2019

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 (SED) 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: 1958–2019

(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

Table 1

Doctorate recipients from U.S. colleges and universities: 1958–2019

(Number and percent)

Year	Doctorate recipients	% change from previous year
2007	48,132	5.5
2008	48,776	1.3
2009	49,552	1.6
2010	48,028	-3.1
2011	48,909	1.8
2012	50,943	4.2
2013	52,703	3.5
2014	53,986	2.4
2015	54,886	1.7
2016	54,809	-0.1
2017	54,554	-0.5
2018	55,103	1.0
2019	55,703	1.1

* = 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: 1973–2019

(Number, mean, and median)

Year	Doctorate-granting institutions	Doctorate recipients		
		Total	Mean (per institution)	Median (per institution)
1973	283	33,755	119.3	43.0
1974	289	33,047	114.3	41.0
1975	290	32,952	113.6	44.5
1976	292	32,946	112.8	44.5
1977	300	31,716	105.7	43.0
1978	304	30,875	101.6	38.5
1979	306	31,238	102.1	41.5
1980	314	31,019	98.8	38.0
1981	317	31,355	98.9	41.0
1982	323	31,108	96.3	35.0
1983	327	31,280	95.7	37.0
1984	326	31,334	96.1	39.5
1985	332	31,295	94.3	36.5
1986	334	31,897	95.5	37.0
1987	344	32,365	94.1	39.5
1988	346	33,497	96.8	36.0
1989	351	34,325	97.8	36.0
1990	348	36,065	103.6	43.0
1991	358	37,530	104.8	38.5
1992	361	38,886	107.7	42.0
1993	366	39,800	108.7	42.5
1994	368	41,034	111.5	43.0
1995	376	41,747	111.0	43.0
1996	384	42,437	110.5	44.0
1997	379	42,539	112.2	45.0
1998	382	42,636	111.6	44.5
1999	389	41,100	105.7	43.0
2000	403	41,369	102.7	41.0
2001	411	40,744	99.1	37.0
2002	410	40,031	97.6	38.0
2003	418	40,762	97.5	36.5
2004	413	42,122	102.0	39.0
2005	413	43,385	105.0	42.0
2006	413	45,620	110.5	41.0
2007	408	48,132	118.0	46.0
2008	415	48,776	117.5	43.0
2009	416	49,552	119.1	46.0
2010	411	48,028	116.9	44.0
2011	405	48,909	120.8	44.0
2012	412	50,943	123.6	46.5
2013	417	52,703	126.4	44.0
2014	422	53,986	127.9	47.0
2015	426	54,886	128.8	46.0
2016	430	54,809	127.5	48.0
2017	425	54,554	128.4	50.0
2018	428	55,103	128.7	48.5
2019	448	55,703	124.3	40.5

Source(s):
National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

Table 3

Top 50 doctorate-granting institutions ranked by total number of doctorate recipients, by sex: 2019

(Number)

Institution	Rank	Total	Male	Female
U. California, Berkeley	1	864	492	372
Walden U.	2	820	263	557
U. Michigan, Ann Arbor	3	801	465	336
U. Texas, Austin	3	801	473	327
U. Wisconsin-Madison	5	780	441	339
Stanford U.	6	770	490	279
U. Illinois, Urbana-Champaign	7	759	461	298
Texas A&M U., College Station and Health Science Center	8	744	466	278
Harvard U.	9	738	391	347
Purdue U., West Lafayette	10	730	447	283
Ohio State U., Columbus	11	726	392	334
U. Minnesota, Twin Cities	12	719	395	324
U. Florida	13	718	381	337
U. Washington, Seattle	14	708	359	349
U. California, Los Angeles	15	701	390	311
Massachusetts Institute of Technology	16	685	472	213
Pennsylvania State U., University Park and Hershey Medical Center	17	659	372	286
U. Maryland, College Park	18	575	325	250
Columbia U. in the City of New York	19	573	298	275
North Carolina State U.	20	533	302	231
Cornell U.	21	527	309	218
U. California, Davis	22	521	281	240
Michigan State U.	23	518	263	255
Georgia Institute of Technology	24	503	385	118
U. Southern California	25	494	288	206
U. California, San Diego	26	492	301	191
U. North Carolina, Chapel Hill	27	489	212	277
Northwestern U.	28	484	283	200
Johns Hopkins U.	29	455	248	207
U. Pennsylvania	30	450	245	205
Rutgers, State U. New Jersey, New Brunswick	31	441	226	215
Indiana U., Bloomington	32	428	225	202
U. Georgia	32	428	194	234
New York U.	34	426	239	187
Yale U.	35	415	234	181
U. Chicago	36	409	263	146
U. California, Irvine	37	407	244	163
U. Arizona	38	406	212	194
Virginia Polytechnic Institute and State U.	39	405	240	164
Princeton U.	40	398	262	136
CUNY, Graduate Center	41	394	177	217
Arizona State U.	42	392	223	168
Iowa State U.	43	389	233	156
U. Colorado Boulder	44	388	241	147
Duke U.	45	382	211	171
SUNY, U. Buffalo	45	382	219	163
Florida State U.	47	381	209	172
U. Pittsburgh, Pittsburgh	48	375	194	181
U. Utah	49	361	220	141

Table 3

Top 50 doctorate-granting institutions ranked by total number of doctorate recipients, by sex: 2019

(Number)

Institution	Rank	Total	Male	Female
U. Tennessee, Knoxville	50	359	207	152

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 total number of doctorate recipients, by broad field of study and sex: 2019

(Number)

Field and institution	Rank	Total	Male	Female
Life sciences[a]	-	12,781	5,819	6,961
From top 20 institutions	-	3,584	1,558	2,026
Harvard U.	1	269	133	136
U. Florida	2	248	100	148
U. Wisconsin-Madison	3	226	112	114
Johns Hopkins U.	4	222	86	136
U. Washington, Seattle	5	221	88	133
U. California, Davis	6	203	93	110
Ohio State U., Columbus	7	191	90	101
U. Minnesota, Twin Cities	8	188	85	103
U. North Carolina, Chapel Hill	9	176	62	114
Texas A&M U., College Station and Health Science Center	10	169	86	83
U. Michigan, Ann Arbor	11	166	75	91
U. California, Los Angeles	12	164	77	87
Walden U.	13	161	42	119
U. Georgia	14	156	78	78
U. California, Berkeley	15	145	58	87
Michigan State U.	16	143	66	77
U. Illinois, Urbana-Champaign	16	143	62	81
Purdue U., West Lafayette	18	139	60	79
Pennsylvania State U., University Park and Hershey Medical Center	19	128	54	74
Columbia U. in the City of New York	20	126	51	75
Physical sciences and earth sciences	-	6,585	4,368	2,213
From top 20 institutions	-	1,939	1,311	626
U. California, Berkeley	1	146	91	55
Stanford U.	2	136	97	39
Massachusetts Institute of Technology	3	129	88	41
Harvard U.	4	126	78	48
U. Michigan, Ann Arbor	5	125	75	50
U. Texas, Austin	6	107	79	28
U. Illinois, Urbana-Champaign	7	96	68	28
U. Wisconsin-Madison	8	91	68	23
California Institute of Technology	9	90	64	26
U. California, San Diego	9	90	62	28
Purdue U., West Lafayette	11	88	59	29
U. California, Los Angeles	11	88	60	28
Texas A&M U., College Station and Health Science Center	13	85	62	23
Ohio State U., Columbus	14	83	58	25
U. Washington, Seattle	15	79	46	33
U. Minnesota, Twin Cities	16	78	55	23
Pennsylvania State U., University Park and Hershey Medical Center	17	76	47	28
U. Colorado Boulder	17	76	46	30
Northwestern U.	19	75	51	23
Princeton U.	19	75	57	18
Mathematics and computer sciences	-	4,240	3,144	1,095
From top 20 institutions	-	1,311	1,010	301
U. California, Berkeley	1	101	80	21
Carnegie Mellon U.	2	96	78	18
U. Illinois, Urbana-Champaign	3	81	57	24

Table 4

Top 20 doctorate-granting institutions ranked by total number of doctorate recipients, by broad field of study and sex: 2019

(Number)

Field and institution	Rank	Total	Male	Female
North Carolina State U.	4	77	49	28
U. Washington, Seattle	4	77	56	21
Stanford U.	6	68	54	14
Purdue U., West Lafayette	7	67	47	20
U. Maryland, College Park	8	66	56	10
U. Southern California	8	66	48	18
U. California, Los Angeles	10	64	52	12
U. Michigan, Ann Arbor	11	63	49	14
Massachusetts Institute of Technology	12	62	48	14
Pennsylvania State U., University Park and Hershey Medical Center	13	59	48	11
Georgia Institute of Technology	14	58	47	11
U. Minnesota, Twin Cities	15	55	37	18
U. Wisconsin-Madison	16	54	45	9
Indiana U., Bloomington	17	50	41	9
Princeton U.	17	50	43	7
U. California, Irvine	19	49	36	13
U. California, Davis	20	48	39	9
Psychology and social sciences	-	9,071	3,672	5,399
From top 20 institutions	-	2,325	1,014	1,311
Walden U.	1	360	110	250
U. California, Berkeley	2	137	73	64
CUNY, Graduate Center	3	135	51	84
U. Maryland, College Park	4	121	51	70
Harvard U.	5	120	55	65
U. California, Los Angeles	6	115	46	69
U. Wisconsin-Madison	7	111	52	59
U. Minnesota, Twin Cities	8	108	50	58
Pennsylvania State U., University Park and Hershey Medical Center	9	105	50	55
Columbia U. in the City of New York	10	99	37	62
U. Texas, Austin	11	96	37	59
U. Florida	12	95	36	59
New York U.	13	94	55	39
Indiana U., Bloomington	14	92	54	38
Cornell U.	15	91	42	49
Stanford U.	16	90	50	40
U. Illinois, Urbana-Champaign	16	90	42	48
Ohio State U., Columbus	18	89	42	47
U. Michigan, Ann Arbor	18	89	33	56
U. Chicago	20	88	48	40
Engineering	-	10,303	7,833	2,468
From top 20 institutions	-	3,804	2,904	898
Massachusetts Institute of Technology	1	308	232	76
Georgia Institute of Technology	2	296	236	60
Purdue U., West Lafayette	3	276	218	58
Texas A&M U., College Station and Health Science Center	4	265	212	53
Stanford U.	5	242	153	88
U. Texas, Austin	6	239	190	48
U. Illinois, Urbana-Champaign	7	225	176	49
U. Michigan, Ann Arbor	8	218	178	40

Table 4

Top 20 doctorate-granting institutions ranked by total number of doctorate recipients, by broad field of study and sex: 2019

(Number)

Field and institution	Rank	Total	Male	Female
U. California, Berkeley	9	167	115	52
North Carolina State U.	10	164	124	40
U. Maryland, College Park	11	155	120	35
Ohio State U., Columbus	12	146	112	34
Pennsylvania State U., University Park and Hershey Medical Center	13	145	109	36
Virginia Polytechnic Institute and State U.	14	144	113	31
U. Florida	15	143	112	31
Carnegie Mellon U.	16	136	100	36
U. Washington, Seattle	16	136	92	44
U. Wisconsin-Madison	18	134	105	29
U. California, San Diego	19	133	100	33
U. Minnesota, Twin Cities	20	132	107	25
Education	-	4,635	1,422	3,213
From top 20 institutions	-	1,354	402	952
Walden U.	1	110	21	89
Pennsylvania State U., University Park and Hershey Medical Center	2	82	27	55
Columbia U., Teachers C.	3	81	19	62
Michigan State U.	4	75	27	48
U. Georgia	4	75	24	51
Ohio State U., Columbus	6	74	22	52
U. Minnesota, Twin Cities	7	66	23	43
Texas Tech U.	8	64	18	46
U. South Florida, Tampa	9	62	17	45
U. Texas, Austin	10	59	17	42
U. Wisconsin-Madison	11	56	16	40
Florida State U.	12	55	21	34
Indiana U., Bloomington	13	54	10	44
U. North Texas, Denton	13	54	18	36
George Mason U.	15	53	22	31
George Washington U.	16	51	13	38
North Carolina State U.	16	51	11	40
Texas A&M U., College Station and Health Science Center	16	51	15	36
U. Alabama, Tuscaloosa	19	46	11	35
Auburn U., Auburn	20	45	22	23
Jackson State U.	20	45	14	31
Kent State U., Kent	20	45	14	31
Humanities and arts	-	5,054	2,479	2,573
From top 20 institutions	-	1,727	830	895
U. Chicago	1	125	73	52
CUNY, Graduate Center	2	110	43	67
U. Texas, Austin	3	104	41	63
Harvard U.	4	103	61	42
New York U.	5	99	47	52
Columbia U. in the City of New York	6	98	56	42
Indiana U., Bloomington	7	93	43	49
U. California, Berkeley	7	93	42	51
U. California, Los Angeles	9	91	41	50
Princeton U.	10	87	49	38
U. Wisconsin-Madison	11	85	37	48

Table 4

Top 20 doctorate-granting institutions ranked by total number of doctorate recipients, by broad field of study and sex: 2019

(Number)

Field and institution	Rank	Total	Male	Female
Yale U.	11	85	40	45
U. Michigan, Ann Arbor	13	83	36	47
Ohio State U., Columbus	14	80	29	51
Stanford U.	15	70	43	27
U. Pennsylvania	15	70	31	39
Northwestern U.	17	65	29	36
Arizona State U.	18	64	31	32
U. North Carolina, Chapel Hill	19	63	22	41
U. Notre Dame	20	59	36	23
Other[b]	-	3,034	1,414	1,620
From top 20 institutions	-	918	447	471
Walden U.	1	181	88	93
U. Pennsylvania	2	54	30	24
U. Texas, Austin	2	54	28	26
U. Florida	4	46	24	22
Texas A&M U., College Station and Health Science Center	5	44	28	16
U. Illinois, Urbana-Champaign	6	43	21	22
U. California, Berkeley	7	41	21	20
U. Minnesota, Twin Cities	8	40	17	23
U. Southern California	8	40	15	25
Regent U.	10	38	21	17
Texas Tech U.	10	38	16	22
Harvard U.	12	37	12	25
U. Michigan, Ann Arbor	13	36	14	22
U. Washington, Seattle	14	35	14	21
U. Texas, Dallas	15	33	19	14
Arizona State U.	16	32	18	14
Pennsylvania State U., University Park and Hershey Medical Center	16	32	19	13
Stanford U.	16	32	20	12
Louisiana State U., Baton Rouge	19	31	11	20
Michigan State U.	19	31	11	20

[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 of doctorate institution ranked by total number of doctorate recipients, by sex: 2019

(Number)

State or location	Rank	Total	Male	Female
California	1	6,342	3,584	2,757
Texas	2	4,166	2,326	1,839
New York	3	4,164	2,187	1,977
Massachusetts	4	3,034	1,676	1,358
Pennsylvania	5	2,600	1,430	1,169
Illinois	6	2,492	1,428	1,063
Florida	7	2,469	1,300	1,168
Ohio	8	2,000	1,064	936
Michigan	9	1,905	1,051	854
North Carolina	10	1,808	923	885
Minnesota	11	1,578	669	909
Indiana	12	1,569	876	692
Georgia	13	1,447	796	651
Virginia	14	1,433	761	671
Maryland	15	1,291	699	591
New Jersey	16	1,145	660	485
Wisconsin	17	1,067	590	477
Colorado	18	1,036	547	489
Washington	19	1,001	506	495
Missouri	20	978	523	455
Tennessee	21	949	496	453
Arizona	22	847	451	395
Connecticut	23	796	429	367
Iowa	24	727	407	320
Alabama	25	653	350	303
Louisiana	26	615	317	298
District of Columbia	27	584	284	300
Oregon	28	572	310	262
Utah	29	549	331	217
South Carolina	30	547	296	251
Kansas	31	536	292	244
Kentucky	32	524	299	225
Mississippi	33	517	244	273
Oklahoma	34	482	279	203
Nebraska	35	383	208	175
Rhode Island	36	338	193	145
New Mexico	37	328	186	142
Delaware	38	241	143	98
Arkansas	39	239	131	108
West Virginia	40	225	115	110
Nevada	41	217	108	109
Hawaii	42	209	99	110
New Hampshire	43	193	107	86
North Dakota	44	168	91	77
Puerto Rico	45	133	65	68
Montana	46	126	77	49
Idaho	47	104	52	52
South Dakota	48	102	71	31

Table 5

State or location of doctorate institution ranked by total number of doctorate recipients, by sex: 2019

(Number)

State or location	Rank	Total	Male	Female
Vermont	49	80	35	45
Wyoming	50	78	42	36
Maine	51	74	31	43
Alaska	52	42	16	26

Source(s):
National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

Table 6

Doctorates recipients, by state or location of doctorate institution, broad field of study, and sex: 2019

(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]	30,151	25,542	5,819	6,961	4,368	2,213	3,144	1,095	3,672	5,399	7,833	2,468	1,422	3,213	2,479	2,573	1,414	1,620
Alabama	350	303	91	107	35	11	19	15	29	50	115	30	38	69	9	5	14	16
Alaska	16	26	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Arizona	451	395	84	78	65	44	42	14	64	97	103	38	20	53	44	53	29	18
Arkansas	131	108	42	41	D	D	10	6	17	7	29	12	6	20	D	D	10	10
California	3,584	2,757	627	682	642	306	454	127	487	703	859	353	94	165	326	320	95	101
Colorado	547	489	99	134	92	76	60	23	50	80	171	56	33	66	31	37	11	17
Connecticut	429	367	98	102	78	47	39	18	72	73	74	32	D	D	52	61	D	D
Delaware	143	98	22	19	27	18	D	D	13	23	57	18	D	D	D	D	D	D
District of Columbia	284	300	30	49	20	12	26	12	77	101	40	12	19	43	60	43	12	28
Florida	1,300	1,168	200	311	190	97	173	54	159	264	333	107	78	182	86	80	81	73
Georgia	796	651	159	203	103	52	89	24	70	98	242	64	36	80	51	79	46	51
Hawaii	99	110	22	20	21	15	D	D	26	30	10	5	D	D	10	20	D	D
Idaho	52	52	9	15	9	5	D	D	D	D	D	D	9	20	D	D	D	D
Illinois	1,428	1,063	203	258	225	91	147	58	191	253	366	109	47	76	177	144	72	74
Indiana	876	692	136	160	115	59	110	37	97	121	252	73	43	100	94	100	29	42
Iowa	407	320	95	89	55	25	44	26	22	52	130	31	28	48	16	21	17	28
Kansas	292	244	78	63	30	19	19	13	48	52	66	21	19	35	13	22	19	19
Kentucky	299	225	63	73	25	11	22	9	42	54	56	13	20	33	50	18	21	14
Louisiana	317	298	74	89	39	24	26	10	45	43	76	25	10	45	32	36	15	26
Maine	31	43	9	17	8	9	D	D	5	7	D	D	D	D	D	D	D	D
Maryland	699	591	163	240	82	48	99	26	89	116	206	58	11	38	28	33	21	32
Massachusetts	1,676	1,358	336	393	286	148	168	54	200	284	460	173	29	98	142	121	55	87
Michigan	1,051	854	175	212	147	106	110	35	108	159	341	79	59	135	75	77	36	51
Minnesota	669	909	136	246	55	23	38	18	160	308	109	26	44	132	22	40	105	116
Mississippi	244	273	63	52	35	24	7	5	19	56	46	13	43	86	15	15	16	22
Missouri	523	455	110	113	65	36	30	15	59	102	141	41	32	76	52	39	34	33
Montana	77	49	32	17	15	6	D	D	5	10	D	D	D	D	D	D	0	0
Nebraska	208	175	80	64	19	6	16	8	28	39	37	12	8	29	10	10	10	7
Nevada	108	109	D	D	21	13	D	D	20	31	22	8	10	23	7	7	7	7
New Hampshire	107	86	31	38	23	11	7	7	8	12	30	9	D	D	D	D	D	D
New Jersey	660	485	95	122	96	38	96	22	82	98	155	48	14	42	91	79	31	36
New Mexico	186	142	27	30	35	7	D	D	24	27	55	12	19	35	11	13	D	D
New York	2,187	1,977	432	501	317	155	247	55	340	511	429	150	85	205	257	287	80	113

Table 6

Doctorates recipients, by state or location of doctorate institution, broad field of study, and sex: 2019

(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	923	885	208	290	117	67	122	65	89	140	237	78	38	106	72	86	40	53
North Dakota	91	77	24	25	D	D	D	D	5	18	19	5	13	22	D	D	0	0
Ohio	1,064	936	223	251	171	81	76	22	83	164	321	85	81	168	68	102	41	63
Oklahoma	279	203	46	45	45	25	13	9	29	34	82	16	29	41	14	14	21	19
Oregon	310	262	73	79	51	33	30	13	46	65	76	21	12	19	7	23	15	9
Pennsylvania	1,430	1,169	229	331	175	72	193	54	152	225	387	127	61	140	135	135	98	85
Puerto Rico	65	68	17	23	7	6	D	D	15	33	D	D	D	D	D	D	D	D
Rhode Island	193	145	31	34	39	15	30	10	28	33	33	9	D	D	27	35	D	D
South Carolina	296	251	52	78	41	19	30	18	31	37	92	29	18	28	18	18	14	24
South Dakota	71	31	32	12	D	D	D	D	D	D	13	5	D	D	D	D	0	0
Tennessee	496	453	116	148	54	31	37	18	66	75	134	39	34	81	44	43	11	18
Texas	2,326	1,839	419	494	321	150	197	80	198	310	747	217	120	285	161	171	163	132
Utah	331	217	55	48	52	33	34	8	33	51	112	25	22	31	8	7	15	14
Vermont	35	45	17	22	D	D	D	D	D	D	D	D	D	D	D	D	0	0
Virginia	761	671	130	143	91	46	76	30	87	130	224	71	54	149	47	46	52	56
Washington	506	495	119	174	60	38	69	32	56	85	130	58	20	50	25	26	27	32
West Virginia	115	110	29	33	21	5	5	5	16	19	D	D	10	21	10	12	D	D
Wisconsin	590	477	149	156	83	30	60	19	67	82	133	35	30	65	57	60	11	30
Wyoming	42	36	13	11	D	D	D	D	D	D	11	7	D	D	0	0	0	0

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 recipients, by state or location, institution, and major science and engineering fields of study: 2019

(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	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
All institutions	55,703	12,781	1,491	8,702	2,588	6,585	2,941	1,274	2,370	4,240	2,228	2,012	9,071	3,936	445	1,247	707	633	2,103	10,303	379	1,164	981	701	1,799	234	992	1,533	2,520
Alabama	653	198	27	122	49	46	27	7	12	34	11	23	79	59	1	8	4	4	3	145	5	9	14	12	24	12	14	21	34
Alabama A&M U.	4	3	2	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
Alabama State U.	4	1	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
Auburn U., Auburn	253	71	24	20	27	18	14	1	3	13	3	10	22	17	0	3	0	0	2	65	1	1	12	8	8	12	2	10	11
Tuskegee U.	5	4	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
U. Alabama, Birmingham	150	93	0	75	18	8	5	0	3	4	2	2	17	13	0	0	0	4	0	18	0	7	0	0	1	0	3	0	7
U. Alabama, Huntsville	38	4	0	4	0	8	1	4	3	3	0	3	1	0	0	1	0	0	0	22	2	0	0	1	9	0	0	4	6
U. Alabama, Tuscaloosa	171	10	1	8	1	11	7	1	3	12	4	8	33	23	1	4	4	0	1	34	2	0	2	3	6	0	8	7	6
U. South Alabama	28	12	0	10	2	1	0	1	0	2	2	0	6	6	0	0	0	0	0	5	0	1	0	0	0	0	0	0	4
Alaska	42	12	5	7	0	9	0	9	0	1	0	1	14	7	2	0	0	0	5	1	0	0	0	1	0	0	0	0	0
U. Alaska, Anchorage	5	0	0	0	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
U. Alaska, Fairbanks	37	12	5	7	0	9	0	9	0	1	0	1	9	2	2	0	0	0	5	1	0	0	0	1	0	0	0	0	0
Arizona	847	162	28	97	37	109	26	40	43	56	23	33	161	40	17	13	6	11	74	141	4	15	10	16	34	3	9	13	37
Arizona State U.	392	49	6	32	11	34	9	12	13	36	19	17	64	17	11	6	2	0	28	90	2	10	4	14	24	3	8	10	15
Northern Arizona U.	44	14	4	10	0	4	0	4	0	0	0	0	11	3	0	0	3	0	5	1	0	0	0	0	0	0	0	0	1
Prescott C.	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	0	0	0
U. Arizona	406	99	18	55	26	71	17	24	30	20	4	16	86	20	6	7	1	11	41	50	2	5	6	2	10	0	1	3	21
Arkansas	239	83	18	43	22	15	4	3	8	16	12	4	24	9	2	3	0	0	10	41	0	3	6	3	8	5	3	1	12
Arkansas State U., Jonesboro	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
U. Arkansas for Medical Sciences	15	15	0	7	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
U. Arkansas, Fayetteville	179	57	18	27	12	12	2	3	7	8	4	4	17	6	2	3	0	0	6	33	0	3	6	3	7	5	3	1	5
U. Arkansas, Little Rock	33	6	0	6	0	3	2	0	1	8	8	0	4	0	0	0	0	0	4	8	0	0	0	0	1	0	0	0	7

Table 7

Doctorate recipients, by state or location, institution, and major science and engineering fields of study: 2019

(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	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. Central Arkansas	9	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
California	6,342	1,309	102	1,028	179	948	403	190	355	581	330	251	1,190	529	78	183	91	86	223	1,213	55	186	101	52	262	5	183	149	220
Alliant International U., San Diego	87	0	0	0	0	0	0	0	0	0	0	0	85	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Azusa Pacific U.	17	5	0	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
Biola U.	28	0	0	0	0	0	0	0	0	0	0	0	12	7	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0
California Institute of Integral Studies	40	0	0	0	0	0	0	0	0	0	0	0	23	18	2	0	0	1	2	1	0	0	0	0	0	0	0	0	1
California Institute of Technology	206	32	0	31	1	90	31	12	47	13	3	10	4	1	0	2	1	0	0	67	14	11	7	1	6	0	17	5	6
California Institute of the Arts	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
Chapman U.	18	3	1	0	2	1	0	0	1	2	1	1	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
City of Hope, Irell and Manella Graduate School of Biological Sciences	8	8	0	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
Claremont Graduate U.	140	6	0	2	4	0	0	0	0	21	12	9	42	19	0	10	6	0	7	2	0	0	0	1	0	0	0	0	1
Claremont School of Theology	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	0	0	0
Fielding Graduate U.	74	1	0	0	1	0	0	0	0	0	0	0	55	48	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Frederick S. Pardee RAND Graduate School	11	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0
Fuller Theological Seminary	53	0	0	0	0	0	0	0	0	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graduate Theological Union	17	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	0	0	0
Keck Graduate Institute	6	5	0	5	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
La Sierra U.	7	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
Loma Linda U.	38	25	0	17	8	3	0	3	0	0	0	0	9	6	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Naval Postgraduate School	10	0	0	0	0	1	0	1	0	3	3	0	0	0	0	0	0	0	0	6	2	0	0	0	1	0	0	0	3

Table 7

Doctorate recipients, by state or location, institution, and major science and engineering fields of study: 2019

(Number)

State or location and institution	All fields	Science																													
		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
Pacifica Graduate Institute	53	0	0	0	0	0	0	0	0	0	0	0	43	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Palo Alto U.	54	0	0	0	0	0	0	0	0	0	0	0	54	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Diego State U., San Diego	35	12	0	11	1	5	5	0	0	3	0	3	10	7	0	0	0	0	3	1	0	1	0	0	0	0	0	0	0	0	0
Sanford-Burnham Medical Research Institute, La Jolla	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	0	0
Santa Clara U.	7	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	6	0	0	0	0	3	0	0	1	2		
Saybrook U.	41	12	0	0	12	0	0	0	0	0	0	0	19	18	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Scripps Research Institute	52	23	0	23	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sofia U.	6	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford U.	770	107	8	98	1	136	55	29	52	68	44	24	90	16	12	31	11	8	12	242	26	26	16	15	55	0	23	37	44		
U. California, Berkeley	864	145	10	128	7	146	71	16	59	101	52	49	137	25	12	33	16	17	34	167	0	20	14	7	30	1	14	43	38		
U. California, Davis	521	203	51	144	8	71	31	14	26	48	24	24	76	20	8	16	5	5	22	73	0	13	4	9	17	0	9	4	17		
U. California, Irvine	407	68	1	57	10	74	34	10	30	49	35	14	68	21	9	13	3	12	10	85	2	20	9	8	13	0	16	3	14		
U. California, Los Angeles	701	164	0	122	42	88	42	16	30	64	32	32	115	30	8	19	12	13	33	126	3	20	14	5	32	0	24	18	10		
U. California, Merced	63	18	2	11	5	10	1	1	8	9	6	3	17	12	2	0	3	0	0	8	0	3	0	0	0	0	1	4	0		
U. California, Riverside	292	66	9	57	0	45	25	7	13	27	14	13	41	8	3	12	2	5	11	73	0	12	16	0	16	0	19	6	4		
U. California, San Diego	492	108	1	101	6	90	20	40	30	41	20	21	66	16	4	15	14	8	9	133	1	22	2	0	33	0	25	17	33		
U. California, San Francisco	130	98	0	88	10	6	6	0	0	0	0	0	11	0	5	0	0	4	2	15	0	15	0	0	0	0	0	0	0		
U. California, Santa Barbara	323	27	12	15	0	57	18	13	26	33	13	20	59	13	3	5	9	6	23	63	0	1	11	0	13	0	26	5	7		
U. California, Santa Cruz	190	38	7	31	0	43	14	12	17	32	21	11	41	13	8	10	5	1	4	13	0	1	0	0	4	0	1	0	7		
U. of the Pacific	14	12	0	0	12	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
U. of the West	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		
U. San Diego	32	19	0	0	19	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0		

Table 7

Doctorate recipients, by state or location, institution, and major science and engineering fields of study: 2019

(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	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. San Francisco	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
U. Southern California	494	97	0	72	25	52	21	15	16	66	49	17	60	12	0	16	4	6	22	131	7	20	8	6	39	4	8	6	33
Colorado	1,036	233	28	164	41	168	53	63	52	83	28	55	130	56	8	24	6	9	27	227	17	14	33	25	33	0	11	29	65
Colorado School of Mines	96	2	1	1	0	36	4	23	9	6	1	5	4	0	0	4	0	0	0	48	0	0	8	2	3	0	5	7	23
Colorado State U., Fort Collins	263	97	23	65	9	48	25	17	6	22	6	16	26	14	0	8	2	1	1	46	0	10	1	8	8	0	1	7	11
U. Colorado Boulder	388	43	3	37	3	76	22	23	31	42	18	24	55	7	8	12	4	8	16	102	17	3	24	14	14	0	4	8	18
U. Colorado Colorado Springs	30	0	0	0	0	2	0	0	2	4	3	1	4	3	0	0	0	0	1	11	0	0	0	0	2	0	0	0	9
U. Colorado Denver	106	84	1	55	28	0	0	0	0	2	0	2	4	3	0	0	0	0	1	7	0	1	0	1	0	0	0	3	2
U. Denver	96	3	0	3	0	6	2	0	4	7	0	7	22	15	0	0	0	0	7	13	0	0	0	0	6	0	1	4	2
U. Northern Colorado	57	4	0	3	1	0	0	0	0	0	0	0	15	14	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Connecticut	796	200	14	161	25	125	68	22	35	57	23	34	145	40	6	32	21	13	33	106	0	15	10	3	18	0	17	16	27
U. Bridgeport	12	0	0	0	0	0	0	0	0	7	6	1	0	0	0	0	0	0	0	4	0	1	0	0	0	0	0	0	3
U. Connecticut, Storrs	355	75	9	48	18	50	30	8	12	33	12	21	61	28	3	8	5	5	12	75	0	7	4	3	14	0	17	15	15
U. New Haven	3	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
Wesleyan U.	11	4	0	4	0	5	2	0	3	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yale U.	415	121	5	109	7	70	36	14	20	15	5	10	81	12	3	24	16	8	18	27	0	7	6	0	4	0	0	1	9
Delaware	241	41	11	23	7	45	23	7	15	17	11	6	36	8	0	10	1	3	14	75	0	10	18	7	13	0	11	4	12
Delaware State U.	6	0	0	0	0	4	2	0	2	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Delaware	235	41	11	23	7	41	21	7	13	15	11	4	36	8	0	10	1	3	14	75	0	10	18	7	13	0	11	4	12
District of Columbia	584	79	2	60	17	32	14	1	17	38	23	15	178	65	8	40	24	1	40	52	1	1	0	1	7	0	0	14	28
American U.	42	1	1	0	0	1	1	0	0	0	0	0	28	6	2	16	1	0	3	0	0	0	0	0	0	0	0	0	0
Catholic U. of America	106	18	0	8	10	5	0	0	5	3	3	0	14	9	0	0	5	0	0	10	0	1	0	1	4	0	0	3	1
Gallaudet U.	12	0	0	0	0	0	0	0	0	0	0	0	9	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Table 7

Doctorate recipients, by state or location, institution, and major science and engineering fields of study: 2019

(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	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
George Washington U.	228	19	0	18	1	9	3	0	6	27	14	13	56	16	6	10	10	0	14	38	1	0	0	0	1	0	0	9	27
Georgetown U.	110	22	1	21	0	15	10	0	5	1	1	0	40	5	0	9	8	0	18	0	0	0	0	0	0	0	0	0	0
Howard U.	86	19	0	13	6	2	0	1	1	7	5	2	31	21	0	5	0	1	4	4	0	0	0	0	2	0	0	2	0
Florida	2,469	511	72	295	144	288	126	80	82	227	124	103	423	207	26	23	29	27	111	440	27	27	17	35	77	21	35	80	121
Barry U.	19	0	0	0	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
Embry-Riddle Aeronautical U., Daytona Beach	23	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	18	14	0	0	0	0	0	0	1	3
Florida A&M U.	18	5	1	0	4	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5	0	1	1	2	0	1	0	0	0
Florida Atlantic U.	110	19	0	14	5	11	4	3	4	13	7	6	12	9	0	0	0	0	3	12	0	0	0	0	2	0	0	2	8
Florida Institute of Technology	84	3	0	3	0	9	4	2	3	27	12	15	8	8	0	0	0	0	0	36	4	0	2	3	9	0	0	6	12
Florida International U.	204	46	1	31	14	32	20	7	5	13	13	0	35	7	3	8	4	1	12	33	0	2	0	2	13	0	6	2	8
Florida State U.	381	35	1	28	6	53	24	13	16	39	10	29	80	29	0	10	7	10	24	47	0	2	4	4	10	7	5	10	5
Nova Southeastern U.	165	25	0	0	25	2	0	2	0	35	35	0	75	44	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0
U. Central Florida	230	18	0	10	8	37	15	3	19	36	23	13	22	11	0	0	2	3	6	74	0	0	0	8	13	6	8	16	23
U. Florida	718	248	65	129	54	74	40	13	21	38	15	23	95	40	13	1	10	9	22	143	9	12	8	9	15	2	15	28	45
U. Miami	200	59	3	44	12	37	13	17	7	7	1	6	29	24	0	0	3	1	1	19	0	6	0	0	4	3	0	4	2
U. South Florida, Tampa	308	53	1	36	16	31	6	20	5	19	8	11	57	25	10	4	3	3	12	53	0	4	2	7	11	2	1	11	15
U. West Florida	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
Georgia	1,447	362	49	240	73	155	95	14	46	113	70	43	168	69	9	17	17	14	42	306	40	29	23	14	63	9	23	40	65
Clark Atlanta U.	16	4	0	4	0	1	1	0	0	0	0	0	4	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0
Emory U.	216	90	1	66	23	21	16	0	5	8	1	7	32	16	6	1	5	1	3	0	0	0	0	0	0	0	0	0	0
Georgia Institute of Technology	503	30	1	28	1	74	39	9	26	58	42	16	23	10	0	3	0	1	9	296	40	25	23	14	62	9	23	40	60
Georgia Regents U.	22	22	0	20	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

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Georgia Southern U.	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
Georgia State U.	233	48	0	33	15	23	12	0	11	19	14	5	44	13	0	8	5	8	10	0	0	0	0	0	0	0	0	0	0
Kennesaw State U.	16	0	0	0	0	0	0	0	0	1	0	1	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Mercer U.	10	10	0	3	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
Morehouse School of Medicine	2	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
U. Georgia	428	156	47	84	25	36	27	5	4	27	13	14	62	30	3	5	6	4	14	10	0	4	0	0	1	0	0	0	5
Hawaii	209	42	4	25	13	36	2	21	13	4	1	3	56	11	1	8	11	4	21	15	0	3	0	3	5	0	0	1	3
U. Hawaii, Manoa	209	42	4	25	13	36	2	21	13	4	1	3	56	11	1	8	11	4	21	15	0	3	0	3	5	0	0	1	3
Idaho	104	24	7	14	3	14	3	8	3	3	3	0	10	7	0	0	0	0	3	16	0	1	0	1	2	0	7	2	3
Boise State U.	23	4	0	4	0	5	0	5	0	0	0	0	2	0	0	0	0	0	2	9	0	0	0	0	2	0	7	0	0
Idaho State U.	39	4	0	2	2	3	0	1	2	0	0	0	7	7	0	0	0	0	0	3	0	0	0	1	0	0	0	0	2
U. Idaho	42	16	7	8	1	6	3	2	1	3	3	0	1	0	0	0	0	0	1	4	0	1	0	0	0	0	0	2	1
Illinois	2,492	461	43	350	68	317	166	30	121	205	98	107	444	178	33	90	39	36	68	475	10	53	38	57	90	12	66	71	78
Benedictine U.	15	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
Chicago Theological Seminary	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
DePaul U.	17	0	0	0	0	0	0	0	0	4	4	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Garrett-Evangelical Theological Seminary	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
Illinois Institute of Technology	103	1	0	1	0	15	6	1	8	12	7	5	9	9	0	0	0	0	0	45	2	6	5	4	15	0	5	3	5
Illinois State U.	30	8	0	3	5	0	0	0	0	0	0	0	5	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Institute for Clinical Social Work, Chicago	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
Loyola U., Chicago	73	20	0	13	7	3	3	0	0	0	0	0	29	25	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0

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Lutheran School of Theology, Chicago	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
National Louis U.	6	0	0	0	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
Northern Illinois U.	70	9	0	5	4	15	8	1	6	1	0	1	25	12	0	5	5	0	3	0	0	0	0	0	0	0	0	0	0
Northwestern U.	484	76	0	74	2	75	44	5	26	33	14	19	84	22	7	25	9	11	10	120	0	12	19	11	12	6	29	13	18
Roosevelt U.	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
Rosalind Franklin U. of Medicine and Science	15	1	0	1	0	0	0	0	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush U.	15	13	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0
Southern Illinois U., Carbondale	134	31	8	21	2	10	3	3	4	7	4	3	30	11	6	7	1	3	2	18	0	1	0	0	9	0	1	2	5
Toyota Technological Institute, Chicago	3	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	0	0	0
U. Chicago	409	73	0	71	2	66	33	6	27	27	4	23	88	16	14	25	15	7	11	4	0	1	1	0	0	0	2	0	0
U. Illinois, Chicago	326	86	1	59	26	37	28	1	8	37	14	23	51	15	4	7	1	9	15	61	0	11	4	9	13	3	3	11	7
U. Illinois, Urbana-Champaign	759	143	34	94	15	96	41	13	42	81	48	33	90	33	2	21	8	3	23	225	8	20	9	33	41	3	26	42	43
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
Indiana	1,569	296	59	179	58	174	95	21	58	147	93	54	218	89	10	31	17	21	50	325	32	19	28	22	58	11	27	61	67
Ball State U.	33	4	1	2	1	1	0	1	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indiana State U.	55	3	0	3	0	0	0	0	0	0	0	0	2	1	0	0	0	0	1	3	0	0	0	0	0	1	0	0	2
Indiana U., Bloomington	428	68	5	40	23	44	23	4	17	50	35	15	92	28	9	15	5	6	29	0	0	0	0	0	0	0	0	0	0
Indiana U.-Purdue U., Indianapolis	83	48	2	29	17	3	0	1	2	7	6	1	8	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Purdue U., West Lafayette	730	139	50	72	17	88	50	11	27	67	37	30	57	22	0	8	2	8	17	276	29	15	17	18	46	10	26	55	60
U. Notre Dame	240	34	1	33	0	38	22	4	12	23	15	8	40	15	1	4	10	7	3	46	3	4	11	4	12	0	1	6	5

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Iowa	727	184	33	120	31	80	48	13	19	70	22	48	74	41	2	7	2	6	16	161	8	10	16	24	19	5	10	27	42
Iowa State U.	389	99	33	62	4	43	25	8	10	40	12	28	33	18	0	5	0	4	6	126	8	1	11	21	13	5	10	21	36
Maharishi U. of Management	5	1	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
St. Ambrose U.	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	0	0
U. Iowa	311	81	0	57	24	37	23	5	9	30	10	20	41	23	2	2	2	2	10	35	0	9	5	3	6	0	0	6	6
U. Northern Iowa	20	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	536	141	41	63	37	49	29	5	15	32	8	24	100	53	2	12	8	7	18	87	5	7	16	12	18	2	2	7	18
Kansas State U.	195	69	41	23	5	19	12	2	5	11	2	9	28	16	0	1	2	3	6	32	0	1	8	4	6	0	2	3	8
U. Kansas	304	71	0	40	31	29	16	3	10	15	4	11	58	23	2	11	6	4	12	40	3	6	8	8	7	0	0	1	7
Wichita State U.	37	1	0	0	1	1	1	0	0	6	2	4	14	14	0	0	0	0	0	15	2	0	0	0	5	2	0	3	3
Kentucky	524	136	20	80	36	36	16	4	16	31	13	18	96	47	8	5	2	8	26	69	0	3	11	6	13	6	8	13	9
Asbury Theological Seminary	16	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Southern Baptist Theological Seminary	32	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. Kentucky	322	91	20	42	29	26	11	4	11	23	8	15	61	27	7	5	2	6	14	50	0	2	7	5	10	0	8	9	9
U. Louisville	154	45	0	38	7	10	5	0	5	8	5	3	29	20	0	0	0	2	7	19	0	1	4	1	3	6	0	4	0
Louisiana	615	163	36	107	20	63	26	16	21	36	11	25	88	35	4	11	7	6	25	101	0	10	12	13	8	0	6	9	43
Grambling State U.	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
Louisiana State U., Baton Rouge	300	68	31	33	4	40	17	13	10	15	4	11	31	12	0	2	4	4	9	55	0	2	5	9	8	0	3	6	22
Louisiana State U., Health Sciences Center, New Orleans	21	21	0	19	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
Louisiana State U., Health Sciences Center, Shreveport	15	15	0	15	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

Table 7

Doctorate recipients, by state or location, institution, and major science and engineering fields of study: 2019

(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	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
Louisiana Tech U.	36	2	0	2	0	0	0	0	0	5	2	3	7	7	0	0	0	0	0	17	0	3	0	3	0	0	2	1	8
New Orleans Baptist Theological Seminary	14	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern U. and A&M C., Baton Rouge	21	9	4	3	2	0	0	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Tulane U.	102	26	0	23	3	20	8	3	9	7	0	7	18	6	4	2	0	2	4	13	0	5	7	0	0	0	1	0	0
U. Louisiana, Lafayette	45	10	1	6	3	0	0	0	0	9	5	4	2	0	0	0	0	0	2	10	0	0	0	1	0	0	0	1	8
U. Louisiana, Monroe	12	10	0	4	6	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. New Orleans	40	2	0	2	0	3	1	0	2	0	0	0	15	2	0	7	3	0	3	6	0	0	0	0	0	0	0	1	5
Maine	74	26	6	20	0	17	6	9	2	2	2	0	12	3	1	0	0	0	8	8	0	1	2	3	0	0	1	0	1
U. Maine	67	26	6	20	0	17	6	9	2	2	2	0	8	3	1	0	0	0	4	8	0	1	2	3	0	0	1	0	1
U. Southern Maine	7	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Maryland	1,291	403	31	266	106	130	45	25	60	126	90	36	205	73	6	25	23	11	67	264	15	40	18	11	42	2	22	69	45
Bowie State U.	1	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	0	0	0
Johns Hopkins U.	455	222	0	158	64	54	25	6	23	29	20	9	44	8	5	9	5	4	13	81	0	25	10	1	6	0	8	18	13
Loyola U., Maryland	10	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morgan State U.	37	7	0	1	6	0	0	0	0	0	0	0	1	1	0	0	0	0	0	12	0	0	0	2	0	2	0	0	8
Notre Dame of Maryland U.	12	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
Towson U.	11	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Maryland, Baltimore	71	66	0	45	21	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Maryland, Baltimore County	81	9	0	8	1	10	5	0	5	20	17	3	20	11	0	0	0	0	9	16	0	1	2	0	4	0	0	6	3
U. Maryland, College Park	575	84	27	44	13	63	14	17	32	66	42	24	121	36	1	16	18	7	43	155	15	14	6	8	32	0	14	45	21
U. Maryland, Eastern Shore	18	6	4	2	0	2	0	2	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0

