	23.9	
2018	30.1	29.0	31.4	37.1	17.5	37.0	38.5	33.6	28.7	38.2	35.4	40.0	39.4	
College or university (%) ^b														
1998	31.5	33.6	28.1	26.8	43.0	35.1	22.2	27.6	24.0	26.3	na	36.3	21.4	
2003	41.5	42.8	39.7	35.0	54.1	37.3	20.0	36.2	39.5	34.6	30.2	40.3	29.9	
2008	45.3	46.3	44.0	40.2	53.6	39.5	36.4	43.3	46.6	39.1	46.1	53.4	43.7	
2013	43.6	45.3	41.4	38.9	52.3	41.6	40.9	40.3	41.1	38.5	40.4	34.0	32.6	
2018	41.1	43.3	38.6	35.9	50.9	38.0	D	36.6	43.1	35.2	37.1	D	24.2	
Private foundation (%) ^b														
1998	9.8	9.5	10.3	9.7	10.0	8.7	5.6	10.8	10.4	9.5	na	11.3	9.5	
2003	5.8	5.3	6.6	6.4	4.8	6.9	6.7	4.3	6.9	6.5	8.3	7.8	7.8	
2008	5.0	4.7	5.5	5.5	4.3	5.0	D	4.0	3.9	5.7	D	0.0	10.3	
2013	4.7	4.1	5.5	5.4	3.5	4.5	D	4.4	4.5	5.6	5.8	D	17.4	
2018	4.5	4.1	5.0	5.3	3.0	4.3	0.0	5.3	4.6	5.6	4.4	0.0	3.0	
Nonprofit, other than private foundation (%) ^b														
1998	3.1	2.8	3.4	2.6	4.2	1.0	0.0	2.5	3.2	2.7	na	0.0	2.4	
2003	3.7	3.0	4.9	3.8	3.6	3.8	0.0	3.8	4.8	3.8	4.2	3.9	2.6	
2008	3.1	2.6	3.8	2.8	3.5	2.9	D	1.9	4.6	2.8	D	4.1	4.6	
2013	3.6	2.7	4.7	3.7	3.4	3.1	0.0	4.7	3.5	3.8	2.4	4.3	4.3	
2018	3.0	2.4	3.8	3.4	2.3	4.0	D	2.8	5.6	3.3	3.1	D	6.1	
Other (%) ^b														
1998	7.4	6.8	8.4	7.0	8.4	10.1	5.6	6.3	5.8	7.1	na	8.8	2.4	
2003	8.8	8.8	8.7	8.0	10.4	6.9	6.7	8.9	8.1	7.9	7.3	6.5	13.0	

TABLE 50

Sources of support for doctorate recipients with postgraduation commitments for postdoctoral study, by sex, citizenship status, ethnicity, and race: Selected years, 1998–2018

(Number and percent)

Postgraduate study commitments, source of support, and year	Total ^a	Sex		Citizenship status		U.S. citizens and permanent residents								
		Male	Female	U.S. citizen or permanent resident	Temporary visa holder	Hispanic or Latino	Not Hispanic or Latino					More than one race	Other race or race not reported	Ethnicity not reported
							American Indian or Alaska Native	Asian	Black or African American	White				
2008	10.2	11.0	9.2	9.2	12.0	7.3	D	8.5	5.2	9.5	D	6.8	14.9	
2013	9.4	10.1	8.5	7.9	12.1	9.2	0.0	8.9	5.4	8.0	4.3	8.5	10.9	
2018	8.5	8.8	8.1	7.0	11.0	4.8	7.7	7.7	7.6	7.1	7.1	7.3	6.1	
Unknown (%) ^b														
1998	11.9	10.6	13.9	11.6	12.4	10.6	16.7	13.7	20.1	10.8	na	16.3	19.0	
2003	7.2	6.4	8.3	7.1	7.2	8.8	13.3	6.8	12.5	6.5	7.3	14.3	16.9	
2008	7.2	6.6	8.0	7.1	7.5	9.7	D	8.1	7.5	6.7	D	5.5	9.2	
2013	7.4	7.3	7.5	6.8	8.3	7.5	4.5	8.7	8.9	6.3	6.7	17.0	10.9	
2018	12.7	12.4	13.2	11.2	15.2	11.8	0.0	14.0	10.4	10.6	12.9	23.6	21.2	

D = suppressed to avoid disclosure of confidential information; na = not applicable; respondents were instructed to indicate only one race.

^a Includes respondents who did not report sex and respondents who did not report citizenship status.^b Percentages based on number reporting definite commitments for postdoctoral study or training.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2018

(Number)

Citizenship status and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
All doctorate recipients ^c	55,195	34,289	30,762	11,840	8,172	6,967	3,783	3,514	13
Life sciences	12,780	7,754	7,170	4,353	1,119	1,055	643	583	1
Agricultural sciences and natural resources	1,445	865	708	338	137	136	97	157	0
Biological and biomedical sciences	8,801	5,308	4,994	3,492	465	738	299	313	1
Health sciences	2,534	1,581	1,468	523	517	181	247	113	0
Physical sciences and earth sciences	6,335	3,950	3,480	1,965	283	1,025	207	469	1
Chemistry	2,810	1,696	1,550	833	129	514	74	146	0
Geosciences, atmospheric sciences, and ocean sciences	1,185	751	659	420	76	97	66	92	0
Physics and astronomy	2,340	1,503	1,271	712	78	414	67	231	1
Mathematics and computer sciences	4,030	2,775	2,443	722	530	1,053	138	332	0
Computer and information sciences	2,004	1,370	1,243	233	258	682	70	127	0
Mathematics and statistics	2,026	1,405	1,200	489	272	371	68	205	0
Psychology and social sciences	8,899	5,880	5,140	2,068	1,673	650	749	737	3
Psychology	3,837	2,581	2,477	1,460	438	283	296	103	1
Anthropology	424	233	189	77	76	16	20	43	1
Economics	1,247	940	667	105	285	179	98	273	0
Political science and government	734	494	411	127	191	33	60	83	0
Sociology	669	444	402	102	232	24	44	42	0
Other social sciences	1,988	1,188	994	197	451	115	231	193	1
Engineering	10,183	6,109	5,507	1,881	466	2,699	461	598	4
Aerospace, aeronautical, and astronautical engineering	383	245	228	64	23	85	56	16	1
Bioengineering and biomedical engineering	1,134	634	577	326	42	186	23	57	0
Chemical engineering	981	551	513	188	18	284	23	37	1
Civil engineering	677	396	336	135	44	127	30	59	1
Electrical, electronics, and communications engineering	1,951	1,289	1,180	264	66	756	94	109	0
Industrial and manufacturing engineering	272	166	141	28	36	65	12	25	0
Materials science engineering	995	561	513	211	23	247	32	48	0
Mechanical engineering	1,504	862	784	289	85	341	69	78	0

TABLE 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2018

(Number)

Citizenship status and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Other engineering	2,286	1,405	1,235	376	129	608	122	169	1
Education	4,834	3,121	2,913	257	1,468	172	1,016	207	1
Education administration	898	583	558	16	238	26	278	25	0
Education research	2,507	1,628	1,518	168	755	106	489	109	1
Teacher education	97	60	D	D	29	8	19	D	0
Teaching fields	963	654	594	50	360	22	162	60	0
Other education	369	196	D	D	86	10	68	D	0
Humanities and arts	5,145	2,742	2,437	444	1,485	137	371	303	2
Foreign languages and literature	617	346	305	52	212	7	34	41	0
History	948	510	441	124	229	18	70	67	2
Letters	1,442	787	725	110	505	43	67	62	0
Other humanities and arts	2,138	1,099	966	158	539	69	200	133	0
Other ^d	2,989	1,958	1,672	150	1,148	176	198	285	1
Business management and administration	1,481	1,063	867	51	640	106	70	195	1
Communication	631	395	363	38	274	31	20	32	0
Non-S&E fields nec	877	500	442	61	234	39	108	58	0
U.S. citizen or permanent resident	35,404	22,944	22,002	7,870	6,716	3,929	3,487	937	5
Life sciences	9,041	5,671	5,492	3,120	1,005	769	598	178	1
Agricultural sciences and natural resources	793	493	468	166	115	102	85	25	0
Biological and biomedical sciences	6,406	3,961	3,822	2,580	417	547	278	138	1
Health sciences	1,842	1,217	1,202	374	473	120	235	15	0
Physical sciences and earth sciences	3,771	2,406	2,237	1,160	228	660	189	168	1
Chemistry	1,711	1,055	1,005	474	106	357	68	50	0
Geosciences, atmospheric sciences, and ocean sciences	760	511	476	280	68	65	63	35	0
Physics and astronomy	1,300	840	756	406	54	238	58	83	1
Mathematics and computer sciences	1,739	1,251	1,182	349	327	395	111	69	0
Computer and information sciences	743	542	528	95	148	233	52	14	0
Mathematics and statistics	996	709	654	254	179	162	59	55	0
Psychology and social sciences	6,704	4,632	4,418	1,802	1,398	537	681	213	1
Psychology	3,321	2,380	2,331	1,370	406	267	288	49	0
Anthropology	335	193	172	68	70	16	18	20	1
Economics	484	392	365	48	155	102	60	27	0

TABLE 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2018

(Number)

Citizenship status and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Political science and government	543	379	350	D	168	D	58	29	0
Sociology	556	386	364	D	217	D	42	22	0
Other social sciences	1,465	902	836	138	382	101	215	66	0
Engineering	4,218	2,650	2,566	758	287	1,141	380	83	1
Aerospace, aeronautical, and astronautical engineering	221	160	D	26	16	62	D	D	1
Bioengineering and biomedical engineering	744	410	392	203	37	131	21	18	0
Chemical engineering	469	262	257	80	D	145	D	5	0
Civil engineering	200	138	132	37	27	45	23	6	0
Electrical, electronics, and communications engineering	544	399	392	66	38	219	69	7	0
Industrial and manufacturing engineering	62	43	D	6	D	17	9	D	0
Materials science engineering	463	272	260	76	15	140	29	12	0
Mechanical engineering	608	380	369	108	59	150	52	11	0
Other engineering	907	586	568	156	72	232	108	18	0
Education	4,033	2,793	2,756	216	1,382	160	998	36	1
Education administration	784	556	D	D	D	26	278	D	0
Education research	2,060	1,432	1,411	D	698	D	474	20	1
Teacher education	88	D	D	D	D	8	19	0	0
Teaching fields	788	567	558	D	337	D	161	9	0
Other education	313	D	178	D	D	10	66	D	0
Humanities and arts	4,150	2,331	2,185	370	1,331	130	354	146	0
Foreign languages and literature	406	243	226	34	156	7	29	17	0
History	800	438	400	D	212	D	68	38	0
Letters	1,235	710	681	100	473	43	65	29	0
Other humanities and arts	1,709	940	878	D	490	D	192	62	0
Other ^d	1,748	1,210	1,166	95	758	137	176	44	0
Business management and administration	744	551	519	25	362	75	57	32	0
Communication	435	280	274	D	202	D	19	6	0
Non-S&E fields nec	569	379	373	D	194	D	100	6	0
Temporary visa holder	17,604	11,229	8,666	3,939	1,432	3,015	280	2,559	4
Life sciences	3,364	2,065	1,662	1,225	112	281	44	403	0
Agricultural sciences and natural resources	609	371	239	172	22	33	12	132	0

TABLE 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2018

(Number)

Citizenship status and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Biological and biomedical sciences	2,160	1,336	1,163	907	48	187	21	173	0
Health sciences	595	358	260	146	42	61	11	98	0
Physical sciences and earth sciences	2,375	1,535	1,237	801	55	364	17	298	0
Chemistry	1,022	636	541	357	23	156	5	95	0
Geosciences, atmospheric sciences, and ocean sciences	392	239	182	139	8	32	3	57	0
Physics and astronomy	961	660	514	305	24	176	9	146	0
Mathematics and computer sciences	2,130	1,510	1,249	370	201	652	26	261	0
Computer and information sciences	1,166	819	707	136	109	444	18	112	0
Mathematics and statistics	964	691	542	234	92	208	8	149	0
Psychology and social sciences	1,771	1,227	706	259	270	111	66	521	0
Psychology	285	191	138	84	31	16	7	53	0
Anthropology	70	40	17	9	6	0	2	23	0
Economics	707	544	298	57	128	76	37	246	0
Political science and government	159	115	61	D	23	D	2	54	0
Sociology	89	57	37	D	15	D	2	20	0
Other social sciences	461	280	155	58	67	14	16	125	0
Engineering	5,583	3,438	2,925	1,117	179	1,550	79	510	3
Aerospace, aeronautical, and astronautical engineering	146	84	D	37	7	23	D	D	0
Bioengineering and biomedical engineering	362	222	183	121	5	55	2	39	0
Chemical engineering	478	289	256	108	D	139	D	32	1
Civil engineering	443	257	204	98	17	82	7	52	1
Electrical, electronics, and communications engineering	1,319	884	784	198	28	534	24	100	0
Industrial and manufacturing engineering	196	123	D	22	D	48	3	D	0
Materials science engineering	502	287	251	133	8	107	3	36	0
Mechanical engineering	831	477	410	181	26	187	16	67	0
Other engineering	1,306	815	665	219	57	375	14	149	1
Education	613	319	149	39	83	12	15	170	0
Education administration	53	27	D	D	D	0	0	D	0

TABLE 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2018

(Number)

Citizenship status and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments							
			United States					Abroad	Unknown	
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b			
Education research	367	190	102	D	D	55	D	13	88	0
Teacher education	8	D	D	D	D	D	0	0	D	0
Teaching fields	155	85	34	D	D	22	D	1	51	0
Other education	30	D	D	D	D	D	0	1	7	0
Humanities and arts	738	398	241	73	149	6	13	156	1	
Foreign languages and literature	180	103	79	18	56	0	5	24	0	
History	112	69	39	D	16	D	1	29	1	
Letters	139	75	42	10	30	0	2	33	0	
Other humanities and arts	307	151	81	D	47	D	5	70	0	
Other ^d	1,030	737	497	55	383	39	20	240	0	
Business management and administration	644	505	342	26	272	31	13	163	0	
Communication	165	115	89	D	72	D	1	26	0	
Non-S&E fields nec	221	117	66	D	39	D	6	51	0	

D = suppressed to avoid disclosure of confidential information.

nec = not elsewhere classified; S&E = science and engineering.

^a Includes doctorate recipients who indicated self-employment.^b Includes doctorate recipients who indicated government, nonprofit, elementary or secondary school, or other employment and those with unknown employment.^c Includes respondents who did not report citizenship status.^d Includes other non-S&E fields not shown separately.**Note(s)**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields. Definite postgraduate commitment includes doctorate recipients reporting definite postgraduation commitments for employment or postdoctoral study.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2018

(Number)

Sex and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
All doctorate recipients ^c	55,195	34,289	30,762	11,840	8,172	6,967	3,783	3,514	13
Life sciences	12,780	7,754	7,170	4,353	1,119	1,055	643	583	1
Agricultural sciences and natural resources	1,445	865	708	338	137	136	97	157	0
Biological and biomedical sciences	8,801	5,308	4,994	3,492	465	738	299	313	1
Health sciences	2,534	1,581	1,468	523	517	181	247	113	0
Physical sciences and earth sciences	6,335	3,950	3,480	1,965	283	1,025	207	469	1
Chemistry	2,810	1,696	1,550	833	129	514	74	146	0
Geosciences, atmospheric sciences, and ocean sciences	1,185	751	659	420	76	97	66	92	0
Physics and astronomy	2,340	1,503	1,271	712	78	414	67	231	1
Mathematics and computer sciences	4,030	2,775	2,443	722	530	1,053	138	332	0
Computer and information sciences	2,004	1,370	1,243	233	258	682	70	127	0
Mathematics and statistics	2,026	1,405	1,200	489	272	371	68	205	0
Psychology and social sciences	8,899	5,880	5,140	2,068	1,673	650	749	737	3
Psychology	3,837	2,581	2,477	1,460	438	283	296	103	1
Anthropology	424	233	189	77	76	16	20	43	1
Economics	1,247	940	667	105	285	179	98	273	0
Political science and government	734	494	411	127	191	33	60	83	0
Sociology	669	444	402	102	232	24	44	42	0
Other social sciences	1,988	1,188	994	197	451	115	231	193	1
Engineering	10,183	6,109	5,507	1,881	466	2,699	461	598	4
Aerospace, aeronautical, and astronautical engineering	383	245	228	64	23	85	56	16	1
Bioengineering and biomedical engineering	1,134	634	577	326	42	186	23	57	0
Chemical engineering	981	551	513	188	18	284	23	37	1
Civil engineering	677	396	336	135	44	127	30	59	1
Electrical, electronics, and communications engineering	1,951	1,289	1,180	264	66	756	94	109	0
Industrial and manufacturing engineering	272	166	141	28	36	65	12	25	0
Materials science engineering	995	561	513	211	23	247	32	48	0
Mechanical engineering	1,504	862	784	289	85	341	69	78	0

TABLE 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2018

(Number)

Sex and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Other engineering	2,286	1,405	1,235	376	129	608	122	169	1
Education	4,834	3,121	2,913	257	1,468	172	1,016	207	1
Education administration	898	583	558	16	238	26	278	25	0
Education research	2,507	1,628	1,518	168	755	106	489	109	1
Teacher education	97	60	D	D	29	8	19	D	0
Teaching fields	963	654	594	50	360	22	162	60	0
Other education	369	196	D	D	86	10	68	D	0
Humanities and arts	5,145	2,742	2,437	444	1,485	137	371	303	2
Foreign languages and literature	617	346	305	52	212	7	34	41	0
History	948	510	441	124	229	18	70	67	2
Letters	1,442	787	725	110	505	43	67	62	0
Other humanities and arts	2,138	1,099	966	158	539	69	200	133	0
Other ^d	2,989	1,958	1,672	150	1,148	176	198	285	1
Business management and administration	1,481	1,063	867	51	640	106	70	195	1
Communication	631	395	363	38	274	31	20	32	0
Non-S&E fields nec	877	500	442	61	234	39	108	58	0
Male	29,798	18,786	16,515	6,354	3,738	4,688	1,735	2,265	6
Life sciences	5,659	3,511	3,193	2,085	394	507	207	317	1
Agricultural sciences and natural resources	746	476	377	196	64	75	42	99	0
Biological and biomedical sciences	4,089	2,495	2,332	1,687	177	349	119	162	1
Health sciences	824	540	484	202	153	83	46	56	0
Physical sciences and earth sciences	4,214	2,668	2,335	1,321	157	724	133	333	0
Chemistry	1,743	1,087	986	556	66	321	43	101	0
Geosciences, atmospheric sciences, and ocean sciences	659	425	363	232	35	61	35	62	0
Physics and astronomy	1,812	1,156	986	533	56	342	55	170	0
Mathematics and computer sciences	3,043	2,097	1,845	541	379	823	102	252	0
Computer and information sciences	1,568	1,075	975	176	193	553	53	100	0
Mathematics and statistics	1,475	1,022	870	365	186	270	49	152	0
Psychology and social sciences	3,641	2,473	2,035	642	737	316	340	437	1
Psychology	1,097	740	698	356	150	99	93	42	0
Anthropology	126	70	50	25	16	7	2	19	1

TABLE 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2018

(Number)

Sex and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Economics	850	650	452	82	186	118	66	198	0
Political science and government	429	290	233	72	105	19	37	57	0
Sociology	250	167	153	33	96	10	14	14	0
Other social sciences	889	556	449	74	184	63	128	107	0
Engineering	7,726	4,713	4,211	1,422	346	2,100	343	499	3
Aerospace, aeronautical, and astronautical engineering	337	217	200	D	17	D	50	16	1
Bioengineering and biomedical engineering	688	391	352	201	32	107	12	39	0
Chemical engineering	688	387	354	139	D	D	17	32	1
Civil engineering	507	311	D	D	32	104	19	D	0
Electrical, electronics, and communications engineering	1,606	1,069	970	213	49	632	76	99	0
Industrial and manufacturing engineering	204	124	D	18	D	50	6	D	0
Materials science engineering	720	417	375	161	14	179	21	42	0
Mechanical engineering	1,286	739	673	244	69	302	58	66	0
Other engineering	1,690	1,058	927	282	92	469	84	130	1
Education	1,496	988	906	71	482	44	309	82	0
Education administration	323	214	205	6	84	12	103	9	0
Education research	764	508	464	49	260	20	135	44	0
Teacher education	18	13	D	D	D	D	5	D	0
Teaching fields	272	188	165	D	109	D	42	23	0
Other education	119	65	D	5	D	D	24	D	0
Humanities and arts	2,567	1,343	1,174	206	682	72	214	168	1
Foreign languages and literature	247	147	129	D	85	D	15	18	0
History	513	265	228	63	116	6	43	36	1
Letters	585	319	286	35	204	18	29	33	0
Other humanities and arts	1,222	612	531	D	277	D	127	81	0
Other ^d	1,452	993	816	66	561	102	87	177	0
Business management and administration	869	647	518	29	381	72	36	129	0
Communication	234	140	123	11	92	11	9	17	0

TABLE 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2018

(Number)

Sex and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Non-S&E fields nec	349	206	175	26	88	19	42	31	0
Female	25,368	15,503	14,247	5,486	4,434	2,279	2,048	1,249	7
Life sciences	7,114	4,243	3,977	2,268	725	548	436	266	0
Agricultural sciences and natural resources	696	389	331	142	73	61	55	58	0
Biological and biomedical sciences	4,709	2,813	2,662	1,805	288	389	180	151	0
Health sciences	1,709	1,041	984	321	364	98	201	57	0
Physical sciences and earth sciences	2,118	1,282	1,145	644	126	301	74	136	1
Chemistry	1,067	609	564	277	63	193	31	45	0
Geosciences, atmospheric sciences, and ocean sciences	526	326	296	188	41	36	31	30	0
Physics and astronomy	525	347	285	179	22	72	12	61	1
Mathematics and computer sciences	983	678	598	181	151	230	36	80	0
Computer and information sciences	435	295	268	57	65	129	17	27	0
Mathematics and statistics	548	383	330	124	86	101	19	53	0
Psychology and social sciences	5,256	3,407	3,105	1,426	936	334	409	300	2
Psychology	2,740	1,841	1,779	1,104	288	184	203	61	1
Anthropology	298	163	139	52	60	9	18	24	0
Economics	397	290	215	23	99	61	32	75	0
Political science and government	304	204	178	55	86	14	23	26	0
Sociology	419	277	249	69	136	14	30	28	0
Other social sciences	1,098	632	545	123	267	52	103	86	1
Engineering	2,453	1,396	1,296	459	120	599	118	99	1
Aerospace, aeronautical, and astronautical engineering	46	28	28	D	6	D	6	0	0
Bioengineering and biomedical engineering	445	243	225	125	10	79	11	18	0
Chemical engineering	293	164	159	49	D	D	6	5	0
Civil engineering	170	85	D	D	12	23	11	D	1
Electrical, electronics, and communications engineering	345	220	210	51	17	124	18	10	0
Industrial and manufacturing engineering	68	42	D	10	D	15	6	D	0

TABLE 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2018

(Number)

Sex and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Materials science engineering	275	144	138	50	9	68	11	6	0
Mechanical engineering	216	123	111	45	16	39	11	12	0
Other engineering	595	347	308	94	37	139	38	39	0
Education	3,337	2,133	2,007	186	986	128	707	125	1
Education administration	575	369	353	10	154	14	175	16	0
Education research	1,742	1,120	1,054	119	495	86	354	65	1
Teacher education	79	47	D	D	D	D	14	D	0
Teaching fields	691	466	429	D	251	D	120	37	0
Other education	250	131	D	D	D	D	44	D	0
Humanities and arts	2,575	1,399	1,263	238	803	65	157	135	1
Foreign languages and literature	370	199	176	D	127	D	19	23	0
History	435	245	213	61	113	12	27	31	1
Letters	856	468	439	75	301	25	38	29	0
Other humanities and arts	914	487	435	D	262	D	73	52	0
Other ^d	1,532	965	856	84	587	74	111	108	1
Business management and administration	609	416	349	22	259	34	34	66	1
Communication	396	255	240	27	182	20	11	15	0
Non-S&E fields nec	527	294	267	35	146	20	66	27	0

D = suppressed to avoid disclosure of confidential information.

nec = not elsewhere classified; S&E = science and engineering.