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Uniformed Services U. of the Health Sciences	20	9	0	8	1	0	0	0	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts	3,034	729	28	553	148	434	182	48	204	222	129	93	484	133	20	104	49	43	135	633	24	109	70	23	62	9	65	106	165
Bentley U.	6	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Boston C.	133	14	0	7	7	24	17	0	7	6	0	6	40	15	0	11	4	8	2	0	0	0	0	0	0	0	0	0	0
Boston U.	312	87	1	72	14	32	9	3	20	19	9	10	59	16	8	14	6	4	11	53	0	26	0	0	5	0	5	10	7
Brandeis U.	77	25	0	19	6	13	7	0	6	6	4	2	20	2	2	3	1	3	9	0	0	0	0	0	0	0	0	0	0
Clark U.	15	2	0	2	0	0	0	0	0	0	0	0	8	3	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0
Harvard U.	738	269	3	224	42	126	46	10	70	39	18	21	120	24	5	29	20	8	34	27	0	9	0	0	0	0	5	4	9
Massachusetts C. of Pharmacy and Health Sciences	3	3	0	2	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
Massachusetts Institute of Technology	685	78	1	69	8	129	42	28	59	62	35	27	72	10	1	25	8	0	28	308	23	43	49	13	12	0	36	54	78
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.	197	33	2	19	12	27	16	2	9	17	11	6	31	7	0	5	2	6	11	78	0	10	10	4	16	4	4	14	16
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.	8	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
Springfield C.	4	2	0	0	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Suffolk U.	13	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tufts U., Medford	138	44	0	41	3	12	7	0	5	9	4	5	30	17	0	1	2	0	10	32	0	10	3	0	10	0	0	5	4
U. Massachusetts, Amherst	349	80	19	39	22	43	22	3	18	29	21	8	49	8	4	12	5	11	9	55	0	1	6	6	6	2	5	7	22
U. Massachusetts, Boston	82	17	2	6	9	5	5	0	0	9	9	0	38	21	0	0	1	3	13	0	0	0	0	0	0	0	0	0	0
U. Massachusetts, Dartmouth	29	6	0	1	5	2	0	2	0	1	0	1	0	0	0	0	0	0	0	9	0	2	0	0	2	0	0	1	4

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U. Massachusetts, Lowell	114	18	0	7	11	16	6	0	10	8	8	0	8	1	0	1	0	0	6	36	0	6	0	0	6	0	0	7	17
U. Massachusetts, Medical School	49	47	0	42	5	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Western New England U.	3	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Worcester Polytechnic Institute	60	3	0	3	0	3	3	0	0	16	10	6	0	0	0	0	0	0	0	34	1	2	2	0	5	3	10	4	7
Michigan	1,905	387	45	266	76	253	136	35	82	145	72	73	267	120	17	44	20	19	47	420	15	25	41	19	91	14	25	92	98
Andrews U.	23	0	0	0	0	0	0	0	0	0	0	0	8	7	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Calvin Theological Seminary	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
Central Michigan U.	40	10	1	9	0	2	1	0	1	3	0	3	14	13	0	0	0	0	1	3	0	0	0	0	0	0	3	0	0
Eastern Michigan U.	40	0	0	0	0	0	0	0	0	1	1	0	11	8	0	0	0	0	3	2	0	0	0	0	0	0	0	0	2
Lawrence Technological U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	3	0	0	1
Michigan State U.	518	143	36	94	13	60	38	3	19	25	9	16	75	20	6	16	3	5	25	80	0	0	12	5	20	0	9	16	18
Michigan Technological U.	86	12	2	8	2	22	3	10	9	6	1	5	2	1	0	0	0	0	1	41	0	2	6	1	11	0	2	10	9
Oakland U.	59	3	0	2	1	1	1	0	0	14	12	2	2	2	0	0	0	0	0	19	0	0	0	0	5	0	0	9	5
U. Detroit Mercy	4	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
U. Michigan, Ann Arbor	801	166	3	124	39	125	59	18	48	63	30	33	89	29	9	21	11	7	12	218	15	20	20	6	40	2	10	50	55
U. Michigan, Dearborn	4	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0
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	44	3	25	16	35	32	0	3	17	10	7	29	15	2	2	5	3	2	29	0	2	1	4	6	7	1	3	5
Western Michigan U.	113	5	0	1	4	8	2	4	2	15	8	7	33	21	0	5	1	4	2	21	0	1	2	3	6	2	0	4	3
Minnesota	1,578	382	22	165	195	78	46	8	24	56	29	27	468	276	4	29	5	7	147	135	9	15	21	8	30	5	14	18	15
Luther Seminary	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	0	0	0
Mayo Clinic, Mayo Graduate School	34	33	0	32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0

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U. Minnesota, Twin Cities	719	188	22	115	51	78	46	8	24	55	28	27	108	46	4	29	5	7	17	132	9	14	21	8	30	5	14	18	13
Walden U.	820	161	0	18	143	0	0	0	0	1	1	0	360	230	0	0	0	0	130	2	0	0	0	0	0	0	0	0	2
Mississippi	517	115	41	45	29	59	31	15	13	12	5	7	75	45	0	8	3	3	16	59	4	1	3	5	6	4	3	7	26
Jackson State U.	85	6	4	2	0	5	5	0	0	0	0	0	13	3	0	0	0	0	10	6	0	0	0	1	0	0	0	0	5
Mississippi State U.	179	64	37	20	7	17	5	7	5	5	3	2	17	12	0	2	0	3	0	36	4	0	1	2	2	4	2	6	15
U. Mississippi, Oxford	129	40	0	21	19	19	10	4	5	3	2	1	14	10	0	1	2	0	1	14	0	1	2	2	4	0	1	1	3
U. Southern Mississippi	124	5	0	2	3	18	11	4	3	4	0	4	31	20	0	5	1	0	5	3	0	0	0	0	0	0	0	0	3
Missouri	978	223	31	153	39	101	45	25	31	45	21	24	161	80	5	27	17	11	21	182	8	26	26	13	17	1	8	27	56
Concordia Seminary	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
Midwestern Baptist Theological Seminary	11	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
Missouri U. of Science and Technology	100	1	0	1	0	15	5	8	2	5	3	2	0	0	0	0	0	0	0	79	4	0	9	8	3	1	6	13	35
Saint Louis U.	135	20	2	11	7	10	5	3	2	1	0	1	28	22	0	0	0	0	6	5	1	1	0	1	0	0	0	1	1
U. Missouri, Columbia	325	87	28	51	8	25	12	6	7	20	7	13	67	28	1	11	7	11	9	35	2	5	4	2	5	0	0	8	9
U. Missouri, Kansas City	61	19	0	4	15	2	1	0	1	4	3	1	15	9	0	6	0	0	0	6	0	1	0	2	2	0	0	0	1
U. Missouri, Saint Louis	55	6	0	3	3	5	4	0	1	1	0	1	19	12	0	0	3	0	4	0	0	0	0	0	0	0	0	0	0
Washington U., Saint Louis	287	90	1	83	6	44	18	8	18	14	8	6	32	9	4	10	7	0	2	57	1	19	13	0	7	0	2	5	10
Montana	126	49	7	42	0	21	9	2	10	9	1	8	15	10	3	0	0	0	2	15	0	0	4	1	3	1	5	1	0
Montana State U., Bozeman	74	28	5	23	0	14	5	0	9	6	1	5	2	1	0	0	0	0	1	11	0	0	4	1	3	1	1	1	0
Montana Tech of U. Montana	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0
U. Montana, Missoula	49	21	2	19	0	7	4	2	1	3	0	3	13	9	3	0	0	0	1	1	0	0	0	0	0	0	1	0	0
Nebraska	383	144	27	79	38	25	15	3	7	24	9	15	67	38	0	3	9	4	13	49	0	6	1	6	5	0	3	4	24

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Creighton U.	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
U. Nebraska, Lincoln	275	62	27	33	2	25	15	3	7	23	8	15	49	28	0	3	9	4	5	47	0	5	1	6	5	0	3	4	23
U. Nebraska, Medical Center	77	68	0	37	31	0	0	0	0	0	0	0	9	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
U. Nebraska, Omaha	24	7	0	2	5	0	0	0	0	1	1	0	9	2	0	0	0	0	7	2	0	1	0	0	0	0	0	0	1
Nevada	217	30	3	18	9	34	17	8	9	11	7	4	51	32	4	0	1	4	10	30	0	0	0	5	5	0	4	8	8
U. Nevada, Las Vegas	109	15	1	5	9	7	3	1	3	6	2	4	26	15	2	0	1	4	4	9	0	0	0	1	1	0	1	4	2
U. Nevada, Reno	108	15	2	13	0	27	14	7	6	5	5	0	25	17	2	0	0	0	6	21	0	0	0	4	4	0	3	4	6
New Hampshire	193	69	12	56	1	34	12	5	17	14	4	10	20	12	1	0	0	5	2	39	0	5	4	2	10	0	1	8	9
Antioch U., Keene	9	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0
Dartmouth C.	100	49	1	47	1	18	6	3	9	6	3	3	7	5	1	0	0	0	1	19	0	5	2	0	6	0	0	0	6
Southern New Hampshire U.	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
U. New Hampshire, Durham	77	13	4	9	0	16	6	2	8	8	1	7	13	7	0	0	0	5	1	18	0	0	2	2	2	0	1	8	3
New Jersey	1,145	217	21	171	25	134	57	15	62	118	61	57	180	54	10	26	25	17	48	203	3	13	28	10	35	4	22	26	62
Caldwell U.	3	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
Drew U.	17	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
Fairleigh Dickinson U., Teaneck	17	0	0	0	0	0	0	0	0	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montclair State U.	23	3	3	0	0	1	0	1	0	0	0	0	9	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
New Jersey Institute of Technology	56	4	0	3	1	7	3	0	4	9	7	2	2	0	0	0	0	0	2	34	0	4	5	0	12	1	3	1	8
Princeton Theological Seminary	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
Princeton U.	398	57	0	57	0	75	27	7	41	50	25	25	66	4	6	19	17	11	9	53	3	1	12	0	13	0	0	10	14
Rowan U.	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
Rutgers, State U. New Jersey, Camden	11	5	0	5	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

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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	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
Rutgers, State U. New Jersey, New Brunswick	441	124	17	98	9	34	15	7	12	43	20	23	53	12	4	7	8	6	16	80	0	7	10	8	7	3	13	11	21
Rutgers, State U. New Jersey, Newark	69	9	1	3	5	5	5	0	0	4	3	1	20	3	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0
Seton Hall U.	38	12	0	2	10	5	5	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens Institute of Technology	60	0	0	0	0	7	2	0	5	12	6	6	0	0	0	0	0	0	0	36	0	1	1	2	3	0	6	4	19
New Mexico	328	57	5	36	16	42	13	5	24	17	13	4	51	26	1	9	1	0	14	67	0	7	7	7	16	1	6	5	18
New Mexico Institute of Mining and Technology	6	1	0	1	0	4	1	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
New Mexico State U., Las Cruces	107	15	5	8	2	14	4	1	9	11	7	4	13	13	0	0	0	0	0	21	0	1	4	3	6	1	1	2	3
U. New Mexico, Albuquerque	215	41	0	27	14	24	8	2	14	6	6	0	38	13	1	9	1	0	14	45	0	6	3	4	10	0	5	3	14
New York	4,164	933	65	747	121	472	190	76	206	302	166	136	851	368	55	114	96	72	146	579	12	83	65	30	99	17	60	76	137
Adelphi U.	29	5	0	0	5	0	0	0	0	0	0	0	18	18	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
Albert Einstein College of Medicine	47	47	0	47	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.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	2
Bard C.	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	0	0	0
Clarkson U.	39	4	0	4	0	11	5	2	4	6	1	5	0	0	0	0	0	0	0	18	0	0	1	2	2	0	2	4	7
Cold Spring Harbor Laboratory	7	6	0	6	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
Columbia U. in the City of New York	573	126	2	104	20	64	19	15	30	39	19	20	99	42	11	15	14	5	12	79	0	19	9	7	15	0	2	5	22
Columbia U., Teachers C.	100	10	0	3	7	0	0	0	0	0	0	0	4	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Cornell U.	527	125	46	78	1	64	18	8	38	43	18	25	91	16	6	24	14	14	17	125	4	25	26	2	10	0	13	13	32
Cornell U., Weill Cornell Medical College	77	75	0	73	2	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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CUNY, City C.	26	0	0	0	0	3	0	2	1	1	1	0	0	0	0	0	0	0	0	22	0	3	6	0	5	0	1	4	3
CUNY, Graduate Center	394	46	3	34	9	51	26	6	19	20	14	6	135	53	14	11	8	14	35	0	0	0	0	0	0	0	0	0	0
Elmezzi Graduate School of Molecular Medicine	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
Five Towns C.	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
Fordham U.	102	1	0	1	0	0	0	0	0	0	0	0	34	30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Hebrew Union C.-Jewish Institute of Religion, New York City	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
Hofstra U.	27	0	0	0	0	0	0	0	0	0	0	0	24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Icahn School of Medicine at Mt. Sinai	40	40	0	40	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
Jewish Theological Seminary of America	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
Juilliard School	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
Long Island U., Brooklyn	24	3	0	0	3	0	0	0	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Long Island U., Brookville	1	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	0	0	0
Memorial Sloan Kettering Cancer Center	14	13	0	13	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Molloy C.	4	4	0	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
New School	67	0	0	0	0	0	0	0	0	0	0	0	60	21	5	8	11	8	7	0	0	0	0	0	0	0	0	0	0
New York 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
New York U.	426	84	1	68	15	29	13	1	15	35	20	15	94	29	8	19	12	7	19	31	0	0	0	5	19	0	0	4	3
Pace U.	5	0	0	0	0	0	0	0	0	2	2	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Rensselaer Polytechnic Institute, Troy	147	9	0	9	0	24	7	6	11	19	14	5	3	0	0	0	0	0	3	83	5	12	7	3	15	2	12	12	15
Rochester Institute of Technology	33	12	3	9	0	5	0	0	5	3	2	1	1	0	0	0	0	0	1	11	0	0	0	0	0	0	1	0	10
Rockefeller U.	30	28	0	28	0	2	1	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	42	11	0	7	4	3	3	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, Binghamton U.	150	13	1	9	3	11	4	3	4	14	8	6	30	8	2	3	6	5	6	37	0	1	0	0	5	8	8	8	7
SUNY, C. of Environmental Science and Forestry	23	14	9	5	0	5	3	2	0	0	0	0	3	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0	1
SUNY, C. of Optometry	2	2	0	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
SUNY, Downstate Medical Center	8	8	0	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
SUNY, Stony Brook U.	266	51	0	46	5	61	28	11	22	47	16	31	43	14	0	7	7	5	10	41	0	5	0	0	7	0	14	12	3
SUNY, U. Albany	137	18	0	14	4	20	6	10	4	14	6	8	48	13	3	7	6	8	11	7	0	0	0	0	1	0	2	0	4
SUNY, U. Buffalo	382	80	0	55	25	44	29	1	14	34	27	7	46	17	2	6	4	2	15	81	2	6	10	8	14	6	1	9	25
SUNY, Upstate Medical U.	17	16	0	16	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
Syracuse U.	156	12	0	9	3	37	13	8	16	10	9	1	33	9	3	6	5	4	6	20	1	2	4	3	3	1	0	4	2
Union Theological Seminary	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	0	0
U. Rochester	186	55	0	45	10	36	13	1	22	12	7	5	32	20	0	3	9	0	0	19	0	9	2	0	3	0	3	1	1
Yeshiva U.	25	0	0	0	0	0	0	0	0	1	0	1	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Carolina	1,808	498	69	326	103	184	98	35	51	187	85	102	229	79	11	42	27	26	44	315	6	54	20	11	56	19	26	32	91
Duke U.	382	103	10	84	9	34	19	8	7	42	17	25	64	11	6	14	11	9	13	64	0	29	0	0	11	0	4	5	15
East Carolina U.	58	39	4	25	10	1	0	1	0	0	0	0	13	11	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
North Carolina Agricultural and Technical State U.	52	5	3	2	0	1	0	0	1	4	4	0	2	2	0	0	0	0	0	17	0	1	0	0	1	7	0	0	8

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North Carolina State U.	533	105	49	55	1	67	32	13	22	77	31	46	39	14	0	11	0	11	3	164	6	6	20	9	26	12	17	16	52
Southeastern Baptist Theological Seminary	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	0	0	0
U. North Carolina, Chapel Hill	489	176	3	112	61	64	40	12	12	40	18	22	77	18	5	13	16	6	19	14	0	6	0	0	0	0	3	0	5
U. North Carolina, Charlotte	130	22	0	15	7	6	1	0	5	23	15	8	13	7	0	1	0	0	5	39	0	1	0	2	18	0	0	11	7
U. North Carolina, Greensboro	93	18	0	5	13	2	2	0	0	1	0	1	21	16	0	2	0	0	3	5	0	0	0	0	0	0	1	0	4
U. North Carolina, Wilmington	2	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wake Forest U.	49	29	0	27	2	8	4	0	4	0	0	0	0	0	0	0	0	0	0	12	0	11	0	0	0	0	1	0	0
North Dakota	168	49	18	23	8	23	12	6	5	10	5	5	23	19	0	0	0	1	3	24	1	0	1	2	2	0	2	2	14
North Dakota State U.	87	35	18	12	5	12	9	1	2	8	3	5	4	3	0	0	0	0	1	16	0	0	0	1	1	0	2	2	10
U. North Dakota	81	14	0	11	3	11	3	5	3	2	2	0	19	16	0	0	0	1	2	8	1	0	1	1	1	0	0	0	4
Ohio	2,000	474	45	335	94	252	113	13	126	98	41	57	247	125	11	19	13	25	54	406	17	41	37	21	83	9	38	67	93
Air Force Institute of Technology	35	0	0	0	0	5	0	0	5	9	3	6	0	0	0	0	0	0	0	20	3	0	0	0	7	0	1	0	9
Bowling Green State U., Bowling Green	72	4	0	4	0	7	7	0	0	6	0	6	22	15	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0
Case Western Reserve U.	191	80	0	61	19	17	6	1	10	4	1	3	16	7	6	0	0	1	2	46	0	7	6	3	4	0	6	4	16
Cleveland State U.	39	9	0	9	0	8	8	0	0	0	0	0	9	5	0	0	0	0	4	5	0	1	0	1	0	0	0	3	0
Kent State U., Kent	176	33	0	16	17	28	7	1	20	15	9	6	25	13	0	0	1	4	7	1	0	0	0	0	0	0	1	0	0
Miami U., Oxford	59	10	0	10	0	6	5	1	0	0	0	0	17	10	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Ohio State U., Columbus	726	191	41	116	34	83	32	7	44	34	16	18	89	31	5	19	10	9	15	146	6	15	11	3	33	7	18	22	31
Ohio U., Athens	139	19	0	17	2	20	3	0	17	9	3	6	16	16	0	0	0	0	0	18	0	0	9	4	4	0	0	1	0
U. Akron, Akron	122	3	1	2	0	33	21	0	12	0	0	0	15	11	0	0	0	4	0	66	0	10	10	5	4	1	4	16	16
U. Cincinnati, Uptown West Campus	241	70	1	51	18	24	13	2	9	6	1	5	26	5	0	0	2	3	16	47	6	4	1	4	9	0	3	10	10

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U. Dayton	45	4	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	25	1	0	0	0	10	0	5	6	3
U. Toledo	118	39	0	35	4	17	11	0	6	10	4	6	7	7	0	0	0	0	0	18	0	3	0	1	5	0	0	5	4
Wright State U., Dayton	37	12	2	10	0	1	0	1	0	5	4	1	5	5	0	0	0	0	0	14	1	1	0	0	7	1	0	0	4
Oklahoma	482	91	22	54	15	70	31	23	16	22	7	15	63	37	1	4	4	6	11	98	3	6	11	7	20	1	1	18	31
Oklahoma City U.	4	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
Oklahoma State U., Center for Health Sciences	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
Oklahoma State U., Stillwater	231	47	21	22	4	32	17	10	5	7	1	6	34	22	0	2	0	4	6	35	2	3	4	5	8	1	0	6	6
U. Oklahoma, Norman	199	39	1	28	10	29	10	11	8	10	1	9	21	9	0	2	4	2	4	43	1	3	7	2	12	0	0	6	12
U. Tulsa	44	0	0	0	0	9	4	2	3	5	5	0	8	6	1	0	0	0	1	20	0	0	0	0	0	0	1	6	13
Oregon	572	152	50	81	21	84	34	29	21	43	20	23	111	47	8	11	3	9	33	97	0	4	6	15	23	3	5	11	30
Oregon Health and Science U.	38	31	0	28	3	1	1	0	0	2	2	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0
Oregon State U., Corvallis	287	92	41	37	14	46	18	20	8	22	12	10	35	17	1	4	0	0	13	75	0	0	6	14	19	3	4	8	21
Portland State U.	71	14	7	5	2	9	2	5	2	4	3	1	19	9	0	0	1	3	6	18	0	0	0	1	4	0	1	3	9
U. Oregon	176	15	2	11	2	28	13	4	11	15	3	12	57	21	7	7	2	6	14	0	0	0	0	0	0	0	0	0	0
Pennsylvania	2,600	560	24	405	131	248	103	44	101	247	150	97	377	150	15	53	29	24	106	514	6	66	42	24	75	16	59	76	150
Bryn Mawr C.	8	1	0	1	0	1	1	0	0	2	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Carnegie Mellon U.	342	19	2	17	0	31	21	2	8	96	72	24	24	9	0	6	0	0	9	136	0	6	11	6	21	0	16	10	66
Drexel U.	149	37	1	35	1	8	2	0	6	8	6	2	16	15	0	1	0	0	0	55	0	10	6	5	10	0	9	9	6
Duquesne U.	84	27	0	6	21	4	4	0	0	0	0	0	16	15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Indiana U. Pennsylvania	68	2	0	0	2	0	0	0	0	0	0	0	16	0	0	0	0	2	14	0	0	0	0	0	0	0	0	0	0
Lehigh U.	106	6	0	6	0	11	3	3	5	12	4	8	12	9	0	3	0	0	0	47	0	1	2	1	8	4	5	11	15

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Lutheran Theological Seminary, Philadelphia	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
Marywood U.	11	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
Pennsylvania State U., University Park and Hershey Medical Center	659	128	21	92	15	76	21	24	31	59	36	23	105	36	4	14	7	12	32	145	6	6	10	8	24	9	19	26	37
Salus U.	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
Temple U.	253	55	0	41	14	32	16	2	14	14	7	7	44	19	2	6	6	1	10	12	0	5	0	0	2	0	0	2	3
Thomas Jefferson U.	29	29	0	23	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
U. Pennsylvania	450	118	0	106	12	41	15	5	21	28	15	13	84	12	6	20	11	6	29	47	0	12	6	0	3	0	7	10	9
U. Pittsburgh, Pittsburgh	375	111	0	67	44	41	19	6	16	28	10	18	41	21	3	3	5	2	7	66	0	26	7	4	6	3	2	7	11
U. of the Sciences Philadelphia	17	13	0	8	5	1	1	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Villanova U.	19	6	0	0	6	2	0	2	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	1	0	1	1	3
Westminster Theological Seminary	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	0	0
Widener U., Chester	24	5	0	0	5	0	0	0	0	0	0	0	12	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico	133	40	10	30	0	13	9	1	3	3	2	1	48	47	0	0	0	0	1	9	0	1	2	2	1	0	1	0	2
Carlos Albizu U., San Juan	23	0	0	0	0	0	0	0	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inter American U. Puerto Rico, San Juan	18	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
Ponce Heath Sciences U.	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
Pontifical Catholic U. Puerto Rico, Ponce	15	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Central del Caribe	1	1	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
U. del Turabo	5	5	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	0
U. Puerto Rico, Mayaguez	20	2	0	2	0	6	5	1	0	3	2	1	0	0	0	0	0	0	0	9	0	1	2	2	1	0	1	0	2

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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	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
U. Puerto Rico, Medical Sciences Campus	18	18	0	18	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. Puerto Rico, Rio Piedras	28	9	5	4	0	7	4	0	3	0	0	0	4	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Rhode Island	338	65	2	48	15	54	22	14	18	40	17	23	61	18	3	13	10	3	14	42	0	9	5	0	5	0	4	6	13
Brown U.	225	42	0	38	4	28	9	5	14	37	14	23	41	5	3	11	10	3	9	27	0	8	1	0	2	0	4	4	8
Salve Regina U.	10	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
U. Rhode Island	103	23	2	10	11	26	13	9	4	3	3	0	17	13	0	2	0	0	2	15	0	1	4	0	3	0	0	2	5
South Carolina	547	130	16	69	45	60	41	8	11	48	17	31	68	30	2	18	5	1	12	121	0	20	12	19	13	4	11	26	16
Clemson U.	243	35	16	17	2	21	16	1	4	19	7	12	27	11	0	15	0	0	1	84	0	15	6	13	8	4	9	17	12
Medical U. South Carolina	39	39	0	31	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
U. South Carolina, Columbia	265	56	0	21	35	39	25	7	7	29	10	19	41	19	2	3	5	1	11	37	0	5	6	6	5	0	2	9	4
South Dakota	102	44	11	28	5	14	8	3	3	12	11	1	8	6	0	0	0	2	0	18	0	5	3	4	3	0	1	0	2
Dakota State U.	11	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
South Dakota School of Mines and Technology	15	0	0	0	0	5	0	3	2	0	0	0	0	0	0	0	0	0	0	10	0	3	3	2	0	0	1	0	1
South Dakota State U.	46	30	11	15	4	7	7	0	0	1	0	1	2	0	0	0	0	2	0	6	0	0	0	2	3	0	0	0	1
U. South Dakota	30	14	0	13	1	2	1	0	1	0	0	0	6	6	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0
Tennessee	949	264	21	196	47	85	47	12	26	55	29	26	141	71	8	18	8	10	26	173	1	18	19	11	29	5	16	25	49
East Tennessee State U.	26	15	0	9	6	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meharry Medical C.	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
Mid-America Baptist Theological Seminary	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
Middle Tennessee State U.	40	11	0	4	7	1	1	0	0	2	0	2	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0

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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	Total	Aerospace, aeronautical, and astronautical	Bioengineering and biomedical	Chemical	Civil	Electrical, electronics, and communications	Industrial and manufacturing	Materials science	Mechanical	Other engineering
Tennessee State U.	32	11	3	8	0	0	0	0	0	2	2	0	11	11	0	0	0	0	0	5	0	0	0	0	0	0	1	4
Tennessee Technological U.	25	4	3	1	0	1	1	0	0	3	3	0	0	0	0	0	0	0	0	12	0	0	3	0	5	0	1	3	0
U. Memphis	138	17	0	7	10	7	2	5	0	9	4	5	34	23	0	1	0	0	10	7	0	0	0	0	2	0	0	0	5
U. Tennessee, Chattanooga	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	0	0
U. Tennessee, Health Science Center	23	23	0	13	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
U. Tennessee, Knoxville	359	61	13	44	4	50	29	5	16	24	12	12	57	23	6	3	5	7	13	97	1	4	9	9	13	5	8	13	35
Vanderbilt U.	291	115	2	103	10	26	14	2	10	15	8	7	29	8	2	10	3	3	3	52	0	14	7	2	9	0	7	8	5
Texas	4,166	913	103	626	184	471	192	138	141	277	141	136	508	241	19	45	39	32	132	965	31	90	97	71	183	15	85	133	260
Baylor C. of Medicine	112	112	0	111	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
Baylor U.	92	17	4	8	5	16	9	4	3	10	0	10	12	4	0	0	4	4	0	3	0	1	0	0	1	0	0	1	0
Brite Divinity S.	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
Dallas Theological Seminary	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
Lamar U.	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	6	1	2	3	0	0	1
Prairie View A&M U.	6	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	1	0	0	0	0	1	0	0	0	0
Rice U.	221	17	0	17	0	52	24	7	21	31	16	15	19	4	0	3	4	2	6	71	0	21	18	0	8	0	9	4	11
Sam Houston State U.	20	0	0	0	0	0	0	0	0	0	0	0	15	7	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
Southern Methodist U.	59	4	0	4	0	8	3	4	1	6	4	2	11	2	7	2	0	0	0	15	0	0	0	0	6	0	0	5	4
Southwestern Baptist Theological Seminary	16	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
St. Mary's U., San Antonio	6	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
Stephen F. Austin State 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
Texas A&M International 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	0

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Texas A&M U., College Station and Health Science Center	744	169	62	83	24	85	33	31	21	30	10	20	79	25	6	14	6	9	19	265	12	10	29	19	46	3	11	43	92
Texas A&M U.-Commerce	21	0	0	0	0	0	0	0	0	0	0	0	12	10	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Texas A&M U.-Corpus Christi	16	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Texas A&M U.-Kingsville	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Texas Christian U.	30	1	0	1	0	9	7	0	2	1	0	1	4	4	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
Texas Southern U.	22	4	1	2	1	1	0	1	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Texas State U.	53	7	0	7	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	4	0	0	0	0	0	0	3	1	0
Texas Tech U.	317	56	23	30	3	21	8	3	10	17	4	13	37	25	0	8	1	0	3	60	0	0	6	8	6	4	1	13	22
Texas Tech U., Health Sciences Center	19	19	0	15	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
Texas Woman's U.	71	29	0	1	28	0	0	0	0	0	0	0	23	17	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
U. Dallas	8	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
U. Houston	300	31	0	20	11	58	23	18	17	29	13	16	45	30	0	3	8	0	4	81	0	12	11	6	7	1	14	7	23
U. North Texas, Denton	232	19	3	15	1	27	17	0	10	39	31	8	31	27	0	0	1	2	1	16	0	1	0	0	2	0	8	2	3
U. North Texas, Health Science Center	18	18	0	18	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. of the Incarnate Word	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. Texas Health Science Center, Houston[a]	119	116	1	74	41	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
U. Texas Health Science Center, San Antonio	32	32	0	26	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
U. Texas Medical Branch	37	33	0	28	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
U. Texas Rio Grande Valley	17	4	0	0	4	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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U. Texas Southwestern Medical Center	88	70	0	70	0	3	3	0	0	0	0	0	10	10	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0
U. Texas, Arlington	200	10	0	8	2	24	14	8	2	20	11	9	21	7	0	0	0	0	14	76	8	8	0	6	11	3	6	13	21
U. Texas, Austin	801	96	1	58	37	107	26	42	39	46	22	24	96	34	3	12	10	12	25	239	11	18	27	23	51	0	14	30	65
U. Texas, Dallas	227	22	0	16	6	32	17	6	9	28	18	10	31	11	0	3	1	0	16	66	0	8	0	0	34	1	9	10	4
U. Texas, El Paso	78	13	5	4	4	14	4	9	1	5	2	3	5	5	0	0	0	0	0	24	0	3	0	4	3	0	9	1	4
U. Texas, San Antonio	125	10	0	9	1	10	4	1	5	15	10	5	20	10	3	0	0	0	7	22	0	3	0	4	5	0	0	3	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
Utah	549	104	5	77	22	85	38	25	22	42	19	23	84	49	2	14	2	4	13	137	1	22	16	7	19	0	6	27	39
Brigham Young U., Provo	92	16	0	12	4	15	10	2	3	8	6	2	20	19	0	0	0	0	1	21	0	0	9	1	5	0	0	5	1
U. Utah	361	68	0	50	18	60	25	17	18	29	12	17	46	18	2	12	2	1	11	95	0	17	7	5	9	0	6	21	30
Utah State U., Logan	96	20	5	15	0	10	3	6	1	5	1	4	18	12	0	2	0	3	1	21	1	5	0	1	5	0	0	1	8
Vermont	80	39	13	25	1	10	8	1	1	3	2	1	9	8	0	0	0	0	1	10	0	0	0	3	2	0	1	2	2
Middlebury 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
U. Vermont	74	39	13	25	1	10	8	1	1	3	2	1	9	8	0	0	0	0	1	10	0	0	0	3	2	0	1	2	2
Virginia	1,433	273	43	157	73	138	52	27	59	106	69	37	217	80	5	28	14	15	75	295	11	34	15	21	53	5	31	37	88
C. of William and Mary	66	1	0	1	0	24	0	10	14	14	12	2	7	0	1	0	0	0	6	1	0	0	0	0	0	0	1	0	0
Eastern Virginia Medical School	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
George Mason U.	259	37	7	13	17	12	2	7	3	29	21	8	86	21	1	15	6	4	39	19	0	3	0	2	3	0	0	0	11
Hampton U.	14	4	0	0	4	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
James Madison U.	13	2	0	0	2	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norfolk State U.	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	0	0
Old Dominion U.	119	7	0	4	3	9	2	1	6	10	5	5	15	12	0	0	0	0	3	29	0	2	0	1	5	1	0	5	15

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Regent U.	58	0	0	0	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
Union Presbyterian Seminary	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
U. Virginia, Charlottesville	308	64	1	52	11	30	11	1	18	14	7	7	34	12	3	9	5	4	1	78	4	13	6	7	15	0	9	8	16
Virginia Commonwealth U.	178	66	0	40	26	18	17	0	1	13	9	4	21	13	0	0	0	0	8	18	0	2	1	0	3	0	3	4	5
Virginia Polytechnic Institute and State U.	405	88	35	43	10	42	20	6	16	26	15	11	44	12	0	4	3	7	18	144	7	14	8	11	27	4	12	20	41
Washington	1,001	293	43	187	63	98	32	36	30	101	59	42	141	39	10	27	9	11	45	188	8	34	19	15	31	0	14	29	38
Gonzaga U.	13	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Seattle Pacific U.	21	0	0	0	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
U. Washington, Seattle	708	221	12	162	47	79	21	32	26	77	45	32	73	16	8	13	5	5	26	136	8	33	13	10	20	0	7	18	27
Washington State U.	259	72	31	25	16	19	11	4	4	24	14	10	53	11	2	14	4	6	16	52	0	1	6	5	11	0	7	11	11
West Virginia	225	62	12	33	17	26	10	6	10	10	7	3	35	15	0	9	3	0	8	26	0	0	6	1	1	2	3	6	7
Marshall U.	24	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
West Virginia U.	201	57	12	28	17	26	10	6	10	10	7	3	35	15	0	9	3	0	8	26	0	0	6	1	1	2	3	6	7
Wisconsin	1,067	305	37	187	81	113	56	13	44	79	33	46	149	48	6	37	7	12	39	168	0	14	22	12	26	6	16	29	43
Cardinal Stritch U.	21	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Marquette U.	70	24	0	9	15	5	5	0	0	5	4	1	8	8	0	0	0	0	0	11	0	2	0	1	1	0	0	5	2
Medical C. Wisconsin	32	31	0	26	5	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Wisconsin-Madison	780	226	37	144	45	91	43	10	38	54	21	33	111	31	5	34	6	12	23	134	0	11	22	7	22	4	13	19	36
U. Wisconsin-Milwaukee	164	23	0	8	15	16	8	3	5	20	8	12	29	9	1	3	1	0	15	23	0	1	0	4	3	2	3	5	5
Wyoming	78	24	4	20	0	14	7	7	0	3	1	2	11	7	0	3	0	0	1	18	0	0	5	5	1	0	1	2	4
U. Wyoming	78	24	4	20	0	14	7	7	0	3	1	2	11	7	0	3	0	0	1	18	0	0	5	5	1	0	1	2	4

[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 recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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	55,703	4,635	839	2,303	104	960	429	5,054	610	912	1,387	2,145	3,034	1,536	543	955	0
Alabama	653	107	20	50	12	22	3	14	2	8	3	1	30	15	5	10	0
Alabama A&M U.	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Alabama State U.	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auburn U., Auburn	253	45	8	16	11	8	2	8	0	6	2	0	11	6	0	5	0
Tuskegee U.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Alabama, Birmingham	150	10	4	2	0	4	0	0	0	0	0	0	0	0	0	0	0
U. Alabama, Huntsville	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Alabama, Tuscaloosa	171	46	5	30	1	9	1	6	2	2	1	1	19	9	5	5	0
U. South Alabama	28	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Alaska	42	2	0	0	0	1	1	1	0	1	0	0	2	1	0	1	0
U. Alaska, Anchorage	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Alaska, Fairbanks	37	2	0	0	0	1	1	1	0	1	0	0	2	1	0	1	0
Arizona	847	73	0	36	0	26	11	98	16	15	20	47	47	29	11	7	0
Arizona State U.	392	23	0	13	0	10	0	64	8	5	11	40	32	17	10	5	0
Northern Arizona U.	44	14	0	9	0	1	4	0	0	0	0	0	0	0	0	0	0
Prescott C.	5	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
U. Arizona	406	31	0	14	0	15	2	34	8	10	9	7	15	12	1	2	0
Arkansas	239	26	1	19	0	5	1	14	0	7	5	2	20	15	0	5	0
Arkansas State U., Jonesboro	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Arkansas for Medical Sciences	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Arkansas, Fayetteville	179	24	1	19	0	4	0	14	0	7	5	2	14	12	0	2	0
U. Arkansas, Little Rock	33	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	0
U. Central Arkansas	9	1	0	0	0	0	1	0	0	0	0	0	3	3	0	0	0
California	6,342	259	34	111	1	34	79	646	77	108	135	326	196	94	44	58	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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
Alliant International U., San Diego	87	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0
Azusa Pacific U.	17	12	1	11	0	0	0	0	0	0	0	0	0	0	0	0	0
Biola U.	28	11	0	1	0	0	10	5	0	0	0	5	0	0	0	0	0
California Institute of Integral Studies	40	2	0	2	0	0	0	11	0	0	0	11	3	0	0	3	0
California Institute of Technology	206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California Institute of the Arts	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Chapman U.	18	9	2	2	0	0	5	0	0	0	0	0	1	1	0	0	0
City of Hope, Irell and Manella Graduate School of Biological Sciences	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Claremont Graduate U.	140	39	3	16	0	3	17	29	0	4	5	20	1	1	0	0	0
Claremont School of Theology	20	0	0	0	0	0	0	20	0	0	0	20	0	0	0	0	0
Fielding Graduate U.	74	5	1	2	1	0	1	1	0	0	0	1	12	12	0	0	0
Frederick S. Pardee RAND Graduate School	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuller Theological Seminary	53	0	0	0	0	0	0	24	0	1	0	23	0	0	0	0	0
Graduate Theological Union	17	0	0	0	0	0	0	16	0	1	0	15	0	0	0	0	0
Keck Graduate Institute	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
La Sierra U.	7	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Loma Linda U.	38	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Naval Postgraduate School	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacifica Graduate Institute	53	0	0	0	0	0	0	10	0	1	0	9	0	0	0	0	0
Palo Alto U.	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Diego State U., San Diego	35	4	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
Sanford-Burnham Medical Research Institute, La Jolla	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara U.	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saybrook U.	41	1	1	0	0	0	0	1	0	0	0	1	8	7	0	1	0
Scripps Research Institute	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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
Sofia U.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford U.	770	25	0	10	0	4	11	70	13	14	18	25	32	23	6	3	0
U. California, Berkeley	864	34	2	19	0	7	6	93	19	21	25	28	41	12	0	29	0
U. California, Davis	521	9	0	4	0	3	2	36	10	6	9	11	5	0	5	0	0
U. California, Irvine	407	6	0	1	0	1	4	47	11	8	11	17	10	7	2	1	0
U. California, Los Angeles	701	35	6	12	0	6	11	91	18	22	18	33	18	9	1	8	0
U. California, Merced	63	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
U. California, Riverside	292	10	0	8	0	0	2	30	1	3	13	13	0	0	0	0	0
U. California, San Diego	492	9	6	3	0	0	0	41	0	12	5	24	4	1	3	0	0
U. California, San Francisco	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. California, Santa Barbara	323	19	1	6	0	6	6	56	3	9	13	31	9	1	8	0	0
U. California, Santa Cruz	190	4	0	2	0	1	1	19	0	2	4	13	0	0	0	0	0
U. of the Pacific	14	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
U. of the West	4	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0
U. San Diego	32	4	3	1	0	0	0	0	0	0	0	0	7	6	1	0	0
U. San Francisco	9	8	4	2	0	1	1	0	0	0	0	0	1	1	0	0	0
U. Southern California	494	8	2	6	0	0	0	40	2	4	13	21	40	11	18	11	0
Colorado	1,036	99	27	47	0	21	4	68	8	5	18	37	28	7	10	11	0
Colorado School of Mines	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colorado State U., Fort Collins	263	20	12	6	0	0	2	0	0	0	0	0	4	2	1	1	0
U. Colorado Boulder	388	12	0	6	0	5	1	47	8	5	5	29	11	4	7	0	0
U. Colorado Colorado Springs	30	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Colorado Denver	106	5	0	0	0	4	1	0	0	0	0	0	4	1	0	3	0
U. Denver	96	17	2	14	0	1	0	21	0	0	13	8	7	0	2	5	0
U. Northern Colorado	57	36	4	21	0	11	0	0	0	0	0	0	2	0	0	2	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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
Connecticut	796	16	2	13	0	1	0	113	27	21	19	46	34	16	5	13	0
U. Bridgeport	12	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
U. Connecticut, Storrs	355	16	2	13	0	1	0	28	7	6	7	8	17	8	5	4	0
U. New Haven	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wesleyan U.	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yale U.	415	0	0	0	0	0	0	85	20	15	12	38	16	7	0	9	0
Delaware	241	12	0	8	0	3	1	8	0	1	3	4	7	4	0	3	0
Delaware State U.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Delaware	235	12	0	8	0	3	1	8	0	1	3	4	7	4	0	3	0
District of Columbia	584	62	29	26	0	2	5	103	15	29	16	43	40	6	12	22	0
American U.	42	0	0	0	0	0	0	5	0	5	0	0	7	0	3	4	0
Catholic U. of America	106	5	5	0	0	0	0	43	4	1	8	30	8	0	0	8	0
Gallaudet U.	12	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
George Washington U.	228	51	24	21	0	1	5	16	0	6	8	2	12	6	0	6	0
Georgetown U.	110	1	0	0	0	1	0	29	8	12	0	9	2	0	0	2	0
Howard U.	86	5	0	5	0	0	0	7	0	5	0	2	11	0	9	2	0
Florida	2,469	260	34	138	4	63	21	166	14	26	49	77	154	80	28	46	0
Barry U.	19	10	7	3	0	0	0	0	0	0	0	0	4	0	0	4	0
Embry-Riddle Aeronautical U., Daytona Beach	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Florida A&M U.	18	6	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Florida Atlantic U.	110	23	11	10	1	0	1	8	0	0	4	4	12	10	0	2	0
Florida Institute of Technology	84	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Florida International U.	204	13	0	11	0	2	0	10	6	4	0	0	22	12	0	10	0
Florida State U.	381	55	1	28	1	23	2	44	0	7	21	16	28	18	5	5	0
Nova Southeastern U.	165	14	0	8	0	3	3	10	0	0	0	10	4	3	0	1	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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. Central Florida	230	22	0	11	2	3	6	9	0	0	4	5	12	6	0	6	0
U. Florida	718	38	1	23	0	14	0	36	2	7	13	14	46	15	14	17	0
U. Miami	200	7	0	1	0	5	1	28	6	3	1	18	14	9	4	1	0
U. South Florida, Tampa	308	62	9	37	0	11	5	21	0	5	6	10	12	7	5	0	0
U. West Florida	9	9	0	6	0	1	2	0	0	0	0	0	0	0	0	0	0
Georgia	1,447	116	10	64	6	31	5	130	12	23	54	41	97	54	12	31	0
Clark Atlanta U.	16	0	0	0	0	0	0	5	0	0	2	3	2	0	0	2	0
Emory U.	216	0	0	0	0	0	0	53	5	9	12	27	12	7	0	5	0
Georgia Institute of Technology	503	1	0	0	0	1	0	5	0	0	0	5	16	10	1	5	0
Georgia Regents U.	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Georgia Southern U.	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Georgia State U.	233	40	0	25	4	11	0	34	0	9	25	0	25	19	4	2	0
Kennesaw State U.	16	0	0	0	0	0	0	0	0	0	0	0	12	7	0	5	0
Mercer U.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morehouse School of Medicine	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Georgia	428	75	10	39	2	19	5	33	7	5	15	6	29	10	7	12	0
Hawaii	209	16	0	13	0	3	0	30	6	2	10	12	10	3	5	2	0
U. Hawaii, Manoa	209	16	0	13	0	3	0	30	6	2	10	12	10	3	5	2	0
Idaho	104	29	7	17	0	0	5	4	1	0	3	0	4	0	0	4	0
Boise State U.	23	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0
Idaho State U.	39	18	5	12	0	0	1	4	1	0	3	0	0	0	0	0	0
U. Idaho	42	11	2	5	0	0	4	0	0	0	0	0	1	0	0	1	0
Illinois	2,492	123	12	88	0	19	4	321	27	61	67	166	146	89	22	35	0
Benedictine U.	15	0	0	0	0	0	0	0	0	0	0	0	14	14	0	0	0
Chicago Theological Seminary	4	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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
DePaul U.	17	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0
Garrett-Evangelical Theological Seminary	9	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0
Illinois Institute of Technology	103	6	0	0	0	6	0	1	0	0	0	1	14	10	0	4	0
Illinois State U.	30	11	3	4	0	4	0	6	0	0	5	1	0	0	0	0	0
Institute for Clinical Social Work, Chicago	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0
Loyola U., Chicago	73	7	0	6	0	0	1	13	0	2	2	9	1	0	0	1	0
Lutheran School of Theology, Chicago	9	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0
National Louis U.	6	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Northern Illinois U.	70	14	0	14	0	0	0	6	0	2	4	0	0	0	0	0	0
Northwestern U.	484	6	0	5	0	1	0	65	4	16	12	33	25	23	2	0	0
Roosevelt U.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosalind Franklin U. of Medicine and Science	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush U.	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Illinois U., Carbondale	134	17	1	11	0	3	2	14	0	2	3	9	7	1	6	0	0
Toyota Technological Institute, Chicago	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Chicago	409	0	0	0	0	0	0	125	13	29	24	59	26	18	0	8	0
U. Illinois, Chicago	326	21	0	18	0	3	0	20	2	4	5	9	13	5	3	5	0
U. Illinois, Urbana-Champaign	759	41	8	30	0	2	1	40	8	6	12	14	43	18	11	14	0
Wheaton C., Wheaton	6	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0
Indiana	1,569	143	31	77	1	27	7	195	36	33	52	74	71	34	17	20	0
Ball State U.	33	5	0	3	0	1	1	4	0	0	4	0	0	0	0	0	0
Indiana State U.	55	43	26	15	0	0	2	0	0	0	0	0	4	4	0	0	0
Indiana U., Bloomington	428	54	1	38	0	13	2	93	26	12	17	38	27	13	7	7	0
Indiana U.-Purdue U., Indianapolis	83	3	2	0	0	1	0	0	0	0	0	0	14	0	1	13	0
Purdue U., West Lafayette	730	38	2	21	1	12	2	39	6	6	22	5	26	17	9	0	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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	240	0	0	0	0	0	0	59	4	15	9	31	0	0	0	0	0
Iowa	727	76	9	39	1	20	7	37	3	5	14	15	45	29	7	9	0
Iowa State U.	389	25	4	8	0	7	6	4	0	1	3	0	19	12	1	6	0
Maharishi U. of Management	5	0	0	0	0	0	0	1	0	0	0	1	3	3	0	0	0
St. Ambrose U.	2	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0
U. Iowa	311	35	1	26	0	8	0	32	3	4	11	14	20	12	6	2	0
U. Northern Iowa	20	16	4	5	1	5	1	0	0	0	0	0	1	0	0	1	0
Kansas	536	54	1	36	0	12	5	35	5	8	12	10	38	14	5	19	0
Kansas State U.	195	19	0	10	0	4	5	2	0	2	0	0	15	11	0	4	0
U. Kansas	304	35	1	26	0	8	0	33	5	6	12	10	23	3	5	15	0
Wichita State U.	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kentucky	524	53	20	19	5	6	3	68	4	2	10	52	35	14	6	15	0
Asbury Theological Seminary	16	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0
Southern Baptist Theological Seminary	32	1	1	0	0	0	0	31	0	1	0	30	0	0	0	0	0
U. Kentucky	322	34	10	13	4	5	2	14	4	0	4	6	23	8	6	9	0
U. Louisville	154	18	9	6	1	1	1	13	0	1	6	6	12	6	0	6	0
Louisiana	615	55	20	23	0	8	4	68	14	4	23	27	41	21	10	10	0
Grambling State U.	9	9	3	5	0	0	1	0	0	0	0	0	0	0	0	0	0
Louisiana State U., Baton Rouge	300	27	7	14	0	5	1	33	6	3	11	13	31	15	10	6	0
Louisiana State U., Health Sciences Center, New Orleans	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Louisiana State U., Health Sciences Center, Shreveport	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Louisiana Tech U.	36	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0
New Orleans Baptist Theological Seminary	14	1	0	0	0	0	1	7	0	0	0	7	0	0	0	0	0
Southern U. and A&M C., Baton Rouge	21	4	0	0	0	3	1	1	0	0	0	1	0	0	0	0	0
Tulane U.	102	1	1	0	0	0	0	13	6	1	0	6	4	0	0	4	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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. Louisiana, Lafayette	45	0	0	0	0	0	0	14	2	0	12	0	0	0	0	0	0
U. Louisiana, Monroe	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. New Orleans	40	13	9	4	0	0	0	0	0	0	0	0	1	1	0	0	0
Maine	74	7	3	1	0	2	1	1	0	1	0	0	1	0	0	1	0
U. Maine	67	4	1	0	0	2	1	1	0	1	0	0	1	0	0	1	0
U. Southern Maine	7	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Maryland	1,291	49	10	30	1	7	1	61	10	14	17	20	53	26	12	15	0
Bowie State U.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Johns Hopkins U.	455	0	0	0	0	0	0	25	5	8	5	7	0	0	0	0	0
Loyola U., Maryland	10	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Morgan State U.	37	3	0	3	0	0	0	4	0	2	0	2	10	2	0	8	0
Notre Dame of Maryland U.	12	12	7	2	1	2	0	0	0	0	0	0	0	0	0	0	0
Towson U.	11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
U. Maryland, Baltimore	71	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0
U. Maryland, Baltimore County	81	1	0	1	0	0	0	3	0	0	2	1	2	1	1	0	0
U. Maryland, College Park	575	28	2	20	0	5	1	29	5	4	10	10	29	16	11	2	0
U. Maryland, Eastern Shore	18	1	1	0	0	0	0	0	0	0	0	0	7	7	0	0	0
Uniformed Services U. of the Health Sciences	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts	3,034	127	33	57	1	23	13	263	34	51	50	128	142	78	6	58	0
Bentley U.	6	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0
Boston C.	133	20	0	12	1	5	2	18	3	1	0	14	11	5	0	6	0
Boston U.	312	1	0	1	0	0	0	53	5	5	9	34	8	3	0	5	0
Brandeis U.	77	0	0	0	0	0	0	13	0	3	4	6	0	0	0	0	0
Clark U.	15	0	0	0	0	0	0	3	0	2	0	1	2	2	0	0	0
Harvard U.	738	17	2	9	0	1	5	103	21	29	19	34	37	19	0	18	0

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Massachusetts C. of Pharmacy and Health Sciences	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts Institute of Technology	685	1	0	1	0	0	0	11	0	0	0	11	24	19	0	5	0
New England Conservatory	10	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0
Northeastern U.	197	0	0	0	0	0	0	11	0	4	7	0	0	0	0	0	0
Simmons C.	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	0
Smith C.	8	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0
Springfield C.	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Suffolk U.	13	0	0	0	0	0	0	0	0	0	0	0	7	1	0	6	0
Tufts U., Medford	138	3	0	1	0	1	1	8	0	1	2	5	0	0	0	0	0
U. Massachusetts, Amherst	349	40	5	20	0	11	4	31	4	6	9	12	22	15	6	1	0
U. Massachusetts, Boston	82	6	2	4	0	0	0	0	0	0	0	0	7	6	0	1	0
U. Massachusetts, Dartmouth	29	9	4	2	0	3	0	2	1	0	0	1	0	0	0	0	0
U. Massachusetts, Lowell	114	26	20	4	0	1	1	0	0	0	0	0	2	2	0	0	0
U. Massachusetts, Medical School	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Western New England U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worcester Polytechnic Institute	60	3	0	3	0	0	0	0	0	0	0	0	1	1	0	0	0
Michigan	1,905	194	50	98	4	38	4	152	15	38	45	54	87	36	24	27	0
Andrews U.	23	6	2	4	0	0	0	6	0	0	0	6	3	3	0	0	0
Calvin Theological Seminary	4	0	0	0	0	0	0	4	0	1	0	3	0	0	0	0	0
Central Michigan U.	40	5	2	1	0	2	0	3	0	3	0	0	0	0	0	0	0
Eastern Michigan U.	40	22	16	2	0	3	1	0	0	0	0	0	4	3	0	1	0
Lawrence Technological U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Michigan State U.	518	75	6	50	3	15	1	29	4	4	9	12	31	9	18	4	0
Michigan Technological U.	86	0	0	0	0	0	0	3	0	0	1	2	0	0	0	0	0
Oakland U.	59	20	13	3	1	3	0	0	0	0	0	0	0	0	0	0	0

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U. Detroit Mercy	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Michigan, Ann Arbor	801	21	0	8	0	11	2	83	9	27	21	26	36	18	4	14	0
U. Michigan, Dearborn	4	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	24	0	22	0	2	0	20	0	3	12	5	7	3	2	2	0
Western Michigan U.	113	21	11	8	0	2	0	4	2	0	2	0	6	0	0	6	0
Minnesota	1,578	176	14	92	4	34	32	62	9	8	8	37	221	114	10	97	0
Luther Seminary	5	0	0	0	0	0	0	5	0	1	0	4	0	0	0	0	0
Mayo Clinic, Mayo Graduate School	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Minnesota, Twin Cities	719	66	5	31	1	15	14	52	9	7	8	28	40	14	10	16	0
Walden U.	820	110	9	61	3	19	18	5	0	0	0	5	181	100	0	81	0
Mississippi	517	129	61	34	3	26	5	30	0	11	19	0	38	23	6	9	0
Jackson State U.	85	45	34	11	0	0	0	0	0	0	0	0	10	2	0	8	0
Mississippi State U.	179	29	17	5	0	4	3	4	0	4	0	0	7	6	0	1	0
U. Mississippi, Oxford	129	15	1	6	1	6	1	11	0	5	6	0	13	13	0	0	0
U. Southern Mississippi	124	40	9	12	2	16	1	15	0	2	13	0	8	2	6	0	0
Missouri	978	108	22	41	1	33	11	91	9	14	18	50	67	27	11	29	0
Concordia Seminary	4	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0
Midwestern Baptist Theological Seminary	11	0	0	0	0	0	0	11	0	0	0	11	0	0	0	0	0
Missouri U. of Science and Technology	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saint Louis U.	135	41	12	25	0	1	3	23	0	3	3	17	7	3	0	4	0
U. Missouri, Columbia	325	31	3	6	1	21	0	30	5	6	8	11	30	10	11	9	0
U. Missouri, Kansas City	61	10	0	3	0	7	0	0	0	0	0	0	5	2	0	3	0
U. Missouri, Saint Louis	55	21	7	5	0	3	6	0	0	0	0	0	3	3	0	0	0

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Washington U., Saint Louis	287	5	0	2	0	1	2	23	4	5	7	7	22	9	0	13	0
Montana	126	14	7	2	1	3	1	3	0	2	0	1	0	0	0	0	0
Montana State U., Bozeman	74	11	5	2	1	2	1	2	0	1	0	1	0	0	0	0	0
Montana Tech of U. Montana	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Montana, Missoula	49	3	2	0	0	1	0	1	0	1	0	0	0	0	0	0	0
Nebraska	383	37	13	14	1	4	5	20	3	2	9	6	17	6	4	7	0
Creighton U.	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Nebraska, Lincoln	275	37	13	14	1	4	5	20	3	2	9	6	12	6	4	2	0
U. Nebraska, Medical Center	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Nebraska, Omaha	24	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0
Nevada	217	33	2	19	0	9	3	14	0	1	13	0	14	5	0	9	0
U. Nevada, Las Vegas	109	26	0	17	0	7	2	8	0	1	7	0	12	5	0	7	0
U. Nevada, Reno	108	7	2	2	0	2	1	6	0	0	6	0	2	0	0	2	0
New Hampshire	193	4	0	1	0	1	2	6	0	2	4	0	7	7	0	0	0
Antioch U., Keene	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dartmouth C.	100	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern New Hampshire U.	7	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0
U. New Hampshire, Durham	77	3	0	0	0	1	2	6	0	2	4	0	0	0	0	0	0
New Jersey	1,145	56	12	22	5	15	2	170	25	48	34	63	67	33	10	24	0
Caldwell U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drew U.	17	0	0	0	0	0	0	17	0	7	0	10	0	0	0	0	0
Fairleigh Dickinson U., Teaneck	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montclair State U.	23	9	0	1	1	7	0	0	0	0	0	0	1	0	0	1	0
New Jersey Institute of Technology	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Princeton Theological Seminary	9	0	0	0	0	0	0	9	0	0	1	8	0	0	0	0	0

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Princeton U.	398	0	0	0	0	0	0	87	10	32	21	24	10	0	0	10	0
Rowan U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rutgers, State U. New Jersey, Camden	11	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0
Rutgers, State U. New Jersey, New Brunswick	441	31	6	11	4	8	2	57	15	9	12	21	19	2	10	7	0
Rutgers, State U. New Jersey, Newark	69	2	2	0	0	0	0	0	0	0	0	0	29	26	0	3	0
Seton Hall U.	38	14	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens Institute of Technology	60	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0
New Mexico	328	54	5	29	1	16	3	24	3	2	11	8	16	7	6	3	0
New Mexico Institute of Mining and Technology	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico State U., Las Cruces	107	23	5	12	1	4	1	4	0	0	4	0	6	6	0	0	0
U. New Mexico, Albuquerque	215	31	0	17	0	12	2	20	3	2	7	8	10	1	6	3	0
New York	4,164	290	32	111	9	111	27	544	66	94	139	245	193	80	34	79	0
Adelphi U.	29	1	0	0	0	1	0	0	0	0	0	0	5	0	0	5	0
Albany Medical C.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Albert Einstein College of Medicine	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alfred U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bard C.	5	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0
Clarkson U.	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cold Spring Harbor Laboratory	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Columbia U. in the City of New York	573	40	1	16	0	20	3	98	14	27	16	41	28	13	5	10	0
Columbia U., Teachers C.	100	81	6	17	7	45	6	1	0	1	0	0	4	1	3	0	0
Cornell U.	527	3	0	1	0	0	2	51	8	8	14	21	25	11	6	8	0
Cornell U., Weill Cornell Medical College	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CUNY, City C.	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CUNY, Graduate Center	394	16	9	5	0	2	0	110	13	11	33	53	16	11	0	5	0

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Elmezzi Graduate School of Molecular Medicine	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Five Towns C.	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Fordham U.	102	21	6	10	0	3	2	26	0	5	10	11	20	1	0	19	0
Hebrew Union C.-Jewish Institute of Religion, New York City	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Hofstra U.	27	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Icahn School of Medicine at Mt. Sinai	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jewish Theological Seminary of America	3	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0
Juilliard School	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Long Island U., Brooklyn	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Long Island U., Brookville	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Memorial Sloan Kettering Cancer Center	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Molloy C.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New School	67	0	0	0	0	0	0	7	0	1	0	6	0	0	0	0	0
New York Medical C.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New York U.	426	25	3	12	1	6	3	99	25	19	12	43	29	12	7	10	0
Pace U.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Institute, Troy	147	0	0	0	0	0	0	3	0	0	0	3	6	6	0	0	0
Rochester Institute of Technology	33	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	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	42	7	0	0	0	7	0	11	0	0	11	0	0	0	0	0	0
SUNY, Binghamton U.	150	7	0	3	0	2	2	32	4	3	17	8	6	5	0	1	0
SUNY, C. of Environmental Science and Forestry	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, C. of Optometry	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, Downstate Medical Center	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUNY, Stony Brook U.	266	7	0	1	0	6	0	15	1	4	3	7	1	0	0	1	0

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SUNY, U. Albany	137	15	3	7	1	3	1	9	1	4	3	1	6	1	1	4	0
SUNY, U. Buffalo	382	35	4	22	0	7	2	38	0	2	14	22	24	12	6	6	0
SUNY, Upstate Medical U.	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syracuse U.	156	15	0	9	0	3	3	18	0	7	3	8	11	2	6	3	0
Union Theological Seminary	2	0	0	0	0	0	0	2	0	1	0	1	0	0	0	0	0
U. Rochester	186	14	0	8	0	3	3	13	0	1	3	9	5	5	0	0	0
Yeshiva U.	25	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0
North Carolina	1,808	144	11	92	0	25	16	158	20	27	46	65	93	49	12	32	0
Duke U.	382	0	0	0	0	0	0	56	8	8	14	26	19	16	0	3	0
East Carolina U.	58	0	0	0	0	0	0	3	0	0	3	0	2	0	2	0	0
North Carolina Agricultural and Technical State U.	52	7	2	5	0	0	0	0	0	0	0	0	16	13	0	3	0
North Carolina State U.	533	51	6	33	0	11	1	7	0	0	3	4	23	2	5	16	0
Southeastern Baptist Theological Seminary	20	0	0	0	0	0	0	19	0	0	0	19	1	1	0	0	0
U. North Carolina, Chapel Hill	489	31	1	16	0	1	13	63	11	16	20	16	24	9	5	10	0
U. North Carolina, Charlotte	130	23	0	19	0	4	0	0	0	0	0	0	4	4	0	0	0
U. North Carolina, Greensboro	93	32	2	19	0	9	2	10	1	3	6	0	4	4	0	0	0
U. North Carolina, Wilmington	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wake Forest U.	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Dakota	168	35	14	9	4	4	4	4	0	0	4	0	0	0	0	0	0
North Dakota State U.	87	11	0	3	3	2	3	1	0	0	1	0	0	0	0	0	0
U. North Dakota	81	24	14	6	1	2	1	3	0	0	3	0	0	0	0	0	0
Ohio	2,000	249	45	129	2	50	23	170	26	21	74	49	104	44	33	27	0
Air Force Institute of Technology	35	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Bowling Green State U., Bowling Green	72	10	6	4	0	0	0	14	0	0	10	4	9	1	8	0	0
Case Western Reserve U.	191	1	0	0	0	1	0	10	0	1	6	3	17	11	0	6	0

Table 8

Doctorate recipients, by state or location, institution, and major non-science and engineering fields of study: 2019

(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
Cleveland State U.	39	5	5	0	0	0	0	0	0	0	0	0	3	3	0	0	0
Kent State U., Kent	176	45	3	35	0	4	3	18	7	5	3	3	11	6	5	0	0
Miami U., Oxford	59	21	15	3	0	1	2	4	0	0	4	0	1	1	0	0	0
Ohio State U., Columbus	726	74	2	29	1	27	15	80	15	9	24	32	29	12	6	11	0
Ohio U., Athens	139	26	0	24	0	2	0	16	0	4	10	2	15	0	14	1	0
U. Akron, Akron	122	3	0	1	1	1	0	0	0	0	0	0	2	0	0	2	0
U. Cincinnati, Uptown West Campus	241	30	4	13	0	11	2	25	4	0	17	4	13	6	0	7	0
U. Dayton	45	12	10	1	0	0	1	1	0	0	0	1	0	0	0	0	0
U. Toledo	118	22	0	19	0	3	0	2	0	2	0	0	3	3	0	0	0
Wright State U., Dayton	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oklahoma	482	70	15	24	3	22	6	28	1	4	11	12	40	27	9	4	0
Oklahoma City U.	4	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Oklahoma State U., Center for Health Sciences	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oklahoma State U., Stillwater	231	44	11	16	0	12	5	10	0	2	7	1	22	19	0	3	0
U. Oklahoma, Norman	199	23	4	8	3	7	1	16	1	2	2	11	18	8	9	1	0
U. Tulsa	44	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
Oregon	572	31	3	18	0	6	4	30	5	4	9	12	24	11	5	8	0
Oregon Health and Science U.	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oregon State U., Corvallis	287	11	1	3	0	6	1	1	0	1	0	0	5	5	0	0	0
Portland State U.	71	0	0	0	0	0	0	0	0	0	0	0	7	1	0	6	0
U. Oregon	176	20	2	15	0	0	3	29	5	3	9	12	12	5	5	2	0
Pennsylvania	2,600	201	29	111	4	36	21	270	21	43	88	118	183	100	47	36	0
Bryn Mawr C.	8	0	0	0	0	0	0	1	0	0	0	1	2	0	0	2	0
Carnegie Mellon U.	342	3	0	1	0	2	0	12	0	5	2	5	21	19	0	2	0
Drexel U.	149	8	3	1	0	1	3	1	0	0	0	1	16	11	5	0	0

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Duquesne U.	84	11	0	11	0	0	0	24	0	0	16	8	2	0	2	0	0
Indiana U. Pennsylvania	68	9	1	1	0	7	0	32	0	0	31	1	9	2	6	1	0
Lehigh U.	106	9	0	8	0	0	1	6	0	1	5	0	3	3	0	0	0
Lutheran Theological Seminary, Philadelphia	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Marywood U.	11	7	4	2	0	0	1	0	0	0	0	0	1	1	0	0	0
Pennsylvania State U., University Park and Hershey Medical Center	659	82	7	51	4	11	9	32	3	6	11	12	32	18	7	7	0
Salus U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Temple U.	253	33	11	13	0	7	2	43	7	11	3	22	20	13	7	0	0
Thomas Jefferson U.	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Pennsylvania	450	8	0	5	0	0	3	70	6	14	14	36	54	25	17	12	0
U. Pittsburgh, Pittsburgh	375	28	3	18	0	5	2	42	5	6	6	25	18	8	3	7	0
U. of the Sciences Philadelphia	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Villanova U.	19	1	0	0	0	1	0	4	0	0	0	4	0	0	0	0	0
Westminster Theological Seminary	2	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0
Widener U., Chester	24	2	0	0	0	2	0	0	0	0	0	0	5	0	0	5	0
Puerto Rico	133	1	0	1	0	0	0	13	2	7	3	1	6	4	0	2	0
Carlos Albizu U., San Juan	23	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Inter American U. Puerto Rico, San Juan	18	0	0	0	0	0	0	7	0	6	0	1	4	4	0	0	0
Ponce Heath Sciences U.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pontifical Catholic U. Puerto Rico, Ponce	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Central del Caribe	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. del Turabo	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Puerto Rico, Mayaguez	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Puerto Rico, Medical Sciences Campus	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Puerto Rico, Rio Piedras	28	0	0	0	0	0	0	6	2	1	3	0	2	0	0	2	0

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Rhode Island	338	10	1	3	0	3	3	62	8	8	17	29	4	3	0	1	0
Brown U.	225	0	0	0	0	0	0	49	8	8	11	22	1	0	0	1	0
Salve Regina U.	10	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0
U. Rhode Island	103	10	1	3	0	3	3	6	0	0	6	0	3	3	0	0	0
South Carolina	547	46	21	15	3	6	1	36	1	5	20	10	38	16	4	18	0
Clemson U.	243	30	19	7	0	3	1	6	0	0	6	0	21	6	1	14	0
Medical U. South Carolina	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. South Carolina, Columbia	265	16	2	8	3	3	0	30	1	5	14	10	17	10	3	4	0
South Dakota	102	5	0	5	0	0	0	1	0	0	1	0	0	0	0	0	0
Dakota State U.	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Dakota School of Mines and Technology	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Dakota State U.	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. South Dakota	30	5	0	5	0	0	0	1	0	0	1	0	0	0	0	0	0
Tennessee	949	115	16	61	7	25	6	87	7	26	24	30	29	11	5	13	0
East Tennessee State U.	26	5	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0
Meharry Medical C.	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mid-America Baptist Theological Seminary	6	0	0	0	0	0	0	6	1	0	0	5	0	0	0	0	0
Middle Tennessee State U.	40	12	0	0	0	12	0	8	0	4	4	0	2	0	0	2	0
Tennessee State U.	32	1	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0
Tennessee Technological U.	25	5	0	2	0	2	1	0	0	0	0	0	0	0	0	0	0
U. Memphis	138	37	9	20	2	4	2	23	0	7	5	11	4	2	2	0	0
U. Tennessee, Chattanooga	2	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
U. Tennessee, Health Science Center	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Tennessee, Knoxville	359	31	5	19	2	4	1	20	1	4	9	6	19	8	3	8	0
Vanderbilt U.	291	22	1	19	0	2	0	30	5	11	6	8	2	1	0	1	0

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Texas	4,166	405	84	209	11	80	21	332	28	60	113	131	295	189	52	54	0
Baylor C. of Medicine	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baylor U.	92	7	1	5	0	1	0	25	0	4	11	10	2	0	0	2	0
Brite Divinity S.	4	0	0	0	0	0	0	4	0	0	0	4	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.	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice U.	221	0	0	0	0	0	0	20	0	7	3	10	11	11	0	0	0
Sam Houston State U.	20	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Methodist U.	59	3	0	2	0	1	0	9	0	1	3	5	3	0	0	3	0
Southwestern Baptist Theological Seminary	16	0	0	0	0	0	0	15	0	0	0	15	0	0	0	0	0
St. Mary's U., San Antonio	6	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Stephen F. Austin State U.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas A&M International U.	10	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0
Texas A&M U., College Station and Health Science Center	744	51	13	24	0	13	1	21	2	5	8	6	44	18	10	16	0
Texas A&M U.-Commerce	21	4	0	4	0	0	0	5	0	0	5	0	0	0	0	0	0
Texas A&M U.-Corpus Christi	16	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas A&M U.-Kingsville	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas Christian U.	30	5	1	2	0	2	0	9	0	3	6	0	0	0	0	0	0
Texas Southern U.	22	9	3	6	0	0	0	0	0	0	0	0	1	0	0	1	0
Texas State U.	53	31	8	6	3	4	10	0	0	0	0	0	0	0	0	0	0
Texas Tech U.	317	64	13	28	1	22	0	24	4	2	13	5	38	19	18	1	0
Texas Tech U., Health Sciences Center	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas Woman's U.	71	15	0	4	3	8	0	4	0	0	2	2	0	0	0	0	0
U. Dallas	8	0	0	0	0	0	0	4	1	0	1	2	0	0	0	0	0

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U. Houston	300	13	1	11	0	1	0	17	2	5	10	0	26	20	0	6	0
U. North Texas, Denton	232	54	5	41	0	8	0	25	1	3	10	11	21	20	0	1	0
U. North Texas, Health Science Center	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. of the Incarnate Word	16	14	5	5	0	2	2	0	0	0	0	0	2	2	0	0	0
U. Texas Health Science Center, Houston	119	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
U. Texas Health Science Center, San Antonio	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Texas Medical Branch	37	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0
U. Texas Rio Grande Valley	17	0	0	0	0	0	0	0	0	0	0	0	8	8	0	0	0
U. Texas Southwestern Medical Center	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Texas, Arlington	200	17	9	2	0	3	3	9	0	5	4	0	23	14	0	9	0
U. Texas, Austin	801	59	7	39	1	9	3	104	17	21	28	38	54	22	22	10	0
U. Texas, Dallas	227	1	0	0	0	0	1	14	1	3	2	8	33	26	2	5	0
U. Texas, El Paso	78	6	0	0	0	5	1	6	0	1	4	1	5	5	0	0	0
U. Texas, San Antonio	125	32	17	11	3	1	0	3	0	0	3	0	13	13	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	549	53	8	23	0	13	9	15	0	2	10	3	29	11	10	8	0
Brigham Young U., Provo	92	12	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0
U. Utah	361	22	2	10	0	8	2	15	0	2	10	3	26	11	7	8	0
Utah State U., Logan	96	19	1	6	0	5	7	0	0	0	0	0	3	0	3	0	0
Vermont	80	4	2	1	0	1	0	5	5	0	0	0	0	0	0	0	0
Middlebury C.	6	1	0	0	0	1	0	5	5	0	0	0	0	0	0	0	0
U. Vermont	74	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Virginia	1,433	203	27	112	6	29	29	93	4	27	29	33	108	53	18	37	0
C. of William and Mary	66	13	3	9	0	0	1	6	0	4	1	1	0	0	0	0	0
Eastern Virginia Medical School	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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George Mason U.	259	53	6	33	4	4	6	16	0	9	6	1	7	0	7	0	0
Hampton U.	14	5	2	2	0	1	0	0	0	0	0	0	2	2	0	0	0
James Madison U.	13	5	3	2	0	0	0	0	0	0	0	0	1	1	0	0	0
Norfolk State U.	8	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
Old Dominion U.	119	35	8	15	1	1	10	4	0	0	4	0	10	7	0	3	0
Regent U.	58	8	0	8	0	0	0	7	0	1	0	6	38	27	11	0	0
Union Presbyterian Seminary	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
U. Virginia, Charlottesville	308	24	1	17	0	3	3	52	4	13	13	22	12	5	0	7	0
Virginia Commonwealth U.	178	24	4	10	0	6	4	4	0	0	2	2	14	5	0	9	0
Virginia Polytechnic Institute and State U.	405	36	0	16	1	14	5	3	0	0	3	0	22	6	0	16	0
Washington	1,001	70	5	43	2	15	5	51	9	8	22	12	59	29	12	18	0
Gonzaga U.	13	1	1	0	0	0	0	1	0	0	0	1	7	7	0	0	0
Seattle Pacific U.	21	10	3	3	1	2	1	0	0	0	0	0	0	0	0	0	0
U. Washington, Seattle	708	40	1	30	1	5	3	47	9	6	21	11	35	12	6	17	0
Washington State U.	259	19	0	10	0	8	1	3	0	2	1	0	17	10	6	1	0
West Virginia	225	31	10	16	0	5	0	22	0	6	3	13	13	6	4	3	0
Marshall U.	24	17	9	8	0	0	0	1	0	1	0	0	1	1	0	0	0
West Virginia U.	201	14	1	8	0	5	0	21	0	5	3	13	12	5	4	3	0
Wisconsin	1,067	95	26	50	1	13	5	117	32	17	33	35	41	16	10	15	0
Cardinal Stritch U.	21	17	11	1	0	1	4	0	0	0	0	0	2	1	0	1	0
Marquette U.	70	1	0	0	0	1	0	16	0	1	6	9	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	780	56	7	39	1	8	1	85	32	14	18	21	23	8	7	8	0
U. Wisconsin-Milwaukee	164	21	8	10	0	3	0	16	0	2	9	5	16	7	3	6	0
Wyoming	78	8	1	6	0	1	0	0	0	0	0	0	0	0	0	0	0

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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
U. Wyoming	78	8	1	6	0	1	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.

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: 5-year total, 2015–19

(Number)

Institution	Rank	Doctorate recipients
Hispanic or Latino (375 institutions)	-	12,952
From top 20 institutions	-	3,816
U. California, Los Angeles	1	291
U. California, Berkeley	2	289
U. Texas, Austin	3	239
Texas A&M U., College Station and Health Science Center	4	232
U. Wisconsin-Madison	5	205
U. Florida	6	200
U. Michigan, Ann Arbor	7	194
U. Arizona	8	188
Walden U.	9	185
U. California, Riverside	10	183
U. California, Irvine	11	180
U. California, Davis	12	179
CUNY, Graduate Center	13	169
U. California, San Diego	14	166
Florida International U.	15	161
U. Washington, Seattle	16	159
U. California, Santa Barbara	17	157
U. Texas, El Paso	18	154
U. Illinois, Urbana-Champaign	19	144
Harvard U.	20	141
Not Hispanic or Latino	-	-
American Indian or Alaska Native (194 institutions)	-	603
From top 22 institutions	-	265
Oklahoma State U., Stillwater	1	32
U. Arizona	2	29
U. Oklahoma, Norman	3	20
Arizona State U.	4	19
U. New Mexico, Albuquerque	5	18
U. Montana, Missoula	6	15
Walden U.	7	13
U. Washington, Seattle	8	12
U. Minnesota, Twin Cities	9	11
U. North Dakota	9	11
U. Alaska, Fairbanks	11	9
U. Arkansas, Fayetteville	12	8
U. California, Davis	12	8
U. Missouri, Columbia	12	8
SUNY, U. Buffalo	15	7
Texas A&M U., College Station and Health Science Center	15	7
U. California, Berkeley	15	7
Washington State U.	15	7
Colorado State U., Fort Collins	19	6
U. Colorado Boulder	19	6
U. Massachusetts, Amherst	19	6
U. Michigan, Ann Arbor	19	6
Asian (383 institutions)	-	16,376

Table 9

Top 20 doctorate-granting institutions ranked by number of minority U.S. citizen and permanent resident doctorate recipients, by ethnicity and race: 5-year total, 2015–19

(Number)

Institution	Rank	Doctorate recipients
From top 20 institutions	-	5,863
U. California, Los Angeles	1	516
U. California, Berkeley	2	487
Harvard U.	3	410
U. Michigan, Ann Arbor	4	319
Massachusetts Institute of Technology	5	314
Columbia U. in the City of New York	6	297
U. Washington, Seattle	7	295
U. California, Irvine	8	293
Stanford U.	9	282
U. California, San Diego	10	281
U. Southern California	11	279
U. Pennsylvania	12	269
U. Illinois, Urbana-Champaign	13	268
U. California, Davis	14	261
U. Maryland, College Park	15	248
Johns Hopkins U.	16	239
Georgia Institute of Technology	17	218
U. Wisconsin-Madison	18	214
U. Texas, Austin	19	192
Purdue U., West Lafayette	20	181
Black or African American (380 institutions)	-	11,994
From top 21 institutions	-	3,991
Walden U.	1	1,247
Howard U.	2	288
Jackson State U.	3	212
U. Florida	4	166
Georgia State U.	5	145
U. North Carolina, Chapel Hill	5	145
U. Georgia	7	144
Louisiana State U., Baton Rouge	8	138
George Washington U.	9	135
U. Michigan, Ann Arbor	9	135
U. Memphis	11	123
U. Illinois, Urbana-Champaign	12	121
Michigan State U.	13	118
Texas A&M U., College Station and Health Science Center	14	116
U. Maryland, College Park	14	116
Morgan State U.	16	113
North Carolina Agricultural and Technical State U.	16	113
U. South Carolina, Columbia	18	107
Auburn U., Auburn	19	103
Columbia U., Teachers C.	19	103
Florida State U.	19	103
More than one race (340 institutions)	-	5,172
From top 21 institutions	-	1,657
U. California, Berkeley	1	150
Harvard U.	2	110

Table 9

Top 20 doctorate-granting institutions ranked by number of minority U.S. citizen and permanent resident doctorate recipients, by ethnicity and race: 5-year total, 2015–19

(Number)

Institution	Rank	Doctorate recipients
U. Washington, Seattle	3	105
U. California, Los Angeles	4	104
U. California, Davis	5	95
U. Michigan, Ann Arbor	6	86
U. Wisconsin-Madison	7	85
Stanford U.	8	83
Walden U.	9	81
U. California, San Diego	10	80
Massachusetts Institute of Technology	11	71
U. Hawaii, Manoa	12	68
Ohio State U., Columbus	13	66
U. California, Irvine	14	65
U. Illinois, Urbana-Champaign	15	63
U. Pennsylvania	16	59
Columbia U. in the City of New York	17	58
Texas A&M U., College Station and Health Science Center	18	57
U. California, Santa Barbara	18	57
U. Texas, Austin	18	57
Yale U.	18	57

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: 2019

(Number)

Institution	Rank	Doctorate recipients
All institutions (448 institutions)	-	18,351
From top 20 institutions	-	5,380
Purdue U., West Lafayette	1	409
Texas A&M U., College Station and Health Science Center	2	393
U. Illinois, Urbana-Champaign	3	388
U. Florida	4	312
Massachusetts Institute of Technology	5	302
Pennsylvania State U., University Park and Hershey Medical Center	6	283
U. Michigan, Ann Arbor	7	277
U. Wisconsin-Madison	8	267
Ohio State U., Columbus	9	259
Georgia Institute of Technology	10	258
U. Southern California	11	252
U. Minnesota, Twin Cities	12	248
U. Texas, Austin	13	246
Columbia U. in the City of New York	14	220
U. Maryland, College Park	15	218
Harvard U.	16	216
Iowa State U.	17	212
U. California, Berkeley	18	209
Michigan State U.	19	206
U. California, Los Angeles	20	205

Source(s):
National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

Table 11

Doctorate recipients, by broad field of study and Carnegie category of doctorate institution: 2010–19

(Number)

Field and Carnegie category	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All doctorate recipients	48,028	48,909	50,943	52,703	53,986	54,886	54,809	54,554	55,103	55,703
Doctoral: Highest research	36,770	37,854	39,297	40,579	41,138	41,490	41,264	41,205	41,462	41,834
Doctoral: Higher research	7,193	7,184	7,529	7,888	8,278	8,676	8,727	8,652	8,754	8,757
Doctoral: Moderate research	1,927	1,755	1,854	2,002	2,396	2,296	2,468	2,436	2,517	2,550
Other universities	2,138	2,116	2,263	2,234	2,174	2,424	2,350	2,261	2,370	2,562
Life sciences[a]	11,319	11,535	11,964	12,207	12,484	12,493	12,539	12,554	12,757	12,781
Doctoral: Highest research	8,658	8,732	9,006	9,175	9,137	9,119	9,165	9,318	9,359	9,293
Doctoral: Higher research	1,316	1,331	1,407	1,499	1,661	1,630	1,667	1,538	1,692	1,665
Doctoral: Moderate research	235	288	283	336	428	429	461	517	458	470
Other universities	1,110	1,184	1,268	1,197	1,258	1,315	1,246	1,181	1,248	1,353
Physical sciences and earth sciences	4,995	5,271	5,419	5,584	5,910	5,916	6,251	6,082	6,332	6,585
Doctoral: Highest research	4,248	4,433	4,561	4,699	4,890	4,956	5,226	5,119	5,298	5,497
Doctoral: Higher research	660	722	746	756	884	855	878	843	902	944
Doctoral: Moderate research	36	46	42	56	74	38	62	53	48	60
Other universities	51	70	70	73	62	67	85	67	84	84
Mathematics and computer sciences	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,024	4,240
Doctoral: Highest research	2,666	2,746	2,916	3,013	3,183	3,145	3,211	3,106	3,312	3,490
Doctoral: Higher research	488	446	496	559	583	566	628	602	589	628
Doctoral: Moderate research	42	57	52	44	60	51	68	74	70	67
Other universities	27	24	32	44	36	56	47	60	53	55
Psychology and social sciences	7,882	8,220	8,498	8,580	8,748	9,073	9,037	9,036	8,879	9,071
Doctoral: Highest research	5,711	5,947	6,121	6,167	6,141	6,371	6,347	6,336	6,205	6,267
Doctoral: Higher research	1,286	1,376	1,410	1,415	1,524	1,623	1,540	1,637	1,545	1,555
Doctoral: Moderate research	562	590	652	680	791	741	805	766	815	855
Other universities	323	307	315	318	292	338	345	297	314	394
Engineering	7,578	8,032	8,469	9,000	9,626	9,875	9,459	9,776	10,166	10,303
Doctoral: Highest research	6,396	6,765	7,131	7,480	8,097	8,107	7,780	8,072	8,256	8,402
Doctoral: Higher research	1,005	1,037	1,098	1,273	1,259	1,470	1,430	1,425	1,592	1,586
Doctoral: Moderate research	122	140	163	151	189	191	150	151	184	183
Other universities	55	90	77	96	81	107	99	128	134	132
Education	5,287	4,670	4,802	4,934	4,789	5,098	5,146	4,826	4,824	4,635
Doctoral: Highest research	2,996	2,999	3,015	3,113	3,002	3,053	3,038	2,856	2,844	2,720
Doctoral: Higher research	1,430	1,189	1,331	1,318	1,259	1,440	1,416	1,438	1,336	1,341
Doctoral: Moderate research	654	368	332	370	425	454	503	395	491	430
Other universities	207	114	124	133	103	151	189	137	153	144
Humanities and arts	5,015	5,225	5,561	5,715	5,524	5,594	5,482	5,286	5,140	5,054
Doctoral: Highest research	4,034	4,194	4,434	4,664	4,476	4,524	4,353	4,202	4,104	4,038
Doctoral: Higher research	590	658	670	616	634	635	713	652	624	590
Doctoral: Moderate research	105	104	164	133	134	124	154	136	119	115
Other universities	286	269	293	302	280	311	262	296	293	311
Other[b]	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,152	2,981	3,034
Doctoral: Highest research	2,061	2,038	2,113	2,268	2,212	2,215	2,144	2,196	2,084	2,127
Doctoral: Higher research	418	425	371	452	474	457	455	517	474	448
Doctoral: Moderate research	171	162	166	232	295	268	265	344	332	370
Other universities	79	58	84	71	62	79	77	95	91	89

[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):
Carnegie category is based on the 2015 Carnegie Classifications.