^a Includes doctorate recipients who indicated self-employment.^b Includes doctorate recipients who indicated government, nonprofit, elementary or secondary school, or other employment and those with unknown employment.^c Includes respondents who did not report sex.^d Includes other non-S&E fields not shown separately.**Note(s)**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields. Definite postgraduate commitment includes doctorate recipients reporting definite postgraduation commitments for employment or postdoctoral study.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 53

Doctorate recipients with temporary visas intending to stay in the United States after doctorate receipt, by country of citizenship: 2012–18

(Number and percent)

Country of citizenship	Total, 2012–18		2012		2013		2014		2015		2016		2017		2018	
	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying
All temporary visa holders	112,794	71.7	14,784	70.7	15,674	70.1	15,839	71.1	16,129	71.3	16,474	72.5	16,290	74.3	17,604	71.9
Africa	4,571	68.3	572	66.3	610	65.2	648	66.8	649	66.4	653	70.8	700	70.9	739	70.6
Egypt	959	67.3	126	64.3	140	61.4	135	70.4	129	62.8	117	66.7	156	69.9	156	73.7
Ghana	533	69.4	55	67.3	58	70.7	62	77.4	83	65.1	87	70.1	85	71.8	103	66.0
Kenya	441	67.8	66	68.2	79	68.4	72	70.8	57	68.4	60	66.7	57	63.2	50	68.0
Nigeria	673	79.6	67	77.6	65	87.7	87	82.8	83	75.9	112	83.9	113	77.9	146	75.3
Other	1,965	64.7	258	63.6	268	59.7	292	57.2	297	65.3	277	68.2	289	69.9	284	68.7
Americas	10,388	56.8	1,471	56.0	1,482	56.3	1,542	55.6	1,480	55.7	1,503	57.5	1,443	56.6	1,467	60.3
Argentina	474	59.7	85	58.8	81	49.4	67	64.2	64	53.1	65	61.5	52	69.2	60	66.7
Brazil	1,094	53.7	163	46.6	142	46.5	139	50.4	149	50.3	156	56.4	167	61.7	178	61.2
Canada	3,090	57.7	423	58.4	485	55.5	488	55.1	454	56.6	408	56.6	408	59.3	424	63.0
Chile	710	35.1	85	50.6	74	36.5	99	35.4	103	32.0	130	32.3	128	25.8	91	39.6
Colombia	1,321	56.3	161	53.4	179	53.1	216	56.9	183	68.3	187	61.5	190	48.4	205	52.7
Mexico	1,363	61.3	213	59.2	177	61.6	193	54.9	194	53.1	221	61.1	180	69.4	185	71.4
Venezuela	221	77.8	28	67.9	40	82.5	40	82.5	29	75.9	27	88.9	31	67.7	26	76.9
Other	2,115	59.2	313	56.5	304	64.1	300	59.7	304	57.6	309	61.2	287	57.5	298	57.7
Asia	75,136	76.8	9,978	74.8	10,560	75.0	10,752	75.8	10,885	76.0	11,015	78.1	10,641	80.0	11,305	77.5
Bangladesh	1,187	87.0	86	88.4	107	78.5	139	83.5	154	87.7	185	90.3	236	88.1	280	88.2
China ^a	36,637	81.4	4,222	82.6	4,796	82.0	4,982	81.3	5,374	81.1	5,526	81.0	5,555	83.3	6,182	79.4
India	15,201	86.2	2,248	85.7	2,204	84.3	2,316	86.2	2,229	84.6	2,195	87.2	1,969	88.5	2,040	87.1
Indonesia	496	43.1	51	51.0	71	49.3	78	38.5	53	37.7	92	43.5	69	50.7	82	34.1
Japan	1,194	48.2	240	45.0	217	47.5	173	48.6	164	39.6	166	53.6	117	58.1	117	50.4
Nepal	1,262	88.7	94	86.2	150	90.0	172	84.9	177	88.1	222	88.7	222	91.4	225	89.3
Pakistan	773	50.3	99	42.4	98	49.0	127	47.2	124	54.0	102	45.1	113	54.0	110	59.1
Philippines	429	71.1	73	74.0	92	66.3	70	67.1	40	75.0	51	76.5	47	70.2	56	73.2
Singapore	651	36.6	88	35.2	91	38.5	97	38.1	102	36.3	91	38.5	101	41.6	81	25.9
South Korea	8,764	62.9	1,472	60.6	1,383	59.1	1,284	60.7	1,234	62.9	1,229	66.7	1,127	68.5	1,035	63.6
Taiwan	4,325	71.4	719	65.2	699	67.4	668	68.6	614	70.4	592	77.9	520	76.7	513	78.0
Thailand	1,508	26.9	260	23.5	264	31.1	231	26.4	220	21.4	185	30.3	171	25.7	177	31.1
Vietnam	894	73.9	99	64.6	140	71.4	142	76.8	134	74.6	124	71.8	133	75.9	122	80.3
Other	1,815	66.6	227	65.6	248	61.7	273	65.9	266	62.4	255	68.2	261	68.6	285	73.0
Australia-Oceania	504	58.1	69	65.2	80	58.8	64	45.3	83	55.4	65	61.5	79	62.0	64	57.8
Australia	322	59.0	40	67.5	60	55.0	44	43.2	52	48.1	42	66.7	47	72.3	37	64.9

TABLE 53

Doctorate recipients with temporary visas intending to stay in the United States after doctorate receipt, by country of citizenship: 2012–18

(Number and percent)

Country of citizenship	Total, 2012–18		2012		2013		2014		2015		2016		2017		2018	
	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying
Other	182	56.6	29	62.1	20	70.0	20	50.0	31	67.7	23	52.2	32	46.9	27	48.1
Europe	12,830	63.7	1,930	65.3	1,904	62.3	1,802	63.4	1,832	61.4	1,776	62.7	1,785	67.4	1,801	63.4
Bulgaria	270	77.8	50	76.0	47	78.7	42	66.7	34	70.6	44	88.6	30	86.7	23	78.3
France	798	63.7	111	56.8	97	62.9	114	67.5	131	58.8	105	66.7	107	69.2	133	64.7
Germany	1,281	56.4	200	60.0	202	51.5	203	51.2	195	51.3	183	61.2	154	68.2	144	54.2
Greece	639	72.5	100	64.0	88	76.1	81	72.8	84	71.4	84	71.4	89	73.0	113	77.9
Italy	1,070	66.4	168	65.5	154	61.0	156	64.1	126	65.1	167	65.9	161	70.8	138	72.5
Romania	444	77.3	101	75.2	66	74.2	79	78.5	57	82.5	51	88.2	43	81.4	47	61.7
Russian Federation (former USSR)	833	73.7	125	69.6	110	71.8	106	72.6	118	78.0	108	69.4	112	81.3	154	73.4
Spain	591	64.5	66	66.7	82	65.9	68	60.3	98	60.2	73	61.6	100	74.0	104	61.5
Turkey	3,232	60.7	439	63.8	478	60.7	426	62.9	469	59.7	472	57.6	496	61.1	452	59.7
Ukraine	294	78.6	46	84.8	52	76.9	51	72.5	42	85.7	31	71.0	37	83.8	35	74.3
United Kingdom	728	61.0	91	72.5	113	56.6	97	70.1	100	55.0	115	54.8	103	60.2	109	60.6
Other	2,650	59.7	433	63.0	415	59.5	379	58.3	378	56.3	343	58.6	353	63.2	349	58.2
Middle East	8,190	64.2	699	65.4	865	65.2	938	65.9	1,131	66.9	1,309	63.9	1,500	62.1	1,748	62.4
Iran	4,205	90.4	287	88.5	409	86.8	483	89.2	629	89.7	695	91.1	767	92.6	935	91.6
Israel	555	56.6	83	61.4	81	60.5	81	61.7	86	59.3	83	51.8	77	49.4	64	50.0
Jordan	762	45.9	121	46.3	115	46.1	110	40.9	128	44.5	98	44.9	114	44.7	76	57.9
Lebanon	381	74.8	66	80.3	66	81.8	50	66.0	39	64.1	57	70.2	52	78.8	51	76.5
Saudi Arabia	1,350	12.7	57	14.0	73	11.0	105	17.1	134	14.2	238	10.1	339	10.3	404	14.9
Other	937	35.2	85	41.2	121	37.2	109	37.6	115	35.7	138	37.7	151	37.7	218	27.1
Country unknown	1,175	39.0	65	41.5	173	25.4	93	24.7	69	47.8	153	12.4	142	61.3	480	46.9

^a Includes Hong Kong.**Note(s)**

Percentages based on all doctorate recipients on temporary visas who indicated where they intended to stay after graduation (United States versus foreign location), not just those with definite commitments for employment or postdoctoral study.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 54

Statistical profile of doctorate recipients, by sex and broad field of study: 2018

(Number, percent, and median years)

Characteristic	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
All doctorate recipients (number) ^c	55,195	12,780	6,335	4,030	8,899	10,183	4,834	5,145	2,989
Sex (%)									
Male	54.0	44.3	66.5	75.5	40.9	75.9	30.9	49.9	48.6
Female	46.0	55.7	33.4	24.4	59.1	24.1	69.0	50.0	51.3
Unknown	0.1	0.1	*	0.1	*	*	*	0.1	0.2
Citizenship (%)									
U.S. citizen or permanent resident	64.1	70.7	59.5	43.2	75.3	41.4	83.4	80.7	58.5
Temporary visa holder	31.9	26.3	37.5	52.9	19.9	54.8	12.7	14.3	34.5
Unknown	4.0	2.9	3.0	4.0	4.8	3.8	3.9	5.0	7.1
Marital status (%)									
Never married	33.9	34.6	43.4	41.9	29.5	40.8	19.1	27.1	24.9
Married	43.2	43.3	36.0	39.1	42.3	40.8	57.0	46.7	46.6
Marriage-like relationship	8.7	10.2	10.1	6.7	11.5	6.2	5.2	10.1	6.1
Separated, divorced, widowed	3.1	2.9	1.7	1.7	3.9	1.5	7.2	4.0	4.5
Unknown	11.0	9.0	8.8	10.6	12.9	10.7	11.5	12.1	17.9
Bachelor's in same field as doctorate (%) ^d	56.4	51.3	70.0	64.1	52.1	77.9	23.9	54.2	36.0
Master's earned (%)	69.6	50.8	53.7	72.4	82.6	71.2	88.8	84.2	79.8
Age at doctorate (median years)	31.4	30.9	29.5	30.2	32.3	29.9	38.2	34.3	34.7
Time to doctorate (median years)									
From bachelor's	8.6	8.2	7.0	7.6	9.3	7.3	14.7	11.0	11.2
From graduate school start	7.3	6.8	6.3	6.8	7.8	6.7	11.9	9.4	9.2
From doctoral program start ^e	5.8	5.5	5.7	5.7	6.0	5.3	5.8	6.8	5.2
Male doctorate recipients (number)	29,798	5,659	4,214	3,043	3,641	7,726	1,496	2,567	1,452
Citizenship (%)									
U.S. citizen or permanent resident	58.2	67.8	57.6	43.3	70.1	40.0	81.7	81.2	55.8
Temporary visa holder	38.0	29.1	39.5	52.9	25.7	56.3	14.2	13.8	37.7
Unknown	3.8	3.1	2.9	3.8	4.2	3.7	4.1	5.0	6.5

TABLE 54

Statistical profile of doctorate recipients, by sex and broad field of study: 2018

(Number, percent, and median years)

Characteristic	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
Marital status (%)									
Never married	35.9	35.3	44.5	42.7	29.7	41.5	17.4	25.1	23.6
Married	43.3	43.8	35.8	38.8	44.8	41.1	61.9	49.8	50.3
Marriage-like relationship	7.9	9.9	9.1	6.9	10.4	5.7	5.1	9.2	5.6
Separated, divorced, widowed	2.0	1.8	1.5	1.6	2.9	1.2	3.7	3.2	3.3
Unknown	10.8	9.2	9.1	10.1	12.2	10.5	11.9	12.7	17.2
Bachelor's in same field as doctorate (%) ^d	60.4	50.0	70.3	64.4	49.9	79.3	21.9	56.6	35.5
Master's earned (%)	68.6	48.5	55.3	71.5	82.0	72.3	87.8	83.8	79.7
Age at doctorate (median years)	31.2	31.1	29.6	30.2	32.8	30.1	38.3	34.5	34.9
Time to doctorate (median years)									
From bachelor's	8.3	8.1	7.0	7.6	9.4	7.4	14.4	11.0	11.3
From graduate school start	7.3	6.8	6.3	6.8	7.9	6.8	11.5	9.6	9.2
From doctoral program start ^e	5.7	5.5	5.8	5.7	5.9	5.3	5.7	6.8	5.0
Female doctorate recipients (number)	25,368	7,114	2,118	983	5,256	2,453	3,337	2,575	1,532
Citizenship (%)									
U.S. citizen or permanent resident	71.2	73.2	63.5	42.9	79.0	46.0	84.2	80.2	61.2
Temporary visa holder	24.8	24.1	33.6	52.8	15.9	50.3	12.0	14.9	31.5
Unknown	4.0	2.7	2.9	4.3	5.1	3.7	3.7	4.9	7.3
Marital status (%)									
Never married	31.5	34.0	41.3	39.5	29.3	38.4	19.9	29.0	26.2
Married	43.2	43.0	36.5	40.1	40.5	40.1	54.9	43.7	43.2
Marriage-like relationship	9.7	10.5	12.2	6.1	12.3	7.9	5.2	11.0	6.5
Separated, divorced, widowed	4.5	3.8	2.0	2.2	4.6	2.4	8.8	4.9	5.7
Unknown	11.1	8.7	8.1	12.1	13.3	11.1	11.2	11.4	18.3
Bachelor's in same field as doctorate (%) ^d	51.9	52.3	69.5	63.6	53.5	73.5	24.8	52.0	36.5
Master's earned (%)	70.9	52.6	50.4	75.2	83.1	68.0	89.3	84.7	80.2

TABLE 54

Statistical profile of doctorate recipients, by sex and broad field of study: 2018

(Number, percent, and median years)

Characteristic	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
Age at doctorate (median years)	31.8	30.8	29.2	30.3	32.1	29.5	38.2	33.9	34.3
Time to doctorate (median years)									
From bachelor's	9.1	8.3	6.7	8.0	9.3	7.0	15.0	11.0	11.0
From graduate school start	7.8	6.9	6.0	6.9	7.8	6.3	12.0	9.3	9.3
From doctoral program start ^e	5.8	5.5	5.4	5.8	6.0	5.2	5.8	6.8	5.3

* = value between 0.00% and 0.05%.

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.^c Includes respondents who did not report sex.^d A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^e Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the same institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 55

Statistical profile of postgraduation plans of doctorate recipients, by sex and broad field of study: 2018

(Number and percent)

Characteristic	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
United States ⁿ	89.7	92.5	88.1	88.0	87.4	90.1	93.3	88.9	85.4
New England	8.7	10.8	9.9	7.7	8.9	8.6	4.1	9.0	6.4
Middle Atlantic	12.5	12.4	11.7	14.1	13.5	10.1	11.0	16.7	13.0
East North Central	11.3	10.5	9.9	10.8	11.6	10.9	14.1	12.0	13.7
West North Central	4.9	6.4	3.3	3.1	5.1	3.4	6.9	5.1	6.0
South Atlantic	15.8	18.2	13.1	11.9	17.9	12.4	20.1	15.5	15.8
East South Central	3.5	3.9	1.9	1.9	2.6	2.5	7.6	4.4	4.5
West South Central	7.2	6.3	6.4	5.2	7.1	7.2	10.6	7.8	9.0
Mountain	5.8	5.2	7.1	3.6	5.5	6.2	8.3	4.7	5.5
Pacific and insular	19.4	17.8	24.5	29.1	14.7	28.4	10.3	13.1	10.5
Not in United States	10.2	7.5	11.9	12.0	12.5	9.8	6.6	11.1	14.6
Location unknown	*	*	*	0.0	0.1	0.1	*	0.1	0.1
Male doctorate recipients (number)	29,798	5,659	4,214	3,043	3,641	7,726	1,496	2,567	1,452
Postgraduation status (number) ^d									
Definite postgraduation study	7,238	2,229	1,559	674	759	1,587	80	265	85
Definite employment	11,548	1,282	1,109	1,423	1,714	3,126	908	1,078	908
Seeking employment or study	7,692	1,406	1,172	661	753	2,237	335	887	241
Other ^e	777	329	71	43	55	147	34	72	26
Definite postgraduation study (%) ^f									
Postdoc fellowship or research associateship	94.9	93.7	97.4	96.6	92.0	95.7	87.5	93.2	92.9
Other or unknown ^g	5.1	6.3	2.6	3.4	8.0	4.3	12.5	6.8	7.1
Definite employment (%) ^h									
Academe	39.2	37.4	17.4	30.5	55.0	15.7	58.9	71.2	76.0
Government	7.6	11.1	7.2	4.4	12.8	7.9	4.3	3.4	5.4
Industry or business ⁱ	43.2	42.0	68.7	61.3	20.5	71.2	5.2	7.1	12.9
Nonprofit organization	5.2	6.4	3.2	2.3	8.1	3.0	8.1	11.2	2.6
Other or unknown ^j	4.7	3.1	3.4	1.4	3.7	2.2	23.5	7.1	3.1
Primary activity ^k									
R&D	52.7	54.2	70.3	67.3	40.0	76.2	12.7	9.2	41.2
Teaching	26.7	21.3	13.8	21.1	33.3	8.7	39.7	70.1	43.6

TABLE 55

Statistical profile of postgraduation plans of doctorate recipients, by sex and broad field of study: 2018

(Number and percent)

Characteristic	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
Postdoc fellowship or research associateship	93.1	94.3	96.3	94.9	89.3	94.4	90.5	92.9	93.4
Other or unknown ^g	6.9	5.7	3.7	5.1	10.7	5.6	9.5	7.1	6.6
Definite employment (%) ^h									
Academe	51.9	43.5	25.8	39.0	56.8	17.0	55.5	78.1	76.4
Government	6.7	9.7	7.5	4.1	8.8	8.2	5.1	2.4	4.6
Industry or business ⁱ	25.1	30.7	59.1	51.9	19.4	68.9	6.8	6.5	9.5
Nonprofit organization	7.5	12.3	3.0	2.6	8.5	4.0	7.6	6.0	5.4
Other or unknown ^j	8.9	3.8	4.7	2.4	6.6	1.9	25.0	7.1	4.1
Primary activity ^k									
R&D	33.6	40.4	62.1	58.2	32.5	67.2	12.6	8.6	34.5
Teaching	37.5	28.4	21.3	28.3	36.3	9.9	44.1	71.8	45.4
Management or administration	12.6	9.5	3.2	2.5	8.8	4.1	29.8	10.9	11.6
Professional services	15.8	20.8	12.6	10.7	22.2	18.2	13.3	8.3	8.4
Other	0.5	1.0	0.8	0.2	0.3	0.6	0.2	0.5	0.1
Secondary activity ^l									
R&D	29.9	27.1	16.2	25.6	32.9	13.5	29.4	43.0	41.5
Teaching	14.7	9.5	3.4	9.6	18.5	7.6	17.7	12.0	31.8
Management or administration	10.7	15.6	14.4	5.7	9.5	12.5	10.7	7.8	4.7
Professional services	6.4	8.9	4.9	5.3	6.3	4.8	7.4	5.5	3.9
Other	0.4	0.6	0.4	0.2	0.3	0.2	0.3	0.6	0.4
No secondary activity	37.8	38.4	60.7	53.7	32.4	61.4	34.4	31.1	17.7
Activity unknown	4.9	4.5	5.4	5.6	5.4	4.2	4.8	5.1	5.1
Postgraduation location (%) ^m									
United States ⁿ	91.9	93.7	89.3	88.2	91.1	92.8	94.1	90.3	88.7
New England	9.0	10.7	10.5	6.8	9.5	10.9	3.9	9.9	7.0
Middle Atlantic	13.1	13.2	11.7	12.5	14.2	10.4	11.3	17.4	13.7
East North Central	12.1	10.5	10.0	13.4	12.3	11.5	14.5	12.5	14.5
West North Central	5.3	6.0	4.1	2.9	5.3	3.8	6.6	4.1	5.8
South Atlantic	17.6	19.4	14.4	13.7	18.3	12.1	21.3	15.7	16.0
East South Central	3.9	4.3	1.8	2.1	2.3	2.4	7.5	4.6	4.7
West South Central	7.3	6.1	6.1	5.3	7.2	6.2	10.4	7.7	9.4

TABLE 55

Statistical profile of postgraduation plans of doctorate recipients, by sex and broad field of study: 2018

(Number and percent)

Characteristic	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities and arts	Other ^b
Mountain	5.7	4.9	7.5	4.1	5.5	5.4	8.3	4.4	5.5
Pacific and insular	17.2	17.6	23.0	26.4	15.8	29.4	9.8	13.2	10.5
Not in United States	8.1	6.3	10.6	11.8	8.8	7.1	5.9	9.6	11.2
Location unknown	*	0.0	0.1	0.0	0.1	0.1	*	0.1	0.1

* = value between 0.00% and 0.05%.

^a Includes agricultural sciences and natural resources; biological and biomedical sciences; and health sciences.^b Includes other non-science and engineering fields not shown separately.^c Includes respondents who did not report sex.^d Includes only respondents who reported postgraduation status.^e Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^f Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^g "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^h Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.ⁱ Includes doctorate recipients who indicated self-employment.^j "Other" is mainly composed of elementary and secondary schools.^k Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.^l Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.^m Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.ⁿ Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 56

Statistical profile of doctorate recipients in life sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
All doctorate recipients (number) ^a	12,780	1,445	8,801	2,534
Sex (%)				
Male	44.3	51.6	46.5	32.5
Female	55.7	48.2	53.5	67.4
Unknown	0.1	0.2	*	*
Citizenship (%)				
U.S. citizen or permanent resident	70.7	54.9	72.8	72.7
Temporary visa holder	26.3	42.1	24.5	23.5
Unknown	2.9	3.0	2.7	3.8
Marital status (%)				
Never married	34.6	30.9	37.6	26.1
Married	43.3	47.8	40.4	50.8
Marriage-like relationship	10.2	8.8	11.6	6.4
Separated, divorced, widowed	2.9	2.6	2.4	4.9
Unknown	9.0	10.0	8.0	11.8
Bachelor's in same field as doctorate (%) ^b	51.3	43.4	54.0	46.4
Master's earned (%)	50.8	73.8	40.4	73.9
Age at doctorate (median years)	30.9	31.8	30.3	34.2
Time to doctorate (median years)				
From bachelor's	8.2	8.8	7.8	11.0
From graduate school start	6.8	7.3	6.5	8.9
From doctoral program start ^c	5.5	5.0	5.8	5.0
Male doctorate recipients (number)	5,659	746	4,089	824
Citizenship (%)				
U.S. citizen or permanent resident	67.8	52.5	71.7	62.3
Temporary visa holder	29.1	45.6	25.1	33.9
Unknown	3.1	1.9	3.2	3.9
Marital status (%)				
Never married	35.3	27.6	37.9	29.2
Married	43.8	54.2	40.6	50.0
Marriage-like relationship	9.9	8.2	10.9	6.7
Separated, divorced, widowed	1.8	1.2	1.7	2.7
Unknown	9.2	8.8	8.9	11.4
Bachelor's in same field as doctorate (%) ^b	50.0	48.8	51.8	41.9
Master's earned (%)	48.5	76.7	39.1	69.8
Age at doctorate (median years)	31.1	32.6	30.6	32.8
Time to doctorate (median years)				
From bachelor's	8.1	9.2	8.0	9.3
From graduate school start	6.8	7.7	6.8	7.7
From doctoral program start ^c	5.5	4.9	5.8	5.0
Female doctorate recipients (number)	7,114	696	4,709	1,709
Citizenship (%)				

TABLE 56

Statistical profile of doctorate recipients in life sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
U.S. citizen or permanent resident	73.2	57.5	73.8	77.8
Temporary visa holder	24.1	38.6	24.1	18.5
Unknown	2.7	3.9	2.1	3.7
Marital status (%)				
Never married	34.0	34.6	37.4	24.6
Married	43.0	41.1	40.3	51.3
Marriage-like relationship	10.5	9.5	12.2	6.3
Separated, divorced, widowed	3.8	4.0	3.0	6.0
Unknown	8.7	10.8	7.2	11.9
Bachelor's in same field as doctorate (%) ^b	52.3	37.8	55.9	48.6
Master's earned (%)	52.6	71.0	41.5	76.0
Age at doctorate (median years)	30.8	31.0	30.0	35.3
Time to doctorate (median years)				
From bachelor's	8.3	8.3	7.6	12.0
From graduate school start	6.9	7.3	6.3	9.7
From doctoral program start ^c	5.5	5.0	5.7	5.0

* = value between 0.00% and 0.05%.

^a Includes respondents who did not report sex.^b A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 57

Statistical profile of postgraduation plans of doctorate recipients in life sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
All doctorate recipients (number) ^a	12,780	1,445	8,801	2,534
Postgraduation status (number) ^b				
Definite postgraduation study	4,616	384	3,685	547
Definite employment	3,138	481	1,623	1,034
Seeking employment or study	3,434	436	2,362	636
Other ^c	664	27	569	68
Definite postgraduation study (%) ^d				
Postdoc fellowship or research associateship	94.0	97.4	94.5	87.9
Other or unknown ^e	6.0	2.6	5.5	12.1
Definite employment (%) ^f				
Academe	41.0	37.4	32.7	55.9
Government	10.3	20.0	9.3	7.3
Industry or business ^g	35.3	32.4	47.0	18.2
Nonprofit organization	9.9	6.9	7.8	14.5
Other or unknown ^h	3.5	3.3	3.2	4.2
Primary activity ⁱ				
R&D	46.0	58.1	53.8	28.2
Teaching	25.5	18.4	17.1	41.9
Management or administration	8.7	8.9	6.2	12.6
Professional services	19.0	13.7	22.0	16.7
Other	0.8	0.9	0.9	0.6
Secondary activity ^j				
R&D	25.5	23.0	17.6	39.0
Teaching	10.1	16.3	6.6	12.9
Management or administration	16.5	19.1	17.9	13.0
Professional services	8.4	9.1	7.7	9.3
Other	0.4	1.1	0.5	0.1
No secondary activity	39.1	31.5	49.8	25.7
Activity unknown	4.4	4.2	4.3	4.5
Postgraduation location (%) ^k				
United States ^l	92.5	81.8	94.1	92.9
New England	10.8	4.6	12.6	8.0
Middle Atlantic	12.4	6.4	13.3	12.7
East North Central	10.5	9.4	10.3	11.8
West North Central	6.4	10.2	6.0	5.6
South Atlantic	18.2	17.9	17.1	22.1
East South Central	3.9	3.9	3.4	5.8
West South Central	6.3	6.7	6.0	7.4
Mountain	5.2	7.2	5.0	5.1
Pacific and insular	17.8	14.8	19.7	13.2
Not in United States	7.5	18.2	5.9	7.1
Location unknown	*	0.0	*	0.0
Male doctorate recipients (number)	5,659	746	4,089	824
Postgraduation status (number) ^b				
Definite postgraduation study	2,229	219	1,796	214
Definite employment	1,282	257	699	326
Seeking employment or study	1,406	207	1,015	184

TABLE 57

Statistical profile of postgraduation plans of doctorate recipients in life sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
Other ^c	329	13	293	23
Definite postgraduation study (%) ^d				
Postdoc fellowship or research associateship	93.7	98.2	94.0	86.4
Other or unknown ^e	6.3	1.8	6.0	13.6
Definite employment (%) ^f				
Academe	37.4	36.2	29.6	55.2
Government	11.1	20.2	9.2	8.0
Industry or business ^g	42.0	34.6	51.6	27.0
Nonprofit organization	6.4	5.4	6.4	7.1
Other or unknown ^h	3.1	3.5	3.1	2.8
Primary activity ⁱ				
R&D	54.2	62.5	60.3	34.6
Teaching	21.3	17.3	14.1	39.7
Management or administration	7.6	8.9	5.7	10.5
Professional services	16.4	10.9	19.2	14.6
Other	0.6	0.4	0.6	0.6
Secondary activity ^j				
R&D	23.1	23.4	14.7	40.6
Teaching	11.1	19.0	6.8	14.0
Management or administration	17.8	21.4	18.3	13.7
Professional services	7.8	7.7	8.3	7.0
Other	0.2	1.2	0.0	0.0
No secondary activity	40.0	27.4	51.9	24.8
Activity unknown	4.2	3.5	4.9	3.4
Postgraduation location (%) ^k				
United States ^l	90.9	79.2	93.5	89.6
New England	10.9	3.4	12.9	8.0
Middle Atlantic	11.5	6.3	12.8	10.2
East North Central	10.5	9.7	10.3	12.0
West North Central	6.9	11.6	6.2	5.7
South Atlantic	16.8	16.2	16.3	19.6
East South Central	3.5	4.2	2.8	5.9
West South Central	6.6	6.7	6.5	6.9
Mountain	5.7	6.9	5.3	6.1
Pacific and insular	18.1	13.7	19.8	14.3
Not in United States	9.0	20.8	6.5	10.4
Location unknown	*	0.0	*	0.0
Female doctorate recipients (number)	7,114	696	4,709	1,709
Postgraduation status (number) ^b				
Definite postgraduation study	2,387	165	1,889	333
Definite employment	1,856	224	924	708
Seeking employment or study	2,028	229	1,347	452
Other ^c	335	14	276	45
Definite postgraduation study (%) ^d				
Postdoc fellowship or research associateship	94.3	96.4	95.0	88.9
Other or unknown ^e	5.7	3.6	5.0	11.1

TABLE 57

Statistical profile of postgraduation plans of doctorate recipients in life sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
Definite employment (%) ^f				
Academe	43.5	38.8	35.0	56.2
Government	9.7	19.6	9.4	6.9
Industry or business ^g	30.7	29.9	43.5	14.1
Nonprofit organization	12.3	8.5	8.9	17.9
Other or unknown ^h	3.8	3.1	3.2	4.8
Primary activity ⁱ				
R&D	40.4	53.1	48.9	25.1
Teaching	28.4	19.7	19.4	43.0
Management or administration	9.5	8.9	6.6	13.5
Professional services	20.8	16.9	24.0	17.7
Other	1.0	1.4	1.1	0.6
Secondary activity ^j				
R&D	27.1	22.5	19.8	38.2
Teaching	9.5	13.1	6.4	12.4
Management or administration	15.6	16.4	17.6	12.6
Professional services	8.9	10.8	7.2	10.4
Other	0.6	0.9	0.8	0.1
No secondary activity	38.4	36.2	48.2	26.2
Activity unknown	4.5	4.9	3.9	5.1
Postgraduation location (%) ^k				
United States ^l	93.7	85.1	94.6	94.5
New England	10.7	6.2	12.4	8.1
Middle Atlantic	13.2	6.4	13.8	14.0
East North Central	10.5	9.0	10.3	11.6
West North Central	6.0	8.5	5.8	5.6
South Atlantic	19.4	20.1	17.8	23.3
East South Central	4.3	3.6	3.8	5.8
West South Central	6.1	6.7	5.5	7.7
Mountain	4.9	7.5	4.7	4.6
Pacific and insular	17.6	16.2	19.6	12.7
Not in United States	6.3	14.9	5.4	5.5
Location unknown	0.0	0.0	0.0	0.0

* = value between 0.00% and 0.05%.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.^g Includes doctorate recipients who indicated self-employment.^h "Other" is mainly composed of elementary and secondary schools.ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.

Note(s)

Due to rounding, percentages may not sum to 100. See **table A-6** in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 58

Statistical profile of doctorate recipients in physical sciences and earth sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All physical sciences and earth sciences fields	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy
All doctorate recipients (number) ^a	6,335	2,810	1,185	2,340
Sex (%)				
Male	66.5	62.0	55.6	77.4
Female	33.4	38.0	44.4	22.4
Unknown	*	0.0	0.0	0.1
Citizenship (%)				
U.S. citizen or permanent resident	59.5	60.9	64.1	55.6
Temporary visa holder	37.5	36.4	33.1	41.1
Unknown	3.0	2.7	2.8	3.4
Marital status (%)				
Never married	43.4	43.6	39.6	45.1
Married	36.0	34.8	40.3	35.2
Marriage-like relationship	10.1	10.5	11.1	9.2
Separated, divorced, widowed	1.7	1.4	2.4	1.6
Unknown	8.8	9.7	6.6	8.8
Bachelor's in same field as doctorate (%) ^b	70.0	72.8	51.7	75.9
Master's earned (%)	53.7	36.1	69.6	66.7
Age at doctorate (median years)	29.5	28.9	30.7	29.7
Time to doctorate (median years)				
From bachelor's	6.9	6.3	8.0	7.0
From graduate school start	6.3	5.8	7.0	6.6
From doctoral program start ^c	5.7	5.3	5.5	6.0
Male doctorate recipients (number)	4,214	1,743	659	1,812
Citizenship (%)				
U.S. citizen or permanent resident	57.6	60.2	58.1	54.9
Temporary visa holder	39.5	37.5	38.7	41.7
Unknown	2.9	2.4	3.2	3.4
Marital status (%)				
Never married	44.5	44.4	39.6	46.4
Married	35.8	35.3	41.9	33.9
Marriage-like relationship	9.1	9.4	9.3	8.8
Separated, divorced, widowed	1.5	1.1	2.1	1.7
Unknown	9.1	9.8	7.1	9.2
Bachelor's in same field as doctorate (%) ^b	70.3	72.7	51.6	74.7
Master's earned (%)	55.3	37.8	73.6	65.6
Age at doctorate (median years)	29.6	29.1	31.0	29.8
Time to doctorate (median years)				
From bachelor's	7.0	6.3	8.0	7.0

TABLE 58

Statistical profile of doctorate recipients in physical sciences and earth sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All physical sciences and earth sciences fields	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy
From graduate school start	6.3	5.8	7.3	6.7
From doctoral program start ^c	5.8	5.3	5.4	6.0
Female doctorate recipients (number)	2,118	1,067	526	525
Citizenship (%)				
U.S. citizen or permanent resident	63.5	62.0	71.7	58.3
Temporary visa holder	33.6	34.6	26.0	39.0
Unknown	2.9	3.4	2.3	2.7
Marital status (%)				
Never married	41.3	42.3	39.5	41.0
Married	36.5	34.0	38.2	39.8
Marriage-like relationship	12.2	12.3	13.5	10.7
Separated, divorced, widowed	2.0	1.8	2.9	1.5
Unknown	8.1	9.7	5.9	7.0
Bachelor's in same field as doctorate (%) ^b	69.5	72.9	51.9	80.2
Master's earned (%)	50.4	33.5	64.6	70.7
Age at doctorate (median years)	29.2	28.7	30.4	29.5
Time to doctorate (median years)				
From bachelor's	6.7	6.2	7.9	7.0
From graduate school start	6.0	5.8	6.8	6.3
From doctoral program start ^c	5.4	5.3	5.5	5.9

* = value between 0.00% and 0.05%.

^a Includes respondents who did not report sex.^b A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctorate institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 59

Statistical profile of postgraduation plans of doctorate recipients in physical sciences and earth sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All physical sciences and earth sciences fields	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy
All doctorate recipients (number) ^a	6,335	2,810	1,185	2,340
Postgraduation status (number) ^b				
Definite postgraduation study	2,306	924	486	896
Definite employment	1,644	772	265	607
Seeking employment or study	1,819	830	351	638
Other ^c	129	66	19	44
Definite postgraduation study (%) ^d				
Postdoc fellowship or research associateship	97.1	96.1	97.7	97.7
Other or unknown ^e	2.9	3.9	2.3	2.3
Definite employment (%) ^f				
Academe	20.1	19.3	32.5	15.8
Government	7.3	4.9	18.5	5.4
Industry or business ^g	65.6	70.3	39.6	70.8
Nonprofit organization	3.2	1.7	4.9	4.3
Other or unknown ^h	3.8	3.8	4.5	3.6
Primary activity ⁱ				
R&D	67.6	67.6	56.2	72.6
Teaching	16.2	17.3	21.5	12.5
Management or administration	3.1	3.8	4.8	1.6
Professional services	12.3	10.7	16.7	12.4
Other	0.7	0.5	0.8	0.9
Secondary activity ^j				
R&D	13.7	11.6	21.9	12.7
Teaching	3.6	2.9	8.8	2.3
Management or administration	14.3	17.9	15.5	9.1
Professional services	5.7	5.7	5.6	5.6
Other	0.2	0.0	0.4	0.3
No secondary activity	62.6	61.9	47.8	70.0
Activity unknown	5.3	5.2	5.3	5.4
Postgraduation location (%) ^k				
United States ^l	88.1	91.4	87.7	84.6
New England	9.9	11.6	8.3	9.0
Middle Atlantic	11.7	13.0	7.9	12.2
East North Central	9.9	12.7	5.1	9.2
West North Central	3.3	4.6	2.8	2.0
South Atlantic	13.1	12.6	16.6	11.8
East South Central	1.9	2.2	1.9	1.7
West South Central	6.4	5.0	11.5	5.4
Mountain	7.1	4.5	11.6	7.7
Pacific and insular	24.5	24.9	21.8	25.3
Not in United States	11.9	8.6	12.3	15.4
Location unknown	*	0.0	0.0	0.1
Male doctorate recipients (number)	4,214	1,743	659	1,812
Postgraduation status (number) ^b				

TABLE 59

Statistical profile of postgraduation plans of doctorate recipients in physical sciences and earth sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All physical sciences and earth sciences fields	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy
Definite postgraduation study	1,559	621	273	665
Definite employment	1,109	466	152	491
Seeking employment or study	1,172	491	185	496
Other ^c	71	28	11	32
Definite postgraduation study (%) ^d				
Postdoc fellowship or research associateship	97.4	96.9	98.5	97.4
Other or unknown ^e	2.6	3.1	1.5	2.6
Definite employment (%) ^f				
Academe	17.4	17.4	27.6	14.3
Government	7.2	4.7	D	D
Industry or business ^g	68.7	72.7	44.7	72.3
Nonprofit organization	3.2	1.5	D	D
Other or unknown ^h	3.4	3.6	3.3	3.3
Primary activity ⁱ				
R&D	70.3	69.9	55.6	75.3
Teaching	13.8	16.3	16.0	10.8
Management or administration	3.1	D	D	D
Professional services	12.1	10.0	20.8	11.4
Other	0.7	0.5	0.7	0.9
Secondary activity ^j				
R&D	12.5	10.0	22.9	11.6
Teaching	3.7	2.7	9.7	2.8
Management or administration	14.2	17.2	D	D
Professional services	6.0	6.1	D	D
Other	0.1	0.0	0.0	0.2
No secondary activity	63.6	64.0	44.4	69.0
Activity unknown	5.2	5.2	5.3	5.3
Postgraduation location (%) ^k				
United States ^l	87.5	90.7	85.4	85.3
New England	9.7	11.7	6.8	8.9
Middle Atlantic	11.7	12.8	7.8	12.2
East North Central	9.9	12.1	5.2	9.6
West North Central	2.8	3.8	2.8	2.0
South Atlantic	12.4	12.4	16.7	10.9
East South Central	2.0	D	1.6	D
West South Central	6.5	D	12.2	D
Mountain	6.9	4.0	10.4	8.3
Pacific and insular	25.2	25.9	21.4	25.9
Not in United States	12.5	9.3	14.6	14.7
Location unknown	0.0	0.0	0.0	0.0
Female doctorate recipients (number)	2,118	1,067	526	525
Postgraduation status (number) ^b				
Definite postgraduation study	747	303	213	231

TABLE 59

Statistical profile of postgraduation plans of doctorate recipients in physical sciences and earth sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All physical sciences and earth sciences fields	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy
Definite employment	535	306	113	116
Seeking employment or study	647	339	166	142
Other ^c	58	38	8	12
Definite postgraduation study (%) ^d				
Postdoc fellowship or research associateship	96.3	94.4	96.7	98.3
Other or unknown ^e	3.7	5.6	3.3	1.7
Definite employment (%) ^f				
Academe	25.8	22.2	38.9	22.4
Government	7.5	5.2	D	D
Industry or business ^g	59.1	66.7	32.7	64.7
Nonprofit organization	3.0	2.0	D	D
Other or unknown ^h	4.7	3.9	6.2	5.2
Primary activity ⁱ				
R&D	62.1	64.1	57.0	61.5
Teaching	21.3	19.0	29.0	20.2
Management or administration	3.2	D	D	D
Professional services	12.6	11.7	11.2	16.5
Other	0.8	0.7	0.9	0.9
Secondary activity ^j				
R&D	16.2	14.1	20.6	17.4
Teaching	3.4	3.1	7.5	0.0
Management or administration	14.4	19.0	D	D
Professional services	4.9	5.2	D	D
Other	0.4	0.0	0.9	0.9
No secondary activity	60.7	58.6	52.3	74.3
Activity unknown	5.4	5.2	5.3	6.0
Postgraduation location (%) ^k				
United States ^l	89.3	92.6	90.8	82.1
New England	10.5	11.3	10.1	9.2
Middle Atlantic	11.7	13.5	8.0	12.1
East North Central	10.0	13.8	4.9	8.1
West North Central	4.1	6.1	2.8	2.0
South Atlantic	14.4	13.0	16.6	14.7
East South Central	1.8	D	2.1	D
West South Central	6.1	D	10.4	D
Mountain	7.5	5.6	13.2	5.5
Pacific and insular	23.0	23.0	22.4	23.6
Not in United States	10.6	7.4	9.2	17.6
Location unknown	0.1	0.0	0.0	0.3

* = value between 0.00% and 0.05%; D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.

^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on the number of doctorate recipients reporting definite postgraduation plans for study.

^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.

^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.

^g Includes doctorate recipients who indicated self-employment.

^h "Other" is mainly composed of elementary and secondary schools.

ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.

^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.

^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.

^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.

Note(s)

Due to rounding, percentages may not sum to 100. See **table A-6** in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 60

Statistical profile of doctorate recipients in mathematics and computer sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
All doctorate recipients (number) ^a	4,030	2,004	2,026
Sex (%)			
Male	75.5	78.2	72.8
Female	24.4	21.7	27.0
Unknown	0.1	*	0.1
Citizenship (%)			
U.S. citizen or permanent resident	43.2	37.1	49.2
Temporary visa holder	52.9	58.2	47.6
Unknown	4.0	4.7	3.3
Marital status (%)			
Never married	41.9	35.8	47.9
Married	39.1	44.4	33.9
Marriage-like relationship	6.7	5.5	7.8
Separated, divorced, widowed	1.7	2.0	1.4
Unknown	10.6	12.3	9.0
Bachelor's in same field as doctorate (%) ^b	64.1	51.4	76.7
Master's earned (%)	72.4	73.8	70.9
Age at doctorate (median years)	30.2	31.3	29.2
Time to doctorate (median years)			
From bachelor's	7.6	8.6	6.8
From graduate school start	6.8	7.8	6.2
From doctoral program start ^c	5.7	5.8	5.3
Male doctorate recipients (number)	3,043	1,568	1,475
Citizenship (%)			
U.S. citizen or permanent resident	43.3	35.7	51.4
Temporary visa holder	52.9	59.8	45.7
Unknown	3.8	4.6	2.9
Marital status (%)			
Never married	42.7	36.6	49.2
Married	38.8	44.5	32.7
Marriage-like relationship	6.9	5.7	8.1
Separated, divorced, widowed	1.6	1.7	1.4
Unknown	10.1	11.4	8.6
Bachelor's in same field as doctorate (%) ^b	64.4	52.9	76.6
Master's earned (%)	71.5	73.7	69.3
Age at doctorate (median years)	30.2	31.3	29.2
Time to doctorate (median years)			
From bachelor's	7.6	8.5	6.7
From graduate school start	6.8	7.7	6.1
From doctoral program start ^c	5.7	5.8	5.3
Female doctorate recipients (number)	983	435	548
Citizenship (%)			
U.S. citizen or permanent resident	42.9	42.3	43.4

TABLE 60

Statistical profile of doctorate recipients in mathematics and computer sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
Temporary visa holder	52.8	52.6	52.9
Unknown	4.3	5.1	3.6
Marital status (%)			
Never married	39.5	32.9	44.7
Married	40.1	43.9	37.0
Marriage-like relationship	6.1	4.8	7.1
Separated, divorced, widowed	2.2	3.2	1.5
Unknown	12.1	15.2	9.7
Bachelor's in same field as doctorate (%) ^b	63.6	46.2	77.4
Master's earned (%)	75.2	74.5	75.7
Age at doctorate (median years)	30.3	31.8	29.3
Time to doctorate (median years)			
From bachelor's	8.0	9.0	6.9
From graduate school start	6.9	8.0	6.3
From doctoral program start ^c	5.8	5.8	5.7

* = value between 0.00% and 0.05%.

^a Includes respondents who did not report sex.^b A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 61

Statistical profile of postgraduation plans of doctorate recipients in mathematics and computer sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
All doctorate recipients (number) ^a	4,030	2,004	2,026
Postgraduation status (number) ^b			
Definite postgraduation study	888	261	627
Definite employment	1,887	1,109	778
Seeking employment or study	864	421	443
Other ^c	59	25	34
Definite postgraduation study (%) ^d			
Postdoc fellowship or research associateship	96.2	93.9	97.1
Other or unknown ^e	3.8	6.1	2.9
Definite employment (%) ^f			
Academe	32.6	27.5	39.8
Government	4.3	4.0	4.9
Industry or business ^g	59.0	64.8	50.8
Nonprofit organization	2.4	2.3	2.4
Other or unknown ^h	1.6	1.4	2.1
Primary activity ⁱ			
R&D	65.1	74.6	51.7
Teaching	22.8	15.3	33.4
Management or administration	2.4	2.5	2.4
Professional services	9.5	7.5	12.3
Other	0.2	0.2	0.3
Secondary activity ^j			
R&D	20.5	15.7	27.2
Teaching	9.8	10.7	8.5
Management or administration	6.9	7.8	5.6
Professional services	5.3	3.7	7.5
Other	0.3	0.2	0.4
No secondary activity	57.4	62.0	50.9
Activity unknown	4.1	4.6	3.5
Postgraduation location (%) ^k			
United States ^l	88.0	90.7	85.4
New England	7.7	6.5	8.9
Middle Atlantic	14.1	12.1	16.0
East North Central	10.8	8.5	13.0
West North Central	3.1	1.9	4.3
South Atlantic	11.9	11.7	12.1
East South Central	1.9	1.9	1.9
West South Central	5.2	3.6	6.8
Mountain	3.6	2.7	4.5
Pacific and insular	29.1	41.2	17.4
Not in United States	12.0	9.3	14.6
Location unknown	0.0	0.0	0.0
Male doctorate recipients (number)	3,043	1,568	1,475
Postgraduation status (number) ^b			
Definite postgraduation study	674	194	480
Definite employment	1,423	881	542

TABLE 61

Statistical profile of postgraduation plans of doctorate recipients in mathematics and computer sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
Seeking employment or study	661	333	328
Other ^c	43	19	24
Definite postgraduation study (%) ^d			
Postdoc fellowship or research associateship	96.6	93.3	97.9
Other or unknown ^e	3.4	6.7	2.1
Definite employment (%) ^f			
Academe	30.5	25.9	38.0
Government	4.4	4.1	5.0
Industry or business ^g	61.3	66.6	52.8
Nonprofit organization	2.3	2.4	2.2
Other or unknown ^h	1.4	1.0	2.0
Primary activity ⁱ			
R&D	67.3	76.6	52.2
Teaching	21.1	14.1	32.4
Management or administration	2.4	D	D
Professional services	9.0	D	D
Other	0.2	0.1	0.4
Secondary activity ^j			
R&D	18.8	14.4	25.9
Teaching	9.8	10.9	8.2
Management or administration	7.2	7.8	6.3
Professional services	5.3	3.7	7.8
Other	0.3	0.2	0.4
No secondary activity	58.6	63.0	51.4
Activity unknown	3.7	4.0	3.1
Postgraduation location (%) ^k			
United States ^l	88.0	90.7	85.1
New England	8.0	6.9	9.2
Middle Atlantic	14.6	12.8	16.4
East North Central	9.9	D	D
West North Central	3.1	D	D
South Atlantic	11.3	11.0	11.6
East South Central	1.9	1.7	2.1
West South Central	5.2	3.6	6.8
Mountain	3.4	2.5	4.4
Pacific and insular	30.0	41.9	17.5
Not in United States	12.0	9.3	14.9
Location unknown	0.0	0.0	0.0
Female doctorate recipients (number)	983	435	548
Postgraduation status (number) ^b			
Definite postgraduation study	214	67	147
Definite employment	464	228	236
Seeking employment or study	203	88	115
Other ^c	16	6	10
Definite postgraduation study (%) ^d			

TABLE 61

Statistical profile of postgraduation plans of doctorate recipients in mathematics and computer sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
Postdoc fellowship or research associateship	94.9	95.5	94.6
Other or unknown ^e	5.1	4.5	5.4
Definite employment (%) ^f			
Academe	39.0	33.8	44.1
Government	4.1	3.5	4.7
Industry or business ^g	51.9	57.9	46.2
Nonprofit organization	2.6	2.2	3.0
Other or unknown ^h	2.4	2.6	2.1
Primary activity ⁱ			
R&D	58.2	66.5	50.4
Teaching	28.3	20.3	35.8
Management or administration	2.5	D	D
Professional services	10.7	D	D
Other	0.2	0.5	0.0
Secondary activity ^j			
R&D	25.6	20.8	30.1
Teaching	9.6	9.9	9.3
Management or administration	5.7	7.5	4.0
Professional services	5.3	3.8	6.6
Other	0.2	0.0	0.4
No secondary activity	53.7	58.0	49.6
Activity unknown	5.6	7.0	4.2
Postgraduation location (%) ^k			
United States ^l	88.2	90.8	86.2
New England	6.8	5.1	8.1
Middle Atlantic	12.5	9.5	14.9
East North Central	13.4	D	D
West North Central	2.9	D	D
South Atlantic	13.7	14.2	13.3
East South Central	2.1	2.7	1.6
West South Central	5.3	3.7	6.5
Mountain	4.1	3.4	4.7
Pacific and insular	26.4	38.6	17.0
Not in United States	11.8	9.2	13.8
Location unknown	0.0	0.0	0.0

D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on the number of doctorate recipients reporting definite postgraduation plans for study.^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.^g Includes doctorate recipients who indicated self-employment.^h "Other" is mainly composed of elementary and secondary schools.

ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.

^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.

^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.

^l Includes cases with an unknown U.S region of employment after doctorate; see technical notes for states or territories included in regions.

Note(s)

Due to rounding, percentages may not sum to 100. See **table A-6** in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 62

Statistical profile of doctorate recipients in psychology and social sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
All doctorate recipients (number) ^a	8,899	3,837	424	1,247	734	669	1,988
Sex (%)							
Male	40.9	28.6	29.7	68.2	58.4	37.4	44.7
Female	59.1	71.4	70.3	31.8	41.4	62.6	55.2
Unknown	*	0.0	0.0	0.0	0.1	0.0	0.1
Citizenship (%)							
U.S. citizen or permanent resident	75.3	86.6	79.0	38.8	74.0	83.1	73.7
Temporary visa holder	19.9	7.4	16.5	56.7	21.7	13.3	23.2
Unknown	4.8	6.0	4.5	4.5	4.4	3.6	3.1
Marital status (%)							
Never married	29.5	29.4	25.7	38.3	31.2	23.6	26.2
Married	42.3	37.8	44.6	39.9	45.0	48.7	48.7
Marriage-like relationship	11.5	12.9	14.4	7.7	10.1	14.3	10.2
Separated, divorced, widowed	3.9	3.4	6.4	2.0	4.2	4.6	5.2
Unknown	12.9	16.5	9.0	12.2	9.5	8.7	9.7
Bachelor's in same field as doctorate (%) ^b	52.1	65.6	38.9	55.8	62.1	43.9	25.3
Master's earned (%)	82.6	80.0	87.5	78.4	84.1	88.9	86.7
Age at doctorate (median years)	32.3	31.2	34.3	31.2	33.0	33.6	34.8
Time to doctorate (median years)							
From bachelor's	9.3	8.3	11.4	8.5	10.0	10.6	11.3
From graduate school start	7.8	6.9	9.3	7.7	8.3	8.9	9.3
From doctoral program start ^c	6.0	5.9	7.6	5.8	6.3	7.0	6.0
Male doctorate recipients (number)	3,641	1,097	126	850	429	250	889
Citizenship (%)							
U.S. citizen or permanent resident	70.1	86.7	73.8	40.6	72.7	84.4	71.9
Temporary visa holder	25.7	7.7	23.0	54.9	23.3	12.4	25.4
Unknown	4.2	5.7	3.2	4.5	4.0	3.2	2.7
Marital status (%)							
Never married	29.7	30.3	22.2	38.0	32.6	20.8	23.2
Married	44.8	39.5	46.8	39.9	45.2	48.8	54.6
Marriage-like relationship	10.4	12.7	15.1	8.1	8.9	14.4	8.7
Separated, divorced, widowed	2.9	2.0	4.8	2.0	4.0	4.0	3.7
Unknown	12.2	15.6	11.1	12.0	9.3	12.0	9.9
Bachelor's in same field as doctorate (%) ^b	49.9	64.4	31.0	55.2	62.0	41.2	26.4
Master's earned (%)	82.0	79.6	88.1	77.2	82.1	88.4	86.8

TABLE 62

Statistical profile of doctorate recipients in psychology and social sciences fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
Age at doctorate (median years)	32.8	31.8	35.8	31.3	33.4	33.6	35.7
Time to doctorate (median years)							
From bachelor's	9.4	8.6	12.0	8.3	10.0	10.3	11.4
From graduate school start	7.9	6.9	10.1	7.3	8.3	8.8	9.3
From doctoral program start ^c	5.9	5.8	7.8	5.8	6.3	6.8	5.9
Female doctorate recipients (number)	5,256	2,740	298	397	304	419	1,098
Citizenship (%)							
U.S. citizen or permanent resident	79.0	86.5	81.2	35.0	76.0	82.3	75.2
Temporary visa holder	15.9	7.3	13.8	60.5	19.4	13.8	21.4
Unknown	5.1	6.2	5.0	4.5	4.6	3.8	3.4
Marital status (%)							
Never married	29.3	29.0	27.2	38.8	29.3	25.3	28.7
Married	40.5	37.2	43.6	39.8	44.7	48.7	44.0
Marriage-like relationship	12.3	13.0	14.1	6.8	11.8	14.3	11.5
Separated, divorced, widowed	4.6	3.9	7.0	2.0	4.6	5.0	6.5
Unknown	13.3	16.9	8.1	12.6	9.5	6.7	9.4
Bachelor's in same field as doctorate (%) ^b	53.5	66.1	42.3	57.2	62.5	45.6	24.4
Master's earned (%)	83.1	80.2	87.2	81.1	86.8	89.3	86.6
Age at doctorate (median years)	32.1	30.9	33.8	30.9	32.5	33.5	34.3
Time to doctorate (median years)							
From bachelor's	9.3	8.3	11.1	8.8	10.0	11.0	11.3
From graduate school start	7.8	6.8	8.9	7.8	8.1	9.0	9.3
From doctoral program start ^c	6.0	5.9	7.3	5.8	6.3	7.0	6.1

* = value between 0.00% and 0.05%.