Source(s):
National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

Table 12

Doctorate recipients, by major field of study: Selected years, 1989–2019

(Number and percent)

Field of study	1989		1994		1999		2004		2009		2014		2019	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All fields	34,325	100.0	41,034	100.0	41,100	100.0	42,122	100.0	49,552	100.0	53,986	100.0	55,703	100.0
Life sciences	6,410	18.7	7,800	19.0	8,204	20.0	8,813	20.9	11,403	23.0	12,484	23.1	12,781	22.9
Agricultural sciences and natural resources	1,320	3.8	1,301	3.2	1,216	3.0	1,155	2.7	1,283	2.6	1,338	2.5	1,491	2.7
Biological and biomedical sciences	4,116	12.0	5,203	12.7	5,581	13.6	5,940	14.1	8,025	16.2	8,868	16.4	8,702	15.6
Health sciences	974	2.8	1,296	3.2	1,407	3.4	1,718	4.1	2,095	4.2	2,278	4.2	2,588	4.6
Physical sciences and earth sciences	3,916	11.4	4,740	11.6	4,285	10.4	4,023	9.6	5,160	10.4	5,910	10.9	6,585	11.8
Chemistry	1,970	5.7	2,257	5.5	2,132	5.2	1,986	4.7	2,391	4.8	2,673	5.0	2,941	5.3
Geosciences, atmospheric sciences, and ocean sciences	672	2.0	791	1.9	723	1.8	686	1.6	877	1.8	1,098	2.0	1,274	2.3
Physics and astronomy	1,274	3.7	1,692	4.1	1,430	3.5	1,351	3.2	1,892	3.8	2,139	4.0	2,370	4.3
Mathematics and computer sciences	1,471	4.3	2,021	4.9	1,939	4.7	2,024	4.8	3,163	6.4	3,862	7.2	4,240	7.6
Computer and information sciences	612	1.8	903	2.2	856	2.1	948	2.3	1,610	3.2	1,988	3.7	2,228	4.0
Mathematics and statistics	859	2.5	1,118	2.7	1,083	2.6	1,076	2.6	1,553	3.1	1,874	3.5	2,012	3.6
Psychology and social sciences	6,225	18.1	6,923	16.9	7,389	18.0	7,158	17.0	7,945	16.0	8,748	16.2	9,071	16.3
Psychology	3,208	9.3	3,379	8.2	3,668	8.9	3,327	7.9	3,472	7.0	3,724	6.9	3,936	7.1
Anthropology	325	0.9	384	0.9	462	1.1	531	1.3	503	1.0	523	1.0	445	0.8
Economics	898	2.6	939	2.3	926	2.3	959	2.3	1,118	2.3	1,196	2.2	1,247	2.2
Political science and government	430	1.3	589	1.4	655	1.6	587	1.4	682	1.4	775	1.4	707	1.3
Sociology	436	1.3	525	1.3	544	1.3	580	1.4	662	1.3	678	1.3	633	1.1
Other social sciences	928	2.7	1,107	2.7	1,134	2.8	1,174	2.8	1,508	3.0	1,852	3.4	2,103	3.8
Engineering	4,543	13.2	5,820	14.2	5,330	13.0	5,776	13.7	7,642	15.4	9,626	17.8	10,303	18.5
Aerospace, aeronautical, and astronautical engineering	178	0.5	230	0.6	206	0.5	201	0.5	297	0.6	386	0.7	379	0.7
Bioengineering and biomedical engineering	115	0.3	173	0.4	245	0.6	369	0.9	834	1.7	1,046	1.9	1,164	2.1
Chemical engineering	625	1.8	630	1.5	576	1.4	638	1.5	807	1.6	973	1.8	981	1.8
Civil engineering	498	1.5	601	1.5	506	1.2	547	1.3	707	1.4	617	1.1	701	1.3
Electrical, electronics, and communications engineering	995	2.9	1,438	3.5	1,236	3.0	1,389	3.3	1,693	3.4	1,952	3.6	1,799	3.2
Industrial and manufacturing engineering	162	0.5	228	0.6	211	0.5	217	0.5	251	0.5	298	0.6	234	0.4
Materials science engineering	257	0.7	433	1.1	393	1.0	475	1.1	625	1.3	832	1.5	992	1.8
Mechanical engineering	650	1.9	883	2.2	786	1.9	754	1.8	1,095	2.2	1,331	2.5	1,533	2.8
Other engineering	1,063	3.1	1,204	2.9	1,171	2.8	1,186	2.8	1,333	2.7	2,191	4.1	2,520	4.5
Education	6,280	18.3	6,711	16.4	6,554	15.9	6,635	15.8	6,528	13.2	4,789	8.9	4,635	8.3
Education administration	1,633	4.8	2,000	4.9	2,046	5.0	2,342	5.6	2,146	4.3	893	1.7	839	1.5
Education research	2,410	7.0	2,528	6.2	2,733	6.6	2,805	6.7	2,663	5.4	2,560	4.7	2,303	4.1

Table 12

Doctorate recipients, by major field of study: Selected years, 1989–2019

(Number and percent)

Field of study	1989		1994		1999		2004		2009		2014		2019	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Teacher education	451	1.3	401	1.0	293	0.7	270	0.6	332	0.7	152	0.3	104	0.2
Teaching fields	970	2.8	960	2.3	893	2.2	758	1.8	906	1.8	915	1.7	960	1.7
Other education	816	2.4	822	2.0	589	1.4	460	1.1	481	1.0	269	0.5	429	0.8
Humanities and arts	3,520	10.3	4,695	11.4	5,273	12.8	5,245	12.5	4,904	9.9	5,524	10.2	5,054	9.1
Foreign languages and literature	432	1.3	594	1.4	626	1.5	587	1.4	598	1.2	674	1.2	610	1.1
History	538	1.6	801	2.0	1,010	2.5	976	2.3	1,045	2.1	1,186	2.2	912	1.6
Letters	982	2.9	1,379	3.4	1,516	3.7	1,407	3.3	1,413	2.9	1,551	2.9	1,387	2.5
Other humanities and arts	1,568	4.6	1,921	4.7	2,121	5.2	2,275	5.4	1,848	3.7	2,113	3.9	2,145	3.9
Other[a]	1,960	5.7	2,324	5.7	2,126	5.2	2,448	5.8	2,807	5.7	3,043	5.6	3,034	5.4
Business management and administration	1,066	3.1	1,283	3.1	1,109	2.7	1,256	3.0	1,405	2.8	1,584	2.9	1,536	2.8
Communication	306	0.9	371	0.9	379	0.9	450	1.1	627	1.3	663	1.2	543	1.0
Non-S&E fields nec	588	1.7	670	1.6	637	1.5	742	1.8	775	1.6	796	1.5	955	1.7
Unknown field	0	0.0	0	0.0	1	*	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: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All fields	48,028	48,909	50,943	52,703	53,986	54,886	54,809	54,554	55,103	55,703
Life sciences	11,319	11,535	11,964	12,207	12,484	12,493	12,539	12,554	12,757	12,781
Agricultural sciences and natural resources	1,100	1,206	1,255	1,324	1,338	1,434	1,379	1,493	1,443	1,491
Agricultural sciences	668	669	735	786	793	831	781	905	874	917
Agricultural economics	118	106	88	107	96	101	113	144	108	117
Agricultural and horticultural plant breeding	31	23	31	21	39	43	61	53	67	69
Agricultural animal breeding	7	7	6	8	na	na	na	na	na	na
Agronomy and crop science	69	54	73	86	80	81	82	100	80	87
Animal nutrition	34	48	57	54	50	40	42	27	36	49
Animal science, poultry or avian	12	25	22	23	25	31	21	20	32	32
Animal sciences, other	54	69	75	85	103	90	83	107	121	120
Food science	100	73	108	105	93	125	122	123	112	103
Food science and technology, other	37	39	35	48	39	47	40	48	51	53
Horticulture science	42	48	40	41	51	50	32	42	46	44
Plant pathology and phytopathology, agricultural	56	53	71	74	74	57	73	106	90	105
Plant sciences, other	49	51	77	67	78	95	51	63	65	57
Soil chemistry, microbiology	20	34	15	16	20	17	23	20	16	28
Soil sciences, other	39	39	37	51	45	54	38	52	50	53
Natural resources and conservation	414	514	501	509	501	566	504	536	502	497
Environmental science	155	195	182	204	213	182	193	228	222	229
Fishing and fisheries sciences and management	34	59	51	53	52	60	47	46	51	63
Forest management, forest resources management	41	34	29	44	28	36	35	25	18	16
Forest sciences and biology	23	26	25	19	22	37	15	32	22	15
Forestry, other	17	35	29	26	20	22	29	36	53	43
Natural resource and environmental policy	na	na	na	na	35	56	68	54	51	40
Natural resources and conservation	88	100	99	92	70	87	72	63	47	53
Natural resources and environmental economics (agricultural sciences)	na	na	31	22	28	39	23	21	27	35
Wildlife, range management	48	50	39	41	29	32	14	20	11	3
Wood science, pulp and paper technology	8	15	16	8	4	15	8	11	na	na
Agricultural sciences and natural resources, general[a]	2	9	8	9	25	21	73	38	38	39
Agricultural sciences and natural resources, other[b]	16	14	11	20	19	16	21	14	29	38
Biological and biomedical sciences	8,046	8,152	8,322	8,354	8,868	8,783	8,863	8,566	8,783	8,702
Anatomy	25	25	23	15	15	24	21	8	23	24
Bacteriology	24	22	23	28	25	22	18	12	13	14
Biochemistry (biological sciences)	861	867	847	826	820	749	832	818	810	793
Bioinformatics	123	140	145	166	183	174	193	184	201	242
Biomedical sciences	287	311	366	401	438	416	329	339	421	386
Biometrics and biostatistics	127	137	174	145	165	171	198	216	233	221
Biophysics (biological sciences)	171	192	193	179	186	181	165	181	152	175
Biotechnology	22	33	54	39	45	38	36	37	35	44
Botany and plant biology	110	110	110	91	93	97	111	97	120	117
Cancer biology	300	396	381	379	455	454	436	370	355	364
Cell, cellular biology, and histology	361	379	376	318	335	321	258	230	218	201
Computational biology	69	65	94	115	117	107	134	149	146	184
Developmental biology and embryology	193	205	174	197	198	187	162	133	135	114
Ecology	431	404	415	468	449	453	482	437	417	433
Endocrinology	23	32	26	39	26	22	11	17	21	12
Entomology	122	113	120	118	112	109	127	129	119	124
Environmental toxicology	39	30	45	33	49	34	45	64	56	67

Table 13

Doctorate recipients, by fine field of study: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Epidemiology[c]	na	na	na	na	292	378	343	351	400	362
Evolutionary biology	214	213	203	209	215	210	200	229	242	238
Genetics, genomics, human and animal	383	374	334	396	401	358	338	344	362	342
Immunology	452	449	455	471	456	471	397	402	419	413
Microbiology	490	462	451	455	463	480	465	431	475	430
Molecular biology	697	716	620	646	670	632	549	634	595	555
Molecular medicine	na	na	na	na	na	na	25	66	62	34
Neurosciences, neurobiology[d]	954	958	1,053	1,016	1,048	1,089	997	984	1,033	1,042
Nutrition sciences	180	163	183	177	175	184	204	215	201	201
Parasitology	37	26	29	26	26	31	20	16	20	26
Pathology, human and animal	79	83	95	95	99	88	49	68	52	50
Pharmacology, human and animal	290	301	308	286	292	243	207	230	210	199
Physiology, human and animal	258	226	254	210	208	210	165	162	201	177
Plant genetics	52	45	41	37	48	57	67	50	72	58
Plant pathology and phytopathology (biological sciences)	19	18	25	21	29	20	13	11	11	13
Plant physiology	28	15	19	25	17	18	13	17	18	12
Structural biology	53	71	57	67	59	64	47	56	51	73
Toxicology	99	96	101	99	117	104	85	77	95	84
Virology	134	178	162	162	163	164	142	115	115	128
Wildlife biology	na	na	na	na	36	47	47	60	62	68
Zoology	72	65	51	40	32	46	38	40	29	24
Biological and biomedical sciences, general	184	168	223	256	245	258	771	469	468	536
Biological and biomedical sciences, other	83	64	92	103	66	72	123	118	115	122
Health sciences	2,173	2,177	2,387	2,529	2,278	2,276	2,297	2,495	2,531	2,588
Environmental health	66	56	67	70	77	79	76	84	83	90
Epidemiology[c]	324	314	365	353	na	na	na	na	na	na
Gerontology (health sciences)	10	15	14	13	14	13	25	19	15	16
Health and behavior	na	na	na	na	88	125	119	84	59	88
Health services research	na	na	na	na	na	na	120	164	138	138
Health systems administration	75	84	51	89	89	70	41	36	22	22
Kinesiology, exercise science[e]	215	198	228	214	249	264	231	267	268	260
Medical physics, radiological science	61	74	80	93	103	84	94	92	74	90
Nursing science	482	523	552	510	580	536	482	552	584	548
Oral biology, oral pathology	15	22	15	20	15	19	23	33	24	19
Pharmaceutical sciences[f]	274	271	295	332	279	270	274	292	345	359
Public health	295	266	349	431	400	437	379	439	421	452
Rehabilitation, therapeutic services	61	60	80	85	83	86	108	90	124	109
Speech-language pathology and audiology	100	110	119	110	114	117	116	128	112	116
Veterinary sciences	57	60	59	67	42	56	49	50	57	50
Health sciences, general	37	41	37	62	39	36	93	65	72	79
Health sciences, other	101	83	76	80	106	84	67	100	133	152
Physical sciences and earth sciences	4,995	5,271	5,419	5,584	5,910	5,916	6,251	6,082	6,332	6,585
Chemistry	2,304	2,432	2,416	2,484	2,673	2,666	2,703	2,699	2,809	2,941
Analytical chemistry	402	391	370	417	415	388	393	387	401	367
Chemical biology	na	na	na	na	na	na	120	150	160	185
Inorganic chemistry	294	320	307	297	372	354	343	353	358	386
Medicinal chemistry[g]	0	0	0	0	86	79	72	70	86	94
Organic chemistry	599	663	667	643	605	625	565	552	574	564

Table 13

Doctorate recipients, by fine field of study: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Physical chemistry	360	390	360	355	340	366	379	343	397	390
Polymer chemistry	126	123	125	125	127	135	151	160	132	174
Theoretical chemistry	86	69	78	74	103	111	88	88	106	96
Chemistry, general	269	289	290	364	416	398	411	432	430	477
Chemistry, other	168	187	219	209	209	210	181	164	165	208
Geosciences, atmospheric sciences, and ocean sciences	862	852	941	989	1,098	1,057	1,227	1,169	1,185	1,274
Atmospheric science and meteorology	170	178	205	205	200	213	245	248	265	236
Atmospheric chemistry and climatology	39	43	50	49	42	36	41	62	50	57
Atmospheric physics and dynamics	45	40	51	43	51	59	58	30	48	32
Meteorology	15	29	18	18	32	30	20	17	19	13
Atmospheric science and meteorology, general	47	47	61	77	55	62	108	105	123	117
Atmospheric science and meteorology, other	24	19	25	18	20	26	18	34	25	17
Geological sciences	463	451	462	489	579	554	618	572	591	622
Geochemistry	74	70	68	73	85	94	81	67	61	66
Geology	128	124	112	126	130	135	127	118	132	149
Geomorphology, glacial geology	28	23	16	32	25	27	24	22	18	21
Geophysics and seismology	94	95	95	113	151	123	138	124	129	136
Mineralogy and petrology	13	19	19	16	15	21	6	9	9	8
Paleontology	31	38	41	31	38	30	30	29	30	24
Stratigraphy and sedimentation	18	16	16	22	15	17	12	12	14	6
Geological and earth sciences, general	36	26	34	33	60	55	155	139	125	159
Geological and earth sciences, other	41	40	61	43	60	52	45	52	73	53
Ocean and marine sciences	229	223	274	295	319	290	364	349	329	416
Hydrology and water resources	47	48	52	51	63	76	130	99	107	163
Marine biology and biological oceanography	na	na	100	111	110	85	90	112	73	88
Marine sciences	79	69	36	26	41	42	54	53	56	70
Oceanography, chemical and physical	87	90	70	92	89	67	79	70	81	81
Ocean and marine sciences, other	16	16	16	15	16	20	11	15	12	14
Physics and astronomy	1,829	1,987	2,062	2,111	2,139	2,193	2,321	2,214	2,338	2,370
Astronomy and astrophysics	266	287	274	301	289	269	315	339	351	362
Astronomy	102	88	88	103	112	86	95	119	138	125
Astrophysics	155	185	175	184	171	174	211	216	203	231
Astronomy and astrophysics, other	9	14	11	14	6	9	9	4	10	6
Physics	1,563	1,700	1,788	1,810	1,850	1,924	2,006	1,875	1,987	2,008
Acoustics	15	20	10	22	20	19	17	16	19	18
Applied physics	143	144	138	180	157	146	229	171	200	164
Atomic, molecular, chemical physics	105	125	116	118	121	125	137	126	121	120
Biophysics (physics)	123	132	130	133	131	127	138	138	146	154
Condensed matter, low-temperature physics	379	383	390	413	389	439	350	354	443	400
Elementary particle physics	196	229	282	272	244	242	231	234	232	234
Nuclear physics	86	81	92	75	103	86	92	109	93	116
Optics, photonics	145	165	165	174	194	216	225	201	176	217
Plasma, high-temperature physics	50	83	66	71	83	88	79	69	60	63
Polymer physics	18	20	19	32	44	26	43	33	29	46
Physics, general	213	189	241	192	230	285	356	330	340	321
Physics, other	90	129	139	128	134	125	109	94	128	155
Mathematics and computer sciences	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,024	4,240
Computer and information sciences	1,633	1,667	1,793	1,843	1,988	2,003	2,082	1,998	2,001	2,228
Computer science	1,356	1,393	1,482	1,568	1,664	1,658	1,650	1,592	1,628	1,821
Information science, systems	158	165	173	152	152	158	173	160	122	127

Table 13

Doctorate recipients, by fine field of study: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Computer and information sciences, general	na	na	na	na	94	117	161	123	141	154
Computer and information sciences, other	119	109	138	123	78	70	98	123	110	126
Mathematics and statistics	1,590	1,606	1,703	1,817	1,874	1,815	1,872	1,844	2,023	2,012
Algebra	150	152	149	151	174	146	83	109	107	82
Analysis and functional analysis	143	145	134	159	137	161	97	85	100	66
Applied mathematics	401	432	462	455	476	435	474	493	455	428
Computational mathematics	na	na	na	na	na	na	na	na	92	94
Computing theory and practice	16	20	14	22	19	24	15	19	8	10
Geometry, geometric analysis	104	120	112	119	120	108	52	63	78	72
Logic	22	17	15	33	26	21	14	15	19	18
Number theory	71	73	63	79	82	89	48	54	62	60
Operations research (mathematics)	27	27	26	15	28	34	45	34	45	45
Statistics (mathematics)	327	332	365	364	407	381	265	368	413	365
Topology and foundations	84	73	74	78	77	86	41	47	58	44
Mathematics and statistics, general	163	143	192	234	235	243	686	493	520	660
Mathematics and statistics, other	82	72	97	108	93	87	52	64	66	68
Psychology and social sciences	7,882	8,220	8,498	8,580	8,748	9,073	9,037	9,036	8,879	9,071
Psychology	3,420	3,576	3,599	3,592	3,724	3,776	3,910	3,926	3,823	3,936
Behavioral analysis	na	na	44	54	51	63	65	53	63	54
Clinical psychology	1,151	1,229	1,228	1,140	1,220	1,173	1,207	1,193	1,259	1,264
Cognitive neuroscience	na	na	na	na	na	na	161	208	199	215
Cognitive psychology and psycholinguistics	220	204	199	219	201	221	165	127	143	135
Community psychology	na	na	na	na	na	na	34	42	44	34
Counseling	408	427	392	425	378	417	310	319	289	295
Developmental and child psychology	191	218	205	227	245	190	236	207	163	176
Educational psychology (psychology)	70	62	67	60	65	60	108	118	115	108
Experimental psychology	142	147	134	141	143	144	144	159	137	137
Family psychology	45	33	41	33	41	55	12	5	2	3
Health, medical psychology	na	na	46	65	80	102	53	65	80	82
Human development and family studies	145	145	136	138	141	134	191	206	141	170
Industrial and organizational psychology	207	200	222	214	203	221	217	196	194	183
Marriage and family therapy, counseling	na	na	na	na	na	na	77	75	69	96
Neuropsychology, physiological psychology[h]	82	77	101	112	122	130	69	47	40	62
Personality psychology	22	23	20	15	21	21	23	16	13	17
Psychometrics and quantitative psychology	36	35	34	44	33	48	49	51	41	65
School psychology (psychology)	107	110	118	114	110	116	125	146	148	132
Social psychology	210	228	246	211	242	220	219	219	215	236
Psychology, general	185	228	220	229	275	289	295	265	251	251
Psychology, other	199	210	146	151	153	172	150	209	217	221
Social sciences	4,462	4,644	4,899	4,988	5,024	5,297	5,127	5,110	5,056	5,135
Anthropology	507	553	547	550	523	492	460	446	424	445
Anthropology, cultural	na	na	na	na	267	317	290	272	276	294
Anthropology, general[i]	507	553	547	550	184	99	90	89	53	77
Anthropology, physical and biological	na	na	na	na	72	76	80	85	95	74
Economics	1,073	1,121	1,243	1,183	1,196	1,255	1,236	1,239	1,245	1,247
Econometrics	34	28	40	48	46	40	38	26	28	33
Natural resources and environmental economics (social sciences)	na	na	48	49	49	47	59	56	58	60
Other economics[j]	1,039	1,093	1,155	1,086	1,101	1,168	1,139	1,157	1,159	1,154
Political science and government	728	685	724	803	775	859	745	743	734	707

Table 13

Doctorate recipients, by fine field of study: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Sociology	639	656	633	636	678	741	613	683	668	633
Other social sciences	1,515	1,629	1,752	1,816	1,852	1,950	2,073	1,999	1,985	2,103
American, U.S. studies	115	132	121	122	121	130	111	98	68	67
Applied linguistics	na	na	na	na	na	na	81	106	70	100
Archaeology (social sciences)	na	na	na	na	na	na	na	na	119	117
Area, ethnic, cultural studies[k]	111	110	113	98	90	80	188	175	133	137
Criminal justice and corrections	74	80	80	75	80	111	93	110	87	142
Criminology	52	101	86	76	78	102	104	94	96	100
Demography and population studies	13	30	17	27	32	21	37	22	28	18
Gender and women's studies	na	na	na	na	40	34	72	49	48	55
Geography	225	233	270	251	293	301	246	279	242	265
Gerontology (social sciences)	18	27	31	32	28	24	22	31	23	27
Health policy analysis	na	na	41	69	50	81	61	55	58	55
History, science and technology and society[l]	na	na	na	na	na	na	na	na	55	74
International relations, international affairs	107	113	124	119	105	104	137	154	135	138
Linguistics	240	270	258	285	276	288	236	208	249	245
Public policy analysis	244	223	263	279	277	293	230	239	264	231
Statistics (social sciences)	21	22	19	24	20	22	44	15	21	28
Urban, city, community and regional planning	106	104	121	114	111	128	131	149	102	118
Urban studies, affairs	34	31	34	39	35	31	39	41	35	34
Social sciences, general	48	39	32	55	59	55	99	48	41	44
Social sciences, other	107	114	142	151	157	145	142	126	111	108
Engineering	7,578	8,032	8,469	9,000	9,626	9,875	9,459	9,776	10,166	10,303
Aerospace, aeronautical, and astronautical engineering	252	262	307	348	386	361	370	379	383	379
Bioengineering and biomedical engineering	824	898	943	1,039	1,046	1,125	1,089	1,032	1,133	1,164
Chemical engineering	822	823	840	824	973	1,002	921	931	981	981
Civil engineering	643	634	495	542	617	632	564	713	676	701
Electrical, electronics, and communications engineering	1,778	1,886	1,938	1,897	1,952	1,997	1,823	1,879	1,944	1,799
Industrial and manufacturing engineering	215	258	226	241	298	243	256	249	272	234
Materials science engineering	670	662	743	815	832	871	984	937	993	992
Mechanical engineering	983	1,084	1,220	1,277	1,331	1,466	1,297	1,399	1,503	1,533
Other engineering	1,391	1,525	1,757	2,017	2,191	2,178	2,155	2,257	2,281	2,520
Agricultural engineering	58	60	68	75	80	67	62	79	84	65
Ceramic sciences engineering	11	7	5	3	na	na	na	na	na	na
Communications engineering	15	16	24	31	29	30	19	16	14	16
Computer engineering	374	372	406	417	465	410	401	423	435	446
Engineering management, administration	38	37	44	59	44	45	29	54	36	40
Engineering mechanics	46	63	48	70	70	66	101	61	71	82
Engineering physics	31	32	17	34	30	36	24	27	37	23
Engineering science	52	51	45	41	60	72	33	65	57	47
Environmental, environmental health engineering[m]	112	144	214	269	270	282	216	240	247	251
Geotechnical and geoenvironmental engineering	na	na	49	51	72	68	81	75	65	84
Metallurgical engineering	11	30	16	25	24	34	31	25	26	24
Mining and mineral engineering	7	6	14	29	na	na	na	na	na	na
Nuclear engineering	91	107	101	119	156	130	131	156	178	156
Ocean engineering	23	26	21	30	30	36	26	25	24	41
Operations research (engineering)	85	83	90	119	117	88	130	115	107	146
Petroleum engineering	51	56	67	92	107	104	99	85	133	144
Polymer, plastics engineering	57	71	67	61	63	80	60	90	54	70
Robotics	31	46	50	59	80	82	120	98	107	145

Table 13

Doctorate recipients, by fine field of study: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Structural engineering	66	69	81	81	101	125	117	103	95	146
Systems engineering	68	79	82	114	95	105	113	121	113	125
Transportation and highway engineering	na	na	76	80	101	106	109	85	96	136
Engineering, general	36	36	43	24	40	42	107	60	73	111
Engineering, other	128	134	129	134	157	170	146	254	229	222
Education	5,287	4,670	4,802	4,934	4,789	5,098	5,146	4,826	4,824	4,635
Education administration	1,439	924	1,057	965	893	920	824	922	896	839
Educational administration and supervision	320	217	219	187	170	169	148	184	167	154
Educational and human resource studies, development	na	na	78	93	62	68	62	71	46	57
Educational leadership	1,029	649	673	601	605	620	555	595	619	563
Urban education and leadership	90	58	87	84	56	63	59	72	64	65
Education research	2,443	2,438	2,568	2,703	2,560	2,772	2,384	2,418	2,503	2,303
Counseling education, counseling and guidance	211	223	223	257	229	292	276	273	279	255
Curriculum and instruction	617	590	583	586	552	585	380	502	531	391
Educational and instructional media design	121	133	30	17	18	30	26	19	15	17
Educational and instructional technology	na	na	163	241	192	201	224	233	200	178
Educational assessment, testing, measurement	65	73	57	63	53	65	66	42	57	46
Educational policy analysis	122	151	157	171	152	168	173	128	142	146
Educational psychology (education)	269	287	302	283	261	286	221	233	210	198
Educational statistics, research methods	68	79	70	84	74	92	76	83	95	86
Higher education evaluation and research	420	384	448	435	446	519	449	438	394	389
International education	65	60	52	65	70	55	56	45	43	51
Learning sciences	na	na	na	na	na	na	na	na	73	80
School psychology (education)	132	128	117	131	145	132	117	120	116	126
Social and philosophical foundations of education	92	100	98	84	92	90	63	66	81	78
Special education	261	230	268	286	276	257	257	236	267	262
Teacher education	245	204	156	109	152	156	180	114	96	104
Adult and continuing teacher education	91	64	49	23	53	39	64	30	42	32
Elementary teacher education	48	45	40	26	36	37	36	30	12	21
Pre-elementary, early childhood teacher education	58	52	29	35	29	47	51	34	28	37
Secondary teacher education	48	43	38	25	34	33	29	20	14	14
Teaching fields	799	805	757	892	915	953	1,166	925	960	960
Agricultural education	34	28	30	27	25	30	36	34	43	51
Art education	35	48	36	30	42	42	37	34	41	34
Bilingual and multilingual education	na	na	35	50	30	27	52	36	30	29
English as a second or foreign language	na	na	na	na	58	94	70	55	58	39
English education	61	64	32	35	31	33	39	36	33	32
Family, consumer, and human sciences	23	24	10	19	20	24	16	9	8	16
Foreign languages education	60	55	60	54	39	31	39	26	26	26
Health education	45	49	35	52	43	53	70	66	62	54
Literacy and reading education[n]	83	80	124	126	127	123	137	139	119	127
Mathematics education	144	142	114	138	142	133	182	150	148	153
Music education	83	86	69	91	104	114	87	75	82	78
Nursing education	30	23	18	33	30	32	73	53	55	65
Physical education and coaching	34	43	38	44	35	36	39	21	19	27
Science education	96	93	110	114	112	122	133	100	139	116
Social science education	21	27	20	22	16	24	28	19	14	10
Teacher education and professional development, other	50	43	26	57	61	35	128	72	83	103
Other education	361	299	264	265	269	297	592	447	369	429
Workforce education and development	na	na	na	na	32	36	36	57	37	35

Table 13

Doctorate recipients, by fine field of study: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Education, general	152	122	121	128	135	140	369	216	170	216
Education, other	209	177	143	137	102	121	187	174	162	178
Humanities and arts	5,015	5,225	5,561	5,715	5,524	5,594	5,482	5,286	5,140	5,054
Foreign languages and literature	601	644	684	701	674	656	599	618	617	610
Arabic language and literature	14	8	12	9	14	6	5	8	6	5
Chinese language and literature	41	29	20	37	17	28	17	28	39	23
French language and literature	110	114	122	140	139	137	107	92	100	100
Germanic language and literature	64	71	90	74	84	72	67	72	62	74
Italian language and literature	35	38	50	44	39	40	34	45	31	29
Japanese language and literature	27	16	20	21	23	21	10	15	16	17
Latin American languages and literature	na	na	57	66	83	79	96	30	38	42
Russian language and literature	23	34	24	30	25	21	14	26	12	14
Spanish language and literature	231	247	205	216	181	186	127	178	207	161
Foreign languages and literatures, other	56	87	84	64	69	66	122	124	106	145
History	1,005	1,065	1,086	1,148	1,186	1,146	1,148	1,058	948	912
African history	30	29	38	32	32	30	26	24	33	23
American history, United States and Canada	391	432	440	444	433	412	391	376	389	319
Asian history	59	68	73	85	78	89	73	59	73	71
European history	193	224	186	186	232	198	207	179	172	149
History, science and technology and society[l]	46	47	49	53	78	72	66	78	na	na
Latin American history	65	52	63	77	73	64	77	63	55	71
Middle, Near East history	65	63	60	71	68	82	63	70	44	61
History, general	78	68	93	105	121	108	155	120	107	139
History, other	78	82	84	95	71	91	90	89	75	79
Letters	1,516	1,513	1,638	1,606	1,551	1,583	1,531	1,462	1,439	1,387
American literature, United States and Canada	361	367	409	397	349	334	343	319	272	255
Classics	86	91	101	101	91	94	109	80	94	96
Comparative literature	197	192	201	218	196	165	172	164	172	165
Creative writing	81	84	93	79	87	97	79	84	86	98
English language	146	179	154	92	147	153	126	132	120	120
English literature, British and Commonwealth	419	354	423	399	396	412	414	381	383	378
Folklore	11	10	6	9	17	6	na	na	na	na
Rhetoric and composition	na	na	154	220	207	238	211	226	241	191
Speech and rhetorical studies	152	165	53	33	29	42	39	45	42	50
Letters, general	22	25	18	26	12	22	23	14	15	15
Letters, other	41	46	26	32	20	20	15	17	14	19
Other humanities and arts	1,893	2,003	2,153	2,260	2,113	2,209	2,204	2,148	2,136	2,145
African American studies, literature, and history	na	na	na	na	na	na	na	na	52	65
Archaeology (humanities)	60	87	79	72	105	121	166	132	54	31
Art history, criticism, and conservation	248	242	227	265	263	272	278	247	220	250
Bible, biblical studies	97	103	95	106	86	87	62	84	113	102
Dance	na	na	na	na	na	na	13	11	17	18
Drama, theater arts, performance studies[o]	104	106	111	120	104	86	74	87	96	91
Ethics	na	na	29	26	29	30	38	30	37	37
Film, cinema, media studies[p]	na	na	62	67	71	67	73	81	90	112
Jewish, Judaic studies	na	na	17	33	27	27	27	28	23	19
Music	66	81	67	88	64	54	59	67	55	57
Musicology and ethnomusicology	135	137	138	128	140	148	127	158	131	128
Music performance	106	92	113	124	77	110	92	92	88	76
Music theory and composition	91	95	95	102	104	108	92	90	85	111

Table 13

Doctorate recipients, by fine field of study: 2010–19

(Number)

Field of study	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Music, other	18	22	21	29	20	23	19	16	14	23
Philosophy	431	462	497	494	454	463	454	419	477	437
Religion, religious studies	282	312	290	301	292	314	254	310	258	226
Theology, religious education	160	150	184	173	156	172	212	162	194	202
Humanities, general	28	43	16	31	34	27	106	60	53	46
Humanities, other	67	71	112	101	87	100	58	74	79	114
Other[q]	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,152	2,981	3,034
Business management and administration	1,366	1,327	1,404	1,551	1,584	1,582	1,509	1,565	1,475	1,536
Accounting	148	157	175	168	196	194	178	159	160	162
Banking/ financial services	5	1	na	na	na	na	na	na	na	na
Business administration and management	157	146	221	269	243	231	263	253	257	265
Business, managerial economics	29	26	31	24	22	43	26	15	23	17
Finance	210	200	232	260	265	241	251	201	193	235
Hospitality, food service and tourism management	36	59	57	71	65	46	66	74	56	47
Human resources development	70	70	44	44	68	51	30	29	29	28
International business, trade, commerce	25	28	21	33	30	24	24	21	19	30
Management information systems, business statistics	108	100	103	107	100	102	107	92	110	99
Marketing management and research	157	156	174	191	152	181	140	143	141	107
Operations research (business)	84	70	80	103	91	110	83	68	53	74
Organizational behavior	175	189	163	186	212	189	168	271	214	221
Business management and administration, general	102	67	50	40	68	68	114	140	124	141
Business management and administration, other	60	58	53	55	72	102	59	99	96	110
Communication	638	650	595	645	663	667	672	622	630	543
Communication research	120	125	126	155	149	149	183	120	143	161
Communication theory	34	29	31	30	39	41	63	37	26	24
Film, radio, TV and digital communication	73	77	43	30	35	37	23	34	16	12
Mass communication, media studies	214	212	199	239	251	242	211	230	227	171
Communication, general	119	117	117	107	123	119	143	131	155	118
Communication, other	78	90	79	84	66	79	49	70	63	57
Non-S&E fields nec	725	706	735	827	796	770	760	962	876	955
Architecture and environmental design	81	81	109	101	118	116	99	118	105	128
Family, consumer sciences and human sciences	48	54	50	57	51	47	39	79	64	78
Law	68	57	53	81	76	76	67	85	74	111
Library science	40	35	49	39	39	41	32	46	32	24
Parks, sports, recreation, leisure and fitness	54	63	61	76	67	52	83	46	52	53
Public administration	126	118	132	127	119	121	143	184	139	208
Social work	308	289	280	330	325	307	294	296	358	330
Other fields nec	0	9	1	16	1	10	3	108	52	23
Unknown field	0	0	0	0	0	0	0	3	0	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 2014.
[d] This field was renamed from "Neurosciences" in 2012.
[e] This field was renamed from "Kinesiology/Exercise science" in 2012.
[f] This field was renamed from "Medicinal/Pharmaceutical sciences" in 2014.
[g] 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."

[h] This field was renamed from "Physiologial psychology/Psychobiology" in 2012.
[i] This field was renamed from "Anthropology" in 2014.
[j] This field is collected as "Economics."
[k] 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.
[l] This field was moved from "History" to "Other social sciences" in 2018.
[m] This field was renamed from "Environmental health engineering" in 2012.
[n] This field was renamed from "Reading education" in 2012.
[o] This field was renamed from "Drama, theater arts" in 2018.
[p] This field was renamed from "Film, cinema, video studies" in 2018.
[q] 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, 1989–2019

(Number and percent)

Field and sex	1989		1994		1999		2004		2009		2014		2019	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All fields[a]	34,325	100.0	40,880	100.0	40,923	100.0	42,120	100.0	49,518	100.0	53,821	100.0	55,693	100.0
Male	21,812	63.5	25,058	61.3	23,438	57.3	22,965	54.5	26,331	53.2	29,008	53.9	30,151	54.1
Female	12,513	36.5	15,822	38.7	17,485	42.7	19,155	45.5	23,187	46.8	24,813	46.1	25,542	45.9
Life sciences[b]	6,410	100.0	7,771	100.0	8,173	100.0	8,813	100.0	11,393	100.0	12,444	100.0	12,780	100.0
Male	3,966	61.9	4,526	58.2	4,530	55.4	4,450	50.5	5,183	45.5	5,514	44.3	5,819	45.5
Female	2,444	38.1	3,245	41.8	3,643	44.6	4,363	49.5	6,210	54.5	6,930	55.7	6,961	54.5
Physical sciences and earth sciences	3,916	100.0	4,713	100.0	4,267	100.0	4,022	100.0	5,151	100.0	5,892	100.0	6,581	100.0
Male	3,169	80.9	3,726	79.1	3,257	76.3	2,920	72.6	3,533	68.6	3,968	67.3	4,368	66.4
Female	747	19.1	987	20.9	1,010	23.7	1,102	27.4	1,618	31.4	1,924	32.7	2,213	33.6
Mathematics and computer sciences	1,471	100.0	2,014	100.0	1,929	100.0	2,024	100.0	3,159	100.0	3,846	100.0	4,239	100.0
Male	1,208	82.1	1,641	81.5	1,495	77.5	1,520	75.1	2,327	73.7	2,912	75.7	3,144	74.2
Female	263	17.9	373	18.5	434	22.5	504	24.9	832	26.3	934	24.3	1,095	25.8
Psychology and social sciences	6,225	100.0	6,895	100.0	7,361	100.0	7,158	100.0	7,943	100.0	8,724	100.0	9,071	100.0
Male	3,375	54.2	3,444	49.9	3,332	45.3	3,191	44.6	3,297	41.5	3,507	40.2	3,672	40.5
Female	2,850	45.8	3,451	50.1	4,029	54.7	3,967	55.4	4,646	58.5	5,217	59.8	5,399	59.5
Engineering	4,543	100.0	5,784	100.0	5,292	100.0	5,776	100.0	7,637	100.0	9,585	100.0	10,301	100.0
Male	4,168	91.7	5,149	89.0	4,504	85.1	4,755	82.3	6,006	78.6	7,401	77.2	7,833	76.0
Female	375	8.3	635	11.0	788	14.9	1,021	17.7	1,631	21.4	2,184	22.8	2,468	24.0
Education	6,280	100.0	6,702	100.0	6,538	100.0	6,634	100.0	6,527	100.0	4,779	100.0	4,635	100.0
Male	2,670	42.5	2,612	39.0	2,339	35.8	2,264	34.1	2,161	33.1	1,468	30.7	1,422	30.7
Female	3,610	57.5	4,090	61.0	4,199	64.2	4,370	65.9	4,366	66.9	3,311	69.3	3,213	69.3
Humanities and arts	3,520	100.0	4,684	100.0	5,247	100.0	5,245	100.0	4,903	100.0	5,520	100.0	5,052	100.0
Male	2,023	57.5	2,554	54.5	2,760	52.6	2,574	49.1	2,404	49.0	2,760	50.0	2,479	49.1
Female	1,497	42.5	2,130	45.5	2,487	47.4	2,671	50.9	2,499	51.0	2,760	50.0	2,573	50.9
Other[c]	1,960	100.0	2,317	100.0	2,116	100.0	2,448	100.0	2,805	100.0	3,031	100.0	3,034	100.0
Male	1,233	62.9	1,406	60.7	1,221	57.7	1,291	52.7	1,420	50.6	1,478	48.8	1,414	46.6
Female	727	37.1	911	39.3	895	42.3	1,157	47.3	1,385	49.4	1,553	51.2	1,620	53.4

[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: 2010–19

(Number and percent)

Sex and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
All doctorate recipients[a]	48,028	48,909	50,943	52,703	53,986	54,886	54,809	54,554	55,103	55,703	16.0
Life sciences	11,319	11,535	11,964	12,207	12,484	12,493	12,539	12,554	12,757	12,781	12.9
Agricultural sciences and natural resources	1,100	1,206	1,255	1,324	1,338	1,434	1,379	1,493	1,443	1,491	35.5
Biological and biomedical sciences	8,046	8,152	8,322	8,354	8,868	8,783	8,863	8,566	8,783	8,702	8.2
Health sciences	2,173	2,177	2,387	2,529	2,278	2,276	2,297	2,495	2,531	2,588	19.1
Physical sciences and earth sciences	4,995	5,271	5,419	5,584	5,910	5,916	6,251	6,082	6,332	6,585	31.8
Chemistry	2,304	2,432	2,416	2,484	2,673	2,666	2,703	2,699	2,809	2,941	27.6
Geosciences, atmospheric sciences, and ocean sciences	862	852	941	989	1,098	1,057	1,227	1,169	1,185	1,274	47.8
Physics and astronomy	1,829	1,987	2,062	2,111	2,139	2,193	2,321	2,214	2,338	2,370	29.6
Mathematics and computer sciences	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,024	4,240	31.6
Computer and information sciences	1,633	1,667	1,793	1,843	1,988	2,003	2,082	1,998	2,001	2,228	36.4
Mathematics and statistics	1,590	1,606	1,703	1,817	1,874	1,815	1,872	1,844	2,023	2,012	26.5
Psychology and social sciences	7,882	8,220	8,498	8,580	8,748	9,073	9,037	9,036	8,879	9,071	15.1
Psychology	3,420	3,576	3,599	3,592	3,724	3,776	3,910	3,926	3,823	3,936	15.1
Anthropology	507	553	547	550	523	492	460	446	424	445	-12.2
Economics	1,073	1,121	1,243	1,183	1,196	1,255	1,236	1,239	1,245	1,247	16.2
Political science and government	728	685	724	803	775	859	745	743	734	707	-2.9
Sociology	639	656	633	636	678	741	613	683	668	633	-0.9
Other social sciences	1,515	1,629	1,752	1,816	1,852	1,950	2,073	1,999	1,985	2,103	38.8
Engineering	7,578	8,032	8,469	9,000	9,626	9,875	9,459	9,776	10,166	10,303	36.0
Aerospace, aeronautical, and astronautical engineering	252	262	307	348	386	361	370	379	383	379	50.4
Bioengineering and biomedical engineering	824	898	943	1,039	1,046	1,125	1,089	1,032	1,133	1,164	41.3
Chemical engineering	822	823	840	824	973	1,002	921	931	981	981	19.3
Civil engineering	643	634	495	542	617	632	564	713	676	701	9.0
Electrical, electronics, and communications engineering	1,778	1,886	1,938	1,897	1,952	1,997	1,823	1,879	1,944	1,799	1.2
Industrial and manufacturing engineering	215	258	226	241	298	243	256	249	272	234	8.8
Materials science engineering	670	662	743	815	832	871	984	937	993	992	48.1
Mechanical engineering	983	1,084	1,220	1,277	1,331	1,466	1,297	1,399	1,503	1,533	56.0
Other engineering	1,391	1,525	1,757	2,017	2,191	2,178	2,155	2,257	2,281	2,520	81.2
Education	5,287	4,670	4,802	4,934	4,789	5,098	5,146	4,826	4,824	4,635	-12.3
Education administration	1,439	924	1,057	965	893	920	824	922	896	839	-41.7
Education research	2,443	2,438	2,568	2,703	2,560	2,772	2,384	2,418	2,503	2,303	-5.7
Teacher education	245	204	156	109	152	156	180	114	96	104	-57.6
Teaching fields	799	805	757	892	915	953	1,166	925	960	960	20.2
Other education	361	299	264	265	269	297	592	447	369	429	18.8
Humanities and arts	5,015	5,225	5,561	5,715	5,524	5,594	5,482	5,286	5,140	5,054	0.8
Foreign languages and literature	601	644	684	701	674	656	599	618	617	610	1.5
History	1,005	1,065	1,086	1,148	1,186	1,146	1,148	1,058	948	912	-9.3
Letters	1,516	1,513	1,638	1,606	1,551	1,583	1,531	1,462	1,439	1,387	-8.5
Other humanities and arts	1,893	2,003	2,153	2,260	2,113	2,209	2,204	2,148	2,136	2,145	13.3
Other[b]	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,152	2,981	3,034	11.2
Business management and administration	1,366	1,327	1,404	1,551	1,584	1,582	1,509	1,565	1,475	1,536	12.4
Communication	638	650	595	645	663	667	672	622	630	543	-14.9

Table 15

Doctorate recipients, by sex and major field of study: 2010–19

(Number and percent)

Sex and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
Non-S&E fields nec	725	706	735	827	796	770	760	962	876	955	31.7
Unknown field	0	0	0	0	0	0	0	3	0	0	0.0
Male	25,524	26,188	27,362	28,326	29,008	29,532	29,572	29,081	29,754	30,151	18.1
Life sciences	5,101	5,243	5,335	5,492	5,514	5,563	5,628	5,612	5,650	5,819	14.1
Agricultural sciences and natural resources	609	652	698	702	691	746	755	755	746	761	25.0
Biological and biomedical sciences	3,823	3,878	3,891	3,941	4,088	4,100	4,154	4,056	4,081	4,200	9.9
Health sciences	669	713	746	849	735	717	719	801	823	858	28.3
Physical sciences and earth sciences	3,379	3,629	3,684	3,717	3,968	3,928	4,285	4,068	4,212	4,368	29.3
Chemistry	1,440	1,508	1,521	1,497	1,642	1,592	1,712	1,667	1,742	1,790	24.3
Geosciences, atmospheric sciences, and ocean sciences	496	522	538	539	622	600	716	644	659	740	49.2
Physics and astronomy	1,443	1,599	1,625	1,681	1,704	1,736	1,857	1,757	1,811	1,838	27.4
Mathematics and computer sciences	2,409	2,456	2,638	2,792	2,912	2,877	2,994	2,867	3,038	3,144	30.5
Computer and information sciences	1,286	1,312	1,419	1,502	1,580	1,581	1,662	1,548	1,566	1,717	33.5
Mathematics and statistics	1,123	1,144	1,219	1,290	1,332	1,296	1,332	1,319	1,472	1,427	27.1
Psychology and social sciences	3,357	3,332	3,539	3,501	3,507	3,757	3,741	3,670	3,636	3,672	9.4
Psychology	1,031	1,003	1,040	997	1,063	1,057	1,133	1,123	1,095	1,118	8.4
Anthropology	201	223	187	188	195	185	171	155	126	155	-22.9
Economics	703	734	840	767	785	821	819	812	849	818	16.4
Political science and government	434	389	420	469	433	527	462	449	429	433	-0.2
Sociology	250	254	230	259	247	284	257	263	250	229	-8.4
Other social sciences	738	729	822	821	784	883	899	868	887	919	24.5
Engineering	5,829	6,242	6,565	6,946	7,401	7,578	7,267	7,341	7,712	7,833	34.4
Aerospace, aeronautical, and astronautical engineering	215	228	268	293	330	308	314	336	337	323	50.2
Bioengineering and biomedical engineering	509	563	608	684	660	698	686	605	687	720	41.5
Chemical engineering	574	566	583	566	682	685	624	659	688	665	15.9
Civil engineering	473	486	388	417	465	457	437	508	506	542	14.6
Electrical, electronics, and communications engineering	1,462	1,579	1,594	1,616	1,614	1,704	1,529	1,524	1,600	1,501	2.7
Industrial and manufacturing engineering	159	180	164	176	209	154	185	168	204	172	8.2
Materials science engineering	495	496	556	598	617	648	721	688	719	701	41.6
Mechanical engineering	858	934	1,042	1,081	1,126	1,265	1,096	1,160	1,285	1,283	49.5
Other engineering	1,084	1,210	1,362	1,515	1,698	1,659	1,675	1,693	1,686	1,926	77.7
Education	1,661	1,432	1,500	1,570	1,468	1,605	1,545	1,519	1,495	1,422	-14.4
Education administration	547	349	389	372	371	344	304	344	323	342	-37.5
Education research	706	699	761	826	723	849	718	772	764	653	-7.5
Teacher education	59	38	43	22	35	36	43	21	18	20	-66.1
Teaching fields	233	250	229	275	265	294	313	263	271	260	11.6
Other education	116	96	78	75	74	82	167	119	119	147	26.7
Humanities and arts	2,462	2,571	2,741	2,829	2,760	2,763	2,639	2,580	2,565	2,479	0.7
Foreign languages and literature	218	248	238	271	248	238	228	237	247	215	-1.4
History	556	586	602	632	664	632	621	594	513	529	-4.9
Letters	625	615	659	665	657	647	600	591	585	560	-10.4
Other humanities and arts	1,063	1,122	1,242	1,261	1,191	1,246	1,190	1,158	1,220	1,175	10.5
Other[b]	1,326	1,283	1,360	1,479	1,478	1,461	1,473	1,424	1,446	1,414	6.6

Table 15

Doctorate recipients, by sex and major field of study: 2010–19

(Number and percent)