^a Includes respondents who did not report sex.^b A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 63

Statistical profile of postgraduation plans of doctorate recipients in psychology and social sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
All doctorate recipients (number) ^a	8,899	3,837	424	1,247	734	669	1,988
Postgraduation status (number) ^b							
Definite postgraduation study	2,306	1,503	101	145	170	122	265
Definite employment	3,574	1,078	132	795	324	322	923
Seeking employment or study	1,910	660	155	161	173	167	594
Other ^c	177	70	10	16	7	12	62
Definite postgraduation study (%) ^d							
Postdoc fellowship or research associateship	90.2	86.8	98.0	95.9	97.6	95.1	96.2
Other or unknown ^e	9.8	13.2	2.0	4.1	2.4	4.9	3.8
Definite employment (%) ^f							
Academe	55.9	44.2	67.4	55.6	67.9	77.3	56.7
Government	10.7	9.7	8.3	10.3	11.1	5.0	14.4
Industry or business ^g	19.9	27.8	12.9	25.4	11.1	7.8	14.2
Nonprofit organization	8.3	9.9	8.3	5.9	6.2	7.1	9.5
Other or unknown ^h	5.2	8.3	3.0	2.8	3.7	2.8	5.2
Primary activity ⁱ							
R&D	36.1	27.4	26.6	57.3	28.0	39.5	30.6
Teaching	34.8	26.8	50.8	22.9	51.3	48.5	41.4
Management or administration	8.3	7.6	13.3	2.6	8.9	6.5	14.0
Professional services	20.4	38.1	9.4	17.0	11.1	5.5	13.4
Other	0.3	0.1	0.0	0.3	0.6	0.0	0.6
Secondary activity ^j							
R&D	31.8	26.3	40.6	25.7	42.7	40.8	35.1
Teaching	20.6	14.9	11.7	31.4	18.8	21.7	19.3
Management or administration	10.1	11.2	9.4	8.3	8.3	7.4	12.0
Professional services	6.0	7.5	8.6	5.5	3.5	4.5	5.9
Other	0.3	0.3	0.8	0.4	0.0	0.3	0.3
No secondary activity	31.2	39.9	28.9	28.7	26.8	25.2	27.4
Activity unknown	4.7	7.0	3.0	3.1	3.1	4.0	4.6
Postgraduation location (%) ^k							
United States ^l	87.4	96.0	81.1	71.0	83.2	90.5	83.7
New England	8.9	9.2	10.3	8.0	8.5	8.3	8.8
Middle Atlantic	13.5	13.8	14.6	11.6	16.2	16.2	12.0
East North Central	11.6	12.6	D	10.7	D	14.4	9.0
West North Central	5.1	7.0	7.3	2.3	3.0	5.2	3.6
South Atlantic	17.9	17.0	12.0	17.8	19.4	17.8	20.6
East South Central	2.6	2.6	D	1.9	D	4.1	2.8
West South Central	7.1	9.0	3.4	3.5	6.3	6.8	6.8
Mountain	5.5	6.5	6.4	2.3	4.0	4.1	6.6

TABLE 63

Statistical profile of postgraduation plans of doctorate recipients in psychology and social sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
Pacific and insular	14.7	17.7	12.9	11.8	11.5	13.1	12.8
Not in United States	12.5	4.0	18.5	29.0	16.8	9.5	16.2
Location unknown	0.1	*	0.4	0.0	0.0	0.0	0.1
Male doctorate recipients (number)	3,641	1,097	126	850	429	250	889
Postgraduation status (number) ^b							
Definite postgraduation study	759	378	35	106	98	39	103
Definite employment	1,714	362	35	544	192	128	453
Seeking employment or study	753	199	48	101	100	57	248
Other ^c	55	17	2	9	3	4	20
Definite postgraduation study (%) ^d							
Postdoc fellowship or research associateship	92.0	87.8	97.1	95.3	98.0	94.9	95.1
Other or unknown ^e	8.0	12.2	2.9	4.7	2.0	5.1	4.9
Definite employment (%) ^f							
Academe	55.0	45.3	65.7	55.7	65.1	79.7	49.7
Government	12.8	11.9	D	11.8	13.0	3.9	D
Industry or business ^g	20.5	28.2	22.9	24.6	11.5	8.6	16.3
Nonprofit organization	8.1	9.9	0.0	5.7	7.3	6.3	10.8
Other or unknown ^h	3.7	4.7	D	2.2	3.1	1.6	D
Primary activity ⁱ							
R&D	40.0	30.1	30.3	60.6	27.4	38.5	29.2
Teaching	33.3	30.1	51.5	20.4	50.5	45.9	39.4
Management or administration	7.9	7.3	D	D	9.1	9.8	14.1
Professional services	18.5	32.2	D	D	11.8	5.7	17.1
Other	0.3	0.3	0.0	0.2	1.1	0.0	0.2
Secondary activity ^j							
R&D	30.6	30.1	45.5	23.4	39.2	41.0	32.2
Teaching	22.9	14.6	15.2	33.2	17.2	26.2	18.8
Management or administration	10.6	14.0	D	8.1	9.1	D	13.4
Professional services	5.8	6.7	D	5.3	2.7	D	7.2
Other	0.3	0.0	0.0	0.6	0.0	0.0	0.5
No secondary activity	29.8	34.5	18.2	29.4	31.7	24.6	28.0
Activity unknown	4.0	5.5	5.7	2.6	3.1	4.7	4.6
Postgraduation location (%) ^k							
United States ^l	82.3	94.3	71.4	69.5	80.3	91.6	80.8
New England	8.0	7.8	D	D	9.0	9.0	7.7
Middle Atlantic	12.5	13.2	15.7	10.3	14.5	18.6	11.0
East North Central	10.5	12.7	D	10.6	D	12.6	7.6
West North Central	4.9	7.4	7.1	D	D	6.6	3.4
South Atlantic	17.3	15.4	12.9	17.1	18.6	17.4	20.1

TABLE 63

Statistical profile of postgraduation plans of doctorate recipients in psychology and social sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
East South Central	3.0	3.8	D	D	3.1	3.0	3.1
West South Central	6.8	10.7	D	3.5	D	4.2	7.2
Mountain	5.4	6.4	D	D	3.8	5.4	8.5
Pacific and insular	13.2	16.4	11.4	11.4	11.0	14.4	12.2
Not in United States	17.7	5.7	27.1	30.5	19.7	8.4	19.2
Location unknown	*	0.0	1.4	0.0	0.0	0.0	0.0
Female doctorate recipients (number)	5,256	2,740	298	397	304	419	1,098
Postgraduation status (number) ^b							
Definite postgraduation study	1,547	1,125	66	39	72	83	162
Definite employment	1,860	716	97	251	132	194	470
Seeking employment or study	1,157	461	107	60	73	110	346
Other ^c	122	53	8	7	4	8	42
Definite postgraduation study (%) ^d							
Postdoc fellowship or research associateship	89.3	86.5	98.5	97.4	97.2	95.2	96.9
Other or unknown ^e	10.7	13.5	1.5	2.6	2.8	4.8	3.1
Definite employment (%) ^f							
Academe	56.8	43.6	68.0	55.4	72.0	75.8	63.4
Government	8.8	8.7	D	7.2	8.3	5.7	D
Industry or business ^g	19.4	27.7	9.3	27.1	10.6	7.2	12.1
Nonprofit organization	8.5	9.9	11.3	6.4	4.5	7.7	8.3
Other or unknown ^h	6.6	10.2	D	4.0	4.5	3.6	D
Primary activity ⁱ							
R&D	32.5	26.0	25.3	50.0	28.9	40.1	32.1
Teaching	36.3	25.1	50.5	28.3	52.3	50.3	43.4
Management or administration	8.8	7.7	D	D	8.6	4.3	13.8
Professional services	22.2	41.1	D	D	10.2	5.3	9.8
Other	0.3	0.0	0.0	0.4	0.0	0.0	0.9
Secondary activity ^j							
R&D	32.9	24.4	38.9	30.8	47.7	40.6	37.9
Teaching	18.5	15.0	10.5	27.5	21.1	18.7	19.8
Management or administration	9.5	9.7	D	8.8	7.0	D	10.7
Professional services	6.3	7.9	D	5.8	4.7	D	4.7
Other	0.3	0.5	1.1	0.0	0.0	0.5	0.2
No secondary activity	32.4	42.7	32.6	27.1	19.5	25.7	26.7
Activity unknown	5.4	7.7	2.1	4.4	3.0	3.6	4.5
Postgraduation location (%) ^k							
United States ^l	91.1	96.6	85.3	74.1	87.3	89.9	86.2
New England	9.5	9.8	D	D	7.8	7.9	9.8
Middle Atlantic	14.2	14.0	14.1	14.5	18.6	14.8	13.0

TABLE 63

Statistical profile of postgraduation plans of doctorate recipients in psychology and social sciences fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
East North Central	12.3	12.6	12.3	11.0	13.7	15.5	10.3
West North Central	5.3	6.8	7.4	D	D	4.3	3.8
South Atlantic	18.3	17.7	11.7	19.3	20.6	18.1	21.0
East South Central	2.3	2.2	D	D	D	4.7	2.5
West South Central	7.2	8.4	D	3.4	D	8.3	6.5
Mountain	5.5	6.6	D	D	4.4	3.2	4.9
Pacific and insular	15.8	18.2	13.5	12.8	12.3	12.3	13.3
Not in United States	8.8	3.3	14.7	25.9	12.7	10.1	13.6
Location unknown	0.1	0.1	0.0	0.0	0.0	0.0	0.2

* = value between 0.00% and 0.05%; D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.^g Includes doctorate recipients who indicated self-employment.^h "Other" is mainly composed of elementary and secondary schools.ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.**Note(s)**Due to rounding, percentages may not sum to 100. See **table A-6** in the technical notes for a listing of major fields and their constituent subfields.**Source(s)**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 64

Statistical profile of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
From bachelor's	7.3	6.9	6.9	6.0	8.3	7.8	8.6	6.6	7.3	7.9
From graduate school start	6.7	6.4	6.3	5.6	7.3	7.0	7.8	6.0	6.8	7.0
From doctoral program start ^c	5.3	5.3	5.3	5.0	4.8	5.3	5.0	5.0	5.3	5.2
Male doctorate recipients (number)	7,726	337	688	688	507	1,606	204	720	1,286	1,690
Citizenship (%)										
U.S. citizen or permanent resident	40.0	57.3	63.4	49.3	28.2	27.8	20.6	46.8	39.7	38.0
Temporary visa holder	56.3	38.9	33.7	47.7	66.9	67.7	74.5	50.4	56.2	58.8
Unknown	3.7	3.9	2.9	3.1	4.9	4.5	4.9	2.8	4.1	3.2
Marital status (%)										
Never married	41.5	42.7	46.9	49.6	37.3	42.3	32.4	46.1	40.7	36.2
Married	41.1	37.1	35.0	31.4	46.2	41.5	53.4	33.6	41.9	47.3
Marriage-like relationship	5.7	D	8.7	7.1	3.6	4.5	D	8.5	5.2	4.9
Separated, divorced, widowed	1.2	D	1.6	D	D	1.1	D	0.8	1.3	1.1
Unknown	10.5	D	7.7	D	D	10.6	11.3	11.0	10.8	10.5
Bachelor's in same field as doctorate (%) ^b	79.3	83.4	75.0	84.2	83.2	84.7	73.5	65.6	87.1	72.5
Master's earned (%)	72.3	79.5	55.8	45.5	86.2	79.0	81.9	59.3	77.9	78.0
Age at doctorate (median years)	30.1	29.3	29.7	28.7	31.6	30.5	32.1	29.2	30.1	30.7

TABLE 64

Statistical profile of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Time to doctorate (median years)										
From bachelor's	7.4	6.8	7.0	6.0	8.3	7.8	8.9	6.6	7.5	7.9
From graduate school start	6.8	6.3	6.3	5.6	7.4	7.0	7.8	6.0	6.8	7.0
From doctoral program start ^c	5.3	5.3	5.3	5.0	4.8	5.3	5.0	5.0	5.3	5.2
Female doctorate recipients (number)	2,453	46	445	293	170	345	68	275	216	595
Citizenship (%)										
U.S. citizen or permanent resident	46.0	60.9	69.2	44.4	33.5	28.4	29.4	45.8	45.4	44.4
Temporary visa holder	50.3	32.6	29.2	51.2	61.2	67.0	64.7	50.5	50.0	52.6
Unknown	3.7	6.5	1.6	4.4	5.3	4.6	5.9	3.6	4.6	3.0
Marital status (%)										
Never married	38.4	34.8	44.9	38.9	35.9	34.5	35.3	42.9	33.3	36.8
Married	40.1	37.0	36.9	37.9	35.3	46.4	44.1	36.0	36.6	44.2
Marriage-like relationship	7.9	D	11.0	10.6	6.5	4.3	D	8.0	11.1	6.2
Separated, divorced, widowed	2.4	D	1.1	D	D	2.0	D	3.3	2.8	3.5
Unknown	11.1	17.4	6.1	D	D	12.8	D	9.8	16.2	9.2
Bachelor's in same field as doctorate (%) ^b	73.5	78.3	74.8	82.6	72.4	81.7	66.2	62.9	78.7	67.1

TABLE 64

Statistical profile of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Master's earned (%)	68.0	80.4	50.1	47.1	75.9	76.8	85.3	62.2	75.0	81.7
Age at doctorate (median years)	29.5	29.3	29.0	28.7	30.8	29.8	30.7	28.8	29.5	30.1
Time to doctorate (median years)										
From bachelor's	7.0	7.0	6.6	6.0	7.9	7.7	8.1	6.3	6.9	7.8
From graduate school start	6.3	6.8	5.9	5.6	7.3	7.0	7.1	5.9	6.3	7.0
From doctoral program start ^c	5.2	5.1	5.3	5.0	4.8	5.3	5.0	5.0	5.0	5.2

* = value between 0.00% and 0.05%; D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
All doctorate recipients (number) ^a	10,183	383	1,134	981	677	1,951	272	995	1,504	2,286
Postgraduation status (number) ^b										
Definite postgraduation study	2,088	72	355	202	157	285	30	235	314	438
Definite employment	4,021	173	279	349	239	1,004	136	326	548	967
Seeking employment or study	3,015	91	378	333	191	470	79	343	474	656
Other ^c	205	6	62	16	13	26	1	9	26	46
Definite postgraduation study (%) ^d										
Postdoc fellowship or research associateship	95.4	100.0	95.8	97.5	91.7	91.9	100.0	97.4	97.1	94.1
Other or unknown ^e	4.6	0.0	4.2	2.5	8.3	8.1	0.0	2.6	2.9	5.9
Definite employment (%) ^f										
Academe	16.0	13.3	19.4	7.7	27.6	10.5	35.3	9.2	21.0	18.1
Government	8.0	26.0	3.9	3.4	D	5.4	7.4	D	7.3	10.5
Industry or business ^g	70.7	52.6	70.6	84.8	56.9	79.0	50.7	79.4	65.7	66.3
Nonprofit organization	3.3	6.4	2.9	1.7	D	3.8	4.4	D	4.0	2.9
Other or unknown ^h	2.1	1.7	3.2	2.3	2.5	1.4	2.2	3.1	2.0	2.2
Primary activity ⁱ										
R&D	74.2	82.4	65.2	82.2	41.3	86.8	51.5	83.0	74.2	67.8
Teaching	9.0	4.2	7.6	4.9	17.4	5.6	23.9	4.2	13.3	10.1
Management or administration	3.9	D	6.8	D	7.4	1.7	9.7	2.3	2.5	6.0

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Professional services	12.4	D	20.1	D	33.5	5.0	14.9	9.2	9.4	16.0
Other	0.5	0.6	0.4	0.0	0.4	0.9	0.0	1.3	0.6	0.1
Secondary activity ^j										
R&D	12.3	8.5	12.1	4.3	27.0	7.4	20.9	5.6	13.8	17.4
Teaching	6.6	5.5	6.1	1.8	12.6	5.1	11.9	3.6	7.7	8.3
Management or administration	13.2	11.5	17.0	17.2	7.4	10.4	14.2	19.3	12.3	13.8
Professional services	4.8	4.8	3.4	3.7	7.4	3.8	7.5	4.2	4.6	5.9
Other	0.2	1.2	0.0	0.6	0.4	0.1	0.0	0.3	0.0	0.1
No secondary activity	62.9	68.5	61.4	72.4	45.2	73.2	45.5	67.0	61.5	54.5
Activity unknown	4.8	4.6	5.4	6.6	3.8	4.1	1.5	6.1	5.1	5.0
Postgraduation location (%) ^k										
United States ^l	90.1	93.1	91.0	93.1	84.8	91.5	84.9	91.4	91.0	87.9
New England	8.6	9.0	14.8	11.6	4.8	7.1	3.6	7.8	8.7	7.6
Middle Atlantic	10.1	5.7	13.6	13.2	7.6	8.0	10.2	9.4	12.2	9.8
East North Central	10.9	14.7	11.4	12.5	9.8	7.8	13.9	10.0	14.3	10.4
West North Central	3.4	4.1	3.8	3.1	7.1	2.5	6.6	3.0	3.7	2.6
South Atlantic	12.4	17.1	14.2	10.0	15.2	10.7	14.5	10.3	11.8	13.2
East South Central	2.5	2.9	0.9	1.3	5.3	1.2	4.8	2.1	3.4	3.2
West South Central	7.2	4.1	4.6	9.4	9.8	6.2	12.0	5.0	7.2	8.3
Mountain	6.2	10.2	3.8	4.5	6.6	6.0	4.8	6.6	7.2	6.9
Pacific and insular	28.4	24.9	23.7	26.7	18.2	41.2	13.9	36.5	21.5	25.5
Not in United States	9.8	6.5	9.0	6.7	14.9	8.5	15.1	8.6	9.0	12.0
Location unknown	0.1	0.4	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.1

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Male doctorate recipients (number)	7,726	337	688	688	507	1,606	204	720	1,286	1,690
Postgraduation status (number) ^b										
Definite postgraduation study	1,587	D	221	150	125	232	D	181	266	324
Definite employment	3,126	D	170	237	186	837	D	236	473	734
Seeking employment or study	2,237	80	219	233	140	385	60	238	417	465
Other ^c	147	6	40	12	10	19	1	6	22	31
Definite postgraduation study (%) ^d										
Postdoc fellowship or research associateship	95.7	D	95.5	97.3	91.2	92.2	D	99.4	97.4	94.4
Other or unknown ^e	4.3	0.0	4.5	2.7	8.8	7.8	0.0	0.6	2.6	5.6
Definite employment (%) ^f										
Academe	15.7	11.4	22.4	9.3	26.9	10.2	36.5	8.9	19.7	17.3
Government	7.9	D	2.9	D	D	5.7	D	5.1	D	10.6
Industry or business ^g	71.2	53.0	67.6	82.3	59.7	79.3	51.9	80.5	67.4	67.8
Nonprofit organization	3.0	7.4	D	D	D	3.3	D	2.1	D	2.0
Other or unknown ^h	2.2	2.0	D	D	2.7	1.4	2.9	3.4	2.1	2.2
Primary activity ⁱ										
R&D	76.2	83.1	70.1	84.2	41.8	88.0	49.0	85.8	74.7	70.6

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Teaching	8.7	D	8.3	D	D	5.5	D	3.7	12.5	9.0
Management or administration	3.8	D	6.4	D	D	D	D	D	D	5.9
Professional services	10.8	9.9	14.6	8.6	32.8	D	12.7	D	D	14.3
Other	0.5	0.7	0.6	0.0	0.6	0.9	0.0	1.4	0.2	0.1
Secondary activity ^j										
R&D	11.9	D	14.0	D	26.6	6.8	D	D	13.2	15.6
Teaching	6.3	D	5.7	D	D	5.0	9.8	D	6.9	7.7
Management or administration	13.4	D	15.9	17.6	D	10.5	D	21.5	12.3	14.5
Professional services	4.8	5.6	5.7	D	6.8	3.8	D	3.7	4.0	5.9
Other	0.2	1.4	0.0	0.5	0.0	0.1	0.0	0.5	0.0	0.1
No secondary activity	63.3	68.3	58.6	70.3	46.3	73.7	42.2	64.4	63.5	56.1
Activity unknown	5.0	4.7	7.6	6.3	4.8	3.6	1.9	7.2	5.5	5.0
Postgraduation location (%) ^k										
United States ^l	89.3	92.2	90.0	91.5	D	90.7	D	89.9	91.1	87.6
New England	7.9	7.8	D	9.6	3.9	6.9	D	8.2	9.2	6.6
Middle Atlantic	10.1	D	13.0	12.9	D	7.7	D	10.3	11.8	10.4
East North Central	10.7	D	11.3	12.9	9.0	8.0	8.1	D	14.1	10.8
West North Central	3.3	D	3.1	3.1	D	2.3	D	2.9	D	2.6
South Atlantic	12.4	D	13.8	10.9	14.1	D	D	10.3	12.2	12.7
East South Central	2.5	3.2	D	1.8	D	D	D	D	3.2	2.6
West South Central	7.4	D	5.1	10.3	10.0	6.2	D	4.8	D	8.6
Mountain	6.5	D	4.3	4.1	D	6.4	D	7.2	7.0	7.1

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Pacific and insular	28.1	25.8	24.6	25.3	17.0	40.4	12.9	34.5	20.7	25.9
Not in United States	10.6	7.4	10.0	8.3	D	9.3	D	10.1	8.9	12.3
Location unknown	0.1	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1
Female doctorate recipients (number)	2,453	46	445	293	170	345	68	275	216	595
Postgraduation status (number) ^b										
Definite postgraduation study	501	D	134	52	32	53	D	54	48	114
Definite employment	895	D	109	112	53	167	D	90	75	233
Seeking employment or study	778	11	159	100	51	85	19	105	57	191
Other ^c	58	0	22	4	3	7	0	3	4	15
Definite postgraduation study (%) ^d										
Postdoc fellowship or research associateship	94.4	D	96.3	98.1	93.8	90.6	D	90.7	95.8	93.0
Other or unknown ^e	5.6	0.0	3.7	1.9	6.3	9.4	0.0	9.3	4.2	7.0
Definite employment (%) ^f										
Academe	17.0	25.0	14.7	4.5	30.2	12.0	31.3	10.0	29.3	20.6
Government	8.2	D	5.5	D	D	3.6	D	D	D	10.3
Industry or business ^g	68.9	50.0	75.2	90.2	47.2	77.2	46.9	76.7	54.7	61.4

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Nonprofit organization	4.0	0.0	D	D	D	6.0	D	D	D	5.6
Other or unknown ^h	1.9	0.0	D	D	1.9	1.2	0.0	2.2	1.3	2.1
Primary activity ⁱ										
R&D	67.2	78.3	57.9	77.9	39.6	80.8	59.4	75.9	71.2	59.0
Teaching	9.9	D	6.5	D	D	6.4	D	5.7	17.8	13.5
Management or administration	4.1	0.0	7.5	D	D	D	D	D	D	6.3
Professional services	18.2	D	28.0	D	35.8	D	21.9	D	D	21.2
Other	0.6	0.0	0.0	0.0	0.0	1.3	0.0	1.1	2.7	0.0
Secondary activity ^j										
R&D	13.5	D	9.3	D	28.3	10.3	D	D	17.8	23.0
Teaching	7.6	D	6.5	D	D	5.8	18.8	D	12.3	9.9
Management or administration	12.5	D	18.7	16.3	D	9.6	D	13.8	12.3	11.7
Professional services	4.8	0.0	0.0	D	9.4	3.8	D	5.7	8.2	5.9
Other	0.2	0.0	0.0	1.0	1.9	0.0	0.0	0.0	0.0	0.0
No secondary activity	61.4	69.6	65.4	76.9	41.5	70.5	56.3	73.6	49.3	49.5
Activity unknown	4.2	4.2	1.8	7.1	0.0	6.6	0.0	3.3	2.7	4.7
Postgraduation location (%) ^k										
United States ^l	92.8	100.0	92.6	97.0	D	95.5	D	95.8	90.2	88.8
New England	10.9	17.9	D	16.5	8.2	8.2	D	6.9	5.7	10.7
Middle Atlantic	10.4	D	14.4	14.0	D	9.5	D	6.9	14.6	8.1
East North Central	11.5	D	11.5	11.6	12.9	7.3	31.0	D	15.4	9.2
West North Central	3.8	D	4.9	3.0	D	3.2	D	3.5	D	2.9
South Atlantic	12.1	D	14.8	7.9	18.8	D	D	10.4	9.8	15.0

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
East South Central	2.4	0.0	D	0.0	D	D	D	D	4.1	4.9
West South Central	6.2	D	3.7	7.3	9.4	6.4	D	5.6	D	7.5
Mountain	5.4	D	2.9	5.5	D	4.1	D	4.9	8.1	6.3
Pacific and insular	29.4	17.9	22.2	29.9	22.4	45.0	16.7	42.4	26.0	24.2
Not in United States	7.1	0.0	7.4	3.0	D	4.5	D	4.2	9.8	11.2
Location unknown	0.1	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0

D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.^g Includes doctorate recipients who indicated self-employment.^h "Other" is mainly composed of elementary and secondary schools.ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.**Note(s)**

Due to rounding, percentages may not sum to 100. See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 66

Statistical profile of doctorate recipients in education fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
All doctorate recipients (number) ^a	4,834	898	2,507	97	963	369
Sex (%)						
Male	30.9	36.0	30.5	18.6	28.2	32.2
Female	69.0	64.0	69.5	81.4	71.8	67.8
Unknown	*	0.0	*	0.0	0.0	0.0
Citizenship (%)						
U.S. citizen or permanent resident	83.4	87.3	82.2	90.7	81.8	84.8
Temporary visa holder	12.7	5.9	14.6	8.2	16.1	8.1
Unknown	3.9	6.8	3.2	1.0	2.1	7.0
Marital status (%)						
Never married	19.1	14.4	21.4	13.4	19.8	14.6
Married	57.0	58.5	56.6	64.9	58.8	49.9
Marriage-like relationship	5.2	3.6	5.6	D	6.2	D
Separated, divorced, widowed	7.2	7.9	6.9	D	7.4	D
Unknown	11.5	15.7	9.5	7.2	7.8	25.5
Bachelor's in same field as doctorate (%) ^b	23.9	25.7	20.6	35.1	32.0	17.6
Master's earned (%)	88.8	86.7	90.0	97.9	91.3	76.7
Age at doctorate (median years)	38.2	43.0	37.3	41.8	37.0	38.2
Time to doctorate (median years)						
From bachelor's	14.7	18.6	14.0	17.6	14.0	14.5
From graduate school start	11.9	14.9	11.0	14.7	11.3	12.3
From doctoral program start ^c	5.8	5.8	5.8	5.9	5.6	5.8
Male doctorate recipients (number)	1,496	323	764	18	272	119
Citizenship (%)						
U.S. citizen or permanent resident	81.7	87.9	79.2	88.9	79.4	84.9
Temporary visa holder	14.2	5.6	17.3	11.1	18.4	8.4
Unknown	4.1	6.5	3.5	0.0	2.2	6.7
Marital status (%)						
Never married	17.4	D	19.0	D	23.2	12.6
Married	61.9	65.3	62.2	72.2	59.9	53.8
Marriage-like relationship	5.1	2.5	5.8	D	6.6	D
Separated, divorced, widowed	3.7	D	2.7	D	3.3	D
Unknown	11.9	15.2	10.3	0.0	7.0	26.1
Bachelor's in same field as doctorate (%) ^b	21.9	21.1	19.5	D	32.4	D
Master's earned (%)	87.8	86.4	88.1	100.0	93.4	74.8
Age at doctorate (median years)	38.3	41.8	37.2	39.3	36.7	38.8
Time to doctorate (median years)						
From bachelor's	14.4	17.4	13.8	16.0	13.3	14.4
From graduate school start	11.5	13.8	10.8	10.4	10.8	11.4

TABLE 66

Statistical profile of doctorate recipients in education fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
From doctoral program start ^c	5.7	5.8	5.7	4.8	5.7	5.8
Female doctorate recipients (number)	3,337	575	1,742	79	691	250
Citizenship (%)						
U.S. citizen or permanent resident	84.2	87.0	83.5	91.1	82.8	84.8
Temporary visa holder	12.0	6.1	13.5	7.6	15.2	8.0
Unknown	3.7	7.0	3.0	1.3	2.0	7.2
Marital status (%)						
Never married	19.9	D	22.5	D	18.5	15.6
Married	54.9	54.6	54.2	63.3	58.3	48.0
Marriage-like relationship	5.2	4.2	5.5	D	6.1	D
Separated, divorced, widowed	8.8	D	8.8	11.4	9.0	D
Unknown	11.2	16.0	9.0	8.9	8.1	25.2
Bachelor's in same field as doctorate (%) ^b	24.8	28.3	21.1	D	31.8	D
Master's earned (%)	89.3	87.0	90.9	97.5	90.4	77.6
Age at doctorate (median years)	38.2	43.8	37.3	41.8	37.0	38.0
Time to doctorate (median years)						
From bachelor's	15.0	19.0	14.0	18.8	14.3	14.6
From graduate school start	12.0	15.6	11.3	15.6	11.3	12.4
From doctoral program start ^c	5.8	5.8	5.8	6.8	5.6	5.8

* = value between 0.00% and 0.05%; D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 67

Statistical profile of postgraduation plans of doctorate recipients in education fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
All doctorate recipients (number) ^a	4,834	898	2,507	97	963	369
Postgraduation status (number) ^b						
Definite postgraduation study	280	16	183	D	57	D
Definite employment	2,841	567	1,445	D	597	D
Seeking employment or study	1,152	190	621	28	231	82
Other ^c	126	17	69	8	22	10
Definite postgraduation study (%) ^d						
Postdoc fellowship or research associateship	89.6	87.5	87.4	D	94.7	D
Other or unknown ^e	10.4	12.5	12.6	0.0	5.3	4.5
Definite employment (%) ^f						
Academe	56.6	44.6	57.4	53.4	67.2	53.4
Government	4.8	4.9	5.7	D	2.3	D
Industry or business ^g	6.3	4.8	7.5	13.8	4.0	6.3
Nonprofit organization	7.8	7.6	8.6	D	5.0	D
Other or unknown ^h	24.5	38.1	20.8	24.1	21.4	21.8
Primary activity ⁱ						
R&D	12.6	5.6	16.7	D	D	11.7
Teaching	42.7	26.3	36.5	62.5	73.1	35.6
Management or administration	32.7	59.8	30.9	25.0	10.1	41.7
Professional services	11.7	8.1	15.6	D	D	11.0
Other	0.2	0.2	0.2	0.0	0.3	0.0
Secondary activity ^j						
R&D	29.2	14.3	29.0	37.5	41.4	33.7
Teaching	18.2	20.6	20.7	D	12.6	D
Management or administration	10.8	10.3	10.4	D	11.9	D
Professional services	7.7	7.7	8.1	10.7	7.0	6.7
Other	0.3	0.4	0.3	0.0	0.3	0.0
No secondary activity	33.8	46.7	31.5	28.6	26.9	36.8
Activity unknown	4.5	6.0	3.9	3.4	4.0	6.3
Postgraduation location (%) ^k						
United States ^l	93.3	95.7	93.2	D	90.8	D
New England	4.1	3.4	4.7	D	4.0	D
Middle Atlantic	11.0	10.1	9.6	D	15.7	D
East North Central	14.1	15.8	13.1	D	16.5	D
West North Central	6.9	6.0	7.3	10.0	6.1	7.1
South Atlantic	20.1	18.2	22.9	30.0	14.8	16.3
East South Central	7.6	11.7	6.3	20.0	6.3	6.6
West South Central	10.6	11.8	10.4	16.7	10.1	8.2
Mountain	8.3	10.3	7.9	D	8.0	D
Pacific and insular	10.3	8.2	10.4	D	9.0	D
Not in United States	6.6	4.3	6.7	D	9.2	D
Location unknown	*	0.0	0.1	0.0	0.0	0.0
Male doctorate recipients (number)	1,496	323	764	18	272	119
Postgraduation status (number) ^b						
Definite postgraduation study	80	6	55	D	13	D
Definite employment	908	208	453	D	175	D
Seeking employment or study	335	64	175	5	69	22

TABLE 67

Statistical profile of postgraduation plans of doctorate recipients in education fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
Other ^c	34	5	20	0	4	5
Definite postgraduation study (%) ^d						
Postdoc fellowship or research associateship	87.5	100.0	81.8	D	100.0	D
Other or unknown ^e	12.5	0.0	18.2	0.0	0.0	0.0
Definite employment (%) ^f						
Academe	58.9	D	63.8	D	69.7	51.7
Government	4.3	D	5.1	0.0	0.0	D
Industry or business ^g	5.2	5.8	4.9	D	2.9	D
Nonprofit organization	8.1	8.2	9.3	0.0	4.0	13.3
Other or unknown ^h	23.5	37.0	17.0	41.7	23.4	21.7
Primary activity ⁱ						
R&D	12.7	6.0	17.4	D	D	D
Teaching	39.7	19.6	34.7	50.0	78.6	32.1
Management or administration	38.9	65.3	37.0	D	10.1	D
Professional services	8.4	9.0	10.7	D	D	D
Other	0.2	0.0	0.2	0.0	0.6	0.0
Secondary activity ^j						
R&D	28.8	15.1	30.6	D	40.5	D
Teaching	19.4	22.6	22.6	D	10.7	D
Management or administration	10.9	10.1	10.7	D	13.1	D
Professional services	8.4	7.0	7.3	D	10.7	D
Other	0.2	0.0	0.2	0.0	0.6	0.0
No secondary activity	32.4	45.2	28.5	41.7	24.4	39.3
Activity unknown	3.9	4.3	3.3	0.0	4.0	6.7
Postgraduation location (%) ^k						
United States ^l	91.7	95.8	91.3	D	87.8	D
New England	4.7	D	5.1	0.0	5.3	D
Middle Atlantic	10.4	10.3	10.0	0.0	12.8	9.2
East North Central	13.2	15.4	12.6	0.0	14.4	9.2
West North Central	7.5	4.7	8.3	D	6.9	D
South Atlantic	17.4	19.2	18.1	38.5	13.3	13.8
East South Central	7.6	D	6.5	D	3.7	7.7
West South Central	11.1	12.6	10.4	D	13.3	D
Mountain	8.3	D	9.1	0.0	8.0	D
Pacific and insular	11.2	8.9	10.8	D	9.6	D
Not in United States	8.3	4.2	8.7	D	12.2	D
Location unknown	0.0	0.0	0.0	0.0	0.0	0.0
Female doctorate recipients (number)	3,337	575	1,742	79	691	250
Postgraduation status (number) ^b						
Definite postgraduation study	200	10	128	D	44	D
Definite employment	1,933	359	992	D	422	D
Seeking employment or study	817	126	446	23	162	60
Other ^c	92	12	49	8	18	5

TABLE 67

Statistical profile of postgraduation plans of doctorate recipients in education fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
Definite postgraduation study (%) ^d						
Postdoc fellowship or research associateship	90.5	80.0	89.8	D	93.2	D
Other or unknown ^e	9.5	20.0	10.2	0.0	6.8	5.9
Definite employment (%) ^f						
Academe	55.5	D	54.4	D	66.1	54.4
Government	5.1	D	5.9	D	3.3	5.3
Industry or business ^g	6.8	4.2	8.8	D	4.5	D
Nonprofit organization	7.6	7.2	8.3	D	5.5	D
Other or unknown ^h	25.0	38.7	22.6	19.6	20.6	21.9
Primary activity ⁱ						
R&D	12.6	5.4	16.4	D	10.4	D
Teaching	44.1	30.2	37.4	65.9	70.9	37.4
Management or administration	29.8	56.6	28.1	D	10.1	D
Professional services	13.3	7.5	17.9	D	8.4	D
Other	0.2	0.3	0.2	0.0	0.2	0.0
Secondary activity ^j						
R&D	29.4	13.8	28.3	D	41.7	D
Teaching	17.7	19.5	19.8	D	13.3	D
Management or administration	10.7	10.5	10.3	13.6	11.4	11.2
Professional services	7.4	8.1	8.4	D	5.4	D
Other	0.3	0.6	0.3	0.0	0.2	0.0
No secondary activity	34.4	47.6	32.8	25.0	27.9	35.5
Activity unknown	4.8	7.0	4.2	4.3	4.0	6.1
Postgraduation location (%) ^k						
United States ^l	94.1	95.7	94.1	D	92.1	D
New England	3.9	D	4.5	D	3.4	D
Middle Atlantic	11.3	10.0	9.5	D	17.0	D
East North Central	14.5	16.0	13.4	D	17.4	D
West North Central	6.6	6.8	6.9	D	5.8	D
South Atlantic	21.3	17.6	25.1	27.7	15.5	17.6
East South Central	7.5	D	6.2	D	7.3	6.1
West South Central	10.4	11.4	10.4	D	8.8	D
Mountain	8.3	D	7.4	D	7.9	7.6
Pacific and insular	9.8	7.9	10.2	D	8.8	D
Not in United States	5.9	4.3	5.8	D	7.9	D
Location unknown	*	0.0	0.1	0.0	0.0	0.0

* = value between 0.00% and 0.05%; D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.

^g Includes doctorate recipients who indicated self-employment.

^h "Other" is mainly composed of elementary and secondary schools.

ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.

^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.

^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.

^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.

Note(s)

Due to rounding, percentages may not sum to 100. See **table A-6** in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 68

Statistical profile of doctorate recipients in humanities and arts fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
All doctorate recipients (number) ^a	5,145	617	948	1,442	2,138
Sex (%)					
Male	49.9	40.0	54.1	40.6	57.2
Female	50.0	60.0	45.9	59.4	42.8
Unknown	0.1	0.0	0.0	0.1	0.1
Citizenship (%)					
U.S. citizen or permanent resident	80.7	65.8	84.4	85.6	79.9
Temporary visa holder	14.3	29.2	11.8	9.6	14.4
Unknown	5.0	5.0	3.8	4.7	5.7
Marital status (%)					
Never married	27.1	28.7	28.2	26.1	26.8
Married	46.7	42.0	49.1	45.6	47.8
Marriage-like relationship	10.1	12.6	10.0	11.2	8.6
Separated, divorced, widowed	4.0	4.5	3.9	4.9	3.4
Unknown	12.1	12.2	8.9	12.3	13.5
Bachelor's in same field as doctorate (%) ^b	54.2	47.2	61.9	45.0	59.1
Master's earned (%)	84.2	83.6	88.5	84.8	82.1
Age at doctorate (median years)	34.3	34.4	33.7	33.8	34.8
Time to doctorate (median years)					
From bachelor's	11.0	11.0	10.6	10.8	11.6
From graduate school start	9.4	9.3	9.3	9.0	9.8
From doctoral program start ^c	6.8	6.8	7.0	6.6	6.8
Male doctorate recipients (number)	2,567	247	513	585	1,222
Citizenship (%)					
U.S. citizen or permanent resident	81.2	67.6	83.4	86.5	80.4
Temporary visa holder	13.8	28.7	12.1	9.6	13.6
Unknown	5.0	3.6	4.5	3.9	6.0
Marital status (%)					
Never married	25.1	26.7	26.9	24.6	24.2
Married	49.8	42.5	51.1	51.3	50.1
Marriage-like relationship	9.2	14.2	9.2	9.2	8.2
Separated, divorced, widowed	3.2	5.7	3.1	3.2	2.6
Unknown	12.7	10.9	9.7	11.6	14.9
Bachelor's in same field as doctorate (%) ^b	56.6	44.1	64.9	45.6	60.9
Master's earned (%)	83.8	84.6	88.3	86.0	80.7
Age at doctorate (median years)	34.5	34.7	33.8	34.5	34.8
Time to doctorate (median years)					
From bachelor's	11.0	11.0	10.7	11.0	11.4
From graduate school start	9.6	9.1	9.3	9.1	9.8
From doctoral program start ^c	6.8	6.7	6.9	6.7	6.8
Female doctorate recipients (number)	2,575	370	435	856	914
Citizenship (%)					
U.S. citizen or permanent resident	80.2	64.6	85.5	85.2	79.4
Temporary visa holder	14.9	29.5	11.5	9.7	15.4
Unknown	4.9	5.9	3.0	5.1	5.1

TABLE 68

Statistical profile of doctorate recipients in humanities and arts fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
Marital status (%)					
Never married	29.0	30.0	29.7	27.1	30.2
Married	43.7	41.6	46.7	41.7	44.9
Marriage-like relationship	11.0	11.6	11.0	12.6	9.2
Separated, divorced, widowed	4.9	3.8	4.8	6.0	4.4
Unknown	11.4	13.0	7.8	12.6	11.4
Bachelor's in same field as doctorate (%) ^b	52.0	49.2	58.4	44.6	56.9
Master's earned (%)	84.7	83.0	88.7	84.1	84.1
Age at doctorate (median years)	33.9	34.3	33.5	33.4	34.7
Time to doctorate (median years)					
From bachelor's	11.0	11.0	10.6	10.6	12.0
From graduate school start	9.3	9.3	9.3	8.9	10.0
From doctoral program start ^c	6.8	6.8	7.0	6.5	6.9

^a Includes respondents who did not report sex.^b A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 69

Statistical profile of postgraduation plans of doctorate recipients in humanities and arts fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
All doctorate recipients (number) ^a	5,145	617	948	1,442	2,138
Postgraduation status (number) ^b					
Definite postgraduation study	559	67	158	125	209
Definite employment	2,183	279	352	662	890
Seeking employment or study	1,742	188	344	471	739
Other ^c	155	19	30	43	63
Definite postgraduation study (%) ^d					
Postdoc fellowship or research associateship	93.0	82.1	96.2	93.6	93.8
Other or unknown ^e	7.0	17.9	3.8	6.4	6.2
Definite employment (%) ^f					
Academe	74.7	82.4	73.3	82.5	67.0
Government	2.9	2.2	7.1	0.9	2.9
Industry or business ^g	6.8	3.6	5.4	7.1	8.2
Nonprofit organization	8.6	2.5	6.3	2.3	16.1
Other or unknown ^h	7.1	9.3	8.0	7.3	5.8
Primary activity ⁱ					
R&D	8.9	8.3	12.0	6.6	9.6
Teaching	71.0	81.8	65.9	75.1	66.4
Management or administration	9.7	5.3	12.0	10.6	9.6
Professional services	10.1	4.2	9.6	7.6	14.0
Other	0.3	0.4	0.6	0.2	0.4
Secondary activity ^j					
R&D	40.5	49.6	40.7	40.9	37.2
Teaching	13.2	8.3	13.5	12.5	15.1
Management or administration	8.4	6.8	5.1	9.8	9.1
Professional services	5.6	4.2	3.0	4.9	7.6
Other	0.5	0.4	0.6	0.3	0.6
No secondary activity	31.9	30.7	37.1	31.7	30.5
Activity unknown	5.4	5.4	5.1	4.2	6.3
Postgraduation location (%) ^k					
United States ^l	88.9	88.2	86.5	92.1	87.9
New England	9.0	8.7	12.0	7.8	8.6
Middle Atlantic	16.7	18.8	15.1	16.6	16.8
East North Central	12.0	12.1	11.6	11.9	12.2
West North Central	5.1	5.8	4.5	6.1	4.5
South Atlantic	15.5	14.7	17.3	15.8	14.6
East South Central	4.4	3.5	4.3	5.3	4.2
West South Central	7.8	5.5	6.7	8.8	8.5
Mountain	4.7	3.8	2.5	6.5	4.6
Pacific and insular	13.1	14.5	12.2	12.7	13.3
Not in United States	11.1	11.8	13.1	7.9	12.1
Location unknown	0.1	0.0	0.4	0.0	0.0
Male doctorate recipients (number)	2,567	247	513	585	1,222
Postgraduation status (number) ^b					
Definite postgraduation study	265	34	79	43	109
Definite employment	1,078	113	186	276	503

TABLE 69

Statistical profile of postgraduation plans of doctorate recipients in humanities and arts fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
Seeking employment or study	887	73	192	200	422
Other ^c	72	6	15	15	36
Definite postgraduation study (%) ^d					
Postdoc fellowship or research associateship	93.2	85.3	96.2	95.3	92.7
Other or unknown ^e	6.8	14.7	3.8	4.7	7.3
Definite employment (%) ^f					
Academe	71.2	83.2	73.1	81.5	62.0
Government	3.4	D	9.1	D	3.0
Industry or business ^g	7.1	D	3.2	D	9.3
Nonprofit organization	11.2	D	5.4	D	20.3
Other or unknown ^h	7.1	10.6	9.1	7.2	5.4
Primary activity ⁱ					
R&D	9.2	7.5	13.1	7.2	9.4
Teaching	70.1	86.0	65.3	76.1	64.9
Management or administration	8.6	D	D	8.0	8.7
Professional services	11.9	D	D	8.7	17.0
Other	0.2	0.9	0.6	0.0	0.0
Secondary activity ^j					
R&D	37.9	48.6	37.5	42.4	33.0
Teaching	14.4	10.3	15.9	11.4	16.4
Management or administration	8.9	7.5	6.8	11.4	8.7
Professional services	5.6	D	D	3.8	8.3
Other	0.4	0.0	0.6	0.0	0.6
No secondary activity	32.8	D	D	31.1	33.0
Activity unknown	5.7	5.3	5.4	4.3	6.6
Postgraduation location (%) ^k					
United States ^l	87.4	87.8	86.0	89.7	86.8
New England	8.0	8.8	10.9	7.5	6.9
Middle Atlantic	15.9	21.1	14.0	18.8	14.1
East North Central	11.5	10.9	13.2	9.1	12.1
West North Central	6.1	8.2	D	7.8	D
South Atlantic	15.2	10.9	15.8	15.7	15.7
East South Central	4.3	3.4	3.8	2.5	5.7
West South Central	8.0	5.4	5.7	9.4	8.8
Mountain	4.9	4.1	D	6.9	D
Pacific and insular	13.0	14.3	13.6	11.6	13.1
Not in United States	12.5	12.2	13.6	10.3	13.2
Location unknown	0.1	0.0	0.4	0.0	0.0
Female doctorate recipients (number)	2,575	370	435	856	914
Postgraduation status (number) ^b					
Definite postgraduation study	294	33	79	82	100
Definite employment	1,105	166	166	386	387
Seeking employment or study	855	115	152	271	317
Other ^c	83	13	15	28	27
Definite postgraduation study (%) ^d					

TABLE 69

Statistical profile of postgraduation plans of doctorate recipients in humanities and arts fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
Postdoc fellowship or research associateship	92.9	78.8	96.2	92.7	95.0
Other or unknown ^e	7.1	21.2	3.8	7.3	5.0
Definite employment (%) ^f					
Academe	78.1	81.9	73.5	83.2	73.4
Government	2.4	D	4.8	D	2.8
Industry or business ^g	6.5	D	7.8	D	6.7
Nonprofit organization	6.0	D	7.2	D	10.6
Other or unknown ^h	7.1	8.4	6.6	7.3	6.5
Primary activity ⁱ					
R&D	8.6	8.9	10.8	6.2	9.9
Teaching	71.8	79.0	66.5	74.3	68.4
Management or administration	10.9	D	D	12.4	10.7
Professional services	8.3	D	D	6.8	10.2
Other	0.5	0.0	0.6	0.3	0.8
Secondary activity ^j					
R&D	43.0	50.3	44.3	39.7	42.6
Teaching	12.0	7.0	10.8	13.2	13.5
Management or administration	7.8	6.4	3.2	8.6	9.6
Professional services	5.5	D	D	5.7	6.6
Other	0.6	0.6	0.6	0.5	0.5
No secondary activity	31.1	D	D	32.2	27.2
Activity unknown	5.1	5.4	4.8	4.1	5.9
Postgraduation location (%) ^k					
United States ^l	90.3	88.4	86.9	93.8	89.3
New England	9.9	8.5	13.1	7.9	10.7
Middle Atlantic	17.4	17.1	16.3	15.2	20.3
East North Central	12.5	13.1	9.8	13.9	12.3
West North Central	4.1	4.0	D	4.9	D
South Atlantic	15.7	17.6	18.8	15.8	13.3
East South Central	4.6	3.5	4.9	7.3	2.3
West South Central	7.7	5.5	7.8	8.3	8.0
Mountain	4.4	3.5	D	6.2	D
Pacific and insular	13.2	14.6	10.6	13.5	13.6
Not in United States	9.6	11.6	12.7	6.2	10.7
Location unknown	0.1	0.0	0.4	0.0	0.0

D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.^g Includes doctorate recipients who indicated self-employment.^h "Other" is mainly composed of elementary and secondary schools.

ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.

^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.

^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.

^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.

Note(s)

Due to rounding, percentages may not sum to 100. See **table A-6** in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 70

Statistical profile of doctorate recipients in other fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All other fields ^a	Business management and administration	Communication	Non-S&E fields nec
All doctorate recipients (number) ^b	2,989	1,481	631	877
Sex (%)				
Male	48.6	58.7	37.1	39.8
Female	51.3	41.1	62.8	60.1
Unknown	0.2	0.2	0.2	0.1
Citizenship (%)				
U.S. citizen or permanent resident	58.5	50.2	68.9	64.9
Temporary visa holder	34.5	43.5	26.1	25.2
Unknown	7.1	6.3	4.9	9.9
Marital status (%)				
Never married	24.9	25.5	30.0	20.2
Married	46.6	50.4	42.0	43.4
Marriage-like relationship	6.1	4.0	9.8	6.8
Separated, divorced, widowed	4.5	3.9	4.1	5.8
Unknown	17.9	16.1	14.1	23.7
Bachelor's in same field as doctorate (%) ^c	36.0	36.9	47.5	26.1
Master's earned (%)	79.8	77.3	86.8	79.0
Age at doctorate (median years)	34.7	33.9	33.3	37.0
Time to doctorate (median years)				
From bachelor's	11.2	10.4	10.3	13.0
From graduate school start	9.2	8.9	8.0	11.0
From doctoral program start ^d	5.2	5.0	5.0	5.9
Male doctorate recipients (number)	1,452	869	234	349
Citizenship (%)				
U.S. citizen or permanent resident	55.8	51.1	67.5	59.6
Temporary visa holder	37.7	44.5	26.1	28.7
Unknown	6.5	4.4	6.4	11.7
Marital status (%)				
Never married	23.6	24.5	24.8	20.3
Married	50.3	54.5	43.6	44.4
Marriage-like relationship	5.6	4.3	10.3	5.7
Separated, divorced, widowed	3.3	3.0	3.4	4.0
Unknown	17.2	13.7	17.9	25.5
Bachelor's in same field as doctorate (%) ^c	35.5	35.6	43.6	30.1
Master's earned (%)	79.7	80.1	83.8	75.9
Age at doctorate (median years)	34.9	34.6	34.7	36.6
Time to doctorate (median years)				
From bachelor's	11.3	11.0	10.8	12.6
From graduate school start	9.2	9.0	8.3	10.3
From doctoral program start ^d	5.0	5.0	5.0	5.3
Female doctorate recipients (number)	1,532	609	396	527
Citizenship (%)				
U.S. citizen or permanent resident	61.2	49.3	69.9	68.5
Temporary visa holder	31.5	42.2	26.3	23.0
Unknown	7.3	8.5	3.8	8.5
Marital status (%)				
Never married	26.2	27.1	33.1	20.1

TABLE 70

Statistical profile of doctorate recipients in other fields, by sex and field of study: 2018

(Number, percent, and median years)

Characteristic	All other fields ^a	Business management and administration	Communication	Non-S&E fields nec
Married	43.2	44.8	41.2	42.9
Marriage-like relationship	6.5	3.6	9.6	7.6
Separated, divorced, widowed	5.7	5.3	4.5	7.0
Unknown	18.3	19.2	11.6	22.4
Bachelor's in same field as doctorate (%) ^c	36.5	38.9	50.0	23.5
Master's earned (%)	80.2	73.7	88.9	81.2
Age at doctorate (median years)	34.3	32.9	32.8	37.3
Time to doctorate (median years)				
From bachelor's	11.0	10.0	10.2	13.4
From graduate school start	9.3	8.7	8.0	11.3
From doctoral program start ^d	5.3	5.0	5.0	6.0

nec = not elsewhere classified; S&E = science and engineering.