Sex and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
Business management and administration	814	792	837	909	909	934	932	872	863	874	7.4
Communication	247	233	244	244	277	256	261	197	234	205	-17.0
Non-S&E fields nec	265	258	279	326	292	271	280	353	349	335	26.4
Unknown field	0	0	0	0	0	0	0	2	0	0	0.0
Female	22,488	22,699	23,526	24,365	24,813	25,347	25,222	25,451	25,321	25,542	13.6
Life sciences	6,213	6,289	6,614	6,712	6,930	6,929	6,908	6,937	7,101	6,961	12.0
Agricultural sciences and natural resources	490	554	554	622	646	688	623	736	694	730	49.0
Biological and biomedical sciences	4,219	4,272	4,422	4,410	4,747	4,682	4,707	4,508	4,699	4,501	6.7
Health sciences	1,504	1,463	1,638	1,680	1,537	1,559	1,578	1,693	1,708	1,730	15.0
Physical sciences and earth sciences	1,615	1,640	1,730	1,864	1,924	1,987	1,963	2,013	2,117	2,213	37.0
Chemistry	864	922	894	985	1,021	1,074	991	1,031	1,067	1,151	33.2
Geosciences, atmospheric sciences, and ocean sciences	366	330	403	449	475	457	510	525	526	533	45.6
Physics and astronomy	385	388	433	430	428	456	462	457	524	529	37.4
Mathematics and computer sciences	814	813	855	868	934	939	959	974	982	1,095	34.5
Computer and information sciences	347	353	374	341	400	422	420	450	434	510	47.0
Mathematics and statistics	467	460	481	527	534	517	539	524	548	585	25.3
Psychology and social sciences	4,524	4,887	4,955	5,077	5,217	5,315	5,295	5,362	5,241	5,399	19.3
Psychology	2,389	2,573	2,558	2,594	2,648	2,719	2,776	2,803	2,728	2,818	18.0
Anthropology	306	330	360	362	328	307	289	291	298	290	-5.2
Economics	369	387	402	416	404	434	417	425	396	429	16.3
Political science and government	294	296	303	333	341	332	283	294	304	274	-6.8
Sociology	389	402	402	377	431	457	356	419	418	404	3.9
Other social sciences	777	899	930	995	1,065	1,066	1,174	1,130	1,097	1,184	52.4
Engineering	1,746	1,782	1,887	2,052	2,184	2,297	2,189	2,429	2,450	2,468	41.4
Aerospace, aeronautical, and astronautical engineering	37	34	39	55	55	53	56	43	46	56	51.4
Bioengineering and biomedical engineering	315	335	335	355	384	427	403	427	445	444	41.0
Chemical engineering	248	256	256	258	290	317	296	271	293	316	27.4
Civil engineering	169	147	106	125	147	175	127	203	170	159	-5.9
Electrical, electronics, and communications engineering	315	301	336	279	325	293	293	355	344	297	-5.7
Industrial and manufacturing engineering	55	78	62	65	89	89	71	80	68	62	12.7
Materials science engineering	175	166	184	217	211	223	262	249	274	290	65.7
Mechanical engineering	125	150	177	196	197	201	201	239	216	250	100.0
Other engineering	307	315	392	502	486	519	480	562	594	594	93.5
Education	3,624	3,234	3,298	3,364	3,311	3,492	3,601	3,305	3,328	3,213	-11.3
Education administration	892	574	665	593	522	576	520	578	573	497	-44.3
Education research	1,736	1,736	1,807	1,877	1,828	1,922	1,666	1,645	1,738	1,650	-5.0
Teacher education	186	166	113	87	117	120	137	92	78	84	-54.8
Teaching fields	566	555	527	617	649	659	853	662	689	700	23.7
Other education	244	203	186	190	195	215	425	328	250	282	15.6
Humanities and arts	2,552	2,654	2,818	2,885	2,760	2,830	2,842	2,705	2,572	2,573	0.8
Foreign languages and literature	382	396	446	430	424	418	371	381	370	394	3.1
History	449	479	484	516	521	514	527	464	435	383	-14.7
Letters	891	898	978	941	894	936	931	871	853	827	-7.2
Other humanities and arts	830	881	910	998	921	962	1,013	989	914	969	16.7

Table 15

Doctorate recipients, by sex and major field of study: 2010–19

(Number and percent)

Sex and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
Other[b]	1,400	1,400	1,369	1,543	1,553	1,558	1,465	1,726	1,530	1,620	15.7
Business management and administration	550	535	564	641	669	648	575	692	609	662	20.4
Communication	390	417	350	401	383	411	410	425	395	338	-13.3
Non-S&E fields nec	460	448	455	501	501	499	480	609	526	620	34.8
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: 2019

(Number and percent)

Field of study	Total[a]	Male	Female	% female
All fields	55,703	30,151	25,542	45.9
Life sciences	12,781	5,819	6,961	54.5
Agricultural sciences and natural resources	1,491	761	730	49.0
Agricultural sciences	917	477	440	48.0
Agricultural economics	117	79	38	32.5
Agronomy, horticulture science, plant breeding, plant pathology, plant sciences-other	362	212	150	41.4
Animal nutrition, poultry science	81	39	42	51.9
Animal sciences, other	120	45	75	62.5
Food science, food technology-other	156	61	95	60.9
Soil chemistry and microbiology, soil sciences-other	81	41	40	49.4
Natural resources and conservation	497	241	256	51.5
Environmental science	229	103	126	55.0
Fishing and fisheries sciences and management	63	30	33	52.4
Forest biology, forest management, forestry sciences-other	74	41	33	44.6
Natural resources policy and environmental economics	75	38	37	49.3
Natural resources and conservation, wildlife and range management	56	29	27	48.2
Agricultural sciences, aggregated	77	43	34	44.2
Biological and biomedical sciences	8,702	4,200	4,501	51.7
Anatomy, developmental biology	138	52	86	62.3
Bacteriology, parasitology, and virology	168	87	81	48.2
Biochemistry (biological sciences)	793	449	343	43.3
Bioinformatics	242	173	69	28.5
Biomedical sciences	386	182	204	52.8
Biometrics and biostatistics	221	115	106	48.0
Biophysics (biological sciences)	175	110	65	37.1
Botany, plant pathology, plant physiology	142	68	74	52.1
Cancer biology	364	172	192	52.7
Cell, cellular biology, and histology	201	92	109	54.2
Computational biology	184	117	67	36.4
Ecology	433	185	248	57.3
Endocrinology, human/ animal pathology	62	24	38	61.3
Entomology	124	63	61	49.2
Environmental toxicology	67	22	45	67.2
Epidemiology	362	128	234	64.6
Evolutionary biology	238	126	112	47.1
Genetics and genomics, human and animal	342	159	183	53.5
Immunology	413	201	212	51.3
Microbiology	430	175	255	59.3
Molecular biology	555	244	311	56.0
Molecular medicine	34	16	18	52.9
Neurosciences, neurobiology	1,042	538	504	48.4
Nutrition sciences	201	52	149	74.1
Pharmacology, human and animal	199	86	113	56.8
Physiology, human and animal	177	83	94	53.1
Plant genetics	58	36	22	37.9
Structural biology	73	39	34	46.6
Toxicology	84	41	43	51.2
Wildlife biology, zoology	92	43	49	53.3
Biological and biomedical sciences, general	536	231	305	56.9
Biotechnology, biology/ biomedical sciences-other	166	91	75	45.2

Table 16

Doctorate recipients, by subfield of study and sex: 2019

(Number and percent)

Field of study	Total[a]	Male	Female	% female
Health sciences	2,588	858	1,730	66.8
Environmental health	90	32	58	64.4
Health and behavior	88	29	59	67.0
Health services/ systems administration	160	55	105	65.6
Kinesiology, exercise science	260	156	104	40.0
Medical physics, radiological science	90	62	28	31.1
Nursing science	548	66	482	88.0
Pharmaceutical sciences	359	182	177	49.3
Public health	452	115	337	74.6
Rehabilitation, therapeutic services	109	48	61	56.0
Speech-language pathology and audiology	116	17	99	85.3
Health sciences, aggregated	316	96	220	69.6
Physical sciences and earth sciences	6,585	4,368	2,213	33.6
Chemistry	2,941	1,790	1,151	39.1
Analytical chemistry	367	184	183	49.9
Chemical biology	185	102	83	44.9
Inorganic chemistry	386	240	146	37.8
Medicinal chemistry	94	63	31	33.0
Organic chemistry	564	392	172	30.5
Physical chemistry	390	250	140	35.9
Polymer chemistry	174	113	61	35.1
Theoretical chemistry	96	72	24	25.0
Chemistry, general	477	270	207	43.4
Chemistry, other	208	104	104	50.0
Geosciences, atmospheric sciences, and ocean sciences	1,274	740	533	41.8
Atmospheric science and meteorology	236	147	89	37.7
Atmospheric physics, meteorology	45	33	12	26.7
Atmospheric chemistry, atmospheric sciences-general, atmospheric sciences-other	191	114	77	40.3
Geological sciences	622	393	229	36.8
Geochemistry, mineralogy	74	44	30	40.5
Geology	149	84	65	43.6
Geomorphology, geological sciences-general, geological sciences-other	233	154	79	33.9
Geophysics and seismology	136	90	46	33.8
Paleontology, stratigraphy	30	21	9	30.0
Ocean and marine sciences	416	200	215	51.7
Marine biology and biological oceanography	88	36	52	59.1
Oceanography, chemical and physical	81	35	46	56.8
Ocean/ marine sciences, aggregated	247	129	117	47.4
Physics and astronomy	2,370	1,838	529	22.3
Astronomy and astrophysics	362	251	111	30.7
Astronomy	125	76	49	39.2
Astrophysics	231	172	59	25.5
Astronomy and astrophysics, other	6	3	3	50.0
Physics	2,008	1,587	418	20.8
Acoustics, optics/ photonics	235	189	46	19.6
Applied physics	164	121	43	26.2
Atomic physics, polymer physics	166	131	35	21.1
Biophysics (physics)	154	115	39	25.3
Condensed matter, low-temperature physics	400	327	73	18.3
Elementary particle physics	234	186	48	20.5

Table 16

Doctorate recipients, by subfield of study and sex: 2019

(Number and percent)

Field of study	Total[a]	Male	Female	% female
Nuclear physics	116	92	24	20.7
Plasma, high-temperature physics	63	56	7	11.1
Physics, general	321	246	73	22.7
Physics, other	155	124	30	19.4
Mathematics and computer sciences	4,240	3,144	1,095	25.8
Computer and information sciences	2,228	1,717	510	22.9
Computer science	1,821	1,456	365	20.0
Information science, systems	127	70	57	44.9
Computer and information sciences, general	154	100	54	35.1
Computer and information sciences, other	126	91	34	27.0
Mathematics and statistics	2,012	1,427	585	29.1
Algebra	82	61	21	25.6
Analysis and functional analysis	66	44	22	33.3
Applied mathematics, computing theory	438	305	133	30.4
Computational mathematics	94	71	23	24.5
Geometry, geometric analysis	72	63	9	12.5
Logic, topology/ foundations	62	48	14	22.6
Number theory	60	43	17	28.3
Operations research, mathematics/ statistics-general, mathematics/ statistics-other	773	570	203	26.3
Statistics (mathematics)	365	222	143	39.2
Psychology and social sciences	9,071	3,672	5,399	59.5
Psychology	3,936	1,118	2,818	71.6
Behavioral analysis	54	10	44	81.5
Clinical psychology	1,264	308	956	75.6
Cognitive neuroscience	215	101	114	53.0
Cognitive psychology and psycholinguistics	135	56	79	58.5
Community psychology	34	3	31	91.2
Counseling	295	81	214	72.5
Developmental and child psychology	176	24	152	86.4
Educational psychology (psychology)	108	22	86	79.6
Experimental psychology	137	55	82	59.9
Family psychology, human development and family studies	173	44	129	74.6
Health, medical psychology	82	14	68	82.9
Industrial and organizational psychology	183	66	117	63.9
Marriage and family therapy, counseling	96	19	77	80.2
Neuropsychology, physiological psychology	62	16	46	74.2
School psychology (psychology)	132	20	112	84.8
Social psychology	236	96	140	59.3
Psychology, general	251	85	166	66.1
Psychology, aggregated	303	98	205	67.7
Social sciences	5,135	2,554	2,581	50.3
Anthropology	445	155	290	65.2
Anthropology, cultural	294	102	192	65.3
Anthropology, general	77	35	42	54.5
Anthropology, physical and biological	74	18	56	75.7
Economics	1,247	818	429	34.4
Econometrics, economics	1,187	786	401	33.8
Natural resources and environmental economics (social sciences)	60	32	28	46.7
Political science and government	707	433	274	38.8
Sociology	633	229	404	63.8

Table 16

Doctorate recipients, by subfield of study and sex: 2019

(Number and percent)

Field of study	Total[a]	Male	Female	% female
Other social sciences	2,103	919	1,184	56.3
American, U.S. studies	67	20	47	70.1
Applied linguistics	100	37	63	63.0
Archaeology (social sciences)	117	52	65	55.6
Area, ethnic, and cultural studies	137	45	92	67.2
Criminal justice and corrections	142	63	79	55.6
Criminology	100	40	60	60.0
Demography, gerontology, statistics, urban affairs, social sciences- general, social sciences-other	259	97	162	62.5
Gender and women's studies	55	9	46	83.6
Geography	265	139	126	47.5
Health policy analysis	55	21	34	61.8
History, science and technology and society	74	31	43	58.1
International relations, international affairs	138	89	49	35.5
Linguistics	245	103	142	58.0
Public policy analysis	231	117	114	49.4
Urban, city, community and regional planning	118	56	62	52.5
Engineering	10,303	7,833	2,468	24.0
Aerospace, aeronautical, and astronautical engineering	379	323	56	14.8
Bioengineering and biomedical engineering	1,164	720	444	38.1
Chemical engineering	981	665	316	32.2
Civil engineering	701	542	159	22.7
Electrical, electronics, and communications engineering	1,799	1,501	297	16.5
Industrial and manufacturing engineering	234	172	62	26.5
Materials science engineering	992	701	290	29.2
Mechanical engineering	1,533	1,283	250	16.3
Other engineering	2,520	1,926	594	23.6
Computer engineering	446	389	57	12.8
Environmental, environmental health engineering	251	136	115	45.8
Nuclear engineering	156	127	29	18.6
Robotics	145	127	18	12.4
Structural engineering	146	111	35	24.0
Systems engineering	125	104	21	16.8
Other engineering, aggregated	1,251	932	319	25.5
Education	4,635	1,422	3,213	69.3
Education administration	839	342	497	59.2
Educational administration and supervision	154	75	79	51.3
Educational and human resource studies, development	57	25	32	56.1
Educational leadership	563	219	344	61.1
Urban education and leadership	65	23	42	64.6
Education research	2,303	653	1,650	71.6
Counseling education, counseling and guidance	255	58	197	77.3
Curriculum and instruction	391	102	289	73.9
Educational assessment, testing, measurement	46	14	32	69.6
Educational policy analysis	146	57	89	61.0
Educational psychology (education)	198	52	146	73.7
Educational statistics, research methods	86	29	57	66.3
Educational/ instructional technology, media design	195	69	126	64.6
Higher education evaluation and research	389	126	263	67.6
International education	51	10	41	80.4
Learning sciences	80	35	45	56.3

Table 16

Doctorate recipients, by subfield of study and sex: 2019

(Number and percent)

Field of study	Total[a]	Male	Female	% female
School psychology (education)	126	22	104	82.5
Social and philosophical foundations of education	78	25	53	67.9
Special education	262	54	208	79.4
Teacher education	104	20	84	80.8
Teaching fields	960	260	700	72.9
Health education	54	15	39	72.2
Literacy and reading education	127	26	101	79.5
Mathematics education	153	53	100	65.4
Music education	78	39	39	50.0
Science education	116	34	82	70.7
Teaching fields, aggregated	432	93	339	78.5
Other education	429	147	282	65.7
Workforce education and development	35	17	18	51.4
Education, general	216	68	148	68.5
Education, other	178	62	116	65.2
Humanities and arts	5,054	2,479	2,573	50.9
Foreign languages and literature	610	215	394	64.6
French	100	23	77	77.0
Germanic language and literature	74	29	45	60.8
Spanish language and literature	161	69	92	57.1
Other languages, aggregated	275	94	180	65.5
History	912	529	383	42.0
American history, United States and Canada	319	180	139	43.6
Asian history	71	47	24	33.8
European history	149	83	66	44.3
Latin American history	71	43	28	39.4
Middle, Near East history	61	37	24	39.3
History, general	139	83	56	40.3
History, aggregated	102	56	46	45.1
Letters	1,387	560	827	59.6
American literature, United States and Canada	255	112	143	56.1
Classics	96	60	36	37.5
Comparative literature	165	58	107	64.8
English language	120	40	80	66.7
English literature, British and Commonwealth	378	132	246	65.1
Rhetoric and composition	191	65	126	66.0
Speech and rhetorical studies	50	29	21	42.0
Letters, aggregated	132	64	68	51.5
Other humanities and arts	2,145	1,175	969	45.2
African American studies, literature, and history	65	26	39	60.0
Art history, criticism, and conservation	250	56	194	77.6
Dance, drama	109	41	67	61.5
Film, cinema, video studies	112	58	54	48.2
Music	57	37	20	35.1
Musicology and ethnomusicology	128	60	68	53.1
Music performance	76	40	36	47.4
Music theory and composition	111	82	29	26.1
Philosophy, ethics	474	312	162	34.2
Religion/ religious studies, Jewish/ Judaic studies	245	151	94	38.4
Theology, religious education	202	153	49	24.3

Table 16

Doctorate recipients, by subfield of study and sex: 2019

(Number and percent)

Field of study	Total[a]	Male	Female	% female
Other humanities, aggregated	316	159	157	49.7
Other[b]	3,034	1,414	1,620	53.4
Business management and administration	1,536	874	662	43.1
Accounting	162	89	73	45.1
Business administration and management	265	161	104	39.2
Finance	235	169	66	28.1
Human resources, organizational behavior	249	100	149	59.8
Management information systems, business statistics	99	63	36	36.4
Marketing management and research	107	45	62	57.9
Other aggregated business fields	419	247	172	41.1
Communication	543	205	338	62.2
Communication research	161	59	102	63.4
Mass communication, media studies	171	68	103	60.2
Communication, general	118	46	72	61.0
Communication, aggregated	93	32	61	65.6
Non-S&E fields nec	955	335	620	64.9
Architecture and environmental design	128	49	79	61.7
Family, consumer sciences and human sciences	78	18	60	76.9
Parks, sports, recreation, leisure and fitness	53	27	26	49.1
Public administration	208	90	118	56.7
Social work	330	70	260	78.8
Fields nec, aggregated	158	81	77	48.7

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, 1994–2019

(Number)

Field and citizenship status	1994	1999	2004	2009	2014	2019
All fields	41,034	41,100	42,122	49,552	53,986	55,703
U.S. citizen or permanent resident	30,904	30,312	28,040	32,327	34,003	35,274
Temporary visa holder	9,421	9,060	11,628	14,736	15,839	18,351
Unknown	709	1,728	2,454	2,489	4,144	2,078
Life sciences[a]	7,800	8,204	8,813	11,403	12,484	12,781
U.S. citizen or permanent resident	5,871	5,810	6,082	7,803	8,390	9,052
Temporary visa holder	1,849	2,137	2,316	3,097	3,169	3,406
Unknown	80	257	415	503	925	323
Physical sciences and earth sciences	4,740	4,285	4,023	5,160	5,910	6,585
U.S. citizen or permanent resident	3,360	2,736	2,300	2,914	3,300	3,903
Temporary visa holder	1,292	1,343	1,573	2,028	2,196	2,486
Unknown	88	206	150	218	414	196
Mathematics and computer sciences	2,021	1,939	2,024	3,163	3,862	4,240
U.S. citizen or permanent resident	1,201	1,098	959	1,506	1,738	1,787
Temporary visa holder	794	775	987	1,504	1,850	2,309
Unknown	26	66	78	153	274	144
Psychology and social sciences	6,923	7,389	7,158	7,945	8,748	9,071
U.S. citizen or permanent resident	5,595	5,936	5,348	5,714	6,389	6,723
Temporary visa holder	1,146	1,059	1,307	1,720	1,549	1,917
Unknown	182	394	503	511	810	431
Engineering	5,820	5,330	5,776	7,642	9,626	10,303
U.S. citizen or permanent resident	3,054	2,892	2,190	3,166	4,066	4,253
Temporary visa holder	2,652	2,191	3,311	4,221	4,961	5,683
Unknown	114	247	275	255	599	367
Education	6,711	6,554	6,635	6,528	4,789	4,635
U.S. citizen or permanent resident	6,066	5,817	5,452	5,584	3,934	3,848
Temporary visa holder	537	517	627	567	478	615
Unknown	108	220	556	377	377	172
Humanities and arts	4,695	5,273	5,245	4,904	5,524	5,054
U.S. citizen or permanent resident	4,033	4,487	4,232	3,893	4,361	3,988
Temporary visa holder	582	577	751	729	731	827
Unknown	80	209	262	282	432	239
Other[b]	2,324	2,126	2,448	2,807	3,043	3,034
U.S. citizen or permanent resident	1,724	1,536	1,477	1,747	1,825	1,720
Temporary visa holder	569	461	756	870	905	1,108
Unknown	31	129	215	190	313	206

[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: 2010–19

(Number and percent)

Citizenship status and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
All doctorate recipients[a]	48,028	48,909	50,943	52,703	53,986	54,886	54,809	54,554	55,103	55,703	16.0
Life sciences	11,319	11,535	11,964	12,207	12,484	12,493	12,539	12,554	12,757	12,781	12.9
Agricultural sciences and natural resources	1,100	1,206	1,255	1,324	1,338	1,434	1,379	1,493	1,443	1,491	35.5
Biological and biomedical sciences	8,046	8,152	8,322	8,354	8,868	8,783	8,863	8,566	8,783	8,702	8.2
Health sciences	2,173	2,177	2,387	2,529	2,278	2,276	2,297	2,495	2,531	2,588	19.1
Physical sciences and earth sciences	4,995	5,271	5,419	5,584	5,910	5,916	6,251	6,082	6,332	6,585	31.8
Chemistry	2,304	2,432	2,416	2,484	2,673	2,666	2,703	2,699	2,809	2,941	27.6
Geosciences, atmospheric sciences, and ocean sciences	862	852	941	989	1,098	1,057	1,227	1,169	1,185	1,274	47.8
Physics and astronomy	1,829	1,987	2,062	2,111	2,139	2,193	2,321	2,214	2,338	2,370	29.6
Mathematics and computer sciences	3,223	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,024	4,240	31.6
Computer and information sciences	1,633	1,667	1,793	1,843	1,988	2,003	2,082	1,998	2,001	2,228	36.4
Mathematics and statistics	1,590	1,606	1,703	1,817	1,874	1,815	1,872	1,844	2,023	2,012	26.5
Psychology and social sciences	7,882	8,220	8,498	8,580	8,748	9,073	9,037	9,036	8,879	9,071	15.1
Psychology	3,420	3,576	3,599	3,592	3,724	3,776	3,910	3,926	3,823	3,936	15.1
Anthropology	507	553	547	550	523	492	460	446	424	445	-12.2
Economics	1,073	1,121	1,243	1,183	1,196	1,255	1,236	1,239	1,245	1,247	16.2
Political science and government	728	685	724	803	775	859	745	743	734	707	-2.9
Sociology	639	656	633	636	678	741	613	683	668	633	-0.9
Other social sciences	1,515	1,629	1,752	1,816	1,852	1,950	2,073	1,999	1,985	2,103	38.8
Engineering	7,578	8,032	8,469	9,000	9,626	9,875	9,459	9,776	10,166	10,303	36.0
Aerospace, aeronautical, and astronautical engineering	252	262	307	348	386	361	370	379	383	379	50.4
Bioengineering and biomedical engineering	824	898	943	1,039	1,046	1,125	1,089	1,032	1,133	1,164	41.3
Chemical engineering	822	823	840	824	973	1,002	921	931	981	981	19.3
Civil engineering	643	634	495	542	617	632	564	713	676	701	9.0
Electrical, electronics, and communications engineering	1,778	1,886	1,938	1,897	1,952	1,997	1,823	1,879	1,944	1,799	1.2
Industrial and manufacturing engineering	215	258	226	241	298	243	256	249	272	234	8.8
Materials science engineering	670	662	743	815	832	871	984	937	993	992	48.1
Mechanical engineering	983	1,084	1,220	1,277	1,331	1,466	1,297	1,399	1,503	1,533	56.0
Other engineering	1,391	1,525	1,757	2,017	2,191	2,178	2,155	2,257	2,281	2,520	81.2
Education	5,287	4,670	4,802	4,934	4,789	5,098	5,146	4,826	4,824	4,635	-12.3
Education administration	1,439	924	1,057	965	893	920	824	922	896	839	-41.7
Education research	2,443	2,438	2,568	2,703	2,560	2,772	2,384	2,418	2,503	2,303	-5.7
Teacher education	245	204	156	109	152	156	180	114	96	104	-57.6
Teaching fields	799	805	757	892	915	953	1,166	925	960	960	20.2
Other education	361	299	264	265	269	297	592	447	369	429	18.8
Humanities and arts	5,015	5,225	5,561	5,715	5,524	5,594	5,482	5,286	5,140	5,054	0.8
Foreign languages and literature	601	644	684	701	674	656	599	618	617	610	1.5
History	1,005	1,065	1,086	1,148	1,186	1,146	1,148	1,058	948	912	-9.3
Letters	1,516	1,513	1,638	1,606	1,551	1,583	1,531	1,462	1,439	1,387	-8.5
Other humanities and arts	1,893	2,003	2,153	2,260	2,113	2,209	2,204	2,148	2,136	2,145	13.3
Other[b]	2,729	2,683	2,734	3,023	3,043	3,019	2,941	3,152	2,981	3,034	11.2
Business management and administration	1,366	1,327	1,404	1,551	1,584	1,582	1,509	1,565	1,475	1,536	12.4
Communication	638	650	595	645	663	667	672	622	630	543	-14.9

Table 18

Doctorate recipients, by citizenship status and major field of study: 2010–19

(Number and percent)

Citizenship status and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
Non-S&E fields nec	725	706	735	827	796	770	760	962	876	955	31.7
Unknown field	0	0	0	0	0	0	0	3	0	0	0.0
U.S. citizen or permanent resident	31,602	31,725	32,981	33,964	34,003	35,071	35,678	35,736	35,342	35,274	11.6
Life sciences	7,812	7,892	8,184	8,352	8,390	8,470	8,683	8,826	9,025	9,052	15.9
Agricultural sciences and natural resources	618	697	675	737	754	774	771	822	793	822	33.0
Biological and biomedical sciences	5,585	5,614	5,790	5,768	5,993	6,029	6,215	6,147	6,392	6,380	14.2
Health sciences	1,609	1,581	1,719	1,847	1,643	1,667	1,697	1,857	1,840	1,850	15.0
Physical sciences and earth sciences	2,860	3,048	3,148	3,247	3,300	3,481	3,669	3,714	3,769	3,903	36.5
Chemistry	1,323	1,407	1,385	1,443	1,447	1,572	1,581	1,696	1,710	1,781	34.6
Geosciences, atmospheric sciences, and ocean sciences	573	555	623	654	722	704	803	790	760	809	41.2
Physics and astronomy	964	1,086	1,140	1,150	1,131	1,205	1,285	1,228	1,299	1,313	36.2
Mathematics and computer sciences	1,599	1,603	1,627	1,631	1,738	1,663	1,729	1,748	1,735	1,787	11.8
Computer and information sciences	761	790	785	758	807	774	783	801	742	800	5.1
Mathematics and statistics	838	813	842	873	931	889	946	947	993	987	17.8
Psychology and social sciences	5,803	6,070	6,319	6,464	6,389	6,685	6,798	6,846	6,687	6,723	15.9
Psychology	2,874	3,062	3,046	3,067	3,042	3,103	3,341	3,377	3,308	3,349	16.5
Anthropology	384	455	445	457	405	397	360	349	335	359	-6.5
Economics	459	428	517	505	469	552	522	547	483	491	7.0
Political science and government	522	488	536	593	574	621	579	572	543	504	-3.4
Sociology	519	511	512	516	544	596	506	562	556	511	-1.5
Other social sciences	1,045	1,126	1,263	1,326	1,355	1,416	1,490	1,439	1,462	1,509	44.4
Engineering	3,332	3,350	3,579	3,767	4,066	4,219	4,181	4,311	4,212	4,253	27.6
Aerospace, aeronautical, and astronautical engineering	141	145	181	194	246	216	233	241	221	212	50.4
Bioengineering and biomedical engineering	516	564	602	637	674	723	746	695	743	772	49.6
Chemical engineering	433	393	377	365	445	488	470	469	469	480	10.9
Civil engineering	231	216	159	182	229	231	219	231	200	200	-13.4
Electrical, electronics, and communications engineering	627	617	614	603	575	632	548	581	543	518	-17.4
Industrial and manufacturing engineering	62	100	75	77	91	65	82	85	62	84	35.5
Materials science engineering	313	278	350	349	363	381	456	470	462	501	60.1
Mechanical engineering	403	440	505	547	558	620	585	591	607	600	48.9
Other engineering	606	597	716	813	885	863	842	948	905	886	46.2
Education	4,476	3,878	4,040	4,118	3,934	4,196	4,303	4,052	4,026	3,848	-14.0
Education administration	1,296	833	936	844	763	797	727	792	784	754	-41.8
Education research	2,059	1,989	2,143	2,216	2,104	2,273	1,981	2,029	2,057	1,907	-7.4
Teacher education	203	156	134	90	132	134	158	97	87	87	-57.1
Teaching fields	646	679	613	741	732	762	950	763	785	772	19.5
Other education	272	221	214	227	203	230	487	371	313	328	20.6
Humanities and arts	4,029	4,191	4,434	4,535	4,361	4,478	4,450	4,297	4,145	3,988	-1.0
Foreign languages and literature	389	426	472	467	469	463	399	430	406	383	-1.5
History	843	893	889	947	968	944	950	890	800	741	-12.1
Letters	1,287	1,289	1,383	1,354	1,304	1,353	1,314	1,277	1,232	1,188	-7.7
Other humanities and arts	1,510	1,583	1,690	1,767	1,620	1,718	1,787	1,700	1,707	1,676	11.0
Other[b]	1,691	1,693	1,650	1,850	1,825	1,879	1,865	1,942	1,743	1,720	1.7

Table 18

Doctorate recipients, by citizenship status and major field of study: 2010–19

(Number and percent)

Citizenship status and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
Business management and administration	746	755	736	831	849	892	845	858	740	747	0.1
Communication	468	473	426	471	473	479	472	458	434	349	-25.4
Non-S&E fields nec	477	465	488	548	503	508	548	626	569	624	30.8
Unknown field	0	0	0	0	0	0	0	0	0	0	0.0
Temporary visa holder	13,636	14,235	14,784	15,674	15,839	16,129	16,477	16,287	17,584	18,351	34.6
Life sciences	2,926	3,029	3,197	3,177	3,169	3,264	3,352	3,331	3,359	3,406	16.4
Agricultural sciences and natural resources	412	472	529	516	504	555	561	607	607	648	57.3
Biological and biomedical sciences	2,084	2,124	2,166	2,154	2,229	2,266	2,304	2,180	2,157	2,136	2.5
Health sciences	430	433	502	507	436	443	487	544	595	622	44.7
Physical sciences and earth sciences	1,884	1,955	1,959	2,032	2,196	2,099	2,313	2,160	2,374	2,486	32.0
Chemistry	847	907	880	888	1,000	929	1,000	919	1,022	1,071	26.4
Geosciences, atmospheric sciences, and ocean sciences	251	246	281	290	326	307	390	332	392	430	71.3
Physics and astronomy	786	802	798	854	870	863	923	909	960	985	25.3
Mathematics and computer sciences	1,446	1,449	1,617	1,833	1,850	1,917	2,053	1,926	2,128	2,309	59.7
Computer and information sciences	760	759	870	990	1,029	1,094	1,201	1,105	1,164	1,333	75.4
Mathematics and statistics	686	690	747	843	821	823	852	821	964	976	42.3
Psychology and social sciences	1,553	1,588	1,601	1,634	1,549	1,622	1,753	1,667	1,769	1,917	23.4
Psychology	270	238	254	282	249	260	305	286	285	339	25.6
Anthropology	88	73	74	76	86	68	76	65	70	66	-25.0
Economics	556	623	656	615	627	606	656	641	706	708	27.3
Political science and government	162	150	150	163	145	178	128	140	159	173	6.8
Sociology	95	113	85	92	90	101	89	93	88	105	10.5
Other social sciences	382	391	382	406	352	409	499	442	461	526	37.7
Engineering	3,866	4,164	4,355	4,759	4,961	5,108	4,842	5,037	5,576	5,683	47.0
Aerospace, aeronautical, and astronautical engineering	99	100	107	138	124	132	121	123	146	153	54.5
Bioengineering and biomedical engineering	290	291	292	352	318	348	301	300	362	359	23.8
Chemical engineering	359	379	414	409	482	461	401	426	478	479	33.4
Civil engineering	378	373	303	333	339	359	307	427	442	462	22.2
Electrical, electronics, and communications engineering	1,040	1,109	1,181	1,160	1,217	1,237	1,160	1,215	1,317	1,198	15.2
Industrial and manufacturing engineering	142	152	140	156	185	161	164	157	196	140	-1.4
Materials science engineering	326	350	334	435	419	448	494	428	501	461	41.4
Mechanical engineering	519	568	631	664	686	783	652	742	831	880	69.6
Other engineering	713	842	953	1,112	1,191	1,179	1,242	1,219	1,303	1,551	117.5
Education	478	497	460	515	478	539	562	534	611	615	28.7
Education administration	35	41	46	44	39	35	33	51	52	54	54.3
Education research	277	294	278	319	265	327	279	308	366	317	14.4
Teacher education	19	26	13	17	14	13	13	12	8	16	-15.8
Teaching fields	112	96	101	116	134	145	181	132	155	165	47.3
Other education	35	40	22	19	26	19	56	31	30	63	80.0
Humanities and arts	667	767	761	779	731	713	712	692	738	827	24.0
Foreign languages and literature	179	180	160	179	142	151	164	159	180	202	12.8
History	113	131	136	134	147	131	142	125	112	130	15.0
Letters	134	157	141	150	140	122	126	122	139	149	11.2
Other humanities and arts	241	299	324	316	302	309	280	286	307	346	43.6

Table 18

Doctorate recipients, by citizenship status and major field of study: 2010–19

(Number and percent)

Citizenship status and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
Other[b]	816	786	834	945	905	867	890	940	1,029	1,108	35.8
Business management and administration	499	477	542	600	589	546	553	588	643	690	38.3
Communication	131	132	107	133	137	137	160	122	165	163	24.4
Non-S&E fields nec	186	177	185	212	179	184	177	230	221	255	37.1
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: 2010–19

(Number)

Ethnicity, race, and citizenship status	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All doctorate recipients	48,028	48,909	50,943	52,703	53,986	54,886	54,809	54,554	55,103	55,703
U.S. citizen or permanent resident	31,602	31,725	32,981	33,964	34,003	35,071	35,678	35,736	35,342	35,274
Temporary visa holder	13,636	14,235	14,784	15,674	15,839	16,129	16,477	16,287	17,584	18,351
Unknown citizenship	2,790	2,949	3,178	3,065	4,144	3,686	2,654	2,531	2,177	2,078
Hispanic or Latino	2,702	2,915	3,064	3,073	3,147	3,422	3,572	3,566	3,590	4,007
U.S. citizen or permanent resident	1,842	1,989	2,144	2,135	2,190	2,449	2,548	2,537	2,570	2,848
Temporary visa holder	849	922	916	921	944	964	1,016	996	1,016	1,149
Unknown citizenship	11	4	4	17	13	9	8	33	4	10
Not Hispanic or Latino										
American Indian or Alaska Native	129	135	107	126	109	141	136	111	116	125
U.S. citizen or permanent resident	117	127	104	119	103	131	128	109	115	120
Temporary visa holder[a]	12	8	D	7	6	10	8	D	D	5
Unknown citizenship	0	0	D	0	0	0	0	D	D	0
Asian	11,583	12,311	12,850	13,430	13,556	13,833	14,052	14,259	14,798	15,200
U.S. citizen or permanent resident	2,738	2,832	2,943	2,892	2,881	3,072	3,084	3,499	3,300	3,421
Temporary visa holder	8,822	9,451	9,889	10,514	10,662	10,741	10,931	10,730	11,463	11,731
Unknown citizenship	23	28	18	24	13	20	37	30	35	48
Black or African American	2,380	2,313	2,528	2,655	2,654	2,773	2,866	2,951	3,051	3,095
U.S. citizen or permanent resident	1,939	1,899	2,055	2,172	2,172	2,275	2,358	2,399	2,450	2,512
Temporary visa holder	426	404	469	479	477	493	502	530	595	572
Unknown citizenship	15	10	4	4	5	5	6	22	6	11
White	25,964	26,173	26,982	27,871	27,947	28,619	28,766	28,348	28,543	28,118
U.S. citizen or permanent resident	23,100	23,278	24,010	24,749	24,829	25,375	25,502	24,845	24,914	24,248
Temporary visa holder	2,810	2,841	2,931	3,070	3,086	3,180	3,224	3,428	3,595	3,775
Unknown citizenship	54	54	41	52	32	64	40	75	34	95
More than one race	711	780	868	929	939	971	1,116	1,110	1,211	1,265
U.S. citizen or permanent resident	654	722	807	858	879	903	1,033	1,015	1,100	1,121
Temporary visa holder	54	58	61	71	60	67	83	D	D	144
Unknown citizenship	3	0	0	0	0	1	0	D	D	0
Other race or race not reported	441	464	462	447	411	458	470	787	862	896
U.S. citizen or permanent resident	272	248	293	279	272	249	272	470	371	381
Temporary visa holder	160	212	D	147	125	171	174	279	477	477
Unknown citizenship	9	4	D	21	14	38	24	38	14	38
Ethnicity not reported	4,118	3,818	4,082	4,172	5,223	4,669	3,831	3,422	2,932	2,997
U.S. citizen or permanent resident	940	630	625	760	677	617	753	862	522	623
Temporary visa holder	503	339	355	465	479	503	539	229	326	498
Unknown citizenship	2,675	2,849	3,102	2,947	4,067	3,549	2,539	2,331	2,084	1,876

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: 2010–19

(Number)

Ethnicity, race, and citizenship status	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All doctorate recipients	25,524	26,188	27,362	28,326	29,008	29,532	29,572	29,081	29,754	30,151
U.S. citizen or permanent resident	15,275	15,396	16,072	16,550	16,660	17,218	17,530	17,552	17,308	17,279
Temporary visa holder	8,768	9,179	9,556	10,103	10,204	10,395	10,671	10,600	11,311	11,783
Unknown citizenship	1,481	1,613	1,734	1,673	2,144	1,919	1,371	929	1,135	1,089
Hispanic or Latino	1,383	1,494	1,549	1,523	1,588	1,758	1,766	1,805	1,865	2,013
U.S. citizen or permanent resident	815	893	948	905	999	1,119	1,134	1,153	1,196	1,303
Temporary visa holder	563	598	599	612	580	634	630	633	666	707
Unknown citizenship	5	3	2	6	9	5	2	19	3	3
Not Hispanic or Latino										
American Indian or Alaska Native	64	56	42	62	54	64	63	49	44	58
U.S. citizen or permanent resident	58	50	41	56	49	58	57	48	43	56
Temporary visa holder[a]	6	D	D	D	D	D	6	D	D	D
Unknown citizenship	0	D	D	D	D	D	0	D	D	D
Asian	6,919	7,407	7,730	8,038	8,091	8,235	8,538	8,664	8,901	9,192
U.S. citizen or permanent resident	1,220	1,263	1,312	1,264	1,243	1,359	1,432	1,651	1,561	1,628
Temporary visa holder	5,687	6,131	6,405	6,761	6,842	6,867	7,081	6,997	7,315	7,539
Unknown citizenship	12	13	13	13	6	9	25	16	25	25
Black or African American	977	917	1,047	1,101	1,151	1,113	1,205	1,202	1,324	1,263
U.S. citizen or permanent resident	697	666	741	801	821	807	863	847	923	893
Temporary visa holder	274	248	303	297	329	306	341	347	398	367
Unknown citizenship	6	3	3	3	1	0	1	8	3	3
White	13,439	13,601	14,041	14,608	14,624	15,101	15,155	14,945	14,979	14,901
U.S. citizen or permanent resident	11,604	11,737	12,168	12,582	12,590	12,978	13,033	12,662	12,603	12,377
Temporary visa holder	1,809	1,838	1,859	2,005	2,021	2,101	2,103	2,246	2,362	2,480
Unknown citizenship	26	26	14	21	13	22	19	37	14	44
More than one race	293	381	384	432	451	436	511	517	556	587
U.S. citizen or permanent resident	263	346	347	388	411	394	455	462	485	495
Temporary visa holder	28	35	37	44	40	42	56	D	D	D
Unknown citizenship	2	0	0	0	0	0	0	D	D	D
Other race or race not reported	236	273	260	243	249	291	278	467	529	522
U.S. citizen or permanent resident	139	136	148	148	162	152	149	269	215	207
Temporary visa holder	94	D	D	D	D	D	118	191	306	299
Unknown citizenship	3	D	D	D	D	D	11	7	8	16
Ethnicity not reported	2,213	2,059	2,309	2,319	2,800	2,534	2,056	1,432	1,556	1,615
U.S. citizen or permanent resident	479	305	367	406	385	351	407	460	282	320
Temporary visa holder	307	189	243	290	305	320	336	130	192	297
Unknown citizenship	1,427	1,565	1,699	1,623	2,110	1,863	1,313	842	1,082	998

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: 2010–19

(Number)

Ethnicity, race, and citizenship status	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All doctorate recipients	22,488	22,699	23,526	24,365	24,813	25,347	25,222	25,451	25,321	25,542
U.S. citizen or permanent resident	16,327	16,329	16,909	17,414	17,343	17,853	18,147	18,183	18,033	17,994
Temporary visa holder	4,868	5,056	5,224	5,571	5,633	5,734	5,805	5,686	6,273	6,567
Unknown citizenship	1,293	1,314	1,393	1,380	1,837	1,760	1,270	1,582	1,015	981
Hispanic or Latino	1,319	1,421	1,515	1,550	1,559	1,664	1,806	1,761	1,724	1,994
U.S. citizen or permanent resident	1,027	1,096	1,196	1,230	1,191	1,330	1,414	1,384	1,373	1,545
Temporary visa holder	286	324	317	309	364	330	386	363	350	442
Unknown citizenship	6	1	2	11	4	4	6	14	1	7
Not Hispanic or Latino										
American Indian or Alaska Native	65	79	65	64	55	77	73	62	72	67
U.S. citizen or permanent resident	59	77	63	63	54	73	71	61	72	64
Temporary visa holder[a]	6	D	D	D	D	D	D	D	0	D
Unknown citizenship	0	D	D	D	D	D	D	D	0	D
Asian	4,662	4,904	5,117	5,392	5,465	5,598	5,513	5,593	5,897	6,008
U.S. citizen or permanent resident	1,518	1,569	1,631	1,628	1,638	1,713	1,652	1,847	1,739	1,793
Temporary visa holder	3,135	3,320	3,481	3,753	3,820	3,874	3,849	3,732	4,148	4,192
Unknown citizenship	9	15	5	11	7	11	12	14	10	23
Black or African American	1,403	1,396	1,481	1,554	1,503	1,660	1,661	1,749	1,727	1,832
U.S. citizen or permanent resident	1,242	1,233	1,314	1,371	1,351	1,468	1,495	1,552	1,527	1,619
Temporary visa holder	152	156	166	182	148	187	161	183	197	205
Unknown citizenship	9	7	1	1	4	5	5	14	3	8
White	12,525	12,572	12,941	13,263	13,323	13,518	13,611	13,403	13,564	13,216
U.S. citizen or permanent resident	11,496	11,541	11,842	12,167	12,239	12,397	12,469	12,183	12,311	11,870
Temporary visa holder	1,001	1,003	1,072	1,065	1,065	1,079	1,121	1,182	1,233	1,295
Unknown citizenship	28	28	27	31	19	42	21	38	20	51
More than one race	418	399	484	497	488	535	605	593	655	678
U.S. citizen or permanent resident	391	376	460	470	468	509	578	553	615	626
Temporary visa holder	26	23	24	27	20	25	27	D	40	D
Unknown citizenship	1	0	0	0	0	1	0	D	0	D
Other race or race not reported	205	191	202	204	162	167	192	320	333	374
U.S. citizen or permanent resident	133	112	145	131	110	97	123	201	156	174
Temporary visa holder	66	D	D	D	D	D	D	88	171	178
Unknown citizenship	6	D	D	D	D	D	D	31	6	22
Ethnicity not reported	1,891	1,737	1,721	1,841	2,258	2,128	1,761	1,970	1,349	1,373
U.S. citizen or permanent resident	461	325	258	354	292	266	345	402	240	303
Temporary visa holder	196	150	111	175	172	183	203	99	134	200
Unknown citizenship	1,234	1,262	1,352	1,312	1,794	1,679	1,213	1,469	975	870

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: 2019

(Number)

Field 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	55,703	18,351	35,274	2,848	120	3,421	2,512	24,248	1,121	381	623
Life sciences	12,781	3,406	9,052	775	29	1,042	540	6,158	296	90	122
Agricultural sciences and natural resources	1,491	648	822	54	5	46	40	636	19	9	13
Agricultural sciences	917	463	446	28	2	26	18	356	8	3	5
Agricultural economics	117	81	35	3	0	0	2	29	1	0	0
Agronomy, horticulture science, plant breeding, plant pathology, plant sciences-other	362	177	181	14	1	15	5	135	5	2	4
Animal nutrition, poultry science	81	34	47	2	1	1	1	40	1	0	1
Animal sciences, other	120	38	80	5	0	0	4	71	0	0	0
Food science, food technology-other	156	105	51	1	0	8	4	37	0	1	0
Soil chemistry and microbiology, soil sciences-other	81	28	52	3	0	2	2	44	1	0	0
Natural resources and conservation	497	153	333	24	3	18	18	249	10	5	6
Environmental science	229	74	148	15	1	10	12	100	2	5	3
Fishing and fisheries sciences and management	63	12	49	5	1	2	0	40	1	0	0
Forest biology, forest management, forestry sciences-other	74	20	52	1	0	5	0	40	3	0	3
Natural resources policy and environmental economics	75	29	46	3	0	1	4	35	3	0	0
Natural resources and conservation, wildlife and range management	56	18	38	0	1	0	2	34	1	0	0
Agricultural sciences, aggregated	77	32	43	2	0	2	4	31	1	1	2
Biological and biomedical sciences	8,702	2,136	6,380	600	14	809	276	4,323	228	64	66
Anatomy, developmental biology	138	30	106	8	0	8	8	77	3	1	1