^a Includes other non-S&E fields not reported separately.^b Includes respondents who did not report sex.^c A bachelor's degree is counted as "in same field as doctorate" if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.^d Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 71

Statistical profile of postgraduation plans of doctorate recipients in other fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All other fields ^a	Business management and administration	Communication	Non-S&E fields nec
All doctorate recipients (number) ^b	2,989	1,481	631	877
Postgraduation status (number) ^c				
Definite postgraduation study	176	63	45	68
Definite employment	1,782	1,000	350	432
Seeking employment or study	543	193	154	196
Other ^d	53	30	6	17
Definite postgraduation study (%) ^e				
Postdoc fellowship or research associateship	93.2	90.5	93.3	95.6
Other or unknown ^f	6.8	9.5	6.7	4.4
Definite employment (%) ^g				
Academe	76.2	79.4	84.0	62.5
Government	5.0	3.3	2.3	11.1
Industry or business ^h	11.2	12.1	9.4	10.6
Nonprofit organization	4.0	2.2	2.0	9.7
Other or unknown ⁱ	3.6	3.0	2.3	6.0
Primary activity ^j				
R&D	37.9	48.1	22.8	26.3
Teaching	44.4	38.2	63.5	43.3
Management or administration	9.7	8.3	6.5	15.7
Professional services	7.9	5.5	6.8	14.7
Other	0.1	0.0	0.3	0.0
Secondary activity ^k				
R&D	40.2	35.5	52.8	40.5
Teaching	35.1	45.8	19.0	22.8
Management or administration	4.7	3.0	4.2	9.1
Professional services	3.6	2.5	2.4	7.1
Other	0.2	0.1	0.6	0.3
No secondary activity	16.3	12.9	21.1	20.3
Activity unknown	5.6	4.9	3.7	8.6
Postgraduation location (%) ^l				
United States ^m	85.4	81.6	91.9	88.4
New England	6.4	6.3	6.1	7.0
Middle Atlantic	13.0	12.4	11.1	15.8
East North Central	13.7	12.8	16.7	13.2
West North Central	6.0	5.4	8.9	5.2
South Atlantic	15.8	15.1	15.4	17.6
East South Central	4.5	3.6	7.3	4.2
West South Central	9.0	9.8	9.6	6.8
Mountain	5.5	4.6	7.1	6.2
Pacific and insular	10.5	10.6	9.4	11.0
Not in United States	14.6	18.3	8.1	11.6
Location unknown	0.1	0.1	0.0	0.0
Male doctorate recipients (number)	1,452	869	234	349
Postgraduation status (number) ^c				
Definite postgraduation study	85	39	16	30
Definite employment	908	608	124	176
Seeking employment or study	241	114	58	69

TABLE 71

Statistical profile of postgraduation plans of doctorate recipients in other fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All other fields ^a	Business management and administration	Communication	Non-S&E fields nec
Other ^d	26	18	2	6
Definite postgraduation study (%) ^e				
Postdoc fellowship or research associateship	92.9	89.7	93.8	96.7
Other or unknown ^f	7.1	10.3	6.3	3.3
Definite employment (%) ^g				
Academe	76.0	78.9	81.5	61.9
Government	5.4	D	D	13.1
Industry or business ^h	12.9	13.8	9.7	11.9
Nonprofit organization	2.6	D	D	6.8
Other or unknown ⁱ	3.1	2.3	2.4	6.3
Primary activity ^j				
R&D	41.2	49.5	22.4	25.0
Teaching	43.6	37.4	67.2	48.8
Management or administration	7.8	7.1	6.0	11.9
Professional services	7.4	6.1	4.3	14.4
Other	0.0	0.0	0.0	0.0
Secondary activity ^k				
R&D	38.9	34.3	54.3	44.4
Teaching	38.2	46.5	17.2	23.1
Management or administration	4.7	3.8	5.2	7.5
Professional services	3.3	D	D	6.3
Other	0.1	0.0	0.9	0.0
No secondary activity	14.9	D	D	18.8
Activity unknown	5.9	4.9	6.5	9.1
Postgraduation location (%) ^l				
United States ^m	82.2	80.1	87.9	85.0
New England	5.8	5.7	7.9	4.9
Middle Atlantic	12.4	12.1	9.3	15.5
East North Central	12.9	13.0	12.9	12.6
West North Central	6.2	5.1	13.6	4.9
South Atlantic	15.7	15.9	10.0	18.9
East South Central	4.3	3.2	10.7	3.4
West South Central	8.6	9.9	7.9	4.9
Mountain	5.5	4.2	7.1	8.7
Pacific and insular	10.5	10.8	8.6	10.7
Not in United States	17.8	19.9	12.1	15.0
Location unknown	0.0	0.0	0.0	0.0
Female doctorate recipients (number)	1,532	609	396	527
Postgraduation status (number) ^c				
Definite postgraduation study	91	24	29	38
Definite employment	874	392	226	256
Seeking employment or study	302	79	96	127
Other ^d	27	12	4	11
Definite postgraduation study (%) ^e				
Postdoc fellowship or research associateship	93.4	91.7	93.1	94.7
Other or unknown ^f	6.6	8.3	6.9	5.3

TABLE 71

Statistical profile of postgraduation plans of doctorate recipients in other fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All other fields ^a	Business management and administration	Communication	Non-S&E fields nec
Definite employment (%) ^g				
Academe	76.4	80.1	85.4	62.9
Government	4.6	D	D	9.8
Industry or business ^h	9.5	9.4	9.3	9.8
Nonprofit organization	5.4	D	D	11.7
Other or unknown ⁱ	4.1	4.1	2.2	5.9
Primary activity ^j				
R&D	34.5	45.8	23.1	27.2
Teaching	45.4	39.4	61.5	39.6
Management or administration	11.6	10.2	6.8	18.3
Professional services	8.4	4.6	8.1	14.9
Other	0.1	0.0	0.5	0.0
Secondary activity ^k				
R&D	41.5	37.5	52.0	37.9
Teaching	31.8	44.8	19.9	22.6
Management or administration	4.7	1.9	3.6	10.2
Professional services	3.9	D	D	7.7
Other	0.4	0.3	0.5	0.4
No secondary activity	17.7	D	D	21.3
Activity unknown	5.1	4.8	2.2	8.2
Postgraduation location (%) ^l				
United States ^m	88.7	83.9	94.1	90.8
New England	7.0	7.2	5.1	8.5
Middle Atlantic	13.7	13.0	12.2	16.0
East North Central	14.5	12.5	18.8	13.6
West North Central	5.8	5.8	6.3	5.4
South Atlantic	16.0	13.9	18.4	16.7
East South Central	4.7	4.1	5.5	4.8
West South Central	9.4	9.6	10.6	8.2
Mountain	5.5	5.3	7.1	4.4
Pacific and insular	10.5	10.3	9.8	11.2
Not in United States	11.2	15.9	5.9	9.2
Location unknown	0.1	0.2	0.0	0.0

D = suppressed to avoid disclosure of confidential information.

nec = not elsewhere classified; S&E = science and engineering.

^a Includes other non-S&E fields not reported separately.^b Includes respondents who did not report sex.^c Includes only respondents who reported postgraduation status.^d Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^e Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^f "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^g Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.^h Includes doctorate recipients who indicated self-employment.ⁱ "Other" is mainly composed of elementary and secondary schools.

^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.

^k Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.

^l Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.

^m Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.

Note(s)

Due to rounding, percentages may not sum to 100. See **table A-6** in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE 72

Statistical profile of doctorate recipients, by ethnicity, race, and citizenship status: 2018

(Number, percent, and median years)

Characteristics	Total ^a	U.S. citizen	Non-U.S. citizen	Not Hispanic or Latino														Ethnicity not reported	
				Hispanic or Latino		American Indian or Alaska Native		Asian		Black or African American		White		More than one race		Other race or race not reported			
				U.S. citizen	Non-U.S. citizen	U.S. citizen	Non-U.S. citizen	U.S. citizen	Non-U.S. citizen	U.S. citizen	Non-U.S. citizen	U.S. citizen	Non-U.S. citizen	U.S. citizen	Non-U.S. citizen	U.S. citizen	Non-U.S. citizen	U.S. citizen	Non-U.S. citizen
Academe	45.0	47.7	39.0	53.9	56.1	59.3	0.0	36.7	33.6	43.9	49.3	48.6	48.8	51.3	48.7	41.1	55.7	46.7	42.3
Government	7.2	8.7	4.0	8.6	9.9	9.3	0.0	7.2	3.1	13.7	6.0	8.2	4.5	10.4	D	8.9	D	9.3	3.8
Industry or business ^h	35.0	27.7	51.3	21.2	25.3	D	0.0	44.7	58.9	17.7	27.9	27.6	40.1	24.2	30.8	D	29.5	28.0	38.5
Nonprofit	6.2	7.5	3.4	6.5	4.8	D	0.0	7.6	2.7	8.5	11.6	7.5	3.7	7.0	0.0	D	2.3	2.7	7.7
Other or unknown plans ⁱ	6.6	8.5	2.3	9.8	3.8	7.4	0.0	3.8	1.7	16.2	5.1	8.1	2.9	7.2	D	10.3	D	13.3	7.7
Employment location (%) ^j																			
United States	89.8	97.8	72.3	99.0	55.6	100.0	0.0	95.8	77.3	98.9	60.5	97.8	65.1	97.0	56.4	95.2	42.0	94.7	80.8
Not United States	10.2	2.2	27.7	1.0	44.4	0.0	0.0	4.2	22.7	1.0	39.5	2.2	34.9	3.0	43.6	4.8	58.0	1.3	19.2
Unknown	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Age at doctorate (median years)	31.4	31.8	30.9	32.3	33.4	36.3	D	31.1	30.3	36.0	35.2	31.6	32.0	31.3	31.5	32.3	31.4	32.8	31.6
Time to degree (median years)																			
From bachelor's	8.6	9.0	8.3	8.9	9.8	11.3	D	8.6	7.9	11.6	10.8	8.7	9.0	8.6	8.3	9.6	8.9	9.4	8.6
From graduate school start	7.3	7.3	7.5	7.5	8.3	9.3	D	7.3	7.1	9.7	8.4	7.3	8.2	7.0	7.3	8.3	7.9	8.0	6.8
From doctoral program start ^k	5.8	5.8	5.3	5.9	5.3	6.0	D	5.8	5.3	5.9	5.0	5.8	5.3	5.8	5.7	5.8	5.7	5.9	5.1

D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report their citizenship.^b Percentages are based on the number of doctorate recipients who reported a primary source of financial support during graduate school.^c Includes research assistantships, other assistantships, traineeships, and internships or clinical residencies.^d Includes only respondents who reported postgraduation status.^e Includes respondents who indicated having no plans to work or study, respondents indicating another type of postgraduation plan, and respondents indicating definite plans for another full-time degree program.^f Excludes respondents who indicated plans for another full-time degree program. Percentages are based on the number of doctorate recipients reporting definite postgraduation plans and type of plans.^g Percentages are based on the number of doctorate recipients who reported definite postgraduation plans for employment.

^h Includes doctorate recipients who indicated self-employment.

ⁱ "Other" is mainly composed of elementary and secondary schools.

^j Percentages are based on the number of doctorate recipients who reported definite postgraduation plan for employment and the location of employment.

^k Time to doctorate from doctoral program start is based on master's program entry if the master's degree was at the doctoral institution in the same fine field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.

Note(s)

U.S. citizen refers to U.S. citizens and permanent residents. Non-U.S. citizen refers to temporary visa holders. Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

Technical Notes

Data presented in *Doctorate Recipients from U.S. Universities: 2018* were collected by the Survey of Earned Doctorates (SED). The survey is sponsored by the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF) and by three other federal agencies: the National Institutes of Health (NIH), Department of Education (ED), and National Endowment for the Humanities (NEH). This report presents the summary of these survey data.

Survey Overview (2018 survey cycle)

Purpose. SED collects data on the number and characteristics of individuals receiving research doctoral degrees from U.S. academic institutions.

Data collection authority. The information collected by the SED is solicited under the authority of the National Science Foundation Act of 1950, as amended, and the America COMPETES Reauthorization Act of 2010. The Office of Management and Budget control number is 3145-0019, expiration date 31 May 2020.

Survey contractor. RTI International.

Survey sponsors. The SED is sponsored by NCSES within NSF and by NIH, ED, and NEH.

Key Survey Information

Frequency. Annual.

Initial survey year. Academic year 1957–58.

Reference period. Academic year 2017–18 (1 July 2017 to 30 June 2018).

Response unit. Individuals.

Sample or census. Census.

Population size. 55,195.

Sample size. Not applicable.

Survey Design

Target population. The population for the 2018 SED consists of all individuals receiving a research doctorate from a U.S. academic institution in the 12-month period beginning 1 July 2017 and ending 30 June 2018. A research doctorate is a doctoral degree that (1) requires completion of an original intellectual contribution in the form of a dissertation or an equivalent culminating project (e.g., musical composition) and (2) is not primarily intended as a degree for the practice of a profession. The SED recognized 18 distinct types of research doctorates in 2018 (**table A-1**). Recipients of professional doctoral degrees, such as MD, DDS, DVM, JD, DPharm, DMin, and PsyD, are not included in the SED.

The doctor of philosophy (PhD) constitutes the vast majority of research doctoral degrees. Of the 55,195 new research doctorates granted in 2018, 98.3% were PhDs (**table A-2**). The next most frequently occurring type of research doctorate was the doctor of education (EdD), which accounted for 1.0% of the total in 2018. No other type of doctoral degree accounted for more than 0.2% of the new research doctorates in 2018.

Sampling frame. The population eligible for the 2018 survey consisted of all individuals who received a research doctorate from a U.S. academic institution in the 12-month period ending 30 June 2018. Of the 444 institutions granting research doctorates, 13 institutions were refusals or reported zero graduates. Thus, the total universe consisted of 55,195 persons in 431 institutions that conferred research doctorates in 2018.

Sample design. The SED is a census.

Data Collection and Processing Methods

Data collection. Three modes of data collection are used in the SED: self-administered Web survey, self-administered paper questionnaire, and computer-assisted telephone interviewing (CATI).

The self-administered Web survey is the primary mode of SED completion. When students apply for graduation, institutional coordinators at the universities give students the link to the survey registration website (institutional coordinators at a small number of universities hand out both a paper questionnaire and the link to the survey registration website). Students who sign up at the survey registration website receive PIN and password information via e-mail, as well as the URL of the SED Web survey. The proportion of SED completions using the Web has increased each year since it was introduced in 2001, and it reached 95.5% in 2018.

Paper questionnaires are mailed to institutional coordinators at the universities. For most institutions, paper questionnaires are used as reference copies. For a small number of institutions, the institutional coordinator distributes the paper questionnaires to students receiving research doctorates. The institutional coordinators then collect the completed questionnaires and return them to the survey contractor for editing and data entry.

Both the Web survey and paper questionnaire are used in follow-up contacts via e-mail and mail to nonrespondents. If the series of follow-up emails and mailings is unsuccessful, the survey contractor attempts to reach nonrespondents to complete an abbreviated survey by CATI. Approximately 2% of SED completions each year are from CATI. At the end of data collection phase, institutional coordinators are contacted to obtain information on a small number of critical SED data items for nonrespondents from their institution.

A small but growing number of research doctoral degrees are awarded as a part of joint doctoral programs (i.e., a research doctorate recipient studied at more than one institution in pursuit of the doctoral degree). In these instances, the survey contractor relies on information provided by the institutions to appropriately attribute the doctorate to one of the doctorate-granting institutions.

The survey collects a complete college education history. To code U.S. postsecondary degree-granting institutions, survey staff use the Integrated Postsecondary Education Data System (IPEDS) institution codes. To code the degree-granting institutions of respondents from foreign countries, survey staff use the coding manual *Mapping the World of Education: The Comparative Database System*, augmented with approximately 6,000 additional institutions from the *Europa World of Learning* and the International Association of Universities' *International Handbook of Universities and World Higher Education Database*.

¹ About one-third of 2018 U.S. research doctorate recipients received undergraduate degrees from foreign institutions.

Mode. As noted earlier, three modes of data collection are used in the SED: Web survey, paper questionnaire, and CATI. In 2018, 95.5% of survey responses were obtained via the Web survey, 2.3% via the paper questionnaire, and 2.2% via CATI.

Response rate. Of the 55,195 individuals who received a research doctorate in 2018, 92.1% completed the SED. Additional information on response rate can be found below, under "Nonresponse error."

Data editing. Approved automated edits are applied to the SED, a number of which pertain to the education history section. In addition, completed paper questionnaires undergo review and editing prior to data entry.

Imputation. No imputation was used in producing the 2018 SED Doctorate Records File (DRF) except for the following variables:

- *Age at doctorate.* Months (of birth and doctorate award) were included in the calculation of median age whenever available. If birth month was missing, the month value was randomly imputed.

- *Time to degree from bachelor's completion.* Months (of bachelor's completion and doctorate award) were included in the calculation of total time to degree. If months were missing, month values were logically imputed to the modal value for doctorate recipients who provided month of bachelor's completion and converted to the number of days corresponding to that month.
- *Time to degree from graduate school entry.* Months (of graduate school entry and doctorate award) were included in the calculation of graduate school time to degree. If months were missing, month values were logically imputed to the modal value for doctorate recipients who provided month of graduate entry.
- *Time to degree from doctoral program entry.* Doctoral program entry is based on master's degree program entry if the master's degree was at the doctoral institution in the same fine field of study or if it was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry. Months are included in the calculation of doctoral program time to degree. If the month of entry used in the calculation (master's degree program entry or doctoral program entry) was not reported, the entry month was logically imputed to the modal value for all cases that did report the entry month in the academic year the case was added to the doctoral records file (typically the academic year matching the graduation date of the case).

Weighting. Survey data were not weighted.

Variance estimation. The SED is a census of all research doctorates with no weights calculated, so no variance estimation techniques were used.

Disclosure protection. Two strategies are used in data table production to protect against the disclosure of confidential information provided by SED respondents. In the first, used since 2004, data cell values based on counts of respondents that fall below a predetermined threshold are deemed to be sensitive to potential disclosure and are suppressed. The symbol "D" replaces the cell value. If a suppressed cell does not provide sufficient disclosure protection in tables that include marginal totals, additional (complementary) suppressions of above-threshold data cells are necessary, and the suppression symbol "D" is used to replace those cell values as well.

The second disclosure protection strategy is field aggregation. Field aggregation was applied to data **table 16** and **table 22** in the current report, which present counts of doctorate recipients classified by fine fields of study and by either sex or race and ethnicity. Because some fine fields of study award relatively few doctorates in a single year, the degree counts by race, ethnicity, or sex within these fields can be quite small, leading to extensive cell suppression. The field aggregation technique combines data from small fields of study with the data from related fields, so that the degree counts in the aggregated fields are sufficiently large to protect the confidentiality of respondent information.

Data by race, ethnicity, and sex in the fine fields shown in **table 16** and **table 22** are reported for fields in which at least 25 U.S. citizen or permanent resident individuals earn a doctoral degree in a given year, regardless of how small the count may be in a particular cell. Counts of doctorate recipients in fields having fewer than 25 U.S. citizen or permanent resident doctorates awarded are aggregated with those of one or more related fields until the total number of doctorates in the aggregated field reaches at least 25 U.S. citizens and permanent residents. The related fields chosen for aggregation to protect below-threshold fields may or may not also be below-threshold. The degree count in each racial, ethnic, or sex category of these aggregated fields is reported in the tables, but the constituent fine fields of the aggregated fields are not displayed.

In 2018, fewer than 25 doctorates were awarded to U.S. citizens or permanent residents in 81 of the 334 fine fields of study collected in the SED. These below-threshold fine fields were combined with 66 related fields of study to produce 45 aggregated fields in 2018. **Table 16** and **table 22** report data on the 45 aggregated fields and the remaining 187 unaggregated fine fields. **Table A-5** lists the aggregated fields and their constituent fine fields.

The 81 below-threshold fine fields do not include “other” fine fields (i.e., fine fields that have the word “other” in their label). Data reported for “other” fine fields are not considered confidential. However, a total of 23 “other” fine fields, including 8 that fall under the threshold, are used as aggregation partner fields.

Survey Quality Measures

Sampling error. Not applicable because the SED is a census.

Coverage error. Due to the availability of comprehensive lists of doctorate-granting institutions and the institutions’ high levels of participation in the survey, coverage error of institutions is minimal. Because the graduate schools collect the survey data from degree recipients at the time of doctorate completion, coverage error for the universe of doctorate recipients is also minimal. Comparisons of the institutions and the number of research doctorate recipients covered by the SED with the total number of doctorate recipients (including nonresearch doctorate degree recipients) reported by institutions to the **National Center for Education Statistics** confirm that there is minimal coverage error of doctorate recipients. Institutions that begin to confer research doctorates are invited to join the SED. If a university that confers research doctorates does not wish to participate in the SED, slight undercounts may result. In 2018, 11 doctorate-granting universities declined to fully enumerate their doctorate recipients for AY 2018. Information on the graduates for six of these institutions were found from other sources, such as ProQuest, but no information could be found for five institutions. These five institutions are estimated to have had approximately 37 graduates, resulting in a small percentage (less than 0.1%) of under-coverage in the universe.

Nonresponse error.

- *Unit nonresponse.* Of the 55,195 individuals who received a research doctorate in 2018, 92.1% completed the survey (table A-3). This percentage is referred to as the self-report rate. Skeletal records for nonrespondents appear on the data file and contain a limited number of SED critical data items (doctoral institution, year of doctorate, field of doctorate, type of doctorate, and, if available, baccalaureate institution, master’s degree institution, and sex) that are constructed for nonrespondents from administrative records of the university, such as commencement programs, graduation lists, and other public records. These nonresponding cases are included in the reported total of 55,195 doctorate recipients for 2018.

Nonresponse was concentrated in certain institutions: 6 of the 431 doctorate-granting institutions accounted for 25% of the total nonrespondents, and 43 of these institutions accounted for 70% of the total nonrespondents.

Counts for previous years were corrected by the addition of data from surveys received after the close of data collection for a given year.

- *Item nonresponse.* Among the 55,195 individuals who received a research doctorate in 2018, item nonresponse rates for the five key SED demographic variables—sex, citizenship, country of citizenship, race and ethnicity, and location after graduation—range from 0.1% for sex to 7.0% for location after graduation. Table A-4 shows item response rates for 2008–18 for all variables, by variable name (see clarifying notes in the table).

Measurement error. Measurement error in the SED is attributable to several sources including errors in respondent reporting and errors that occur during data processing. Data reported by respondents about their educational history, including degree institutions and field of study that are not coded within the survey instrument are reviewed and coded by trained coders. Average coding error rates were 0.12% for institution coding, 0.10% for fields of study coding, and 0.06% for “Other–specify” back coding.

Data Comparability

Changes in survey coverage and population. For the 2018 cycle, four institutions were added to the SED universe and two institutions were deemed ineligible and removed.

Changes in questionnaire. The following changes were made to the questionnaire in 2018:

New questions.

- *Postgraduation plans—seeking or negotiating.* If respondents indicated they were seeking employment or negotiating an offer of employment, they were asked a series of follow up questions:
 - *Type of position(s) negotiating or seeking.* Respondents were asked to specify whether the position is a postdoc or other training position, employment other than a postdoc, or other.
 - *Type of employer(s) negotiating with or seeking to work for (or train with).* Respondents were asked to specify whether the work is with an educational institution, the government, a business or industry, a nonprofit organization, or other.
 - *Top choice employer.* Respondents who indicated more than one response for type of employer were asked to rank their top choice.
 - *Current employment status.* Respondents were asked to indicate whether they are currently employed in a position related to their field of study, in a position not related to their field of study, or not employed.
 - *Same employer during or before the start of the doctoral program.* Respondents who are currently employed were asked to indicate whether the position is with the same employer as the one during or before the start of their doctoral studies.
- *Postgraduation plans—definite plans for non-postdoc employment.* If respondents indicated definite postgraduation employment plans other than a postdoc or training position, they were asked further follow-up questions:
 - *Employment in faculty position.* Respondents who specified definite employment plans in the postsecondary education sector were asked if they would be holding a tenure-track faculty position, a non-tenure-track faculty position, or no faculty position.
 - *Same position with same employer during doctoral program.* Respondents were asked to indicate whether the postgraduate position is the same position with the same employer as the one during their doctoral studies.
 - *Postgraduation plan to seek new employment.* Respondents were asked to indicate whether they plan to seek new employment or continue in their current position after they received their doctoral degree.

Questions dropped.

- *Title of dissertation.* Removed question that asked respondent to provide the title of their dissertation.
- *Years of doctoral coursework.* Removed question that asked how many years the respondent took courses or prepared for doctoral degree exams.
- *Years preparing doctoral dissertation.* Removed question that asked how many years the respondent worked on their dissertation after coursework and exams.
- *Years not working on doctoral degree.* Removed question that asked how many years a respondent spent not taking courses or working on dissertation. Previously had been asked only if a respondent indicated that they spent any time from the start of the doctoral program to the awarding of the degree not working on the degree.

Question response options changed.

- *Parent educational attainment.* The Web survey asked the sex and highest education level of up to two parents or guardians, including of the same sex, rather than specifically “mother” and “father.”
- *Field of study (FOS) list.* Three new fields were added, one field was dropped, two fields had their labels modified, and one field was changed to appear under two broad fields.