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	168	28	140	13	0	16	7	96	7	1	0
Biochemistry (biological sciences)	793	227	547	43	3	66	21	382	20	6	6
Bioinformatics	242	98	140	2	0	27	1	103	2	1	4
Biomedical sciences	386	98	278	37	1	38	28	161	5	1	7
Biometrics and biostatistics	221	106	111	5	0	38	4	58	2	3	1
Biophysics (biological sciences)	175	51	121	14	0	14	3	82	4	2	2
Botany, plant pathology, plant physiology	142	49	93	11	0	6	2	70	3	1	0
Cancer biology	364	113	248	37	0	43	13	145	5	3	2
Cell, cellular biology, and histology	201	53	135	14	0	19	7	87	7	1	0
Computational biology	184	68	116	7	1	24	3	73	7	1	0
Ecology	433	39	387	26	1	10	5	322	18	2	3
Endocrinology, human / animal pathology	62	28	32	4	0	1	3	22	1	1	0
Entomology	124	41	83	5	0	8	4	66	0	0	0
Environmental toxicology	67	10	56	4	0	5	6	38	2	1	0
Epidemiology	362	66	292	17	0	36	29	192	10	3	5
Evolutionary biology	238	45	192	15	0	14	3	146	12	1	1
Genetics and genomics, human and animal	342	66	272	20	0	35	8	191	12	3	3
Immunology	413	93	315	34	0	52	17	195	15	2	0
Microbiology	430	84	341	43	2	44	8	230	11	2	1
Molecular biology	555	139	410	38	2	67	14	274	11	3	1
Molecular medicine	34	5	28	3	0	4	4	17	0	0	0
Neurosciences, neurobiology	1,042	183	836	91	1	103	20	573	27	10	11
Nutrition sciences	201	59	137	8	0	16	10	94	4	1	4
Pharmacology, human and animal	199	44	146	10	0	16	9	103	4	3	1
Physiology, human and animal	177	31	141	18	1	18	7	85	7	1	4
Plant genetics	58	24	33	3	1	1	3	24	1	0	0
Structural biology	73	22	51	5	0	8	3	31	3	0	1
Toxicology	84	25	57	7	0	7	5	36	2	0	0
Wildlife biology, zoology	92	7	84	5	0	2	1	73	2	1	0

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	536	152	351	42	1	50	17	212	18	6	5
Biotechnology, biology / biomedical sciences-other	166	52	101	11	0	13	3	65	3	3	3
Health sciences	2,588	622	1,850	121	10	187	224	1,199	49	17	43
Environmental health	90	32	58	5	0	10	6	35	1	1	0
Health and behavior	88	18	67	4	0	13	14	31	3	1	1
Health services / systems administration	160	38	119	3	0	24	23	63	3	1	2
Kinesiology, exercise science	260	48	206	13	2	2	8	170	3	0	8
Medical physics, radiological science	90	23	67	4	0	7	1	53	2	0	0
Nursing science	548	62	461	27	3	34	43	332	10	6	6
Pharmaceutical sciences	359	206	129	6	0	25	12	77	5	0	4
Public health	452	63	375	34	4	35	81	194	15	5	7
Rehabilitation, therapeutic services	109	31	70	4	0	4	4	52	2	0	4
Speech-language pathology and audiology	116	24	88	3	0	7	9	68	0	1	0
Health sciences, aggregated	316	77	210	18	1	26	23	124	5	2	11
Physical sciences and earth sciences	6,585	2,486	3,903	269	8	366	88	2,943	140	34	55
Chemistry	2,941	1,071	1,781	149	3	187	62	1,275	66	13	26
Analytical chemistry	367	147	217	21	0	17	11	163	4	1	0
Chemical biology	185	59	125	7	0	18	5	84	10	0	1
Inorganic chemistry	386	118	264	21	0	24	8	200	10	1	0
Medicinal chemistry	94	37	55	3	0	5	4	42	1	0	0
Organic chemistry	564	216	348	26	2	42	17	244	14	2	1
Physical chemistry	390	138	250	22	0	25	5	186	10	2	0
Polymer chemistry	174	84	89	9	0	8	2	66	3	1	0
Theoretical chemistry	96	42	53	4	0	7	1	40	1	0	0
Chemistry, general	477	183	222	19	1	24	4	139	9	5	21
Chemistry, other	208	47	158	17	0	17	5	111	4	1	3
Geosciences, atmospheric sciences, and ocean sciences	1,274	430	809	52	4	31	15	656	31	9	11
Atmospheric science and meteorology	236	86	143	8	1	7	2	117	2	1	5

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	45	19	25	1	0	2	0	22	0	0	0
Atmospheric chemistry, atmospheric sciences-general, atmospheric sciences-other	191	67	118	7	1	5	2	95	2	1	5
Geological sciences	622	202	397	24	2	11	9	327	13	6	5
Geochemistry, mineralogy	74	16	58	6	0	5	0	44	2	0	1
Geology	149	44	103	1	1	0	5	86	4	4	2
Geomorphology, geological sciences-general, geological sciences-other	233	73	150	7	1	5	2	126	5	2	2
Geophysics and seismology	136	66	60	7	0	1	1	50	1	0	0
Paleontology, stratigraphy	30	3	26	3	0	0	1	21	1	0	0
Ocean and marine sciences	416	142	269	20	1	13	4	212	16	2	1
Marine biology and biological oceanography	88	7	81	7	0	4	0	66	3	1	0
Oceanography, chemical and physical	81	39	41	5	0	0	0	33	2	0	1
Ocean / marine sciences, aggregated	247	96	147	8	1	9	4	113	11	1	0
Physics and astronomy	2,370	985	1,313	68	1	148	11	1,012	43	12	18
Astronomy and astrophysics	362	106	251	14	1	19	0	203	12	0	2
Astronomy	125	42	80	4	0	5	0	66	5	0	0
Astrophysics	231	62	167	10	1	14	0	133	7	0	2
Astronomy and astrophysics, other	6	2	4	0	0	0	0	4	0	0	0
Physics	2,008	879	1,062	54	0	129	11	809	31	12	16
Acoustics, optics / photonics	235	117	114	9	0	14	1	83	6	0	1
Applied physics	164	59	90	5	0	13	0	68	0	3	1
Atomic physics, polymer physics	166	75	90	2	0	11	1	74	0	1	1
Biophysics (physics)	154	65	89	2	0	15	2	63	1	5	1

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	400	210	187	8	0	22	1	149	5	1	1
Elementary particle physics	234	109	119	4	0	15	1	92	6	0	1
Nuclear physics	116	30	84	7	0	3	1	70	3	0	0
Plasma, high-temperature physics	63	21	42	5	0	5	0	31	1	0	0
Physics, general	321	127	159	7	0	15	3	116	6	2	10
Physics, other	155	66	88	5	0	16	1	63	3	0	0
Mathematics and computer sciences	4,240	2,309	1,787	103	1	252	69	1,235	68	27	32
Computer and information sciences	2,228	1,333	800	38	1	134	37	539	27	12	12
Computer science	1,821	1,129	624	28	1	114	21	429	18	7	6
Information science, systems	127	47	67	4	0	2	7	45	4	2	3
Computer and information sciences, general	154	98	52	4	0	13	3	29	2	1	0
Computer and information sciences, other	126	59	57	2	0	5	6	36	3	2	3
Mathematics and statistics	2,012	976	987	65	0	118	32	696	41	15	20
Algebra	82	32	50	3	0	8	0	33	5	1	0
Analysis and functional analysis	66	35	30	1	0	5	1	23	0	0	0
Applied mathematics, computing theory	438	205	226	19	0	22	12	160	5	4	4
Computational mathematics	94	46	46	1	0	5	4	33	3	0	0
Geometry, geometric analysis	72	32	39	1	0	3	0	33	2	0	0
Logic, topology / foundations	62	19	43	1	0	5	0	33	2	2	0
Number theory	60	27	33	1	0	7	0	24	1	0	0
Operations research, mathematics / statistics-general, mathematics / statistics-other	773	362	386	33	0	35	9	275	16	4	14
Statistics (mathematics)	365	218	134	5	0	28	6	82	7	4	2
Psychology and social sciences	9,071	1,917	6,723	629	30	443	593	4,553	243	79	153
Psychology	3,936	339	3,349	323	15	196	284	2,285	122	34	90
Behavioral analysis	54	0	54	2	0	2	4	42	1	1	2

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	1,264	48	1,144	109	6	64	86	799	36	15	29
Cognitive neuroscience	215	36	173	8	0	14	6	129	11	3	2
Cognitive psychology and psycholinguistics	135	22	111	8	0	14	5	82	2	0	0
Community psychology	34	4	25	3	0	0	3	16	3	0	0
Counseling	295	22	249	23	3	13	28	153	9	4	16
Developmental and child psychology	176	19	157	26	1	12	6	103	6	1	2
Educational psychology (psychology)	108	14	87	6	1	3	18	54	3	1	1
Experimental psychology	137	13	121	5	0	7	4	100	4	1	0
Family psychology, human development and family studies	173	34	132	15	1	5	14	86	6	0	5
Health, medical psychology	82	4	76	7	0	2	8	50	2	0	7
Industrial and organizational psychology	183	15	160	18	1	6	18	110	2	1	4
Marriage and family therapy, counseling	96	5	72	11	0	4	15	40	2	0	0
Neuropsychology, physiological psychology	62	4	55	8	0	7	0	37	3	0	0
School psychology (psychology)	132	6	124	12	0	8	14	85	4	1	0
Social psychology	236	32	200	12	0	14	14	141	16	2	1
Psychology, general	251	22	175	23	1	6	19	103	5	2	16
Psychology, aggregated	303	39	234	27	1	15	22	155	7	2	5
Social sciences	5,135	1,578	3,374	306	15	247	309	2,268	121	45	63
Anthropology	445	66	359	39	1	18	20	246	21	8	6
Anthropology, cultural	294	54	234	25	0	16	19	157	11	5	1
Anthropology, general	77	8	56	9	0	1	0	34	6	1	5
Anthropology, physical and biological	74	4	69	5	1	1	1	55	4	2	0
Economics	1,247	708	491	32	0	75	21	330	12	6	15
Econometrics, economics	1,187	684	455	30	0	70	18	305	11	6	15

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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)	60	24	36	2	0	5	3	25	1	0	0
Political science and government	707	173	504	43	0	30	23	379	13	8	8
Sociology	633	105	511	51	1	24	47	351	21	5	11
Other social sciences	2,103	526	1,509	141	13	100	198	962	54	18	23
American, U.S. studies	67	8	57	6	1	5	7	33	3	1	1
Applied linguistics	100	50	46	4	1	6	1	31	2	1	0
Archaeology (social sciences)	117	14	102	6	1	0	3	85	5	0	2
Area, ethnic, and cultural studies	137	32	98	31	4	8	14	30	4	4	3
Criminal justice and corrections	142	8	121	4	2	3	34	70	1	1	6
Criminology	100	13	86	11	1	1	6	63	3	0	1
Demography, gerontology, statistics, urban affairs, social sciences- general, social sciences- other	259	66	183	16	0	15	37	106	4	4	1
Gender and women's studies	55	7	46	4	0	5	6	25	5	1	0
Geography	265	86	175	9	0	9	9	140	4	0	4
Health policy analysis	55	12	43	2	1	5	7	27	1	0	0
History, science and technology and society	74	15	59	2	0	1	1	50	3	0	2
International relations, international affairs	138	34	99	13	0	9	4	68	3	2	0
Linguistics	245	83	154	14	2	14	5	105	10	3	1
Public policy analysis	231	46	180	9	0	12	54	99	5	0	1
Urban, city, community and regional planning	118	52	60	10	0	7	10	30	1	1	1
Engineering	10,303	5,683	4,253	306	9	718	178	2,800	124	50	68
Aerospace, aeronautical, and astronautical engineering	379	153	212	14	1	20	6	166	2	1	2

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	1,164	359	772	65	0	171	27	459	29	7	14
Chemical engineering	981	479	480	30	3	81	27	314	15	3	7
Civil engineering	701	462	200	8	0	27	10	146	3	2	4
Electrical, electronics, and communications engineering	1,799	1,198	518	35	2	127	18	309	11	4	12
Industrial and manufacturing engineering	234	140	84	3	0	10	9	58	2	1	1
Materials science engineering	992	461	501	39	1	79	25	321	19	12	5
Mechanical engineering	1,533	880	600	35	2	76	16	436	17	10	8
Other engineering	2,520	1,551	886	77	0	127	40	591	26	10	15
Computer engineering	446	323	106	9	0	25	2	64	4	2	0
Environmental, environmental health engineering	251	134	115	16	0	10	3	79	4	1	2
Nuclear engineering	156	61	94	10	0	5	1	74	2	1	1
Robotics	145	72	71	2	0	15	2	49	1	1	1
Structural engineering	146	98	48	6	0	2	1	35	3	0	1
Systems engineering	125	45	78	7	0	13	7	43	2	2	4
Other engineering, aggregated	1,251	818	374	27	0	57	24	247	10	3	6
Education	4,635	615	3,848	318	26	206	619	2,485	109	33	52
Education administration	839	54	754	54	8	20	199	446	13	5	9
Educational administration and supervision	154	13	134	9	1	3	44	66	3	2	6
Educational and human resource studies, development	57	12	45	0	0	2	7	35	1	0	0
Educational leadership	563	28	511	37	7	11	114	330	7	3	2
Urban education and leadership	65	1	64	8	0	4	34	15	2	0	1
Education research	2,303	317	1,907	161	8	114	268	1,252	64	18	22
Counseling education, counseling and guidance	255	14	226	14	0	10	48	146	5	0	3
Curriculum and instruction	391	70	302	23	0	19	36	210	5	4	5

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	46	13	33	3	0	4	5	20	1	0	0
Educational policy analysis	146	14	130	10	0	9	21	85	2	2	1
Educational psychology (education)	198	19	174	14	2	14	17	113	8	5	1
Educational statistics, research methods	86	24	60	5	0	3	7	43	2	0	0
Educational / instructional technology, media design	195	54	135	6	0	9	22	89	6	3	0
Higher education evaluation and research	389	21	364	39	1	14	68	222	16	1	3
International education	51	14	35	5	0	2	2	24	2	0	0
Learning sciences	80	11	64	5	0	3	5	46	3	0	2
School psychology (education)	126	8	113	9	1	12	10	72	5	1	3
Social and philosophical foundations of education	78	14	60	11	2	5	7	31	2	0	2
Special education	262	41	211	17	2	10	20	151	7	2	2
Teacher education	104	16	87	4	0	2	15	64	2	0	0
Teaching fields	960	165	772	61	3	48	86	538	20	7	9
Health education	54	2	51	4	0	2	23	21	1	0	0
Literacy and reading education	127	19	101	9	0	4	6	78	2	0	2
Mathematics education	153	28	123	5	2	10	14	83	6	2	1
Music education	78	9	67	2	0	3	7	50	2	2	1
Science education	116	14	98	10	0	6	10	65	5	2	0
Teaching fields, aggregated	432	93	332	31	1	23	26	241	4	1	5
Other education	429	63	328	38	7	22	51	185	10	3	12
Workforce education and development	35	3	30	0	0	1	8	19	1	0	1
Education, general	216	34	154	24	1	17	19	78	3	2	10
Education, other	178	26	144	14	6	4	24	88	6	1	1
Humanities and arts	5,054	827	3,988	337	10	204	179	3,005	105	44	104
Foreign languages and literature	610	202	383	90	1	19	10	245	7	4	7
French	100	36	62	5	0	0	5	50	0	1	1
Germanic language and literature	74	20	51	4	0	0	1	41	2	1	2

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	161	47	110	57	0	2	2	47	0	1	1
Other languages, aggregated	275	99	160	24	1	17	2	107	5	1	3
History	912	130	741	58	3	28	32	579	19	6	16
American history, United States and Canada	319	14	302	17	2	5	14	247	9	1	7
Asian history	71	36	34	0	0	7	0	25	2	0	0
European history	149	19	127	6	0	1	0	118	2	0	0
Latin American history	71	17	53	24	0	1	2	24	2	0	0
Middle, Near East history	61	17	41	0	0	5	0	31	1	3	1
History, general	139	17	92	4	0	6	7	65	3	0	7
History, aggregated	102	10	92	7	1	3	9	69	0	2	1
Letters	1,387	149	1,188	77	4	48	38	946	29	13	33
American literature, United States and Canada	255	19	235	14	0	10	9	191	8	3	0
Classics	96	11	79	3	1	1	1	69	2	0	2
Comparative literature	165	47	111	7	0	7	6	86	1	1	3
English language	120	15	77	8	1	3	4	41	2	3	15
English literature, British and Commonwealth	378	36	338	19	1	15	7	286	7	1	2
Rhetoric and composition	191	7	183	9	1	4	7	153	5	2	2
Speech and rhetorical studies	50	4	46	4	0	3	3	25	0	2	9
Letters, aggregated	132	10	119	13	0	5	1	95	4	1	0
Other humanities and arts	2,145	346	1,676	112	2	109	99	1,235	50	21	48
African American studies, literature, and history	65	6	58	5	0	0	33	15	4	0	1
Art history, criticism, and conservation	250	28	210	18	0	19	1	153	14	2	3
Dance, drama	109	10	95	9	0	5	3	72	2	2	2
Film, cinema, video studies	112	26	85	8	0	5	4	66	2	0	0
Music	57	7	44	6	0	2	0	24	0	0	12
Musicology and ethnomusicology	128	16	106	4	1	7	4	86	1	1	2
Music performance	76	20	50	1	0	4	2	40	1	1	1
Music theory and composition	111	23	85	5	0	4	2	71	2	1	0
Philosophy, ethics	474	86	367	23	0	19	15	285	10	4	11

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	
Religion / religious studies, Jewish / Judaic studies	245	31	193	12	0	18	11	137	7	3	5
Theology, religious education	202	29	163	9	0	10	10	121	3	4	6
Other humanities, aggregated	316	64	220	12	1	16	14	165	4	3	5
Other [b]	3,034	1,108	1,720	111	7	190	246	1,069	36	24	37
Business management and administration	1,536	690	747	42	1	124	106	441	11	10	12
Accounting	162	66	91	1	0	17	3	65	2	2	1
Business administration and management	265	125	123	6	1	19	21	68	2	2	4
Finance	235	138	85	4	0	25	6	49	0	0	1
Human resources, organizational behavior	249	45	187	11	0	18	41	107	5	2	3
Management information systems, business statistics	99	58	40	0	0	10	8	22	0	0	0
Marketing management and research	107	62	42	3	0	9	1	28	1	0	0
Other aggregated business fields	419	196	179	17	0	26	26	102	1	4	3
Communication	543	163	349	24	1	21	35	243	7	6	12
Communication research	161	49	105	7	1	4	10	78	2	1	2
Mass communication, media studies	171	62	102	10	0	8	14	62	1	2	5
Communication, general	118	25	82	4	0	7	3	62	2	1	3
Communication, aggregated	93	27	60	3	0	2	8	41	2	2	2
Non-S&E fields nec	955	255	624	45	5	45	105	385	18	8	13
Architecture and environmental design	128	56	70	3	0	11	3	50	2	1	0
Family, consumer sciences and human sciences	78	23	53	3	0	4	13	28	2	1	2
Parks, sports, recreation, leisure and fitness	53	15	35	1	2	1	2	28	1	0	0
Public administration	208	42	149	11	0	8	42	80	5	3	0

Table 22

Doctorate recipients, by subfield of study, citizenship status, ethnicity, and race: 2019

(Number)

Field 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	
Social work	330	45	266	24	3	12	44	165	7	2	9
Fields nec, aggregated	158	74	51	3	0	9	1	34	1	1	2

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, 1999–2019

(Number)

Field, ethnicity, and race	1999	2004	2009	2014	2019
All fields	30,312	28,040	32,327	34,003	35,274
Hispanic or Latino	1,328	1,302	1,880	2,190	2,848
Not Hispanic or Latino					
American Indian or Alaska Native	214	125	132	103	120
Asian[a]	2,497	2,022	2,612	2,881	3,421
Black or African American	1,765	1,897	2,168	2,172	2,512
White	23,901	21,011	23,616	24,829	24,248
More than one race	na	386	646	879	1,121
Other race or race not reported[b]	352	402	338	272	381
Ethnicity not reported	255	895	935	677	623
Life sciences[c]	5,810	6,082	7,803	8,390	9,052
Hispanic or Latino	238	255	390	529	775
Not Hispanic or Latino					
American Indian or Alaska Native	27	19	29	20	29
Asian[a]	751	611	784	883	1,042
Black or African American	206	272	410	501	540
White	4,482	4,587	5,782	6,040	6,158
More than one race	na	80	158	234	296
Other race or race not reported[b]	69	88	76	63	90
Ethnicity not reported	37	170	174	120	122
Physical sciences and earth sciences	2,736	2,300	2,914	3,300	3,903
Hispanic or Latino	84	74	131	204	269
Not Hispanic or Latino					
American Indian or Alaska Native	15	9	5	9	8
Asian[a]	287	173	217	252	366
Black or African American	77	65	82	100	88
White	2,215	1,822	2,289	2,546	2,943
More than one race	na	37	47	91	140
Other race or race not reported[b]	23	52	30	33	34
Ethnicity not reported	35	68	113	65	55
Mathematics and computer sciences	1,098	959	1,506	1,738	1,787
Hispanic or Latino	30	39	56	66	103
Not Hispanic or Latino					
American Indian or Alaska Native	2	2	3	4	1
Asian[a]	143	126	204	222	252
Black or African American	31	25	51	75	69
White	861	713	1,107	1,289	1,235
More than one race	na	16	32	34	68
Other race or race not reported[b]	16	13	19	14	27
Ethnicity not reported	15	25	34	34	32
Psychology and social sciences	5,936	5,348	5,714	6,389	6,723
Hispanic or Latino	332	299	408	463	629
Not Hispanic or Latino					
American Indian or Alaska Native	63	21	28	30	30
Asian[a]	315	303	354	406	443
Black or African American	349	360	380	438	593
White	4,768	4,042	4,193	4,703	4,553
More than one race	na	84	152	175	243

Table 23

U.S. citizen and permanent resident doctorate recipients, by broad field of study, ethnicity, and race: Selected years, 1999–2019

(Number)

Field, ethnicity, and race	1999	2004	2009	2014	2019
Other race or race not reported[b]	69	75	62	41	79
Ethnicity not reported	40	164	137	133	153
Engineering	2,892	2,190	3,166	4,066	4,253
Hispanic or Latino	83	88	160	244	306
Not Hispanic or Latino					
American Indian or Alaska Native	12	6	10	7	9
Asian[a]	513	349	487	580	718
Black or African American	98	89	132	168	178
White	2,111	1,525	2,111	2,826	2,800
More than one race	na	23	56	103	124
Other race or race not reported[b]	35	46	29	41	50
Ethnicity not reported	40	64	181	97	68
Education	5,817	5,452	5,584	3,934	3,848
Hispanic or Latino	303	273	390	259	318
Not Hispanic or Latino					
American Indian or Alaska Native	58	46	42	19	26
Asian[a]	168	149	211	198	206
Black or African American	689	749	788	522	619
White	4,506	3,915	3,886	2,710	2,485
More than one race	na	61	90	92	109
Other race or race not reported[b]	62	51	53	23	33
Ethnicity not reported	31	208	124	111	52
Humanities and arts	4,487	4,232	3,893	4,361	3,988
Hispanic or Latino	203	214	256	312	337
Not Hispanic or Latino					
American Indian or Alaska Native	21	12	10	12	10
Asian[a]	214	217	203	186	204
Black or African American	178	171	158	156	179
White	3,763	3,362	3,027	3,469	3,005
More than one race	na	60	80	115	105
Other race or race not reported[b]	59	61	54	39	44
Ethnicity not reported	49	135	105	72	104
Other[d]	1,536	1,477	1,747	1,825	1,720
Hispanic or Latino	55	60	89	113	111
Not Hispanic or Latino					
American Indian or Alaska Native	16	10	5	2	7
Asian[a]	106	94	152	154	190
Black or African American	137	166	167	212	246
White	1,195	1,045	1,221	1,246	1,069
More than one race	na	25	31	35	36
Other race or race not reported[b]	19	16	15	18	24
Ethnicity not reported	8	61	67	45	37

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: 2019

(Number and percent distribution)

Field of study	All U.S. citizen and permanent resident doctorate recipients (number)	U.S. citizen or permanent resident								
		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	35,274	100.0	8.1	0.3	9.7	7.1	68.7	3.2	1.1	1.8
Life sciences	9,052	100.0	8.6	0.3	11.5	6.0	68.0	3.3	1.0	1.3
Agricultural sciences and natural resources	822	100.0	6.6	0.6	5.6	4.9	77.4	2.3	1.1	1.6
Biological and biomedical sciences	6,380	100.0	9.4	0.2	12.7	4.3	67.8	3.6	1.0	1.0
Health sciences	1,850	100.0	6.5	0.5	10.1	12.1	64.8	2.6	0.9	2.3
Physical sciences and earth sciences	3,903	100.0	6.9	0.2	9.4	2.3	75.4	3.6	0.9	1.4
Chemistry	1,781	100.0	8.4	0.2	10.5	3.5	71.6	3.7	0.7	1.5
Geosciences, atmospheric sciences, and ocean sciences	809	100.0	6.4	0.5	3.8	1.9	81.1	3.8	1.1	1.4
Physics and astronomy	1,313	100.0	5.2	0.1	11.3	0.8	77.1	3.3	0.9	1.4
Mathematics and computer sciences	1,787	100.0	5.8	0.1	14.1	3.9	69.1	3.8	1.5	1.8
Computer and information sciences	800	100.0	4.8	0.1	16.8	4.6	67.4	3.4	1.5	1.5
Mathematics and statistics	987	100.0	6.6	0.0	12.0	3.2	70.5	4.2	1.5	2.0
Psychology and social sciences	6,723	100.0	9.4	0.4	6.6	8.8	67.7	3.6	1.2	2.3
Psychology	3,349	100.0	9.6	0.4	5.9	8.5	68.2	3.6	1.0	2.7
Anthropology	359	100.0	10.9	0.3	5.0	5.6	68.5	5.8	2.2	1.7
Economics	491	100.0	6.5	0.0	15.3	4.3	67.2	2.4	1.2	3.1
Political science and government	504	100.0	8.5	0.0	6.0	4.6	75.2	2.6	1.6	1.6
Sociology	511	100.0	10.0	0.2	4.7	9.2	68.7	4.1	1.0	2.2
Other social sciences	1,509	100.0	9.3	0.9	6.6	13.1	63.8	3.6	1.2	1.5
Engineering	4,253	100.0	7.2	0.2	16.9	4.2	65.8	2.9	1.2	1.6
Aerospace, aeronautical, and astronautical engineering	212	100.0	6.6	0.5	9.4	2.8	78.3	0.9	0.5	0.9
Bioengineering and biomedical engineering	772	100.0	8.4	0.0	22.2	3.5	59.5	3.8	0.9	1.8
Chemical engineering	480	100.0	6.3	0.6	16.9	5.6	65.4	3.1	0.6	1.5
Civil engineering	200	100.0	4.0	0.0	13.5	5.0	73.0	1.5	1.0	2.0
Electrical, electronics, and communications engineering	518	100.0	6.8	0.4	24.5	3.5	59.7	2.1	0.8	2.3

Table 24

U.S. citizen and permanent resident doctorate recipients, by major field of study, ethnicity, and race: 2019

(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	84	100.0	3.6	0.0	11.9	10.7	69.0	2.4	1.2	1.2
Materials science engineering	501	100.0	7.8	0.2	15.8	5.0	64.1	3.8	2.4	1.0
Mechanical engineering	600	100.0	5.8	0.3	12.7	2.7	72.7	2.8	1.7	1.3
Other engineering	886	100.0	8.7	0.0	14.3	4.5	66.7	2.9	1.1	1.7
Education	3,848	100.0	8.3	0.7	5.4	16.1	64.6	2.8	0.9	1.4
Education administration	754	100.0	7.2	1.1	2.7	26.4	59.2	1.7	0.7	1.2
Education research	1,907	100.0	8.4	0.4	6.0	14.1	65.7	3.4	0.9	1.2
Teacher education	87	100.0	4.6	0.0	2.3	17.2	73.6	2.3	0.0	0.0
Teaching fields	772	100.0	7.9	0.4	6.2	11.1	69.7	2.6	0.9	1.2
Other education	328	100.0	11.6	2.1	6.7	15.5	56.4	3.0	0.9	3.7
Humanities and arts	3,988	100.0	8.5	0.3	5.1	4.5	75.4	2.6	1.1	2.6
Foreign languages and literature	383	100.0	23.5	0.3	5.0	2.6	64.0	1.8	1.0	1.8
History	741	100.0	7.8	0.4	3.8	4.3	78.1	2.6	0.8	2.2
Letters	1,188	100.0	6.5	0.3	4.0	3.2	79.6	2.4	1.1	2.8
Other humanities and arts	1,676	100.0	6.7	0.1	6.5	5.9	73.7	3.0	1.3	2.9
Other[a]	1,720	100.0	6.5	0.4	11.0	14.3	62.2	2.1	1.4	2.2
Business management and administration	747	100.0	5.6	0.1	16.6	14.2	59.0	1.5	1.3	1.6
Communication	349	100.0	6.9	0.3	6.0	10.0	69.6	2.0	1.7	3.4
Non-S&E fields nec	624	100.0	7.2	0.8	7.2	16.8	61.7	2.9	1.3	2.1

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 of origin of temporary visa holders earning U.S. doctorates, ranked by number of doctorate recipients: 2019

(Number)

Country	Rank	Doctorate recipients
All temporary visa holders (165 countries)[a]	-	17,763
Top 40 countries of origin	-	16,588
China[b]	1	6,305
India	2	2,050
South Korea	3	1,164
Iran	4	959
Saudi Arabia	5	553
Taiwan	6	491
Canada	7	422
Turkey	8	405
Bangladesh	9	291
Brazil	10	252
Nepal	11	239
Colombia	12	203
Iraq	12	203
Mexico	14	188
Italy	15	170
Vietnam	16	168
Egypt	17	163
Thailand	18	159
Germany	19	152
Sri Lanka	20	150
Nigeria	21	145
Japan	22	129
Spain	22	129
United Kingdom	24	127
France	25	118
Pakistan	26	110
Russian Federation (former USSR)	26	110
Singapore	28	100
Chile	29	99
Greece	30	91
Jordan	31	89
Ghana	32	85
Israel	33	80
Indonesia	34	79
Malaysia	35	71
Kuwait	36	68
Libya	37	61
Australia	38	53
Lebanon	38	53
Argentina	40	52
Peru	40	52

[a] Excludes cases with unknown country of origin.
[b] Includes Hong Kong.

Note(s):
Tied countries are listed alphabetically.

Source(s):
National Center for Science and Engineering Statistics, Survey of Earned Doctorates.

Table 26

Top 10 countries of origin of temporary visa holders earning U.S. doctorates, by country of citizenship and field of study: 2010–19

(Number)

Country and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
China[a]	3,744	3,988	4,222	4,796	4,982	5,374	5,527	5,553	6,176	6,305
Science and engineering	3,457	3,652	3,906	4,443	4,650	4,970	5,141	5,147	5,683	5,742
Non-science and engineering	287	336	316	353	332	404	386	406	493	563
India	2,142	2,165	2,248	2,204	2,316	2,229	2,195	1,969	2,038	2,050
Science and engineering	1,994	2,036	2,142	2,074	2,208	2,119	2,085	1,883	1,917	1,905
Non-science and engineering	148	129	106	130	108	110	110	86	121	145
South Korea	1,381	1,445	1,472	1,383	1,284	1,234	1,229	1,127	1,035	1,164
Science and engineering	1,076	1,085	1,132	1,012	928	920	891	814	725	822
Non-science and engineering	305	360	340	371	356	314	338	313	310	342
Taiwan	650	693	719	699	668	614	592	520	513	491
Science and engineering	501	570	581	571	558	514	499	435	444	425
Non-science and engineering	149	123	138	128	110	100	93	85	69	66
Iran	147	198	287	409	483	629	695	767	932	959
Science and engineering	D	193	278	380	463	608	664	728	866	877
Non-science and engineering	D	5	9	29	20	21	31	39	66	82
Turkey	477	493	439	478	426	469	472	496	451	405
Science and engineering	405	422	352	391	360	386	380	392	361	323
Non-science and engineering	72	71	87	87	66	83	92	104	90	82
Canada	469	455	423	485	488	454	408	408	424	422
Science and engineering	339	307	299	332	321	318	272	288	301	309
Non-science and engineering	130	148	124	153	167	136	136	120	123	113
Thailand	222	266	260	264	231	220	185	171	177	159
Science and engineering	182	235	240	227	200	193	168	153	155	139
Non-science and engineering	40	31	20	37	31	27	17	18	22	20
Saudi Arabia	40	49	57	73	105	134	238	339	403	553
Science and engineering	26	34	41	53	76	98	175	232	294	431
Non-science and engineering	14	15	16	20	29	36	63	107	109	122
Mexico	201	185	213	177	193	194	221	180	185	188
Science and engineering	169	159	185	146	161	155	191	145	156	163
Non-science and engineering	32	26	28	31	32	39	30	35	29	25

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 2010 to 2019.

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: 2019

(Median age and percent distribution)

Field 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	31.5	100.0	0.7	44.2	31.1	11.9	5.1	7.0
Life sciences[b]	31.0	100.0	0.7	49.0	31.5	9.6	4.1	5.2
Physical sciences and earth sciences	29.5	100.0	1.1	66.4	24.5	5.5	1.5	1.0
Mathematics and computer sciences	30.3	100.0	1.4	55.0	28.5	9.0	2.8	3.3
Psychology and social sciences	32.4	100.0	0.3	35.9	36.0	14.5	5.5	7.7
Engineering	30.1	100.0	1.3	58.5	28.1	7.5	2.4	2.2
Education	38.3	100.0	0.1	12.5	26.2	22.3	14.3	24.5
Humanities and arts	34.2	100.0	0.2	20.7	41.8	19.5	8.2	9.6
Other[c]	34.9	100.0	0.3	22.9	33.1	18.4	9.3	16.0
Sex								
Male	31.3	100.0	0.7	46.4	31.6	11.6	4.4	5.4
Female	31.9	100.0	0.7	41.7	30.5	12.2	5.9	8.9
Citizenship status								
U.S. citizen or permanent resident	31.8	100.0	0.7	42.4	28.9	12.3	5.9	9.7
Temporary visa holder	31.1	100.0	0.8	47.9	35.4	10.9	3.3	1.7
Ethnicity and race (U.S. citizens and permanent residents)								
Hispanic or Latino	32.3	100.0	0.5	38.8	30.7	14.0	7.3	8.7
Not Hispanic or Latino								
American Indian or Alaska Native	36.3	100.0	0.0	24.1	24.1	19.8	6.9	25.0
Asian	31.1	100.0	1.0	47.4	31.0	11.0	4.5	5.1
Black or African American	36.1	100.0	0.3	25.2	24.1	16.0	10.6	23.8
White	31.6	100.0	0.7	44.1	28.8	12.0	5.4	9.0
More than one race	31.3	100.0	1.4	45.2	30.9	9.6	5.9	7.1
Other race or race not reported	32.8	100.0	0.3	34.8	34.8	11.3	7.9	11.0
Ethnicity not reported	33.0	100.0	0.2	37.8	29.5	16.0	6.8	9.8

[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: 2019

(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	4,478	8.0	1,743	3.1	695	1.2	262	0.5	425	0.8	2,269	4.1
Field of doctorate												
Life sciences[a]	1,030	8.1	345	2.7	167	1.3	55	0.4	103	0.8	563	4.4
Physical sciences and earth sciences	512	7.8	189	2.9	67	1.0	23	0.3	38	0.6	287	4.4
Mathematics and computer sciences	290	6.8	145	3.4	48	1.1	18	0.4	25	0.6	121	2.9
Psychology and social sciences	808	8.9	253	2.8	115	1.3	53	0.6	73	0.8	482	5.3
Engineering	652	6.3	368	3.6	97	0.9	35	0.3	49	0.5	233	2.3
Education	377	8.1	176	3.8	77	1.7	26	0.6	46	1.0	142	3.1
Humanities and arts	549	10.9	155	3.1	72	1.4	29	0.6	57	1.1	327	6.5
Other[b]	260	8.6	112	3.7	52	1.7	23	0.8	34	1.1	114	3.8
Sex												
Male	2,255	7.5	931	3.1	412	1.4	123	0.4	139	0.5	1,124	3.7
Female	2,223	8.7	812	3.2	283	1.1	139	0.5	286	1.1	1,145	4.5
Citizenship status[c]												
U.S. citizen or permanent resident	3,193	9.1	872	2.5	546	1.5	196	0.6	278	0.8	1,901	5.4
Temporary visa holder	1,276	7.0	866	4.7	146	0.8	63	0.3	144	0.8	365	2.0

[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 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: 2019

(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	69.9	54.9	52.1	35.4	53.1	44.1	71.6	59.4	82.9	65.7	72.0	65.8	88.8	57.8	84.1	67.5	80.4	58.9
Sex																		
Male	68.5	55.6	49.4	33.0	54.4	45.7	70.5	58.7	82.4	65.8	73.1	67.3	88.0	54.6	83.6	70.1	79.1	57.2
Female	71.5	54.0	54.4	37.4	50.5	41.1	74.8	61.7	83.2	65.7	68.5	61.0	89.1	59.1	84.5	65.1	81.4	60.4
Citizenship status																		
U.S. citizen or permanent resident	70.4	54.7	48.0	33.5	49.1	41.4	72.5	62.5	86.4	69.0	68.5	63.1	92.5	59.5	87.8	71.2	86.2	62.6
Temporary visa holder	75.8	60.6	67.3	43.4	62.6	51.2	74.6	60.2	86.9	67.3	78.5	71.4	87.2	60.8	87.9	67.8	85.1	63.0
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	70.1	54.1	44.3	32.1	51.3	43.9	72.8	68.9	83.1	64.7	72.5	65.4	95.6	61.0	86.9	69.4	88.3	60.4
Not Hispanic or Latino																		
American Indian or Alaska Native	71.7	50.0	48.3	24.1	D	D	0.0	0.0	86.7	56.7	66.7	66.7	D	D	80.0	60.0	85.7	85.7
Asian	67.7	53.6	47.4	32.1	55.5	46.2	77.0	63.5	88.0	72.9	68.8	63.1	93.7	66.5	89.7	72.5	86.3	57.9
Black or African American	82.6	56.1	65.9	42.4	51.1	42.0	82.6	65.2	91.6	61.9	73.6	66.9	91.8	57.0	89.9	60.9	87.4	61.4
White	71.1	56.1	48.0	34.0	49.0	41.5	73.2	63.5	88.5	72.3	69.3	64.1	93.7	60.4	90.1	73.8	88.1	65.5
More than one race	67.4	52.8	42.2	29.4	44.3	35.7	67.6	61.8	87.7	68.7	60.5	55.6	96.3	61.5	91.4	79.0	94.4	75.0
Other race or race not reported	60.4	44.4	42.2	25.6	D	D	55.6	40.7	70.9	58.2	54.0	48.0	D	D	77.3	56.8	75.0	54.2
Ethnicity not reported	19.1	14.3	18.0	9.0	16.4	12.7	12.5	9.4	18.3	15.0	26.5	25.0	25.0	17.3	18.3	15.4	16.2	8.1

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. 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: 2019

(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	18.8	22.5	16.6	13.7	19.8	13.2	27.1	18.7	18.7
Sex									
Male	17.6	21.2	16.8	13.8	19.1	13.2	28.5	20.5	17.9
Female	20.2	23.5	16.3	13.2	20.3	13.2	26.5	16.9	19.3
Citizenship status									
U.S. citizen or permanent resident	25.6	28.0	23.0	24.1	25.0	21.6	31.2	22.2	28.1
Temporary visa holder	7.4	9.5	7.7	6.1	5.1	7.6	7.5	5.8	6.9
Ethnicity and race (U.S. citizens and permanent residents)									
Hispanic or Latino	31.5	31.4	33.1	33.0	28.8	26.5	39.3	31.5	33.3
Not Hispanic or Latino									
American Indian or Alaska Native	44.2	55.2	D	0.0	36.7	D	D	D	D
Asian	18.7	20.6	19.9	14.7	18.7	17.7	22.8	20.1	8.9
Black or African American	27.3	30.2	15.9	24.6	26.3	18.0	29.2	22.3	33.3
White	25.8	28.5	22.5	25.8	25.4	22.4	31.7	21.3	29.5
More than one race	31.6	33.8	32.1	29.4	27.2	25.0	28.4	40.0	52.8
Other race or race not reported	25.7	28.9	D	14.8	24.1	D	D	D	D
Ethnicity not reported	7.5	13.1	7.3	0.0	5.9	8.8	3.8	5.8	10.8

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 major field of study: Selected years, 1994–2019

(Median years)

Field and time to degree	1994	1999	2004	2009	2014	2019
All fields						
Since bachelor's	10.8	10.5	10.0	9.3	8.8	8.7
Since starting graduate school	8.7	8.2	8.0	7.7	7.3	7.5
Since starting doctoral program[a]	na	na	na	na	5.7	5.8
Life sciences[b]						
Since bachelor's	9.6	9.0	8.8	8.5	8.2	8.3
Since starting graduate school	7.7	7.3	7.0	7.0	6.7	6.9
Since starting doctoral program[a]	na	na	na	na	5.7	5.5
Agricultural sciences and natural resources						
Since bachelor's	11.0	11.3	10.2	9.8	9.2	8.8
Since starting graduate school	8.3	8.2	7.9	8.0	7.6	7.3
Since starting doctoral program[a]	na	na	na	na	5.2	4.9
Biological and biomedical sciences						
Since bachelor's	8.7	8.2	8.0	8.0	7.7	7.9
Since starting graduate school	7.2	6.7	6.7	6.7	6.5	6.5
Since starting doctoral program[a]	na	na	na	na	5.7	5.8
Health sciences						
Since bachelor's	14.0	14.0	12.8	12.2	12.0	11.0
Since starting graduate school	11.7	10.7	9.5	9.7	9.3	8.8
Since starting doctoral program[a]	na	na	na	na	5.3	5.1
Physical sciences and earth sciences						
Since bachelor's	8.1	7.6	7.4	7.3	7.0	6.9
Since starting graduate school	6.9	6.7	6.5	6.3	6.3	6.3
Since starting doctoral program[a]	na	na	na	na	5.7	5.6
Chemistry						
Since bachelor's	7.3	6.7	6.8	6.8	6.4	6.3
Since starting graduate school	6.2	5.9	5.8	5.8	5.7	5.8
Since starting doctoral program[a]	na	na	na	na	5.3	5.3
Geosciences, atmospheric sciences, and ocean sciences						
Since bachelor's	10.6	10.3	9.0	8.7	8.5	8.0
Since starting graduate school	8.9	8.2	7.7	7.3	7.3	7.0
Since starting doctoral program[a]	na	na	na	na	5.7	5.3
Physics and astronomy						
Since bachelor's	8.0	7.7	7.6	7.2	7.3	7.0
Since starting graduate school	7.2	6.7	6.7	6.7	6.7	6.4
Since starting doctoral program[a]	na	na	na	na	6.0	5.9
Mathematics and computer sciences						
Since bachelor's	9.1	8.6	8.5	8.0	7.8	7.8
Since starting graduate school	7.7	7.2	7.1	7.0	6.9	6.9
Since starting doctoral program[a]	na	na	na	na	5.7	5.7
Computer and information sciences						
Since bachelor's	9.7	10.0	9.3	8.8	8.5	8.6
Since starting graduate school	8.1	8.2	7.8	7.6	7.4	7.7
Since starting doctoral program[a]	na	na	na	na	5.7	5.8
Mathematics and statistics						
Since bachelor's	8.9	8.0	7.9	7.3	7.0	7.0
Since starting graduate school	7.2	6.7	6.7	6.7	6.3	6.3
Since starting doctoral program[a]	na	na	na	na	5.3	5.3

Table 31

Median years to doctorate, by major field of study: Selected years, 1994–2019

(Median years)

Field and time to degree	1994	1999	2004	2009	2014	2019
Psychology and social sciences						
Since bachelor's	10.5	10.0	10.0	9.4	9.5	9.4
Since starting graduate school	8.7	7.9	8.0	7.7	7.9	8.0
Since starting doctoral program[a]	na	na	na	na	6.0	6.0
Psychology						
Since bachelor's	9.6	9.0	9.0	8.4	8.3	8.5
Since starting graduate school	7.9	7.2	7.1	6.9	7.0	7.0
Since starting doctoral program[a]	na	na	na	na	6.0	5.9
Anthropology						
Since bachelor's	13.9	12.3	12.0	11.4	11.8	11.3
Since starting graduate school	10.9	10.2	9.7	9.4	9.9	9.4
Since starting doctoral program[a]	na	na	na	na	7.7	7.1
Economics						
Since bachelor's	9.7	8.9	9.0	8.4	8.3	8.5
Since starting graduate school	7.9	7.2	7.0	7.0	6.9	7.8
Since starting doctoral program[a]	na	na	na	na	5.7	5.8
Political science and government						
Since bachelor's	10.7	10.5	11.0	10.3	10.1	9.8
Since starting graduate school	8.7	8.7	8.8	8.4	8.2	8.3
Since starting doctoral program[a]	na	na	na	na	6.7	6.2
Sociology						
Since bachelor's	11.5	10.6	11.2	10.6	11.0	10.4
Since starting graduate school	9.5	8.7	8.8	8.9	9.3	8.8
Since starting doctoral program[a]	na	na	na	na	7.0	6.8
Other social sciences						
Since bachelor's	12.2	12.2	12.0	11.7	11.6	11.6
Since starting graduate school	9.9	9.7	9.3	9.2	9.4	9.8
Since starting doctoral program[a]	na	na	na	na	6.2	6.0
Engineering						
Since bachelor's	9.0	8.7	8.4	7.9	7.3	7.4
Since starting graduate school	7.2	7.2	7.2	6.9	6.5	6.8
Since starting doctoral program[a]	na	na	na	na	5.2	5.3
Aerospace, aeronautical, and astronautical engineering						
Since bachelor's	8.5	8.5	8.3	7.3	6.8	7.3
Since starting graduate school	6.9	7.2	7.2	6.7	6.3	6.8
Since starting doctoral program[a]	na	na	na	na	5.3	5.3
Bioengineering and biomedical engineering						
Since bachelor's	8.0	7.9	7.3	7.3	6.7	7.0
Since starting graduate school	7.1	6.8	6.2	6.3	6.0	6.1
Since starting doctoral program[a]	na	na	na	na	5.3	5.3
Chemical engineering						
Since bachelor's	7.3	6.2	7.0	6.5	6.1	6.2
Since starting graduate school	6.2	5.7	5.7	5.7	5.6	5.8
Since starting doctoral program[a]	na	na	na	na	5.0	5.0
Civil engineering						
Since bachelor's	10.1	10.3	9.5	9.0	8.4	8.5
Since starting graduate school	8.2	8.2	7.7	7.8	7.3	7.5
Since starting doctoral program[a]	na	na	na	na	5.0	4.8

Table 31

Median years to doctorate, by major field of study: Selected years, 1994–2019

(Median years)

Field and time to degree	1994	1999	2004	2009	2014	2019
Electrical, electronics, and communications engineering						
Since bachelor's	8.8	8.5	8.4	8.0	7.6	8.0
Since starting graduate school	7.2	7.2	7.3	7.1	6.8	7.3
Since starting doctoral program[a]	na	na	na	na	5.3	5.4
Industrial and manufacturing engineering						
Since bachelor's	10.1	10.4	9.7	9.3	8.3	8.6
Since starting graduate school	7.7	7.8	7.6	7.8	7.0	7.7
Since starting doctoral program[a]	na	na	na	na	5.0	5.0
Materials science engineering						
Since bachelor's	8.7	7.9	7.7	7.5	6.7	6.6
Since starting graduate school	6.9	6.9	6.7	6.7	6.0	6.0
Since starting doctoral program[a]	na	na	na	na	5.0	5.0
Mechanical engineering						
Since bachelor's	9.1	8.8	8.4	7.8	7.3	7.3
Since starting graduate school	7.4	7.5	7.3	6.9	6.5	6.8
Since starting doctoral program[a]	na	na	na	na	5.2	5.3
Other engineering						
Since bachelor's	10.0	9.8	9.3	8.5	8.0	8.0
Since starting graduate school	7.9	7.7	7.8	7.3	7.0	7.3
Since starting doctoral program[a]	na	na	na	na	5.2	5.0
Education						
Since bachelor's	19.7	19.8	17.7	16.3	14.8	14.8
Since starting graduate school	15.9	14.7	12.7	12.4	11.7	11.9
Since starting doctoral program[a]	na	na	na	na	5.9	5.7
Education administration						
Since bachelor's	21.9	23.8	21.0	18.9	18.0	18.3
Since starting graduate school	18.7	18.7	14.8	14.6	14.3	15.3
Since starting doctoral program[a]	na	na	na	na	6.2	5.7
Education research						
Since bachelor's	18.6	17.5	16.0	14.8	13.7	13.8
Since starting graduate school	14.7	13.0	11.7	11.3	10.9	11.0
Since starting doctoral program[a]	na	na	na	na	5.9	5.8
Teacher education						
Since bachelor's	21.0	19.6	20.1	18.0	17.0	17.6
Since starting graduate school	17.2	15.7	13.7	13.7	11.7	13.3
Since starting doctoral program[a]	na	na	na	na	5.8	5.6
Teaching fields						
Since bachelor's	16.7	16.5	15.3	15.0	14.6	14.3
Since starting graduate school	12.9	12.2	11.3	11.3	11.2	11.3
Since starting doctoral program[a]	na	na	na	na	6.0	5.3
Other education						
Since bachelor's	19.2	19.3	17.4	15.4	14.3	14.6
Since starting graduate school	15.3	14.3	12.1	11.3	11.7	11.8
Since starting doctoral program[a]	na	na	na	na	5.7	5.8
Humanities and arts						
Since bachelor's	12.2	11.9	11.8	11.4	11.0	11.0
Since starting graduate school	10.2	9.7	9.7	9.7	9.3	9.5
Since starting doctoral program[a]	na	na	na	na	7.0	6.8

Table 31

Median years to doctorate, by major field of study: Selected years, 1994–2019

(Median years)

Field and time to degree	1994	1999	2004	2009	2014	2019
Foreign languages and literature						
Since bachelor's	11.4	11.5	11.0	10.6	10.3	11.1
Since starting graduate school	9.2	9.0	8.7	8.7	8.7	9.3
Since starting doctoral program[a]	na	na	na	na	7.0	6.8
History						
Since bachelor's	11.6	11.3	11.6	11.3	10.8	11.0
Since starting graduate school	9.7	9.5	9.7	9.7	9.0	9.2
Since starting doctoral program[a]	na	na	na	na	7.0	6.9
Letters						
Since bachelor's	11.5	11.0	11.5	11.0	10.6	10.6
Since starting graduate school	9.7	9.2	9.3	9.0	8.9	8.9
Since starting doctoral program[a]	na	na	na	na	6.7	6.4
Other humanities and arts						
Since bachelor's	13.1	12.8	12.0	12.3	11.9	11.6
Since starting graduate school	11.6	10.7	9.7	10.2	10.0	9.8
Since starting doctoral program[a]	na	na	na	na	7.2	6.8
Other[c]						
Since bachelor's	13.2	13.6	12.8	12.3	11.3	11.4
Since starting graduate school	10.7	10.2	9.8	9.6	9.0	9.3
Since starting doctoral program[a]	na	na	na	na	5.3	5.1
Business management and administration						
Since bachelor's	12.2	12.9	12.1	11.9	10.9	11.0
Since starting graduate school	9.7	9.7	9.7	9.1	8.7	8.9
Since starting doctoral program[a]	na	na	na	na	5.0	5.0
Communication						
Since bachelor's	12.3	12.0	11.9	11.5	10.5	10.3
Since starting graduate school	9.7	8.9	9.0	8.7	8.4	8.3
Since starting doctoral program[a]	na	na	na	na	5.3	5.0
Non-S&E fields nec						
Since bachelor's	17.5	16.9	15.0	14.0	13.3	13.4
Since starting graduate school	13.9	13.7	11.0	11.2	10.8	11.1
Since starting doctoral program[a]	na	na	na	na	6.0	5.8

na = not applicable; not available prior to 2014.

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

[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: 2019

(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]	8.7	53,126	8.3	12,307	6.9	6,342	7.8	4,057	9.4	8,605	7.4	9,799	14.8	4,433	11.0	4,771	11.4	2,812
Sex																		
Male	8.3	28,752	8.1	5,584	7.0	4,192	7.6	3,008	9.6	3,514	7.5	7,464	14.1	1,358	11.1	2,333	11.2	1,299
Female	9.2	24,373	8.3	6,723	6.8	2,150	7.9	1,049	9.3	5,091	7.1	2,335	15.0	3,075	11.0	2,437	11.6	1,513
Citizenship status																		
U.S. citizen or permanent resident	9.0	34,719	8.1	8,912	6.6	3,869	7.5	1,764	9.3	6,608	7.0	4,192	15.4	3,788	11.0	3,901	13.0	1,685
Temporary visa holder	8.3	17,805	8.5	3,292	7.5	2,415	7.8	2,253	9.6	1,868	7.8	5,525	12.0	591	11.1	788	10.0	1,073
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	9.0	2,819	8.0	766	6.4	269	7.3	103	9.4	625	7.0	304	14.2	315	11.3	328	13.4	109
Not Hispanic or Latino																		
American Indian or Alaska Native	11.4	116	9.0	27	8.7	8	D	D	11.3	30	6.0	9	D	D	D	D	D	D
Asian	8.5	3,382	8.4	1,031	6.9	360	8.0	247	9.3	436	7.3	714	13.3	204	12.1	201	11.2	189
Black or African American	12.0	2,438	10.0	528	8.0	86	11.3	68	11.3	574	8.0	175	15.9	598	D	D	D	D
White	8.8	23,998	8.0	6,086	6.5	2,926	7.4	1,226	9.3	4,515	6.8	2,767	15.8	2,462	11.0	2,965	12.7	1,051
More than one race	8.5	1,116	8.0	294	6.3	140	6.6	68	9.3	240	6.6	124	12.3	109	11.0	105	11.5	36

Table 32

Median years to doctorate, by sex, citizenship status, ethnicity, race, and broad field of study: 2019

(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	10.0	355	9.0	84	6.4	31	D	D	10.3	77	7.3	45	D	D	11.8	42	16.4	22
Ethnicity not reported	10.0	495	10.0	96	7.0	49	8.0	29	10.8	111	7.5	54	16.3	42	10.4	78	12.0	36
Years since entering graduate school																		
All doctorate recipients[d]	7.5	51,241	6.9	12,000	6.3	6,172	6.9	3,932	8.0	8,161	6.8	9,528	11.9	4,248	9.5	4,548	9.3	2,652
Sex																		
Male	7.3	27,853	6.8	5,469	6.3	4,093	6.9	2,925	8.0	3,322	6.8	7,261	11.3	1,313	9.7	2,237	9.0	1,233
Female	7.8	23,387	7.0	6,531	6.0	2,079	7.0	1,007	7.9	4,839	6.3	2,267	12.3	2,935	9.3	2,310	9.8	1,419
Citizenship status																		
U.S. citizen or permanent resident	7.3	33,534	6.8	8,717	5.9	3,759	6.8	1,708	7.8	6,295	6.3	4,063	12.6	3,652	9.3	3,746	10.0	1,594
Temporary visa holder	7.7	17,284	7.7	3,218	6.9	2,366	7.0	2,184	8.8	1,793	7.0	5,377	9.4	556	9.9	766	8.8	1,024
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	7.5	2,694	6.8	740	5.8	259	6.8	97	8.0	578	6.3	289	11.8	308	9.4	316	10.0	107
Not Hispanic or Latino																		
American Indian or Alaska Native	9.3	105	8.4	24	8.8	7	D	D	9.0	28	5.7	8	14.8	23	10.4	8	D	D
Asian	7.2	3,301	7.0	1,018	6.3	354	7.0	242	7.7	422	6.7	690	10.8	199	10.5	196	9.0	180

Table 32

Median years to doctorate, by sex, citizenship status, ethnicity, race, and broad field of study: 2019

(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	9.8	2,381	8.3	526	6.3	84	9.1	67	9.4	567	6.8	172	12.8	578	9.9	170	13.2	217
White	7.3	23,483	6.4	6,007	5.9	2,871	6.8	1,206	7.5	4,372	6.0	2,718	12.9	2,393	9.3	2,894	9.8	1,022
More than one race	7.1	1,111	6.4	295	5.8	140	6.0	68	8.0	238	5.9	122	10.3	109	9.0	103	9.4	36
Other race or race not reported	8.6	302	7.3	70	6.0	29	D	D	9.5	61	6.6	38	12.3	28	9.7	37	D	D
Ethnicity not reported	8.5	157	7.5	37	6.8	15	6.8	7	8.3	29	6.4	26	16.9	14	10.5	22	9.7	7
Years since entering doctoral program[e]																		
All doctorate recipients[f]	5.8	49,887	5.5	11,747	5.6	6,027	5.7	3,824	6.0	7,914	5.3	9,267	5.7	4,133	6.8	4,407	5.1	2,568
Sex																		
Male	5.7	27,085	5.5	5,354	5.7	3,994	5.7	2,845	5.9	3,219	5.3	7,053	5.5	1,274	6.8	2,154	5.0	1,192
Female	5.8	22,801	5.6	6,393	5.3	2,033	5.5	979	6.0	4,695	5.1	2,214	5.8	2,859	6.8	2,252	5.3	1,376
Citizenship status																		
U.S. citizen or permanent resident	5.8	32,614	5.7	8,538	5.6	3,677	5.8	1,653	6.0	6,092	5.3	3,947	5.8	3,546	6.8	3,627	5.3	1,534
Temporary visa holder	5.3	16,865	5.3	3,145	5.6	2,303	5.3	2,134	5.8	1,750	5.0	5,236	5.3	547	6.3	747	5.0	1,003
Ethnicity and race (U.S. citizens and permanent residents)																		
Hispanic or Latino	5.9	2,616	5.8	725	5.3	254	5.9	95	6.3	559	5.7	280	5.8	300	6.8	304	5.7	99

Table 32

Median years to doctorate, by sex, citizenship status, ethnicity, race, and broad field of study: 2019

(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	6.5	101	6.0	23	6.0	7	D	D	7.0	27	5.7	8	7.0	21	6.8	8	D	D
Asian	5.8	3,204	5.8	994	5.8	348	5.8	230	6.0	410	5.7	663	6.0	196	7.3	190	5.3	173
Black or African American	5.9	2,252	5.8	503	5.3	82	6.3	64	6.0	533	5.8	164	5.8	541	6.7	162	5.9	203
White	5.8	22,938	5.6	5,907	5.6	2,811	5.8	1,168	6.0	4,246	5.3	2,655	5.7	2,345	6.8	2,812	5.3	994
More than one race	5.8	1,086	5.8	290	5.3	139	5.3	68	6.0	232	5.3	118	6.3	106	7.0	98	6.0	35
Other race or race not reported	6.0	275	5.8	63	5.8	23	D	D	6.8	57	5.3	36	6.3	24	6.8	34	D	D
Ethnicity not reported	5.8	142	5.7	33	5.9	13	5.8	7	6.2	28	4.8	23	5.0	13	5.8	19	4.7	6

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: 2019

(Number and percent distribution)

Demographic characteristic and field	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]	47,821	100.0	23.4	13.7	27.2	17.4	8.4	10.0
Mother's education[d]	48,232	100.0	27.1	17.3	29.3	17.7	4.3	4.4
Sex								
Male								
Father's education	25,929	100.0	23.6	13.2	28.1	17.1	8.0	10.1
Mother's education	26,078	100.0	28.9	16.6	29.7	16.9	4.1	3.8
Female								
Father's education	21,891	100.0	23.2	14.4	26.2	17.6	8.9	9.8
Mother's education	22,153	100.0	25.0	18.1	28.8	18.5	4.5	5.1
Citizenship status								
U.S. citizen or permanent resident								
Father's education	31,768	100.0	21.2	14.4	24.7	18.7	10.3	10.7
Mother's education	32,132	100.0	21.3	19.1	28.8	21.0	5.1	4.8
Temporary visa holder								
Father's education	16,028	100.0	27.8	12.3	32.2	14.6	4.7	8.4
Mother's education	16,076	100.0	38.6	13.7	30.3	11.1	2.7	3.6
Ethnicity and race (U.S. citizens and permanent residents)								
Hispanic or Latino								
Father's education	2,524	100.0	35.3	15.7	21.1	12.5	8.4	7.1
Mother's education	2,580	100.0	34.9	19.6	23.7	13.3	4.1	4.5
Not Hispanic or Latino								
American Indian or Alaska Native								
Father's education	93	100.0	D	24.7	10.8	11.8	D	5.4
Mother's education	99	100.0	32.3	27.3	19.2	15.2	D	D
Asian								
Father's education	3,113	100.0	18.9	9.2	23.4	19.0	7.5	22.0
Mother's education	3,129	100.0	26.9	14.1	29.0	18.5	4.9	6.5
Black or African American								
Father's education	2,040	100.0	42.1	20.8	17.4	11.0	5.0	3.7
Mother's education	2,159	100.0	33.3	25.2	18.3	16.2	3.5	3.5
White								
Father's education	22,626	100.0	18.1	14.4	26.2	20.0	11.3	10.1
Mother's education	22,772	100.0	17.9	19.1	30.4	22.5	5.3	4.7
More than one race								
Father's education	1,052	100.0	18.7	16.2	20.2	20.3	11.1	13.5
Mother's education	1,071	100.0	19.1	18.5	27.0	23.1	D	D
Other race or race not reported								
Father's education	237	100.0	D	13.9	21.5	20.3	D	14.3
Mother's education	237	100.0	21.1	18.1	25.7	20.7	7.6	6.8
Ethnicity not reported								
Father's education	83	100.0	22.9	9.6	26.5	22.9	12.0	6.0

Table 33

Educational attainment of doctorate recipients' parents, by sex, citizenship status, ethnicity, race, and broad field of study: 2019

(Number and percent distribution)

Demographic characteristic and field	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	85	100.0	17.6	21.2	29.4	22.4	5.9	3.5
Field of study								
Life sciences[e]								
Father's education	11,324	100.0	22.6	13.9	27.0	17.4	9.2	9.9
Mother's education	11,422	100.0	25.1	17.8	29.6	18.2	4.9	4.4
Physical sciences and earth sciences								
Father's education	5,796	100.0	23.8	13.9	28.5	16.5	7.3	10.0
Mother's education	5,843	100.0	27.3	16.4	30.6	16.9	4.6	4.2
Mathematics and computer sciences								
Father's education	3,636	100.0	21.1	12.2	30.9	16.6	7.4	11.8
Mother's education	3,642	100.0	27.8	15.8	31.3	16.1	4.4	4.7
Psychology and social sciences								
Father's education	7,600	100.0	23.7	14.5	24.0	18.0	10.2	9.7
Mother's education	7,705	100.0	24.9	18.4	27.2	19.3	4.8	5.3
Engineering								
Father's education	8,858	100.0	21.6	12.4	32.2	17.8	5.8	10.2
Mother's education	8,871	100.0	29.4	15.6	32.5	15.2	3.5	3.7
Education								
Father's education	3,945	100.0	32.8	18.4	21.0	14.8	6.7	6.4
Mother's education	4,011	100.0	33.9	21.5	22.0	17.2	2.1	3.3
Humanities and arts								
Father's education	4,240	100.0	20.8	11.8	23.6	20.0	12.7	11.1
Mother's education	4,295	100.0	22.1	16.3	28.9	21.9	5.8	5.0
Other[f]								
Father's education	2,422	100.0	24.6	12.9	27.4	16.3	7.6	11.1
Mother's education	2,443	100.0	30.9	16.4	28.5	16.3	3.0	5.0

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, 1994–2019

(Percent)

Year	High school or less	Some college[a]	Bachelor's degree	Master's degree	Professional degree[b]	Research doctoral degree
1994	30.0	15.2	21.1	12.9	8.9	11.9
1999	25.1	13.6	21.9	16.1	9.1	14.2
2004	22.7	13.4	23.8	18.7	8.9	12.1
2009	20.1	13.0	25.3	21.2	9.9	10.1
2014	18.1	12.2	26.1	22.2	10.2	10.6
2019	16.5	13.1	26.4	22.2	9.4	12.0

[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: 2019

(Number and percent)

Field and primary source of support	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
All fields (number)	49,291	26,755	22,535	32,362	16,749	2,590	101	3,167	2,215	22,821	1,074	265	129
Teaching assistantships	21.4	21.4	21.2	20.2	23.5	19.2	11.9	19.0	12.1	21.5	18.1	18.9	18.6
Research assistantships or traineeships[b]	33.4	38.7	27.1	26.8	46.2	19.1	12.9	34.4	14.5	28.0	24.6	21.5	25.6
Fellowships, scholarships, or dissertation grants	24.8	23.0	26.9	27.5	19.6	35.9	45.5	31.6	26.1	25.6	34.3	30.6	25.6
Own resources	15.2	11.4	19.8	21.1	3.9	22.5	23.8	11.6	41.8	20.2	20.0	21.9	23.3
Employer	2.7	2.6	2.9	3.9	0.6	2.5	5.0	2.9	4.7	4.1	2.9	4.5	7.0
Other	2.5	2.9	2.0	0.6	6.2	0.9	1.0	0.5	0.7	0.6	0.2	2.6	0.0
Life sciences (number)[c]	11,581	5,258	6,323	8,434	3,117	715	23	968	496	5,856	286	59	31
Teaching assistantships	13.0	13.8	12.4	12.4	14.9	11.5	D	D	9.3	13.4	10.1	6.8	6.5
Research assistantships or traineeships[b]	37.1	39.7	34.8	33.6	46.3	24.3	26.1	36.0	23.6	35.4	33.2	30.5	22.6
Fellowships, scholarships, or dissertation grants	33.0	32.5	33.3	35.6	25.9	48.4	39.1	39.8	35.3	33.0	40.6	45.8	35.5
Own resources	11.5	8.6	13.8	14.5	3.2	13.4	D	D	27.8	14.2	13.3	11.9	19.4
Employer	2.6	2.3	2.9	3.3	0.8	1.7	D	D	3.0	3.5	2.1	3.4	16.1
Other	2.9	3.1	2.7	0.6	9.0	0.7	0.0	0.6	1.0	0.5	0.7	1.7	0.0
Physical sciences and earth sciences (number)	5,982	3,968	2,014	3,671	2,291	252	7	349	82	2,806	138	23	14
Teaching assistantships	25.5	25.3	25.8	23.1	29.2	23.4	D	D	30.5	22.8	21.0	21.7	21.4
Research assistantships or traineeships[b]	50.5	52.8	45.8	48.1	54.4	34.5	D	50.1	26.8	50.1	D	34.8	57.1
Fellowships, scholarships, or dissertation grants	18.3	16.0	22.8	22.1	12.0	34.1	D	22.3	30.5	20.5	D	21.7	21.4

Table 35

Doctorate recipients' primary source of financial support, by broad field of study, sex, citizenship status, ethnicity, and race: 2019

(Number and percent)

Field and primary source of support	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
Own resources	3.5	3.5	3.5	5.2	0.7	6.0	0.0	1.7	12.2	5.2	8.7	8.7	0.0
Employer	0.9	1.0	0.6	1.2	0.3	D	0.0	1.7	0.0	1.1	D	8.7	0.0
Other	1.4	1.4	1.6	0.3	3.3	D	0.0	D	0.0	0.2	0.0	4.3	0.0
Mathematics and computer sciences (number)	3,791	2,822	969	1,654	2,120	95	D	234	64	1,166	68	D	6
Teaching assistantships	38.4	36.9	42.8	39.7	37.5	44.2	0.0	35.9	23.4	40.6	45.6	45.0	33.3
Research assistantships or traineeships[b]	36.3	39.3	27.8	26.5	43.9	26.3	0.0	35.5	15.6	26.2	19.1	10.0	16.7
Fellowships, scholarships, or dissertation grants	14.6	13.0	19.5	18.4	11.7	17.9	0.0	20.5	37.5	17.0	D	D	16.7
Own resources	5.3	5.4	5.1	9.6	1.9	6.3	D	D	14.1	10.2	7.4	20.0	16.7
Employer	2.4	2.7	1.3	4.9	0.4	5.3	0.0	D	9.4	5.2	D	0.0	16.7
Other	3.0	2.8	3.5	0.8	4.6	0.0	D	D	0.0	0.9	0.0	15.0	0.0
Psychology and social sciences (number)	7,829	3,182	4,647	6,051	1,740	553	27	405	520	4,238	230	54	24
Teaching assistantships	28.8	31.6	26.9	25.8	39.3	22.2	D	32.1	10.6	27.8	D	18.5	33.3
Research assistantships or traineeships[b]	16.8	15.0	18.0	17.1	15.6	11.4	D	D	10.4	19.3	13.0	13.0	29.2
Fellowships, scholarships, or dissertation grants	26.3	27.6	25.4	24.7	31.7	32.5	40.7	36.5	22.7	22.3	33.9	31.5	4.2
Own resources	24.5	20.9	27.0	29.6	6.8	32.0	29.6	17.3	51.5	27.7	29.1	35.2	33.3
Employer	1.7	2.4	1.3	D	D	D	D	D	3.8	2.2	D	0.0	0.0
Other	1.9	2.5	1.4	D	D	D	3.7	D	1.0	0.6	0.0	1.9	0.0
Engineering (number)	9,170	6,982	2,188	3,923	5,208	278	8	661	159	2,644	117	36	20
Teaching assistantships	11.4	11.0	12.8	9.2	13.1	6.5	D	12.4	13.8	8.4	9.4	D	10.0

Table 35

Doctorate recipients' primary source of financial support, by broad field of study, sex, citizenship status, ethnicity, and race: 2019

(Number and percent)

Field and primary source of support	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
Research assistantships or traineeships[b]	57.4	59.0	52.4	46.3	65.7	32.7	D	51.3	27.7	48.0	41.0	D	40.0
Fellowships, scholarships, or dissertation grants	20.2	18.0	27.1	30.8	12.1	47.5	D	25.6	40.3	29.3	41.0	D	40.0
Own resources	4.6	4.9	3.9	7.7	2.3	7.9	D	7.1	D	7.8	4.3	13.9	5.0
Employer	2.5	2.8	1.6	5.4	0.4	3.2	D	3.5	D	5.9	4.3	8.3	5.0
Other	3.9	4.4	2.2	0.7	6.3	2.2	0.0	0.2	0.6	0.7	0.0	0.0	0.0
Education (number)	4,047	1,241	2,806	3,499	536	298	D	194	535	2,316	102	D	11
Teaching assistantships	11.8	12.0	11.7	10.5	20.1	9.4	0.0	16.0	6.7	11.2	8.8	13.6	9.1
Research assistantships or traineeships[b]	15.7	15.5	15.9	13.6	29.7	11.7	D	21.1	10.1	14.2	14.7	D	0.0
Fellowships, scholarships, or dissertation grants	12.8	12.7	12.9	11.7	20.0	14.8	57.1	16.5	14.2	9.9	14.7	9.1	9.1
Own resources	47.2	47.1	47.3	52.0	16.2	56.0	33.3	36.1	60.6	51.0	51.0	40.9	63.6
Employer	10.1	9.5	10.4	11.4	1.9	6.7	D	8.8	8.0	13.0	10.8	D	18.2
Other	2.2	3.2	1.8	0.7	12.1	1.3	0.0	1.5	0.4	0.6	0.0	4.5	0.0
Humanities and arts (number)	4,370	2,138	2,231	3,609	748	302	8	187	159	2,805	98	33	17
Teaching assistantships	39.2	36.9	41.4	39.3	38.8	41.4	D	35.8	32.7	40.3	26.5	D	35.3
Research assistantships or traineeships[b]	2.1	2.1	2.2	2.1	2.5	2.3	D	D	D	2.0	0.0	3.0	5.9
Fellowships, scholarships, or dissertation grants	37.8	38.8	36.8	35.9	46.5	33.8	D	43.9	D	35.1	51.0	39.4	35.3
Own resources	18.9	20.0	17.8	21.2	7.8	21.2	D	15.5	D	21.1	22.4	21.2	23.5
Employer	1.0	1.1	0.9	D	D	D	0.0	D	D	1.1	0.0	D	0.0
Other	1.0	1.2	0.9	D	D	D	0.0	1.6	0.0	0.4	0.0	0.0	0.0

Table 35

Doctorate recipients' primary source of financial support, by broad field of study, sex, citizenship status, ethnicity, and race: 2019

(Number and percent)

Field and primary source of support	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
Other (number)[d]	2,521	1,164	1,357	1,521	989	97	6	169	200	990	35	18	6
Teaching assistantships	21.5	21.9	21.1	19.0	25.4	19.6	D	18.3	9.0	20.8	D	33.3	0.0
Research assistantships or traineeships[b]	18.5	19.3	17.8	14.6	24.4	12.4	D	26.6	D	14.2	D	11.1	16.7
Fellowships, scholarships, or dissertation grants	27.0	28.3	25.9	23.3	32.5	23.7	D	35.5	D	21.3	25.7	27.8	33.3
Own resources	27.0	24.1	29.4	37.0	11.7	36.1	0.0	16.6	57.0	36.8	40.0	27.8	50.0
Employer	3.3	3.4	3.2	4.9	0.8	8.2	0.0	3.0	4.0	5.4	0.0	0.0	0.0
Other	2.8	3.0	2.6	1.2	5.3	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0

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: 2019

(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]	26,843	22,632	5,285	6,352	3,974	2,020	2,827	971	3,195	4,671	6,996	2,194	1,252	2,820	2,144	2,241	1,170	1,363
Fellowship or scholarship	63.7	68.0	68.1	70.5	59.9	68.2	56.4	63.5	72.4	69.6	58.4	66.5	44.2	49.3	83.9	85.5	66.2	65.7
Dissertation grant	14.6	22.1	12.5	17.5	9.1	11.6	6.0	9.7	30.5	33.4	7.2	10.0	13.2	15.9	40.1	45.4	18.7	23.6
Assistantship																		
Teaching	70.2	66.3	53.0	53.1	86.4	86.2	83.1	86.1	79.0	75.5	65.6	67.1	40.3	39.8	86.3	89.9	68.5	67.6
Research	70.7	61.7	66.6	63.2	88.9	87.1	73.4	67.8	60.0	62.0	84.6	84.8	37.3	37.5	37.8	39.8	62.3	61.3
Other	7.4	10.8	4.8	6.0	4.7	6.6	5.5	4.8	12.5	16.8	5.5	5.3	14.2	16.9	15.4	15.2	8.5	11.3
Traineeship	3.6	5.2	11.4	11.6	1.7	3.0	1.0	0.9	2.9	4.1	2.0	4.3	0.6	1.3	0.7	0.9	0.9	1.2
Internship or clinical residency	10.2	10.2	4.0	4.3	5.6	7.0	24.8	23.5	12.1	23.0	15.0	14.8	5.0	5.0	3.0	3.4	3.8	4.0
Loan (any source)	21.3	30.3	19.8	24.3	12.8	11.0	11.6	9.7	38.0	43.6	10.8	9.8	50.0	49.3	38.6	38.8	34.2	36.5
Personal sources																		
Savings	49.1	56.1	46.6	52.6	38.0	41.8	42.4	42.1	63.1	65.4	42.7	41.3	68.3	66.0	62.9	62.5	67.9	65.1
Other earnings during graduate school	26.7	37.2	23.2	30.2	15.8	16.8	20.4	18.8	41.6	46.4	16.1	14.9	57.0	59.4	54.5	55.6	33.2	41.9
Spouse's, partner's, or family's earnings or savings	36.5	47.9	34.5	43.7	28.4	34.2	31.5	37.5	47.1	57.9	32.2	37.1	42.9	51.7	52.5	55.9	46.3	56.5
Employer reimbursement or assistance	10.7	12.5	9.9	12.4	7.5	6.8	10.6	10.5	10.2	8.9	9.3	7.5	30.5	29.3	9.7	8.0	15.6	15.4
Foreign (non-U.S.) support	8.5	6.3	7.2	6.3	5.8	4.9	9.2	8.5	8.9	5.7	11.1	8.1	6.0	4.1	7.6	7.3	9.9	8.0
Other	1.1	1.4	1.2	1.2	0.4	0.9	0.7	0.9	2.0	1.8	0.5	0.6	2.4	1.7	1.9	1.4	1.9	1.6

[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: 2019

(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]	26,843	100.0	19.7	14.8	10.5	11.9	26.1	4.7	8.0	4.4
Fellowship or scholarship	17,101	100.0	21.1	13.9	9.3	13.5	23.9	3.2	10.5	4.5
Dissertation grant	3,914	100.0	16.9	9.2	4.3	24.9	12.9	4.2	22.0	5.6
Assistantship										
Teaching	18,857	100.0	14.8	18.2	12.5	13.4	24.3	2.7	9.8	4.3
Research	18,969	100.0	18.5	18.6	10.9	10.1	31.2	2.5	4.3	3.8
Other	1,989	100.0	12.7	9.3	7.8	20.1	19.5	8.9	16.6	5.0
Traineeship	963	100.0	62.5	6.9	2.9	9.8	14.5	0.7	1.7	1.0
Internship or clinical residency	2,736	100.0	7.6	8.1	25.6	14.1	38.3	2.3	2.3	1.6
Loan (any source)	5,711	100.0	18.4	8.9	5.7	21.3	13.3	11.0	14.5	7.0
Personal sources										
Savings	13,174	100.0	18.7	11.5	9.1	15.3	22.7	6.5	10.2	6.0
Other earnings during graduate school	7,155	100.0	17.1	8.8	8.1	18.6	15.7	10.0	16.3	5.4
Spouse's, partner's, or family's earnings or savings	9,801	100.0	18.6	11.5	9.1	15.3	23.0	5.5	11.5	5.5
Employer reimbursement or assistance	2,870	100.0	18.2	10.5	10.5	11.3	22.6	13.3	7.2	6.4
Foreign (non-U.S.) support	2,283	100.0	16.6	10.2	11.3	12.5	33.9	3.3	7.1	5.1
Other	293	100.0	21.8	5.8	7.2	21.8	11.9	10.2	13.7	7.5
Female doctorate recipients										
Unduplicated total[c]	22,632	100.0	28.1	8.9	4.3	20.6	9.7	12.5	9.9	6.0
Fellowship or scholarship	15,382	100.0	29.1	9.0	4.0	21.1	9.5	9.0	12.5	5.8
Dissertation grant	5,011	100.0	22.2	4.7	1.9	31.2	4.4	9.0	20.3	6.4
Assistantship										
Teaching	15,013	100.0	22.5	11.6	5.6	23.5	9.8	7.5	13.4	6.1
Research	13,973	100.0	28.7	12.6	4.7	20.7	13.3	7.6	6.4	6.0
Other	2,433	100.0	15.6	5.5	1.9	32.2	4.8	19.6	14.0	6.3
Traineeship	1,167	100.0	63.1	5.1	0.8	16.5	8.1	3.2	1.8	1.5
Internship or clinical residency	2,313	100.0	11.9	6.1	9.9	46.4	14.0	6.1	3.3	2.3
Loan (any source)	6,864	100.0	22.5	3.2	1.4	29.7	3.1	20.3	12.7	7.2

Table 37

Doctorate recipients' sources of financial support, by sex and broad field of study: 2019

(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	12,704	100.0	26.3	6.6	3.2	24.0	7.1	14.6	11.0	7.0
Other earnings during graduate school	8,428	100.0	22.7	4.0	2.2	25.7	3.9	19.9	14.8	6.8
Spouse's, partner's, or family's earnings or savings	10,830	100.0	25.6	6.4	3.4	25.0	7.5	13.5	11.6	7.1
Employer reimbursement or assistance	2,819	100.0	27.8	4.9	3.6	14.7	5.9	29.3	6.3	7.4
Foreign (non-U.S.) support	1,417	100.0	28.4	6.9	5.9	18.8	12.5	8.3	11.5	7.7
Other	308	100.0	25.3	6.2	2.9	27.9	4.5	15.6	10.4	7.1

[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: 2019

(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]	
Cumulative debt																		
Mean	$26,137		$23,865		$14,911		$10,686		$43,439		$12,081		$47,672		$33,729		$35,338	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No debt	29,461	57.9	6,748	56.5	4,005	65.2	2,941	75.4	3,712	45.8	6,731	71.2	1,784	42.4	2,137	47.4	1,403	53.5
$10,000 or less	3,853	7.6	997	8.4	472	7.7	258	6.6	541	6.7	750	7.9	264	6.3	402	8.9	169	6.4
$10,001–$20,000	3,024	5.9	813	6.8	393	6.4	157	4.0	494	6.1	505	5.3	209	5.0	305	6.8	148	5.6
$20,001–$30,000	2,367	4.7	630	5.3	327	5.3	127	3.3	377	4.7	344	3.6	200	4.8	261	5.8	101	3.9
$30,001–$40,000	1,729	3.4	480	4.0	219	3.6	91	2.3	303	3.7	213	2.3	155	3.7	183	4.1	85	3.2
$40,001–$50,000	1,336	2.6	347	2.9	139	2.3	51	1.3	247	3.1	167	1.8	161	3.8	154	3.4	70	2.7
$50,001–$60,000	1,050	2.1	251	2.1	96	1.6	48	1.2	213	2.6	128	1.4	128	3.0	116	2.6	70	2.7
$60,001–$70,000	981	1.9	236	2.0	84	1.4	36	0.9	220	2.7	96	1.0	136	3.2	125	2.8	48	1.8
$70,001–$80,000	789	1.6	175	1.5	67	1.1	28	0.7	176	2.2	80	0.8	108	2.6	100	2.2	55	2.1
$80,001–$90,000	777	1.5	193	1.6	63	1.0	31	0.8	167	2.1	64	0.7	127	3.0	85	1.9	47	1.8
$90,001–$100,000	998	2.0	224	1.9	83	1.4	33	0.8	254	3.1	103	1.1	126	3.0	118	2.6	57	2.2
$100,001–$120,000	1,045	2.1	223	1.9	60	1.0	25	0.6	277	3.4	67	0.7	183	4.3	126	2.8	84	3.2
$120,001–$140,000	753	1.5	134	1.1	30	0.5	15	0.4	227	2.8	44	0.5	143	3.4	94	2.1	66	2.5
$140,001–$160,000	584	1.1	95	0.8	22	0.4	20	0.5	167	2.1	35	0.4	122	2.9	79	1.8	44	1.7
$160,001 or more	2,124	4.2	394	3.3	80	1.3	40	1.0	721	8.9	122	1.3	364	8.6	228	5.1	175	6.7
Total	50,871	100.0	11,940	100.0	6,140	100.0	3,901	100.0	8,096	100.0	9,449	100.0	4,210	100.0	4,513	100.0	2,622	100.0
Graduate debt																		
Mean	$17,673		$14,414		$6,428		$6,509		$32,600		$7,064		$36,184		$23,778		$27,359	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No debt	34,746	68.4	8,504	71.3	5,026	82.0	3,255	83.6	4,349	53.8	7,575	80.3	1,977	47.0	2,562	56.9	1,498	57.2
$10,000 or less	3,481	6.9	841	7.1	395	6.4	210	5.4	557	6.9	639	6.8	267	6.4	402	8.9	170	6.5

Table 38

Education-related debt of doctorate recipients, by broad field of study: 2019

(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]	
$10,001–$20,000	2,222	4.4	511	4.3	196	3.2	106	2.7	400	4.9	377	4.0	208	5.0	282	6.3	142	5.4
$20,001–$30,000	1,573	3.1	342	2.9	122	2.0	63	1.6	327	4.0	201	2.1	213	5.1	193	4.3	112	4.3
$30,001–$40,000	1,128	2.2	231	1.9	73	1.2	48	1.2	273	3.4	113	1.2	157	3.7	146	3.2	87	3.3
$40,001–$50,000	921	1.8	212	1.8	54	0.9	36	0.9	187	2.3	102	1.1	161	3.8	111	2.5	58	2.2
$50,001–$60,000	863	1.7	189	1.6	42	0.7	35	0.9	199	2.5	79	0.8	144	3.4	106	2.4	69	2.6
$60,001–$70,000	765	1.5	161	1.4	37	0.6	23	0.6	182	2.3	51	0.5	160	3.8	102	2.3	49	1.9
$70,001–$80,000	619	1.2	120	1.0	23	0.4	14	0.4	170	2.1	45	0.5	116	2.8	74	1.6	57	2.2
$80,001–$90,000	541	1.1	115	1.0	24	0.4	18	0.5	142	1.8	27	0.3	103	2.5	66	1.5	46	1.8
$90,001–$100,000	720	1.4	132	1.1	28	0.5	14	0.4	226	2.8	53	0.6	126	3.0	80	1.8	61	2.3
$100,001–$120,000	782	1.5	151	1.3	37	0.6	17	0.4	217	2.7	32	0.3	159	3.8	100	2.2	69	2.6
$120,001–$140,000	516	1.0	95	0.8	15	0.2	11	0.3	163	2.0	21	0.2	103	2.5	66	1.5	42	1.6
$140,001–$160,000	439	0.9	62	0.5	12	0.2	14	0.4	151	1.9	23	0.2	73	1.7	70	1.6	34	1.3
$160,001 or more	1,468	2.9	255	2.1	44	0.7	30	0.8	540	6.7	95	1.0	235	5.6	145	3.2	124	4.7
Total	50,784	100.0	11,921	100.0	6,128	100.0	3,894	100.0	8,083	100.0	9,433	100.0	4,202	100.0	4,505	100.0	2,618	100.0
Undergraduate debt																		
Mean	$8,505		$9,480		$8,501		$4,191		$10,910		$5,037		$11,574		$10,018		$8,039	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No debt	36,772	72.4	8,265	69.3	4,419	72.0	3,271	83.9	5,363	66.4	7,751	82.2	2,739	65.2	2,996	66.5	1,968	75.2
$10,000 or less	3,268	6.4	828	6.9	377	6.1	177	4.5	550	6.8	499	5.3	322	7.7	356	7.9	159	6.1
$10,001–$20,000	2,878	5.7	748	6.3	361	5.9	148	3.8	566	7.0	333	3.5	287	6.8	311	6.9	124	4.7
$20,001–$30,000	2,338	4.6	622	5.2	305	5.0	108	2.8	464	5.7	252	2.7	222	5.3	267	5.9	98	3.7

Table 38

Education-related debt of doctorate recipients, by broad field of study: 2019

(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]	
$30,001–$40,000	1,715	3.4	471	3.9	220	3.6	75	1.9	329	4.1	191	2.0	175	4.2	186	4.1	68	2.6
$40,001–$50,000	1,051	2.1	298	2.5	123	2.0	28	0.7	226	2.8	119	1.3	107	2.5	105	2.3	45	1.7
$50,001–$60,000	815	1.6	194	1.6	103	1.7	30	0.8	165	2.0	87	0.9	99	2.4	90	2.0	47	1.8
$60,001–$70,000	502	1.0	133	1.1	67	1.1	18	0.5	109	1.3	39	0.4	66	1.6	48	1.1	22	0.8
$70,001–$80,000	364	0.7	83	0.7	51	0.8	13	0.3	76	0.9	44	0.5	43	1.0	34	0.8	20	0.8
$80,001–$90,000	272	0.5	78	0.7	29	0.5	9	0.2	44	0.5	33	0.3	39	0.9	23	0.5	17	0.6
$90,001 or more	831	1.6	212	1.8	81	1.3	22	0.6	190	2.4	87	0.9	105	2.5	86	1.9	48	1.8
Total	50,806	100.0	11,932	100.0	6,136	100.0	3,899	100.0	8,082	100.0	9,435	100.0	4,204	100.0	4,502	100.0	2,616	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: 2010–19

(Number)