Changes in reporting procedures or classification.

- *Citizenship.* The citizenship status variable is used to identify the appropriate citizenship category of respondents, including the citizenship category of respondents who did not respond to the citizenship status survey item on the SED. The code framework for the citizenship status variable is outlined below.

Code	Citizenship category
0	U.S. native born
1	U.S. naturalized citizen
2	Non-U.S. immigrant (permanent resident)
3	Non-U.S. non-immigrant (temporary U.S. visa)
4	Non-U.S., visa status unknown
U	U.S. citizen, unspecified
Blank	Missing or citizenship unknown

Respondents who indicated a U.S. birthplace, regardless of what they reported for citizenship status, were assigned code 0.

In 1999, code 4 (non-U.S., visa status unknown) was introduced and data were back-coded through 1997. Respondents who designated a non-U.S. country for the country of citizenship item but did not respond to the citizenship status item were assigned code 4 for citizenship status. From 1997 to 2003, non-U.S.-born respondents who did not indicate their country of citizenship or citizenship status were assigned to code 4 if three out of four geographic variables—place of birth, place of high school, place of college entry, and postgraduation location—were non-U.S. locations. Beginning with the 2004 SED, the variable “place of baccalaureate institution” replaced “place of college entry” in the assignment of a citizenship code for respondents who did not indicate citizenship status.

For tabulations in this report, code 4 was combined with code 3—that is, counts of doctorate recipients in the temporary visa holder category include non-U.S. citizens with unknown visa status. This is consistent with coding procedures in previous data collections. However, the existence of code 4 allows the microdata user to exclude cases for which visa status is unknown. Prospective data users should note, however, that the number of cases in the code 4 group is not sufficient to warrant analysis as a separate citizenship category.

Non-U.S. citizens who did not report a country of citizenship but reported the same non-U.S. country for three out of four geographic variables—place of birth, place of high school, place of baccalaureate institution, and postgraduation location—were assigned that reported country as their country of citizenship.

- *Debt.* Since 2001, respondents have been asked to indicate the amount of education-related debt they owe, with separate response categories for graduate and undergraduate education. To estimate overall debt, the midpoint of the chosen range for undergraduate and for graduate debt was selected and summed to yield a total debt amount. Where mean debt levels are presented in this report (i.e., **table 38** and **table 40**), the individual values for debt are assigned as the midpoint of the chosen range for graduate and undergraduate debt. Doctorate recipients who chose the lowest debt category (no debt) were assigned a value of \$0 for the computation of mean debt levels. Doctorate recipients who chose the uppermost category (\$90,001 or more) were assigned a value of \$95,000 for the computation of mean debt levels. All valid responses, including “no debt,” were included in the computation of all average debt figures in this report. See item A18 on the survey questionnaire for a complete listing of the debt ranges on which the midpoint figures were based.

- *Field of study.* Beginning in 2015, the broad field of study of “physical sciences” was broken out into two separate broad fields: “physical sciences and earth sciences” and “mathematics and computer sciences.” Also beginning in 2015, the major fields of “mathematics and statistics” and “computer and information sciences” are listed under the new broad field of “mathematics and computer science.” Prior to 2015, these major fields were listed under physical sciences.
- *Functional limitations (previously, disability).* Beginning in 2012, item C12 (the functional limitations item) assesses both the presence and severity of functional limitations in each of several domains, which do not precisely overlap with the domains in prior surveys.
- *Median computation.* Since 1994, medians have been computed as outlined below. When months are included, they are converted to the number of days corresponding to the first day of the month. In 2017, the method for accounting for leap days changed to reflect the actual number leap days during the time period specified, rather than the prior method of adding 0.25 days to each year.
 - *Median age.* Months (of birth and doctorate award) are included in the calculation of median age whenever available. Beginning in 2015, if birth month is missing, the month value is randomly imputed. Prior to 2015, the missing month value was assigned to the month the doctorate was received.
 - *Time to degree from bachelor’s completion.* Months are included in the calculation of total time to degree. If months are missing, month values are assigned to the modal value for doctorate recipients who provide month of bachelor’s completion and converted to the number of days corresponding to that month.
 - *Time to degree from graduate school entry.* Months are included in the calculation of graduate school time to degree. If months are missing in the calculation of graduate school time to degree, month values are assigned to the modal value for doctorate recipients who provided month of graduate entry. Reports published before 2004 reported a different time-to-degree measure: registered time to degree. Comparisons of graduate school time-to-degree data with pre-2004 registered time-to-degree data should be interpreted cautiously. For an explanation of registered time to degree, see the technical notes of any *Doctorate Recipients from United States Universities: Summary Report* published before 2004.
 - *Time to degree from doctoral program entry.* This variable was first included in 2015. Doctoral program entry is based on master’s degree program entry if the master’s degree was at the doctoral institution in the same fine field of study or if it was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry. Months are included in the calculation of doctoral program time to degree. If the month of entry used in the calculation (master’s degree program entry or doctoral program entry) was not reported, the entry month is assigned to the modal value for all cases that did report the entry month in the academic year the case was added to the doctoral records file (typically the academic year matching the graduation date of the case).
- *Salary.* Median salary is calculated from exact salary values when provided by the respondent. Salary imputation was dropped as of 2015 due to the increase in exact salary response rate. From 2011–14, if a respondent selected a salary range instead of providing an exact salary value, exact salary values were imputed for median salary calculation purposes by applying hot-deck imputation based on salary range and other relevant respondent characteristics. Prior to 2011, median salary was calculated directly from the salary range values via interpolation methods, and exact salary values were not used in the calculation of median salary. Only salary data from doctorate recipients reporting definite commitments for employment or for a postdoc position in the United States are included in median salary calculations.
- *Postdoctoral plans to stay in the United States.* In 1997, the planned postdoctoral location of doctorate recipients began being coded in a new variable using Federal Information Processing Standards codes both for the United States and its territories and for countries.

Also in 1997, a dichotomous variable was created to index whether the planned postdoctoral location reported by the respondent was in the United States or in a foreign location, even if the respondent did not indicate a specific state or country.

- *Race and Hispanic ethnicity.* Since 2001, respondents have been asked to first indicate whether they are Hispanic or Latino and then to check one or more racial group categories (i.e., American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, black or African American, or white).

In data tables, doctorate recipients who report Hispanic or Latino ethnicity, regardless of race, are counted as Hispanic or Latino, and as of 2013, those who did not answer the Hispanic or Latino question are counted as “ethnicity not reported.” Respondents who indicate that they are not Hispanic or Latino and indicate a single race are reported in their respective racial groups, except for those indicating Native Hawaiian or Other Pacific Islander, who are included in “other race or race not reported.” Beginning in 2007, doctorate recipients who indicate they are not Hispanic or Latino and indicate more than one race are reported in the group “two or more races.”

- *Research doctoral degree.* As doctoral degree programs change to meet the needs of students, the orientation of the degrees they award may change from research to professional, and vice versa. Survey staff review degree programs to ensure that the designation of research doctorate remains appropriate. As a result of degree reviews in past data collections, survey staff identified several research doctoral degrees that shifted to a professional orientation. The doctor of music (DM) and the doctor of industrial technology (DIT) were both dropped from the SED in 2008, and the graduates (approximately 40 to 60 per year) who earn these doctoral degrees are no longer included in the SED.

After a multiyear review of doctoral programs offering the EdD degree, most were determined to have a professional orientation and were dropped from the SED in 2010 and 2011, and graduates earning EdD degrees from those programs are no longer included in the SED. As a result, the proportion of EdD degrees among the total number of research doctorate recipients fell from 5.5% in 2009 to 1.0% in 2018. **Table A-1** lists the doctoral degrees that were eligible for inclusion in the SED in 2018.

Definitions

- *Basic annual salary.* Annual salary expected to be earned from the doctorate recipient's principal job in the next year after receiving the doctorate, not including bonuses or additional compensation for summertime teaching or research.
- *Carnegie classification (institution categories).* In this report, four types of doctorate-granting institutions identified in the figures and tabulations are defined according to the Carnegie classification scheme as updated in 2015: doctoral highest research, doctoral higher research, doctoral moderate research, and other universities (comprised of all other classifications). Institutions are classified according to their aggregate and per-capita levels of research activity, using indicators of research and development expenditures, staffing (including postdoctoral appointees and other nonfaculty research staff with doctorates), and doctoral conferrals in science and engineering and other fields.
- *Definite plans to stay in the United States.* A respondent is coded as having definite plans to stay in the United States if the reported postgraduation location was in the United States and the reported postgraduation plans for employment or postdoc were coded “definite.”
- *Definite postgraduation plans.* The status of postgraduation plans is coded using the values from item B2 of the survey questionnaire, which indicate whether the doctorate recipient's postgraduation plans for employment or a postdoc position were definite at the time the survey was completed.

- *Field of study.* The SED has 334 fine fields of doctoral study, which are grouped into 35 major fields of study. The major field groupings are further aggregated into eight broad fields: life sciences, psychology and social sciences, physical sciences and earth sciences, mathematics and computer sciences, engineering, education, humanities and arts, and other fields. The levels of this variable were derived by grouping related fine fields of study from the field of study taxonomy used in the SED (**table A-6**). See the survey questionnaire for a full listing of the fine fields of study in 2018.

Doctorate recipients indicate their fields of specialty. Their choices may differ from departmental names. Field groupings may differ from those in other reports published by federal sponsors of the SED. The “general” field categories (e.g., “chemistry, general”) include individuals who either received the doctorate in the general subject area or who did not indicate a particular specialty field. The “other” field categories (e.g., “chemistry, other”) include individuals whose specified doctoral discipline was not among the specialty fields listed.

- *Median age at doctorate.* One-half of the respondents received the doctorate at or before this age. A recipient's age is obtained by subtracting the month and year of birth from the month and year of doctorate.
- *Percentage with master's.* This variable is the percentage of doctorate recipients in a field who received a master's degree in any field before earning the doctorate.
- *Research doctorate.* A research doctoral degree is oriented toward preparing students to make original intellectual contributions in a field of study and is not primarily intended for the practice of a profession. Research doctorates require the completion of a dissertation or equivalent project.
- *Time to doctorate.* The time it takes to complete a doctoral degree is measured in three ways: (1) the time elapsed from completion of the baccalaureate to completion of the doctorate (total time to degree), (2) the time elapsed from the start of any graduate school program to completion of the doctorate (graduate school time to degree), and (3) the time elapsed from the start of the doctoral program. Time-to-doctorate measures herein are reported as medians. In 2017, the method for accounting for leap days changed to reflect the actual number leap days during the time period specified, rather than the prior method of adding 0.25 days to each year.
 - *Total time to degree.* This variable is the total elapsed time between the baccalaureate and the doctorate, including time not enrolled in school. It can be computed only for individuals whose baccalaureate year is known. Baccalaureate year is often obtained from commencement programs or doctorate institutions when not reported by the recipient.
 - *Graduate school time to degree.* This variable is the elapsed time from the initiation of graduate study, in any program or capacity at any university, and the award of the doctorate. This variable can be computed only for individuals who provided the year they started graduate school. If an individual did not respond to question A13, which asks for the month and year of first entry into any graduate school, then values for graduate school month and year of entry are imputed from the month and year of entry into the most recent master's degree program (A14c) or, if that is missing, the month and year of entry into the doctoral degree program (A1). Months are included in the computation.
 - *Doctoral program time to degree.* This variable is either (1) the elapsed time from the master's degree program entry, if the master's degree was awarded at the doctoral institution and was in the same fine field as the doctorate or if the master's degree was a prerequisite to the doctoral program until doctorate completion; otherwise, it is (2) the elapsed time from the doctoral program entry until doctorate completion. This variable is only computed for academic year 2015 and later doctorates.
- *U.S. regions of employment.* This variable is used to classify the location of U.S. employment after award of the doctorate.

New England

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Middle Atlantic

New Jersey, New York, Pennsylvania

East North Central	Illinois, Indiana, Michigan, Ohio, Wisconsin
West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
South Atlantic	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
East South Central	Alabama, Kentucky, Mississippi, Tennessee
West South Central	Arkansas, Louisiana, Oklahoma, Texas
Mountain	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
Pacific and Insular	Alaska, California, Hawaii, Oregon, Washington, American Samoa, Guam, Puerto Rico, Trust Territories, Virgin Islands

Notes

1 U.S. Department of Education. 1996. *Mapping the World of Education: The Comparative Database System (CDS)*. Vols. 1, 2, and 3. Alexandria, VA: National Science Foundation. Available at <https://www.nsf.gov/statistics/mapping/>. Routledge-Taylor & Francis Group. 2015. *Europa World of Learning*. London. Serial and online database available at <http://www.worldoflearning.com/>. 2015. *International Handbook of Universities 2016*. London: Palgrave Macmillan UK. International Association of Universities. World Higher Education Database. <http://www.whed.net/home.php>.

Technical Tables

Table	Title
A-1	Types of research doctoral degrees recognized by the Survey of Earned Doctorates: 2018
A-2	Research degrees included in the Survey of Earned Doctorates: 2014–18
A-3	Survey response rates: 1979–2018
A-4	Item response rates: 2009–18
A-5	SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018
A-6	Aggregations used to determine major fields of study: 2018

TABLE A-1

Types of research doctoral degrees recognized by the Survey of Earned Doctorates: 2018

(Type)

Abbreviation	Degree title
PhD	Doctor of Philosophy
DA	Doctor of Arts
DBA	Doctor of Business Administration
DDes	Doctor of Design
DEng, DEsc, DES	Doctor of Engineering or Engineering Science
DFA	Doctor of Fine Arts
DHL	Doctor of Hebrew Letters
DMA	Doctor of Musical Arts
DME	Doctor of Music Education
DML	Doctor of Modern Languages
DNsc	Doctor of Nursing Science
DPH	Doctor of Public Health
DSc, ScD	Doctor of Science
EdD	Doctor of Education
JCD	Doctor of Canon Law
JSD, SJD	Doctor of Juridical Science
STD	Doctor of Sacred Theology
ThD	Doctor of Theology

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE A-2

Research degrees included in the Survey of Earned Doctorates: 2014–18

(Number and percent)

Research degree	Degree title	2014		2015		2016		2017		2018	
		Number	Percent								
All research doctorates		53,988	100.0	54,889	100.0	54,798	100.0	54,559	100.0	55,195	100.0
PhD	Doctor of Philosophy	52,943	98.1	53,804	98.0	53,768	98.1	53,479	98.0	54,246	98.3
EdD	Doctor of Education	587	1.1	616	1.1	615	1.1	589	1.1	571	1.0
DSc, ScD	Doctor of Science	106	0.2	105	0.2	103	0.2	108	0.2	92	0.2
DEng, DEsc, DES	Doctor of Engineering or Engineering Science	32	0.1	36	0.1	33	0.1	28	0.1	21	*
DA	Doctor of Arts	6	*	4	*	7	*	4	*	5	*
DBA	Doctor of Business Administration	31	0.1	35	0.1	32	0.1	32	0.1	24	*
DMA	Doctor of Musical Arts	168	0.3	178	0.3	141	0.3	139	0.3	116	0.2
DDes	Doctor of Design	7	*	1	*	5	*	7	*	9	*
DPH	Doctor of Public Health	21	*	27	*	20	*	53	0.1	41	0.1
DHL	Doctor of Hebrew Letters	3	*	0	0.0	1	*	0	0.0	0	0.0
DME	Doctor of Music Education	0	0.0	2	*	0	0.0	3	*	0	0.0
DML	Doctor of Modern Languages	7	*	3	*	5	*	6	*	4	*
DNsc	Doctor of Nursing Science	5	*	2	*	2	*	10	*	0	0.0
ThD	Doctor of Theology	8	*	16	*	14	*	23	*	11	*
DFA	Doctor of Fine Arts	1	*	0	0.0	2	*	4	*	3	*
JSD, SJD	Doctor of Juridical Science	61	0.1	54	0.1	45	0.1	67	0.1	50	0.1
STD	Doctor of Sacred Theology	1	*	5	*	2	*	1	*	0	0.0
JCD	Doctor of Canon Law	1	*	1	*	2	*	6	*	2	*
All other research doctorates ^a		0	0.0	0	0.0	1	*	0	0.0	0	0.0

* = value < 0.05%.

^a Includes doctorates awarded that were determined to be ineligible for Survey of Earned Doctorates after the doctoral program was begun but before doctorate was granted.**Note(s)**

Due to rounding, percentages may not sum to 100.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE A-3

Survey response rates: 1979–2018

(Percent)

Year	Self-report rate
1979	96.4
1980	96.2
1981	95.7
1982	95.3
1983	95.5
1984	95.1
1985	94.8
1986	93.5
1987	93.1
1988	92.9
1989	92.3
1990	93.6
1991	94.6
1992	95.1
1993	94.7
1994	94.6
1995	94.2
1996	93.0
1997	91.6
1998	91.9
1999	91.9
2000	92.4
2001	92.7
2002	91.3
2003	91.6
2004	91.3
2005	92.1
2006	93.1
2007	91.7
2008	92.3
2009	92.6
2010	93.0
2011	92.9
2012	92.5
2013	92.0
2014	90.6
2015	90.3
2016	92.0
2017	91.4
2018	92.1

Note(s)

Rates for 1979–2017 include late responses. Rate for 2018 may increase slightly in the next year if additional questionnaires are received after survey closure.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE A-4

Item response rates: 2009–18

(Percent)

Variable name	Variable description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
AAEMONTH ^a	First associate's degree start month	na	96.9	99.2							
AAEYEAR ^a	First associate's degree start year	na	97.6	99.3							
AAFIELD ^a	First associate's degree field	na	85.0	97.4							
AAINST ^a	First associate's degree institution	na	93.4	94.9							
AAMONTH ^a	First associate's degree month	na	97.6	99.7							
AANID ^a	First associate's degree institution (NCSES institution identification)	na	93.0	94.9							
AAYEAR ^a	First associate's degree year	na	98.3	100.0							
AADEGRN ^a	Number of associate's degrees received	na	90.3	93.4							
AGEDOC ^b	Age at doctorate	na	na	na	na	na	na	92.1	94.1	94.6	95.0
AMERIND	American Indian or Alaska Native race indicator	91.9	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.1
ASIAN	Asian race indicator	91.9	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.1
AUDIDIS ^c	Deaf or hearing disability indicator	90.8	89.7	89.8	na						
BA2EMONTH ^a	Most recent baccalaureate start month	na	89.9	92.3							
BA2EYEAR ^a	Most recent baccalaureate start year	na	90.2	92.4							
BA2FIELD ^a	Most recent baccalaureate degree field	na	89.7	91.7							
BA2INST ^a	Most recent baccalaureate institution	na	88.4	90.6							
BA2MONTH ^a	Most recent baccalaureate month	na	90.0	92.4							
BA2NID ^a	Most recent baccalaureate institution (NCSES institution identification)	na	88.4	90.6							
BA2YEAR ^a	Most recent baccalaureate year	na	90.4	92.6							
BADEGRN ^a	Number of bachelor's degrees received	na	91.1	98.3							
BADBLFIELD ^a	First baccalaureate double major field	na	96.4	98.4							
BADBLMAJ ^a	First baccalaureate double major indicator	na	89.5	90.9							
BAEMONTH ^d	First baccalaureate start month	na	na	na	na	na	86.9	87.0	89.0	89.6	90.6
BAEYEAR ^e	First baccalaureate start year	86.3	86.9	87.6	88.2	88.8	87.3	87.3	89.4	89.7	90.6
BAFIELD	First baccalaureate field	88.8	89.3	89.8	89.3	90.4	89.3	89.2	91.0	91.3	91.2
BAINST	First baccalaureate institution	92.9	92.5	93.4	92.3	93.2	91.6	92.3	94.2	94.5	95.0
BAMONTH	First baccalaureate month	88.0	88.5	89.1	89.7	90.2	89.0	88.9	90.7	90.6	91.3
BANID	First baccalaureate institution (NCSES institution identification)	92.1	91.6	92.5	91.5	92.2	90.2	91.0	92.9	93.6	94.3
BANONE ^f	No bachelor's and/or master's degree indicator	13.6	14.6	16.4	18.2	20.4	21.4	21.7	22.4	22.0	91.6
BAPLACE	First baccalaureate institution location	92.9	92.5	93.4	92.3	93.2	91.6	92.3	94.2	94.5	95.0
BAYEAR	First baccalaureate year	93.1	92.6	93.2	92.8	93.2	91.7	92.2	94.4	95.3	95.5
BIRTHMO	Month of birth	93.4	92.3	92.2	92.1	92.5	90.7	91.6	93.2	93.9	94.6
BIRTHPL	Place of birth	93.7	93.4	94.3	94.2	93.5	91.9	92.1	94.5	95.0	95.9
BIRTHYR	Year of birth	94.3	93.0	93.0	92.8	93.1	91.3	92.1	94.1	94.5	95.0
BLACK	Black race indicator	91.9	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.1
CITIZ	Type of citizenship	95.0	94.2	94.0	93.8	94.2	92.3	93.3	95.2	95.4	96.0
CNTRYCIT ^g	Country of citizenship	94.7	93.8	93.7	93.6	93.8	92.1	93.1	94.8	95.0	95.0
COGNDIS ^c	Learning or cognitive disability indicator	90.8	89.7	89.8	na						
DDSDEG ^h	Earned a professional dental degree	na	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.0	89.6
DDSSTUDY ^h	Earning a professional dental degree	na	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.0	89.6
DEPEND18	Number of dependents-ages 6–18	88.2	88.3	89.2	89.9	89.5	88.4	88.3	89.7	90.1	90.7
DEPEND19	Number of dependents-ages 19 and older	88.2	88.3	89.2	89.9	89.5	88.4	88.3	89.7	90.1	90.7
DEPEND5	Number of dependents-ages 5 or younger	88.2	88.3	89.2	89.9	89.5	88.4	88.3	89.7	90.1	90.7
DIFAGE ⁱ	Earliest age experienced difficulties	na	na	na	90.4	90.8	89.4	89.4	90.9	89.9	90.3

TABLE A-4

Item response rates: 2009–18

(Percent)

Variable name	Variable description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DIFCOGN ⁱ	Degree of difficulty concentrating, remembering, or making decisions	na	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5
DIFHEAR ⁱ	Degree of difficulty hearing	na	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5
DIFLIFT ⁱ	Degree of difficulty lifting	na	na	na	90.5	91.0	89.6	89.6	91.1	90.1	90.5
DIFSEE ⁱ	Degree of difficulty seeing	na	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5
DIFWALK ⁱ	Degree of difficulty walking	na	na	na	90.5	91.0	89.6	89.6	91.1	90.1	90.5
DISABILITY1 ^c	Disability status	90.8	89.7	89.8	na						
DISABILITY2 ⁱ	Moderate or greater degree of difficulty in any domain	na	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5
DOCCODE	Type of doctorate (since 2004)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EDFATHER	Father/male guardian's education	90.7	90.8	90.8	90.7	90.0	88.6	88.4	89.9	89.9	89.3
EDMOTHER	Mother/female guardian's education	90.9	90.9	90.9	90.8	90.1	88.6	88.5	89.9	90.0	89.7
GDEBTLVL	Graduate debt level	92.6	92.7	93.2	92.9	89.7	88.2	90.1	93.1	92.3	92.6
GEMONTH	Month of graduate program entry	89.7	87.4	88.0	88.4	88.5	90.1	89.7	90.7	90.3	91.9
GEYEAR	Year of graduate program entry	90.4	87.8	88.3	88.6	88.7	90.2	89.9	90.9	90.3	91.9
HAWAIIAN	Native Hawaiian or Other Pacific Islander race indicator	91.9	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.1
HISPANIC	Hispanic origin indicator	92.0	91.4	92.2	92.0	92.1	90.3	91.5	93.0	93.7	94.7
HSPLACE	Place of high school	91.1	90.8	91.8	91.7	91.2	89.7	89.5	91.6	90.1	90.4
JRCOLL	Junior college indicator	90.5	91.2	93.1	93.0	92.6	91.0	90.8	93.4	93.2	93.7
MA1CRED ^a	Credits from first master's degree counted toward doctoral degree	na	97.6	99.5							
MA1EMONTH ^a	First master's degree start month	na	99.6	99.0							
MA1EYEAR ^a	First master's degree start year	na	99.7	99.1							
MA1FIELD ^a	First master's degree field	na	99.4	99.0							
MA1INST ^a	First master's degree institution	na	97.9	98.0							
MA1MONTH ^a	First master's degree month	na	99.8	99.0							
MA1NID ^a	First master's degree institution (NCSES institution identification)	na	97.9	98.0							
MA1PART ^a	First master's degree was required for doctoral program	na	98.4	99.5							
MA1YEAR ^a	First master's degree year	na	99.9	99.1							
MACRED ^a	Credits from most recent master's degree counted toward doctoral degree	na	99.2	99.8							
MADEGRN ^a	Number of master's degrees received	na	99.3	93.7							
MAEMONTH ^d	Most recent master's degree start month	na	na	na	na	na	67.8	67.5	68.7	69.0	69.1
MAEYEAR ^d	Most recent master's degree start year	na	na	na	na	na	68.0	67.7	68.9	69.1	69.1
MAFIELD	Most recent master's degree field	84.1	84.9	86.5	88.1	89.8	89.2	89.2	90.9	90.5	91.1
MAINST	Most recent master's degree institution	85.2	85.5	87.1	88.4	89.7	89.1	89.0	90.8	90.7	90.7
MAMONTH	Most recent master's degree month	83.5	84.1	85.7	87.8	89.6	88.9	88.9	90.7	90.5	91.1
MANID	Most recent master's degree institution (NCSES institution identification)	72.2	71.6	71.5	70.8	70.0	68.5	68.0	69.2	69.3	68.8
MAPART ^a	Most recent master's degree was required for doctoral program	na	69.1	69.0							
MARITAL	Marital status	90.9	91.0	91.0	91.0	90.4	88.9	88.9	90.5	90.3	90.8
MAYEAR	Most recent master's degree year	85.1	85.5	86.9	88.5	90.0	89.2	89.1	91.0	91.2	91.2
MDDEG ^h	Earned a professional medical degree	na	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.0	89.6
MDSTUDY ^h	Earning a professional medical degree	na	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.0	89.6
MEDDENT	Additional professional medical or dental degree	88.6	89.9	90.3	90.5	90.4	89.1	89.2	90.5	90.0	91.4
MSPREREQ	Prerequisite master's degree for doctoral program	90.5	91.5	91.5	91.1	90.7	89.2	89.1	90.8	91.0	91.7

TABLE A-4

Item response rates: 2009–18

(Percent)

Variable name	Variable description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ORTHDIS ^c	Physical or orthopedic disability indicator	90.8	89.7	89.8	na						
OTHRDIS ^c	Other or unknown disability indicator	90.8	89.7	89.8	na						
PDEMPLOY	Postgraduation employer type	98.0	97.8	98.6	98.5	99.0	99.5	99.3	98.1	99.7	98.8
PDFACULTY ^j	Employment in faculty position	na	99.4								
PDFORGN ^f	Postgraduation affiliation with a non-U.S. college or university	3.7	3.8	3.7	3.5	3.7	3.4	3.1	3.2	3.8	90.4
PDLOC	Postgraduation location	92.6	93.0	92.9	92.5	91.6	89.9	90.0	92.1	92.4	93.0
PDOCCODE ^f	Postgraduation institution affiliation in the U.S. (IPEDS)	32.5	31.9	31.1	30.6	28.4	26.7	26.1	26.4	21.9	83.0
PDOCNID ^f	Postgraduation institution affiliation in the U.S. (NCSES institution identification)	32.5	31.9	31.1	30.6	28.4	26.7	26.1	26.4	21.9	83.0
PDOCPLAN	Postgraduation plans	97.7	97.6	95.0	93.9	92.5	91.7	91.5	95.2	97.6	99.8
PDOCSTAT	Postgraduation status	90.7	91.3	91.4	91.4	90.8	89.3	89.3	90.9	90.8	91.3
PDSAMEEMP ^a	Postgraduation employer was employer before or during doctoral studies	na	91.7	91.8							
PDSAMEPOSEMP ^j	Employment in same position with same employer worked during doctoral studies	na	95.4								
PDSEEKNEWEMP ^j	Postgraduation plan to seek new employment	na	99.5								
PDSTDSUP	Postdoctoral study support	95.1	93.9	94.6	95.8	96.7	97.5	97.8	95.5	96.9	97.0
PDUSFOR	Postgraduation location: U.S. or foreign	92.6	93.0	92.9	92.5	91.6	89.9	90.0	92.1	92.4	93.0
PDWK1ED	Edited primary work activity	92.7	92.8	91.8	91.5	90.7	90.8	90.5	91.3	97.7	98.6
PDWK2ED ^f	Edited secondary work activity	52.6	50.6	50.1	50.8	50.2	49.8	49.4	50.6	48.9	47.5
PDWKPRIM	Primary work activity	92.7	92.8	91.8	91.5	90.7	90.8	90.5	91.3	97.7	98.6
PDWKSEC ^f	Secondary work activity	52.6	50.6	50.1	50.8	50.2	49.8	49.4	50.6	48.9	47.5
PHDCY	Calendar year of doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDDISS	Dissertation field	92.2	92.5	92.4	91.8	91.6	90.2	90.0	91.6	91.1	91.5
PHDDISS2 ^f	Secondary dissertation field	26.8	30.2	32.1	34.7	36.2	35.0	35.0	41.0	34.9	89.8
PHDEMONTH ^d	Doctoral program start month	na	na	na	na	na	89.6	89.6	91.2	91.3	91.6
PHDEYEAR ^k	Doctoral program start year	90.0	90.4	90.7	90.8	90.9	89.8	89.7	91.4	91.3	91.6
PHDFIELD	Doctorate field	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDFY	Fiscal year of doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDINST	Doctoral institution	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDMONTH	Month of doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDNID	Doctoral institution (NCSES institution identification)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
POSTDOC ^l	Intention to take postdoc position	90.9	91.5	91.5	91.6	91.1	89.6	89.6	91.5	na	na
PROFDEG ^f	Type of professional doctorate	0.9	0.9	1.0	0.8	0.8	0.9	1.0	1.0	96.0	100.0
PROFEARN ^a	Earned or earning a professional doctoral degree	na	90.7	91.4							
PROFEMONTH ^a	Professional doctorate start month	na	99.7	99.3							
PROFEYEAR ^a	Professional doctorate start year	na	99.8	99.1							
PROFINST ^a	Professional doctorate institution	na	98.0	98.2							
PROFMONTH ^a	Professional doctorate month	na	99.8	99.2							
PROFNID ^a	Professional doctorate institution (NCSES institution identification)	na	94.7	98.2							
PROFYEAR ^f	Professional doctorate year	1.0	0.9	0.9	0.7	0.8	0.9	0.9	1.0	99.7	99.2
QUESTMON ^b	Month questionnaire filled out	na	na	na	na	na	na	90.0	92.0	93.2	92.1
QUESTYR ^m	Year questionnaire filled out	na	92.2	92.8	92.4	92.0	90.6	90.3	92.0	93.4	92.1
RACE	Edited race or ethnicity code	94.3	93.4	93.2	93.0	93.2	91.4	92.4	94.3	94.6	95.5

TABLE A-4

Item response rates: 2009–18

(Percent)

Variable name	Variable description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
RACE2 ^b	Edited ethnicity or race code (NSF-revised)	94.3	93.4	93.2	93.0	93.2	91.4	92.4	94.3	94.9	95.5
SALARYR ^l	Range of expected basic annual salary	91.9	91.0	89.7	89.0	87.6	88.7	88.7	89.3	97.3	96.3
SALARYV	Expected basic annual salary	52.2	51.5	46.6	41.2	36.8	76.9	83.9	85.5	94.2	93.2
SALMONTH	Number of months expected basic annual salary covers	90.0	90.9	90.1	89.5	88.7	89.0	88.9	89.1	95.2	96.5
SEEKPOSPDOC ^j	Seeking or negotiating a postdoc position	na	na	na	na	na	na	na	na	na	85.4
SEEKPOSEMP ^j	Seeking or negotiating an employment position other than a postdoc	na	na	na	na	na	na	na	na	na	85.4
SEEKPOSOTHR ^j	Seeking or negotiating other position	na	na	na	na	na	na	na	na	na	85.4
SEEKEMPEDU ^j	Seeking or negotiating position at an educational institution	na	na	na	na	na	na	na	na	na	85.3
SEEKEMPGOV ^j	Seeking or negotiating position in government	na	na	na	na	na	na	na	na	na	85.3
SEEKEMPBUS ^j	Seeking or negotiating position in business or industry	na	na	na	na	na	na	na	na	na	85.3
SEEKEMPNO ^j	Seeking or negotiating position in nonprofit organization	na	na	na	na	na	na	na	na	na	85.3
SEEKEMPOTHR ^j	Seeking or negotiating position in other sector	na	na	na	na	na	na	na	na	na	85.3
SEEKEMPCHOICE ^j	Top choice of employer seeking or negotiating	na	na	na	na	na	na	na	na	na	84.1
SEEKEMPSTAT ^j	Employment status while seeking or negotiating employment	na	na	na	na	na	na	na	na	na	85.2
SEX	Sex of doctorate recipient	99.9	100.0	100.0	99.9	100.0	99.7	100.0	100.0	100.0	99.9
SRCE1ED	Edited primary source of support	90.5	90.9	91.0	91.1	90.7	89.6	89.5	91.2	90.0	90.6
SRCEPRIM	Primary source of support	90.5	90.9	91.0	91.1	90.7	89.6	89.5	91.2	90.0	90.6
SRCESEC	Secondary source of support	80.9	80.8	80.8	80.3	79.6	79.2	78.8	83.0	78.4	80.1
TICEPHD	Time in from college entry to doctorate	86.3	86.9	87.6	88.2	88.8	87.3	87.3	89.4	89.7	90.6
TOBAGE	Time out between baccalaureate to graduate school entry	88.0	85.8	86.4	86.9	87.2	87.2	87.2	88.5	87.4	88.4
TTDBAPHD	Total time elapsed from baccalaureate to doctorate	92.3	91.7	92.3	92.0	92.3	90.3	90.8	93.1	94.4	94.8
TTDDOC ^d	Total elapsed time in doctorate	na	na	na	na	na	89.9	89.8	91.5	91.3	91.5
TTDGEPHD	Total time elapsed from graduate entry to doctorate	90.4	87.9	88.3	88.6	88.7	90.2	89.9	90.9	90.3	91.9
TUITREMS	Tuition remission-full or partial	89.9	90.4	91.3	91.5	91.2	90.0	89.8	91.4	91.0	91.6
UDEBTLVL	Undergraduate debt level	92.5	92.7	93.4	93.3	86.1	84.7	90.9	93.7	92.6	93.0
VISUDIS ^c	Blind or visual disability indicator	90.8	89.7	89.8	na	na	na	na	na	na	na
VOCLDIS ^c	Vocal or speech disability indicator	90.8	89.7	89.8	na	na	na	na	na	na	na
WHITE	White race indicator	91.9	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.1
YRSCOURS ^o	Years of doctoral coursework	90.4	90.9	91.0	90.9	90.4	88.9	89.0	90.5	89.8	na
YRSDISST ^o	Years preparing doctorate dissertation	90.2	91.0	91.1	91.0	90.5	89.0	89.0	90.6	89.7	na
YRSNOTWRK ^o	Years not working on doctoral degree	90.6	91.0	91.2	91.0	90.8	89.2	89.2	90.8	90.9	na

na = not applicable; data either were not collected or derived, or were collected for the first time in that year (see "Notes").

IPEDES = Integrated Postsecondary Education Data System; NCSSES = National Center for Science and Engineering Statistics.

^a Variable added to the Doctorate Records File in 2017.

^b Variable added to the Doctorate Records File in 2015.

^c In 2012, survey stopped collecting data for this item.

^d Variable added to the Doctorate Records File in 2014.

^e Methodology reports prior to 2014 reported BAEYEAR as CEYEAR.

^f Variable has low response rate because although all respondents are considered eligible to provide data for item, not all eligible respondents were able to do so.

^g Response rate counts respondents who reported being U.S. citizens or permanent residents or temporary visa holders and provided country of

citizenship.

^h Item appeared on survey form for the first time in 2010 (see "Notes").

ⁱ Item appeared on survey form for the first time in 2012 (see "Notes").

^j Item appeared on survey form for the first time in 2018 (see "Notes").

^k Methodology reports prior to 2014 reported PHDEYEAR as PHDENTRY.

^l In 2017, survey stopped collecting data for this item.

^m Item appeared on all survey forms except 2007–09.

ⁿ Methodology reports prior to 2011 reported SALARYR as SALARY.

^o In 2018, survey stopped collecting data for this item.

Note(s)

Response rate is the percentage of cases providing data on an item divided by the universe of doctorate recipients eligible to answer that item. For most data items, all doctorate recipient respondents are in the universe of eligible respondents. However, for some of the new survey data items introduced for the first time, not all eligible respondents were able to provide data due to completing earlier versions of the survey but are reported in subsequent years, when the item became available to the entire respondent universe.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Life sciences
Agricultural sciences and natural resources
Agricultural sciences
Agricultural animal breeding
Agricultural economics
Agronomy, horticulture science, plant breeding, plant pathology, plant sciences-other [†]
Agricultural and horticultural plant breeding
Agronomy and crop science
Horticulture science [*]
Plant pathology and phytopathology, agricultural
Plant sciences, other [*]
Animal nutrition, poultry science [†]
Animal nutrition [*]
Animal science, poultry or avian [*]
Animal sciences, other
Food science, food technology-other [†]
Food science
Food science and technology, other [*]
Soil chemistry and microbiology, soil sciences-other [†]
Soil chemistry, microbiology [*]
Soil sciences, other [*]
Natural resources and conservation
Environmental science
Fishing and fisheries sciences and management
Forest biology, forest management, forestry sciences-other [†]
Forest management, forest resources management [*]
Forest sciences and biology [*]
Forestry, other
Natural resources policy and environmental economics [†]
Natural resource and environmental policy
Natural resources and environmental economics (agricultural sciences) [*]
Natural resources and conservation, wildlife and range management [†]
Natural resources and conservation
Wildlife, range management [*]
Agricultural sciences, aggregated [†]
Agricultural sciences and natural resources, general [*]
Agricultural sciences and natural resources, other [*]
Biological and biomedical sciences
Anatomy, developmental biology [†]
Anatomy [*]
Developmental biology and embryology
Bacteriology, parasitology, and virology [†]
Bacteriology [*]
Parasitology [*]
Virology
Biochemistry (biological sciences)
Bioinformatics

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Biomedical sciences
Biometrics and biostatistics
Biophysics (biological sciences)
Botany, plant pathology, plant physiology [†]
Botany and plant biology
Plant pathology and phytopathology (biological sciences)*
Plant physiology*
Cancer biology
Cell, cellular biology, and histology
Computational biology
Ecology
Endocrinology, human/animal pathology [†]
Endocrinology*
Pathology, human and animal
Entomology
Environmental toxicology
Epidemiology
Evolutionary biology
Genetics and genomics, human and animal
Immunology
Microbiology
Molecular biology
Molecular medicine
Neurosciences, neurobiology
Nutrition sciences
Pharmacology, human and animal
Physiology, human and animal
Plant genetics
Structural biology
Toxicology
Wildlife biology
Zoology
Biological and biomedical sciences, general
Biotechnology, biology/biomedical sciences-other [†]
Biotechnology*
Biological and biomedical sciences, other
Health sciences
Environmental health
Health and behavior
Health services/systems administration [†]
Health systems administration*
Health services research
Kinesiology, exercise science
Medical physics, radiological science
Nursing science
Pharmaceutical sciences
Public health
Rehabilitation, therapeutic services
Speech-language pathology and audiology

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Health sciences, aggregated [†]
Gerontology (health sciences)*
Oral biology, oral pathology*
Veterinary sciences
Health sciences, general
Health sciences, other
Physical sciences and earth sciences
Chemistry
Analytical chemistry
Chemical biology
Inorganic chemistry
Medicinal chemistry
Organic chemistry
Physical chemistry
Polymer chemistry
Theoretical chemistry
Chemistry, general
Chemistry, other
Geosciences, atmospheric, and ocean sciences
Atmospheric science and meteorology
Atmospheric physics, meteorology [†]
Atmospheric physics and dynamics
Meteorology*
Atmospheric chemistry, atmospheric sciences-general, atmospheric sciences-other [†]
Atmospheric chemistry and climatology
Atmospheric science and meteorology, general
Atmospheric science and meteorology, other*
Geological sciences
Geochemistry, mineralogy [†]
Geochemistry
Mineralogy and petrology*
Geology
Geomorphology, geological sciences-general, geological sciences-other [†]
Geomorphology, glacial geology*
Geological sciences, general
Geological sciences, other
Geophysics and seismology
Paleontology, stratigraphy [†]
Paleontology
Stratigraphy and sedimentation*
Ocean and marine sciences
Marine biology and biological oceanography
Oceanography, chemical and physical
Ocean/marine sciences, aggregated [†]
Hydrology and water resources
Marine sciences
Ocean and marine sciences, other*
Physics and astronomy

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Astronomy and astrophysics
Astronomy
Astrophysics
Astronomy and astrophysics, other
Physics
Acoustics, optics/phonics [†]
Acoustics [*]
Optics, photonics
Applied physics
Atomic physics, polymer physics [†]
Atomic, molecular, chemical physics
Polymer physics [*]
Biophysics (physics)
Condensed matter, low-temperature physics
Elementary particle physics
Nuclear physics
Plasma, high-temperature physics
Physics, general
Physics, other
Mathematics and computer sciences
Computer and information sciences
Computer science
Information science, systems
Computer and information sciences, general
Computer and information sciences, other
Mathematics and statistics
Algebra
Analysis and functional analysis
Applied mathematics, computing theory [†]
Applied mathematics
Computing theory and practice [*]
Computational mathematics
Geometry, geometric analysis
Logic, topology/foundations [†]
Logic [*]
Topology and foundations
Number theory
Operations research, mathematics/statistics-general, mathematics/statistics-other [†]
Operations research (mathematics) [*]
Mathematics and statistics, general
Mathematics and statistics, other
Statistics (mathematics)
Psychology and social sciences
Psychology
Behavioral analysis
Clinical psychology
Cognitive neuroscience
Cognitive psychology and psycholinguistics
Community psychology

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Counseling
Developmental and child psychology
Educational psychology (psychology)
Experimental psychology
Family psychology, human development and family studies [†]
Family psychology*
Human development and family studies
Health, medical psychology
Industrial and organizational psychology
Marriage and family therapy, counseling
Neuropsychology, physiological psychology
School psychology (psychology)
Social psychology
Psychology, general
Psychology, aggregated [†]
Personality psychology*
Psychometrics and quantitative psychology
Psychology, other
Social sciences
Anthropology
Anthropology, cultural
Anthropology, general
Anthropology, physical and biological
Economics
Econometrics, economics [†]
Econometrics*
Other economics
Natural resources and environmental economics (social sciences)
Political science and government
Sociology
Other social sciences
American, U.S. studies
Applied linguistics
Archaeology (social sciences)
Area, ethnic, and cultural studies
Criminal justice and corrections
Criminology
Demography, gerontology, statistics, urban affairs, social sciences-general, social sciences-other [†]
Demography and population studies*
Gerontology (social sciences)*
Statistics (social sciences)*
Urban studies, affairs
Social sciences, general
Social sciences, other
Gender and women's studies
Geography
Health policy analysis
History, science and technology and society
International relations, international affairs

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Linguistics
Public policy analysis
Urban, city, community and regional planning
Engineering
Aerospace, aeronautical, and astronautical engineering
Bioengineering and biomedical engineering
Chemical engineering
Civil engineering
Electrical, electronics, and communications engineering
Industrial and manufacturing engineering
Materials science engineering
Mechanical engineering
Other engineering
Computer engineering
Environmental, environmental health engineering
Nuclear engineering
Robotics
Structural engineering
Systems engineering
Other engineering, aggregated [†]
Agricultural engineering*
Communications engineering*
Engineering management, administration*
Engineering mechanics*
Engineering physics*
Engineering science
Geotechnical and geoenvironmental engineering*
Metallurgical engineering*
Ocean engineering*
Operations research (engineering)
Petroleum engineering*
Polymer, plastics engineering*
Transportation and highway engineering*
Engineering, general*
Engineering, other
Education
Education administration
Educational administration and supervision
Educational and human resource studies, development
Educational leadership
Urban education and leadership
Education research
Counseling education, counseling and guidance
Curriculum and instruction
Educational assessment, testing, measurement
Educational policy analysis
Educational psychology (education)
Educational statistics, research methods

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Educational/instructional technology, media design [†]
Educational and instructional media design [*]
Educational and instructional technology
Higher education evaluation and research
International education
Learning sciences
School psychology (education)
Social and philosophical foundations of education
Special education
Teacher education [†]
Adult and continuing teacher education
Elementary teacher education [*]
Pre-elementary, early childhood teacher education
Secondary teacher education [*]
Teaching fields
Health education
Literacy and reading education
Mathematics education
Music education
Science education
Teaching fields, aggregated [†]
Agricultural education
Art education
Bilingual and multilingual education [*]
English as a second or foreign language [*]
English education
Family, consumer, and human sciences [*]
Foreign languages education [*]
Nursing education
Physical education and coaching [*]
Social science education [*]
Teacher education and professional development, other
Other education
Workforce education and development
Education, general
Education, other
Humanities and arts
Foreign languages and literature
French
Germanic language and literature
Spanish language and literature
Other languages, aggregated [†]
Arabic language and literature [*]
Chinese language and literature [*]
Italian [*]
Japanese language and literature [*]
Latin American languages and literature [*]
Russian language and literature [*]

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Foreign languages and literatures, other
History
American history, United States and Canada
Asian history
European history
Latin American history
Middle, Near East history
History, general
History, aggregated [†]
African history
History, other
Letters
American literature, United States and Canada
Classics
Comparative literature
English language
English literature, British and Commonwealth
Rhetoric and composition
Speech and rhetorical studies
Letters, aggregated [†]
Creative writing
Letters, general [*]
Letters, other [*]
Other humanities and arts
African American studies, literature, and history
Archaeology (humanities)
Art history, criticism, and conservation
Dance, drama [†]
Dance [*]
Drama, theater arts
Film, cinema, video studies
Music
Musicology and ethnomusicology
Music performance
Music theory and composition
Philosophy, ethics [†]
Ethics
Philosophy
Religion/religious studies, Jewish/Judaic studies [†]
Jewish, Judaic studies [*]
Religion, religious studies
Theology, religious education
Other humanities, aggregated [†]
Bible, biblical studies
Music, other [*]
Humanities, general
Humanities, other
Other ^a
Business management and administration

TABLE A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2018

(Field)

Aggregated field name and constituent fields
Accounting
Business administration and management
Finance
Human resources, organizational behavior [†]
Human resources development [*]
Organizational behavior
Management information systems, business statistics
Marketing management and research
Other aggregated business fields [†]
Business, managerial economics [*]
Hospitality, food service, and tourism management [*]
International business, trade, commerce [*]
Operations research (business) [*]
Business management and administration, general
Business management and administration, other
Communication
Communication research
Mass communication, media studies
Communication, general
Communication, aggregated [†]
Communication theory [*]
Film, radio, TV and digital communication [*]
Communication, other
Non-S&E fields nec
Architecture and environmental design
Family, consumer sciences and human sciences
Parks, sports, recreation, leisure and fitness
Public administration
Social work
Fields nec, aggregated [†]
Law [*]
Library science
Other fields nec
Unknown field

[†] = aggregated field in 2018.

^{*} = fine field with fewer than 25 U.S. citizen or permanent resident doctorate recipients in 2018.

nec = not elsewhere classified; S&E = science and engineering.

^a Includes other non-S&E fields not shown separately.

Note(s)

Aggregated fields appear in tables 16 and 22 only.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

TABLE A-6

Aggregations used to determine major fields of study: 2018

(Field code)

Field of study	Survey of Earned Doctorates field code
Life sciences	000–299 (excluding 152, 217), 577, 685
Agricultural sciences and natural resources	000–099, 685
Biological and biomedical sciences	100–199 (excluding 152)
Health sciences	200–299 (excluding 217), 577
Physical sciences and earth sciences	500–599 (excluding 577), 152
Chemistry	520–539
Geosciences, atmospheric sciences, and ocean sciences	510–519, 540–559, 580–599, 152
Physics and astronomy	500–509, 560–579 (excluding 577)
Mathematics and computer sciences	400–499 (excluding 415)
Computer and information sciences	400–419 (excluding 415)
Mathematics and statistics	420–499
Psychology and social sciences	600–699, (excluding 685), 217, 770
Psychology	600–649
Anthropology	650, 655, 656
Economics	665, 667, 668
Political science and government	678
Sociology	686
Other social sciences	All fields 600–699 (excluding 685) not listed above, 217, 710, 770
Engineering	300–399, 415
Aerospace, aeronautical, and astronautical engineering	300
Bioengineering and biomedical engineering	306
Chemical engineering	312
Civil engineering	315
Electrical, electronics, and communications engineering	324
Industrial and manufacturing engineering	339
Materials science engineering	342
Mechanical engineering	345
Other engineering	All fields 300–399 not listed above, 415
Education	800–899
Education administration	804–807
Education research	800, 801, 808–845
Teacher education	850–858
Teaching fields	860–889
Other education	All fields 800–899 not listed above
Humanities and arts	700–799 (excluding 770), 984
Foreign languages and literature	740–769
History	700–719 (excluding 710)
Letters	720–739 (excluding 731)
Other humanities and arts	All fields 700–799 (excluding 770) not listed above, 984
Other ^a	900–999 (excluding 984)
Business management and administration	900–939
Communication	940–959
Non-S&E fields nec	960–989 (excluding 984)
Unknown field	999

nec = not elsewhere classified; S&E = science and engineering.

^a Includes other non-science and engineering fields not shown separately.**Note(s)**

Major fields appear in tables 7, 8, 12, 15, 18, 24, 48, 49, 51, 52, and 56–71.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

Additional Resources

The National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF) has a wealth of information on the U.S. science and engineering (S&E) enterprise, including additional data and analysis on degree recipients and degree-granting institutions. The latest information from NCSES is available at <https://nces.nsf.gov/>.

Interactive data tool

NCSES's interactive data tool (<https://ncesdata.nsf.gov/ids>) allows for the creation of custom tables from the Survey of Earned Doctorates (SED) and other NCSES surveys.

Publications

Survey of Earned Doctorates

The SED questionnaire, all editions of *Doctorate Recipients from U.S. Universities*, and other products related to SED—including *U.S. Doctorates in the 20th Century*, which documents the history of U.S. doctoral education from 1861 through 1999—are available at <https://nsf.gov/statistics/srvydoctorates/>.

Science and Engineering Indicators

Science and Engineering Indicators offers a comprehensive look at the U.S. S&E enterprise, including education, demographics, employment, research and development expenditures, science and technology capabilities, and public attitudes and understanding about science. The *Indicators 2020* report *Higher Education in Science and Engineering* (NSB-2019-7) is available at <https://nces.nsf.gov/pubs/nsb20197/>.

Women, Minorities, and Persons with Disabilities in Science and Engineering

The biennial report *Women, Minorities, and Persons with Disabilities in Science and Engineering* looks at the participation of these three groups in S&E education and employment. Topics in the report include enrollment; field of degree; employment status; and occupation, including academic careers. The 2019 edition (NSF 19-304) is available at <https://nces.nsf.gov/pubs/nsf19304/>.

Related Survey

Survey of Doctorate Recipients

The SED serves as a sampling frame for the Survey of Doctorate Recipients (SDR). The SDR provides demographic, education, and career history information from individuals with a U.S. research doctoral degree in a science, engineering, or health (SEH) field. The SDR is a unique source of information about the educational and occupational achievements and career movement of U.S.-trained doctoral scientists and engineers in the United States and abroad. The survey description, questionnaires, data tables, and latest SDR publications are available at <https://www.nsf.gov/statistics/srvydoctoratework/>.

Contact Us

Thank you for visiting the *Doctorate Recipients from U.S. Universities* website from the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF).

To report an issue with this website, please e-mail ncsesweb@nsf.gov. For questions about NSF, please visit the **NSF help** page.

You may also reach NCSES, including the project officer and report author, using the contact information below.

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