Debt level and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All doctorate recipients	43,898	44,781	46,490	46,449	46,819	48,759	49,778	49,225	50,014	50,784
No debt	28,105	28,663	29,297	28,883	29,333	30,890	31,987	32,602	33,828	34,746
$10,000 or less	3,510	3,697	4,030	3,931	3,842	4,189	4,071	3,799	3,831	3,481
$10,001–$30,000	4,238	4,314	4,565	4,609	4,435	4,464	4,376	3,896	3,720	3,795
$30,001 or more	8,045	8,107	8,598	9,026	9,209	9,216	9,344	8,928	8,635	8,762
Life sciences[a]	10,466	10,673	11,115	10,867	10,917	11,306	11,636	11,615	11,778	11,921
No debt	7,268	7,451	7,658	7,318	7,427	7,812	8,100	8,213	8,391	8,504
$10,000 or less	849	853	943	904	860	940	914	913	875	841
$10,001–$30,000	944	909	1,001	1,016	997	943	940	817	815	853
$30,001 or more	1,405	1,460	1,513	1,629	1,633	1,611	1,682	1,672	1,697	1,723
Physical sciences and earth sciences	4,629	4,900	5,009	5,005	5,203	5,328	5,748	5,624	5,870	6,128
No debt	3,575	3,734	3,833	3,831	4,023	4,164	4,530	4,583	4,823	5,026
$10,000 or less	384	401	426	421	404	460	484	392	446	395
$10,001–$30,000	333	353	377	380	365	324	335	298	269	318
$30,001 or more	337	412	373	373	411	380	399	351	332	389
Mathematics and computer sciences	2,956	2,999	3,149	3,273	3,415	3,407	3,589	3,468	3,673	3,894
No debt	2,358	2,381	2,505	2,633	2,685	2,747	2,885	2,835	3,044	3,255
$10,000 or less	174	217	202	204	238	222	190	218	215	210
$10,001–$30,000	171	178	187	182	189	175	217	175	170	169
$30,001 or more	253	223	255	254	303	263	297	240	244	260
Psychology and social sciences	7,095	7,363	7,598	7,442	7,435	7,853	8,073	7,957	7,913	8,083
No debt	3,415	3,523	3,560	3,446	3,431	3,635	3,966	4,057	4,165	4,349
$10,000 or less	556	630	657	615	609	670	687	643	610	557
$10,001–$30,000	866	882	983	880	860	947	881	840	736	727
$30,001 or more	2,258	2,328	2,398	2,501	2,535	2,601	2,539	2,417	2,402	2,450
Engineering	6,989	7,363	7,747	7,964	8,445	8,827	8,549	8,853	9,285	9,433
No debt	5,347	5,654	5,907	5,981	6,426	6,787	6,555	7,034	7,485	7,575
$10,000 or less	581	635	692	706	746	774	759	678	715	639
$10,001–$30,000	528	504	549	615	617	613	568	520	516	578
$30,001 or more	533	570	599	662	656	653	667	621	569	641
Education	4,766	4,255	4,397	4,300	4,079	4,490	4,621	4,299	4,356	4,202
No debt	2,445	2,152	2,115	1,898	1,725	1,942	2,038	1,893	1,952	1,977
$10,000 or less	365	312	373	361	347	396	369	340	339	267
$10,001–$30,000	556	542	534	574	502	555	557	483	480	421
$30,001 or more	1,400	1,249	1,375	1,467	1,505	1,597	1,657	1,583	1,585	1,537
Humanities and arts	4,577	4,808	5,059	4,974	4,771	4,939	4,953	4,734	4,610	4,505
No debt	2,383	2,459	2,451	2,431	2,325	2,437	2,551	2,544	2,549	2,562
$10,000 or less	434	477	539	525	450	543	466	444	457	402
$10,001–$30,000	569	657	671	667	629	633	611	509	483	475
$30,001 or more	1,191	1,215	1,398	1,351	1,367	1,326	1,325	1,237	1,121	1,066
Other[b]	2,420	2,420	2,416	2,624	2,554	2,609	2,609	2,675	2,529	2,618
No debt	1,314	1,309	1,268	1,345	1,291	1,366	1,362	1,443	1,419	1,498
$10,000 or less	167	172	198	195	188	184	202	171	174	170
$10,001–$30,000	271	289	263	295	276	274	267	254	251	254
$30,001 or more	668	650	687	789	799	785	778	807	685	696

[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: 2019

(Mean debt, number, and percent)

Debt level	Sex				Citizenship status				U.S. citizens and permanent residents															
											Not Hispanic or Latino												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		Other race or race not reported			
Cumulative debt																								
Mean	$22,015		$31,039		$35,178		$8,591		$44,369		$52,692		$15,903		$84,050		$31,657		$39,445		$30,966		$38,486	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No debt	16,780	60.7	12,681	54.6	15,808	47.2	13,537	78.6	965	35.9	30	28.8	2,219	67.2	474	20.0	11,396	48.6	515	46.4	150	50.8	59	41.5
$10,000 or less	2,215	8.0	1,638	7.1	2,460	7.4	1,377	8.0	245	9.1	8	7.7	250	7.6	120	5.1	1,729	7.4	70	6.3	25	8.5	13	9.2
$10,001–$20,000	1,647	6.0	1,377	5.9	2,393	7.2	618	3.6	205	7.6	8	7.7	216	6.5	97	4.1	1,758	7.5	77	6.9	22	7.5	10	7.0
$20,001–$30,000	1,293	4.7	1,074	4.6	1,965	5.9	397	2.3	177	6.6	6	5.8	119	3.6	129	5.4	1,459	6.2	53	4.8	16	5.4	6	4.2
$30,001–$40,000	925	3.3	804	3.5	1,490	4.5	236	1.4	133	5.0	8	7.7	73	2.2	92	3.9	1,117	4.8	51	4.6	8	2.7	8	5.6
$40,001–$50,000	677	2.4	659	2.8	1,142	3.4	186	1.1	119	4.4	D	D	64	1.9	113	4.8	786	3.4	39	3.5	D	D	10	7.0
$50,001–$60,000	517	1.9	533	2.3	924	2.8	124	0.7	96	3.6	7	6.7	51	1.5	96	4.1	629	2.7	31	2.8	9	3.1	5	3.5
$60,001–$70,000	478	1.7	503	2.2	874	2.6	104	0.6	83	3.1	D	D	45	1.4	86	3.6	624	2.7	26	2.3	D	D	4	2.8
$70,001–$80,000	380	1.4	408	1.8	723	2.2	65	0.4	73	2.7	D	D	37	1.1	77	3.3	503	2.1	26	2.3	D	D	1	0.7
$80,001–$90,000	335	1.2	442	1.9	719	2.1	58	0.3	74	2.8	5	4.8	34	1.0	82	3.5	484	2.1	23	2.1	11	3.7	6	4.2
$90,001–$100,000	459	1.7	539	2.3	913	2.7	84	0.5	86	3.2	6	5.8	56	1.7	109	4.6	604	2.6	39	3.5	9	3.1	4	2.8
$100,001–$120,000	478	1.7	567	2.4	960	2.9	80	0.5	118	4.4	D	D	32	1.0	178	7.5	595	2.5	24	2.2	D	D	1	0.7
$120,001–$140,000	343	1.2	410	1.8	695	2.1	54	0.3	78	2.9	D	D	20	0.6	129	5.4	415	1.8	35	3.2	D	D	4	2.8
$140,001–$160,000	241	0.9	343	1.5	528	1.6	53	0.3	45	1.7	D	D	17	0.5	97	4.1	335	1.4	30	2.7	D	D	1	0.7
$160,001 or more	874	3.2	1,250	5.4	1,867	5.6	248	1.4	188	7.0	8	7.7	68	2.1	490	20.7	1,022	4.4	70	6.3	11	3.7	10	7.0
Total	27,642	100.0	23,228	100.0	33,461	100.0	17,221	100.0	2,685	100.0	104	100.0	3,301	100.0	2,369	100.0	23,456	100.0	1,109	100.0	295	100.0	142	100.0
Graduate debt																								
Mean	$14,242		$21,754		$23,359		$6,613		$29,834		$36,311		$10,190		$61,436		$20,405		$26,777		$21,866		$28,063	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No debt	19,754	71.6	14,992	64.7	20,590	61.6	14,031	81.6	1,371	51.1	38	36.9	2,617	79.4	674	28.5	14,976	63.9	661	59.8	179	61.3	74	52.1
$10,000 or less	1,965	7.1	1,516	6.5	2,233	6.7	1,231	7.2	206	7.7	7	6.8	170	5.2	133	5.6	1,623	6.9	60	5.4	21	7.2	13	9.2
$10,001–$20,000	1,216	4.4	1,006	4.3	1,626	4.9	589	3.4	165	6.1	11	10.7	103	3.1	115	4.9	1,153	4.9	59	5.3	15	5.1	5	3.5
$20,001–$30,000	793	2.9	780	3.4	1,265	3.8	300	1.7	136	5.1	6	5.8	75	2.3	118	5.0	872	3.7	42	3.8	10	3.4	6	4.2

Table 40

Education-related debt of doctorate recipients, by sex, citizenship status, ethnicity, and race: 2019

(Mean debt, number, and percent)

Debt level	Sex				Citizenship status				U.S. citizens and permanent residents															
											Not Hispanic or Latino												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		Other race or race not reported			
$30,001–$40,000	554	2.0	574	2.5	936	2.8	189	1.1	98	3.7	9	8.7	42	1.3	100	4.2	637	2.7	36	3.3	7	2.4	7	4.9
$40,001–$50,000	448	1.6	473	2.0	773	2.3	145	0.8	78	2.9	D	D	36	1.1	103	4.4	514	2.2	23	2.1	D	D	9	6.3
$50,001–$60,000	401	1.5	462	2.0	738	2.2	122	0.7	92	3.4	6	5.8	37	1.1	98	4.2	467	2.0	28	2.5	6	2.1	4	2.8
$60,001–$70,000	334	1.2	431	1.9	692	2.1	70	0.4	73	2.7	D	D	32	1.0	101	4.3	449	1.9	25	2.3	D	D	3	2.1
$70,001–$80,000	276	1.0	342	1.5	562	1.7	56	0.3	60	2.2	6	5.8	25	0.8	82	3.5	364	1.6	18	1.6	5	1.7	2	1.4
$80,001–$90,000	238	0.9	303	1.3	505	1.5	36	0.2	58	2.2	D	D	24	0.7	74	3.1	323	1.4	12	1.1	D	D	5	3.5
$90,001–$100,000	310	1.1	410	1.8	640	1.9	79	0.5	57	2.1	D	D	33	1.0	118	5.0	403	1.7	18	1.6	D	D	3	2.1
$100,001–$120,000	313	1.1	469	2.0	726	2.2	53	0.3	80	3.0	6	5.8	29	0.9	129	5.5	449	1.9	27	2.4	5	1.7	1	0.7
$120,001–$140,000	215	0.8	301	1.3	472	1.4	42	0.2	50	1.9	D	D	13	0.4	109	4.6	259	1.1	33	3.0	D	D	0	0.0
$140,001–$160,000	177	0.6	262	1.1	398	1.2	38	0.2	39	1.5	D	D	9	0.3	79	3.3	252	1.1	15	1.4	D	D	2	1.4
$160,001 or more	603	2.2	865	3.7	1,255	3.8	206	1.2	120	4.5	D	D	52	1.6	328	13.9	686	2.9	49	4.4	D	D	8	5.6
Total	27,597	100.0	23,186	100.0	33,411	100.0	17,187	100.0	2,683	100.0	103	100.0	3,297	100.0	2,361	100.0	23,427	100.0	1,106	100.0	292	100.0	142	100.0
Undergraduate debt																								
Mean	$7,806		$9,338		$11,870		$1,993		$14,568		$16,731		$5,732		$22,899		$11,288		$12,753		$9,386		$10,647	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No debt	20,439	74.0	16,332	70.4	21,009	62.9	15,612	90.7	1,448	54.0	54	51.9	2,559	77.6	1,016	43.0	14,964	63.9	678	61.2	203	69.3	87	62.6
$10,000 or less	1,727	6.3	1,541	6.6	2,536	7.6	727	4.2	302	11.3	9	8.7	221	6.7	207	8.8	1,675	7.1	83	7.5	23	7.8	16	11.5
$10,001–$20,000	1,475	5.3	1,403	6.0	2,575	7.7	296	1.7	238	8.9	10	9.6	200	6.1	193	8.2	1,811	7.7	96	8.7	17	5.8	10	7.2
$20,001–$30,000	1,213	4.4	1,125	4.9	2,137	6.4	193	1.1	176	6.6	9	8.7	106	3.2	209	8.9	1,539	6.6	72	6.5	18	6.1	8	5.8
$30,001–$40,000	883	3.2	832	3.6	1,587	4.7	124	0.7	157	5.9	D	D	D	D	169	7.2	1,133	4.8	48	4.3	9	3.1	6	4.3

Table 40

Education-related debt of doctorate recipients, by sex, citizenship status, ethnicity, and race: 2019

(Mean debt, number, and percent)

Debt level	Sex				Citizenship status				U.S. citizens and permanent residents															
											Not Hispanic or Latino												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		Other race or race not reported			
$40,001–$50,000	529	1.9	522	2.3	977	2.9	72	0.4	95	3.5	D	D	D	D	128	5.4	652	2.8	44	4.0	5	1.7	5	3.6
$50,001–$60,000	403	1.5	412	1.8	758	2.3	55	0.3	87	3.2	D	D	D	D	123	5.2	494	2.1	16	1.4	6	2.0	0	0.0
$60,001–$70,000	249	0.9	253	1.1	479	1.4	22	0.1	38	1.4	7	6.7	16	0.5	69	2.9	335	1.4	12	1.1	1	0.3	1	0.7
$70,001–$80,000	161	0.6	203	0.9	348	1.0	14	0.1	34	1.3	0	0.0	14	0.4	52	2.2	229	1.0	18	1.6	1	0.3	0	0.0
$80,001–$90,000	124	0.4	148	0.6	255	0.8	16	0.1	23	0.9	0	0.0	12	0.4	44	1.9	162	0.7	9	0.8	3	1.0	2	1.4
$90,001 or more	408	1.5	423	1.8	756	2.3	73	0.4	85	3.2	D	D	D	D	151	6.4	438	1.9	32	2.9	7	2.4	4	2.9
Total	27,611	100.0	23,194	100.0	33,417	100.0	17,204	100.0	2,683	100.0	104	100.0	3,297	100.0	2,361	100.0	23,432	100.0	1,108	100.0	293	100.0	139	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: 2019

(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]	33,411	8,689	3,751	1,705	6,266	4,052	3,637	3,725	1,586
Debt > $30,000 (%)	23.0	17.3	7.9	10.0	36.9	8.0	40.3	27.7	37.7
Hispanic or Latino									
Total (number)[c]	2,683	737	258	97	576	288	306	314	107
Debt > $30,000 (%)	30.0	19.0	15.9	16.5	44.6	12.2	51.0	33.8	50.5
Not Hispanic or Latino									
American Indian or Alaska Native									
Total (number)[c]	103	23	7	D	27	8	D	8	6
Debt > $30,000 (%)	39.8	30.4	D	0.0	48.1	0.0	D	D	D
Asian									
Total (number)[c]	3,297	1,019	354	243	419	688	200	193	181
Debt > $30,000 (%)	10.1	8.4	5.6	3.7	16.7	6.5	26.5	13.0	13.3
Black or African American									
Total (number)[c]	2,361	522	83	67	564	172	571	168	214
Debt > $30,000 (%)	56.0	46.0	24.1	34.3	66.0	18.0	66.9	60.1	71.0
White									
Total (number)[c]	23,427	5,994	2,865	1,203	4,359	2,712	2,391	2,886	1,017
Debt > $30,000 (%)	20.5	15.7	6.9	9.4	33.6	7.3	33.4	25.7	33.8
More than one race									
Total (number)[c]	1,106	294	140	67	238	122	107	102	36
Debt > $30,000 (%)	25.7	21.4	5.7	11.9	40.3	8.2	48.6	33.3	36.1
Other race or race not reported									
Total (number)[c]	292	68	28	D	58	38	D	35	19
Debt > $30,000 (%)	22.9	20.6	D	5.0	41.4	5.3	D	D	D
Ethnicity not reported									
Total (number)[c]	142	32	16	7	25	24	13	19	6
Debt > $30,000 (%)	31.0	21.9	18.8	14.3	52.0	8.3	38.5	42.1	83.3

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.

[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, 1999–2019

(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)									
1999	41,100	8,204	4,285	1,939	7,389	5,330	6,554	5,273	2,126
2004	42,122	8,813	4,023	2,024	7,158	5,776	6,635	5,245	2,448
2009	49,552	11,403	5,160	3,163	7,945	7,642	6,528	4,904	2,807
2014	53,986	12,484	5,910	3,862	8,748	9,626	4,789	5,524	3,043
2019	55,703	12,781	6,585	4,240	9,071	10,303	4,635	5,054	3,034
All responses to postgraduation commitment									
1999	37,198	7,597	3,901	1,788	6,585	4,863	5,796	4,815	1,853
2004	37,931	8,055	3,728	1,868	6,333	5,282	5,777	4,781	2,107
2009	44,926	10,485	4,719	2,897	7,072	6,992	5,871	4,427	2,463
2014	48,214	11,304	5,341	3,483	7,646	8,679	4,227	4,934	2,600
2019	50,905	11,943	6,136	3,901	8,107	9,455	4,219	4,521	2,623
Definite commitment for employment or postdoctoral study (%)[c]									
1999	69.9	72.4	73.0	72.8	67.5	67.7	74.1	60.6	76.2
2004	70.0	71.2	70.8	72.8	71.1	63.6	74.6	63.6	76.6
2009	69.5	66.8	72.1	72.1	72.9	66.8	71.6	63.2	76.4
2014	61.4	58.1	61.6	66.8	68.7	57.2	64.5	54.6	68.9
2019	69.0	66.6	67.5	76.3	74.3	66.9	72.7	58.5	76.2
No definite commitment for employment or postdoctoral study (%)[c,d]									
1999	30.1	27.6	27.0	27.2	32.5	32.3	25.9	39.4	23.8
2004	30.0	28.8	29.2	27.2	28.9	36.4	25.4	36.4	23.4
2009	30.5	33.2	27.9	27.9	27.1	33.2	28.4	36.8	23.6
2014	38.6	41.9	38.4	33.2	31.3	42.8	35.5	45.4	31.1
2019	31.0	33.4	32.5	23.7	25.7	33.1	27.3	41.5	23.8

[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] 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, 1999–2019

(Number and percent)

Commitment status and year	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
All doctorate recipients (number)													
1999	41,100	23,438	17,485	30,312	9,060	1,328	214	2,497	1,765	23,901	na	352	255
2004	42,122	22,965	19,155	28,040	11,628	1,302	125	2,022	1,897	21,011	386	402	895
2009	49,552	26,331	23,187	32,327	14,736	1,880	132	2,612	2,168	23,616	646	338	935
2014	53,986	29,008	24,813	34,003	15,839	2,190	103	2,881	2,172	24,829	879	272	677
2019	55,703	30,151	25,542	35,274	18,351	2,848	120	3,421	2,512	24,248	1,121	381	623
All responses to postgraduation commitment													
1999	37,198	21,372	15,823	28,714	8,422	1,169	197	2,366	1,614	22,872	na	340	156
2004	37,931	20,719	17,212	26,882	10,984	1,264	119	1,976	1,824	20,632	384	344	339
2009	44,926	23,936	20,986	31,092	13,747	1,765	124	2,524	2,032	23,043	638	297	669
2014	48,214	25,952	22,262	32,970	15,117	2,107	96	2,836	2,127	24,503	875	247	179
2019	50,905	27,657	23,247	33,492	17,235	2,690	105	3,299	2,377	23,467	1,112	295	147
Definite commitment for employment or postdoctoral study (%)[b]													
1999	69.9	71.0	68.5	70.9	66.8	68.5	64.0	66.5	66.5	72.0	na	65.9	62.2
2004	70.0	70.7	69.2	71.6	66.1	69.9	71.4	65.1	67.2	72.9	66.9	69.2	69.0
2009	69.5	70.6	68.2	70.3	67.7	68.4	59.7	61.5	63.9	72.1	68.7	69.0	70.4
2014	61.4	62.4	60.2	62.7	58.5	57.9	62.5	53.9	53.3	65.1	60.7	59.5	58.1
2019	69.0	69.8	68.1	69.0	69.1	66.1	74.3	64.4	64.7	70.4	68.5	67.8	66.0
No definite commitment for employment or postdoctoral study (%)[b],[c]													
1999	30.1	29.0	31.5	29.1	33.2	31.5	36.0	33.5	33.5	28.0	na	34.1	37.8
2004	30.0	29.3	30.8	28.4	33.9	30.1	28.6	34.9	32.8	27.1	33.1	30.8	31.0
2009	30.5	29.4	31.8	29.7	32.3	31.6	40.3	38.5	36.1	27.9	31.3	31.0	29.6
2014	38.6	37.6	39.8	37.3	41.5	42.1	37.5	46.1	46.7	34.9	39.3	40.5	41.9
2019	31.0	30.2	31.9	31.0	30.9	33.9	25.7	35.6	35.3	29.6	31.5	32.2	34.0

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, 1999–2019

(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)									
1999	26,007	5,502	2,846	1,301	4,443	3,290	4,296	2,917	1,412
2004	26,561	5,738	2,641	1,360	4,502	3,357	4,308	3,042	1,613
2009	31,208	7,007	3,402	2,089	5,154	4,672	4,205	2,797	1,882
2014	29,605	6,563	3,289	2,325	5,250	4,966	2,727	2,693	1,792
2019	35,134	7,958	4,142	2,976	6,020	6,329	3,067	2,644	1,998
Reported type of plan									
1999	25,776	5,462	2,834	1,294	4,411	3,274	4,226	2,875	1,400
2004	25,874	5,574	2,599	1,333	4,394	3,280	4,179	2,944	1,571
2009	30,401	6,854	3,357	2,052	5,036	4,571	4,046	2,712	1,773
2014	27,144	6,098	3,123	2,189	4,768	4,590	2,429	2,393	1,554
2019	35,090	7,942	4,138	2,973	6,015	6,319	3,065	2,642	1,996
Employment (%)[c]									
1999	69.9	36.6	43.2	75.1	74.3	77.5	94.9	92.0	95.5
2004	64.8	32.9	33.6	63.8	69.9	63.9	93.8	89.1	94.9
2009	62.1	33.2	33.2	64.0	67.6	63.9	94.4	87.2	93.8
2014	60.6	35.1	37.8	65.1	63.8	66.1	91.8	81.8	92.3
2019	61.6	42.0	42.4	69.3	60.3	65.7	90.8	79.2	91.3
Postdoctoral study (%)[c]									
1999	30.1	63.4	56.8	24.9	25.7	22.5	5.1	8.0	4.5
2004	35.2	67.1	66.4	36.2	30.1	36.1	6.2	10.9	5.1
2009	37.9	66.8	66.8	36.0	32.4	36.1	5.6	12.8	6.2
2014	39.4	64.9	62.2	34.9	36.2	33.9	8.2	18.2	7.7
2019	38.4	58.0	57.6	30.7	39.7	34.3	9.2	20.8	8.7

[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, 1999–2019

(Number and percent)

Definite commitment, plan, and year	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
All definite commitments (number)													
1999	26,007	15,167	10,838	20,356	5,624	801	126	1,573	1,074	16,461	na	224	97
2004	26,561	14,652	11,909	19,257	7,263	884	85	1,286	1,225	15,048	257	238	234
2009	31,208	16,887	14,319	21,853	9,300	1,207	74	1,551	1,299	16,608	438	205	471
2014	29,605	16,193	13,412	20,684	8,842	1,221	60	1,529	1,133	15,959	531	147	104
2019	35,134	19,299	15,834	23,103	11,911	1,779	78	2,125	1,537	16,525	762	200	97
Reported type of plan													
1999	25,776	15,056	10,719	20,181	5,577	793	125	1,561	1,063	16,324	na	220	95
2004	25,874	14,262	11,612	18,746	7,094	854	81	1,234	1,182	14,693	248	232	222
2009	30,401	16,484	13,915	21,257	9,090	1,157	72	1,504	1,247	16,185	429	202	461
2014	27,144	14,910	12,234	18,811	8,256	1,082	52	1,411	998	14,554	478	137	99
2019	35,090	19,272	15,817	23,079	11,892	1,776	78	2,122	1,537	16,508	761	200	97
Employment (%)[b]													
1999	69.9	68.0	72.5	72.4	60.6	73.5	76.0	59.8	81.5	73.0	na	70.5	73.7
2004	64.8	62.2	68.0	68.6	54.5	66.2	79.0	56.2	76.7	69.1	66.5	67.2	73.9
2009	62.1	60.5	64.0	65.6	54.0	62.8	65.3	58.4	74.6	65.9	59.2	66.3	65.9
2014	60.6	60.5	60.7	62.6	55.8	59.1	67.3	58.6	71.6	62.8	59.0	56.2	68.7
2019	61.6	61.4	61.9	63.3	58.4	59.1	66.7	61.4	75.9	62.8	59.1	71.5	73.2
Postdoctoral study (%)[b]													
1999	30.1	32.0	27.5	27.6	39.4	26.5	24.0	40.2	18.5	27.0	na	29.5	26.3
2004	35.2	37.8	32.0	31.4	45.5	33.8	21.0	43.8	23.3	30.9	33.5	32.8	26.1
2009	37.9	39.5	36.0	34.4	46.0	37.2	34.7	41.6	25.4	34.1	40.8	33.7	34.1
2014	39.4	39.5	39.3	37.4	44.2	40.9	32.7	41.4	28.4	37.2	41.0	43.8	31.3
2019	38.4	38.6	38.1	36.7	41.6	40.9	33.3	38.6	24.1	37.2	40.9	28.5	26.8

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, 1999–2019

(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)									
1999	16,267	1,681	1,127	877	2,933	2,265	3,788	2,422	1,174
2004	14,870	1,565	800	741	2,663	1,726	3,697	2,407	1,271
2009	17,179	2,029	1,029	1,232	2,947	2,606	3,696	2,161	1,479
2014	14,802	1,907	1,076	1,335	2,605	2,736	2,101	1,767	1,275
2019	19,424	3,005	1,616	1,877	3,145	3,666	2,608	1,927	1,580
Academe (%)[c]									
1999	48.8	47.5	21.1	48.1	51.9	14.1	47.2	80.7	75.7
2004	56.1	52.3	27.6	62.3	60.8	22.0	50.2	83.3	77.1
2009	51.8	50.0	27.8	40.8	63.0	14.4	50.3	83.9	80.2
2014	49.2	46.9	25.0	33.0	60.1	14.9	59.4	81.8	80.0
2019	41.3	36.0	17.1	27.5	51.7	12.2	56.8	72.3	75.9
Government (%)[c]									
1999	7.5	12.7	9.6	5.2	11.5	9.5	5.3	2.0	4.8
2004	7.4	14.2	10.8	5.3	10.7	10.6	4.0	2.2	6.1
2009	6.7	12.3	10.0	4.7	9.9	8.5	3.8	1.6	3.7
2014	7.3	10.5	7.4	4.3	10.6	10.0	4.7	2.1	4.5
2019	7.2	8.5	9.2	4.6	12.3	8.3	3.8	1.9	5.6
Industry or business (%)[c,d]									
1999	27.5	29.8	65.6	43.7	20.1	74.2	6.9	6.4	14.5
2004	18.9	23.6	53.6	29.4	13.4	61.8	3.9	4.2	10.3
2009	25.7	25.3	55.8	49.7	14.6	73.1	4.1	3.4	10.8
2014	32.2	31.3	63.0	59.3	16.5	72.1	3.6	4.6	10.8
2019	38.5	42.4	69.0	63.8	21.6	74.3	5.6	7.5	12.4
Nonprofit organization (%)[c]									
1999	5.4	7.3	2.1	1.7	10.6	1.6	4.4	6.8	3.4
2004	5.7	7.0	5.6	2.0	9.5	4.4	4.1	5.8	4.3
2009	4.7	7.8	2.7	2.5	7.1	2.1	4.5	5.9	2.2
2014	5.4	9.4	2.5	2.2	9.0	2.5	4.5	6.7	3.4
2019	6.3	10.1	2.2	2.4	9.1	3.4	7.1	9.8	4.1
Other or unknown (%)[c,e]									
1999	10.8	2.7	1.6	1.3	5.8	0.6	36.2	4.1	1.6
2004	11.9	3.0	2.4	0.9	5.6	1.2	37.8	4.5	2.2
2009	11.1	4.6	3.7	2.3	5.4	1.9	37.3	5.2	3.1

Table 46

Employment sector of doctorate recipients with definite postgraduation commitments for employment in the United States, by broad field of study: Selected years, 1999–2019

(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]
2014	5.9	1.9	2.0	1.2	3.9	0.4	27.9	4.8	1.3
2019	6.7	3.1	2.5	1.7	5.3	1.9	26.7	8.6	2.1

[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, 1999–2019

(Number and percent)

Employment commitment, sector, and year	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
All U.S. employment commitments (number)													
1999	16,267	9,033	7,234	14,236	2,020	561	90	871	848	11,649	na	149	68
2004	14,870	7,656	7,214	12,539	2,314	553	64	644	896	9,910	162	150	160
2009	17,179	8,912	8,267	13,620	3,529	711	46	838	916	10,439	250	131	289
2014	14,802	8,005	6,797	11,477	3,280	625	D	782	705	8,925	274	D	60
2019	19,424	10,396	9,027	14,316	5,043	1,031	51	1,260	1,161	10,173	435	137	68
Academe (%)[b]													
1999	48.8	43.3	55.6	50.8	34.3	58.3	53.3	34.8	55.3	51.3	na	51.7	50.0
2004	56.1	51.6	60.8	56.9	51.8	61.8	53.1	45.7	52.6	57.7	64.2	55.3	53.1
2009	51.8	45.7	58.3	54.6	40.9	56.1	41.3	45.5	51.5	55.6	60.0	51.9	50.9
2014	49.2	41.8	58.0	53.8	33.4	55.5	69.7	39.1	51.2	55.1	56.6	38.4	53.3
2019	41.3	34.3	49.3	45.2	30.3	48.4	47.1	33.1	45.0	46.5	43.4	46.7	36.8
Government (%)[b]													
1999	7.5	8.4	6.5	8.4	1.5	8.2	8.9	5.7	7.8	8.6	na	10.1	8.8
2004	7.4	8.4	6.2	8.4	2.0	7.4	6.3	6.7	9.5	8.3	9.9	9.3	13.1
2009	6.7	7.2	6.2	8.1	1.5	8.0	17.4	8.0	8.7	7.9	7.2	9.2	10.7
2014	7.3	7.7	6.8	8.9	1.8	9.3	D	7.2	14.0	8.6	9.5	D	8.3
2019	7.2	7.5	6.9	9.3	1.2	8.7	15.7	7.7	12.0	9.3	10.3	3.6	11.8
Industry or business (%)[b,c]													
1999	27.5	36.0	16.9	23.0	59.7	17.3	13.3	49.7	12.0	22.0	na	22.8	32.4
2004	18.9	26.0	11.4	15.0	39.9	15.2	9.4	36.8	8.1	14.2	15.4	22.0	12.5
2009	25.7	34.6	16.2	18.7	52.9	16.3	19.6	35.8	11.6	17.9	18.0	22.9	23.9
2014	32.2	42.3	20.3	23.7	61.9	20.8	15.2	43.6	14.5	22.9	20.8	41.1	23.3
2019	38.5	48.4	27.1	29.5	63.8	26.3	15.7	48.0	17.6	29.0	29.9	29.9	32.4
Nonprofit organization (%)[b]													
1999	5.4	4.6	6.4	5.9	2.3	4.3	7.8	5.6	4.4	6.1	na	6.7	2.9
2004	5.7	5.6	5.7	6.1	3.5	4.0	3.1	6.1	6.0	6.3	2.5	7.3	7.5

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, 1999–2019

(Number and percent)

Employment commitment, sector, and year	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
2009	4.7	4.3	5.1	5.3	2.3	3.9	D	4.8	5.7	5.4	6.4	D	4.2
2014	5.4	4.2	6.8	6.3	2.0	6.2	D	5.5	6.8	6.4	5.8	D	5.0
2019	6.3	5.0	7.9	7.6	2.8	8.1	11.8	6.4	10.4	7.3	8.3	6.6	4.4
Other or unknown (%)[b,d]													
1999	10.8	7.7	14.6	12.0	2.2	11.9	16.7	4.1	20.5	12.0	na	8.7	5.9
2004	11.9	8.3	15.8	13.6	2.8	11.6	28.1	4.8	23.8	13.5	8.0	6.0	13.8
2009	11.1	8.2	14.2	13.3	2.5	15.6	D	6.0	22.5	13.2	8.4	D	10.4
2014	5.9	4.0	8.1	7.3	0.9	8.2	D	4.6	13.5	7.0	7.3	D	10.0
2019	6.7	4.8	8.9	8.3	1.9	8.4	9.8	4.8	15.1	7.9	8.0	13.1	14.7

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 basic annual salary for doctorate recipients with definite postgraduation plans in the United States, by field of study, type of postgraduation plans, and sex: 2019

(Dollars)

Field of study	Total[a]		Employment			Postdoctoral study		
	Male	Female	Total	Male	Female	Total	Male	Female
All fields	70,000	60,000	83,000	95,000	72,500	50,000	50,000	50,000
Science and engineering	70,000	59,530	92,000	100,000	80,000	50,000	50,000	50,000
Life sciences	52,000	52,500	82,000	87,000	80,000	50,000	50,000	50,000
Agricultural sciences and natural resources	55,000	55,000	75,000	80,000	70,116	49,000	48,216	49,000
Biological and biomedical sciences	50,004	50,000	85,000	90,000	80,000	50,000	50,000	50,000
Health sciences	62,200	70,000	85,000	88,739	85,000	50,000	50,000	50,000
Physical sciences and earth sciences	61,218	60,000	96,000	100,000	90,000	50,123	50,004	50,760
Chemistry	55,000	60,000	95,000	97,000	92,250	49,000	48,950	49,000
Geosciences, atmospheric sciences, and ocean sciences	60,000	58,250	70,000	76,750	67,000	55,000	54,000	55,000
Physics and astronomy	70,000	67,600	109,350	110,000	102,500	58,000	58,000	60,295
Mathematics and computer sciences	100,250	82,000	120,000	125,000	101,500	60,000	61,500	60,000
Psychology and social sciences	63,800	55,000	71,000	77,000	69,000	50,000	50,000	48,500
Psychology	52,500	50,000	68,000	71,002	66,050	48,000	48,700	48,000
Economics	100,000	106,000	115,000	115,000	120,000	65,000	65,000	65,000
Social sciences[b]	61,323	60,000	66,000	68,018	65,000	52,000	54,000	52,000
Engineering	90,000	80,000	102,500	105,000	100,000	50,000	50,000	50,000
Non-science and engineering	65,000	62,000	65,000	69,000	65,000	50,000	50,000	50,000
Education	70,000	65,000	70,000	73,000	68,000	50,000	53,000	50,000
Humanities and arts	52,000	52,000	53,000	53,000	53,000	50,000	50,000	50,000
Business management and administration	130,000	123,000	130,000	130,000	125,000	66,000	75,000	65,000
Other non-S&E fields[c]	65,000	64,500	65,500	67,500	65,000	50,000	55,000	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 basic annual salary for doctorate recipients with definite postgraduation plans for employment in the United States, by field of study and employment sector: 2019

(Dollars)

Field of study	Total[a]	Academe	Industry or business[b]	Government	Nonprofit organization	Other or unknown[c]
All fields	83,000	65,000	110,000	86,000	80,000	70,000
Science and engineering	92,000	67,000	110,000	87,000	88,000	65,000
Life sciences	82,000	67,000	100,000	80,000	89,000	55,500
Agricultural sciences and natural resources	75,000	65,000	89,000	70,000	77,000	35,000
Biological and biomedical sciences	85,000	60,000	100,000	70,000	75,000	55,000
Health sciences	85,000	73,500	100,000	90,000	100,000	68,000
Physical sciences and earth sciences	96,000	54,000	109,000	78,785	86,000	51,000
Chemistry	95,000	54,000	102,158	80,000	81,000	50,000
Geosciences, atmospheric sciences, and ocean sciences	70,000	52,380	100,000	68,000	68,000	66,000
Physics and astronomy	109,350	54,000	117,500	102,900	105,000	51,000
Mathematics and computer sciences	120,000	74,000	140,000	106,000	119,000	67,500
Psychology and social sciences	71,000	64,000	100,000	80,000	75,000	70,000
Psychology	68,000	60,000	85,500	70,000	75,500	70,000
Economics	115,000	95,000	130,000	108,000	120,000	115,500
Social sciences[d]	66,000	60,500	91,000	81,976	70,000	63,000
Engineering	102,500	83,000	110,000	97,000	108,000	85,000
Non-science and engineering	65,000	63,000	80,000	84,000	65,000	73,000
Education	70,000	65,000	80,000	83,191	80,000	76,869
Humanities and arts	53,000	52,000	52,750	72,000	55,000	54,000
Business management and administration	130,000	130,000	130,000	113,000	115,000	98,500
Other non-S&E fields[e]	65,500	65,000	90,050	91,480	68,500	62,500

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, 1999–2019

(Number and percent)

Postgraduate study commitments, source of support, and year	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
All postgraduate study commitments (number)													
1999	7,768	4,817	2,950	5,564	2,199	210	30	627	197	4,410	na	65	25
2004	9,116	5,396	3,720	5,877	3,226	289	17	541	275	4,538	83	76	58
2009	11,522	6,508	5,013	7,318	4,184	430	25	625	317	5,521	175	68	157
2014	10,699	5,886	4,813	7,026	3,651	442	17	584	283	5,413	196	60	31
2019	13,462	7,441	6,021	8,477	4,947	726	26	820	371	6,140	311	57	26
U.S. government (%)[b]													
1999	35.7	35.8	35.4	41.6	20.7	41.4	36.7	36.4	34.0	42.9	na	30.8	44.0
2004	30.9	31.2	30.4	37.6	18.8	34.3	23.5	33.3	28.0	39.0	36.1	34.2	36.2
2009	29.6	29.0	30.4	36.3	17.9	38.1	20.0	30.4	32.8	37.4	31.4	35.3	28.0
2014	31.2	30.9	31.7	36.4	21.3	38.0	D	32.5	30.7	37.0	36.7	D	48.4
2019	31.6	30.9	32.4	38.6	19.8	37.6	34.6	34.4	32.6	39.8	37.0	28.1	38.5
College or university (%)[b]													
1999	32.4	34.4	29.1	27.3	45.4	27.1	40.0	32.2	27.4	26.5	na	23.1	36.0
2004	45.5	47.1	43.1	39.1	57.0	42.2	41.2	42.5	43.3	38.1	38.6	43.4	39.7
2009	44.9	46.7	42.6	38.8	55.6	37.2	48.0	42.9	36.3	38.6	44.0	32.4	36.9
2014	43.5	44.8	41.8	39.1	51.9	41.2	52.9	41.8	44.5	38.5	37.2	35.0	35.5
2019	39.0	40.5	37.1	33.2	49.0	35.7	42.3	36.1	40.2	32.0	36.0	29.8	34.6
Private foundation (%)[b]													
1999	9.3	8.5	10.6	9.2	9.6	8.1	3.3	8.8	7.1	9.4	na	9.2	8.0
2004	5.4	5.1	6.0	6.1	4.3	3.8	5.9	5.2	5.1	6.4	4.8	6.6	6.9
2009	4.7	4.3	5.2	5.8	2.8	5.6	0.0	5.3	5.7	5.9	D	D	9.6
2014	5.0	5.0	5.2	5.9	3.4	3.8	0.0	6.0	6.0	6.1	5.1	3.3	6.5
2019	4.1	3.5	4.8	4.9	2.7	4.7	D	4.9	3.0	4.9	8.0	D	0.0
Nonprofit, other than private foundation (%)[b]													
1999	3.2	2.9	3.7	2.9	4.0	2.9	3.3	3.7	3.6	2.7	na	3.1	0.0
2004	3.0	2.4	3.9	2.7	3.5	3.5	0.0	2.6	4.0	2.7	1.2	2.6	0.0
2009	3.1	2.2	4.1	2.9	3.4	3.0	D	3.2	3.8	2.7	D	0.0	5.1
2014	3.4	2.7	4.2	3.7	2.8	2.3	D	3.3	3.5	3.9	2.6	D	0.0

Table 50

Sources of support for doctorate recipients with postgraduation commitments for postdoctoral study, by sex, citizenship status, ethnicity, and race: Selected years, 1999–2019

(Number and percent)

Postgraduate study commitments, source of support, and year	Total[a]	Sex		Citizenship status		U.S. citizens and permanent residents							
							Not Hispanic or Latino						
		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	Other race or race not reported	Ethnicity not reported
2019	3.2	2.3	4.3	3.7	2.4	4.0	0.0	3.7	2.7	3.8	1.6	0.0	3.8
Other (%)[b]													
1999	9.0	8.3	10.1	8.8	9.5	9.5	6.7	5.9	11.2	9.1	na	13.8	0.0
2004	8.1	7.6	8.9	7.5	9.2	6.9	11.8	8.9	6.2	7.4	6.0	10.5	5.2
2009	9.4	10.0	8.6	8.2	11.4	8.6	D	7.5	7.6	8.2	9.7	D	9.6
2014	9.7	10.1	9.1	8.1	12.8	5.9	D	9.4	7.1	8.1	7.7	D	3.2
2019	8.1	8.3	7.9	7.2	9.8	6.2	3.8	6.5	8.6	7.3	7.1	7.0	7.7
Unknown (%)[b]													
1999	10.5	10.0	11.2	10.3	10.8	11.0	10.0	13.1	16.8	9.4	na	20.0	12.0
2004	7.1	6.7	7.7	7.1	7.1	9.3	17.6	7.6	13.5	6.4	13.3	2.6	12.1
2009	8.3	7.8	9.0	8.0	9.0	7.4	16.0	10.7	13.9	7.2	9.1	13.2	10.8
2014	7.2	6.6	8.0	6.8	7.8	8.8	0.0	7.0	8.1	6.4	10.7	15.0	6.5
2019	14.1	14.5	13.6	12.4	16.4	11.8	D	14.5	12.9	12.1	10.3	D	15.4

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: 2019

(Number)

Citizenship status and field	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]	55,703	35,090	31,515	12,091	8,019	7,476	3,929	3,544	31
Life sciences	12,781	7,942	7,331	4,326	1,082	1,273	650	609	2
Agricultural sciences and natural resources	1,491	889	752	362	148	161	81	136	1
Biological and biomedical sciences	8,702	5,386	5,054	3,426	442	892	294	332	0
Health sciences	2,588	1,667	1,525	538	492	220	275	141	1
Physical sciences and earth sciences	6,585	4,138	3,670	2,054	276	1,115	225	464	4
Chemistry	2,941	1,770	1,632	893	106	577	56	135	3
Geosciences, atmospheric sciences, and ocean sciences	1,274	823	707	413	77	115	102	116	0
Physics and astronomy	2,370	1,545	1,331	748	93	423	67	213	1
Mathematics and computer sciences	4,240	2,973	2,603	726	516	1,198	163	366	4
Computer and information sciences	2,228	1,578	1,414	276	254	789	95	161	3
Mathematics and statistics	2,012	1,395	1,189	450	262	409	68	205	1
Psychology and social sciences	9,071	6,015	5,315	2,170	1,625	680	840	694	6
Psychology	3,936	2,641	2,538	1,491	419	302	326	101	2
Anthropology	445	239	198	80	80	14	24	41	0
Economics	1,247	929	660	112	253	184	111	268	1
Political science and government	707	482	411	132	194	30	55	70	1
Sociology	633	457	423	122	227	28	46	34	0
Other social sciences	2,103	1,267	1,085	233	452	122	278	180	2
Engineering	10,303	6,319	5,621	1,955	446	2,723	497	686	12
Aerospace, aeronautical, and astronautical engineering	379	255	233	59	29	93	52	21	1
Bioengineering and biomedical engineering	1,164	648	600	342	29	210	19	48	0
Chemical engineering	981	596	534	197	16	300	21	60	2
Civil engineering	701	397	325	111	42	137	35	70	2
Electrical, electronics, and communications engineering	1,799	1,142	1,033	221	54	660	98	105	4
Industrial and manufacturing engineering	234	155	138	27	26	70	15	17	0
Materials science engineering	992	582	534	242	13	243	36	46	2
Mechanical engineering	1,533	931	831	331	70	345	85	99	1
Other engineering	2,520	1,613	1,393	425	167	665	136	220	0

Table 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2019

(Number)

Citizenship status and field	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	4,635	3,065	2,877	269	1,481	147	980	187	1
Education administration	839	571	555	14	222	21	298	16	0
Education research	2,303	1,547	1,448	167	778	96	407	98	1
Teacher education	104	69	64	D	30	D	29	5	0
Teaching fields	960	630	576	61	340	18	157	54	0
Other education	429	248	234	D	111	D	89	14	0
Humanities and arts	5,054	2,642	2,377	450	1,394	144	389	265	0
Foreign languages and literature	610	345	304	43	207	11	43	41	0
History	912	505	443	131	219	20	73	62	0
Letters	1,387	710	667	102	456	33	76	43	0
Other humanities and arts	2,145	1,082	963	174	512	80	197	119	0
Other[d]	3,034	1,996	1,721	141	1,199	196	185	273	2
Business management and administration	1,536	1,109	941	45	704	130	62	167	1
Communication	543	336	302	30	229	22	21	34	0
Non-S&E fields nec	955	551	478	66	266	44	102	72	1
U.S. citizen or permanent resident	35,274	23,079	22,259	7,943	6,472	4,228	3,616	817	3
Life sciences	9,052	5,748	5,597	3,094	954	955	594	149	2
Agricultural sciences and natural resources	822	507	489	183	115	116	75	17	1
Biological and biomedical sciences	6,380	3,978	3,860	2,536	385	679	260	118	0
Health sciences	1,850	1,263	1,248	375	454	160	259	14	1
Physical sciences and earth sciences	3,903	2,509	2,367	1,187	230	738	212	142	0
Chemistry	1,781	1,089	1,053	501	88	412	52	36	0
Geosciences, atmospheric sciences, and ocean sciences	809	544	504	259	67	80	98	40	0
Physics and astronomy	1,313	876	810	427	75	246	62	66	0
Mathematics and computer sciences	1,787	1,251	1,169	323	309	407	130	82	0
Computer and information sciences	800	580	557	102	133	247	75	23	0
Mathematics and statistics	987	671	612	221	176	160	55	59	0
Psychology and social sciences	6,723	4,709	4,540	1,880	1,352	530	778	168	1
Psychology	3,349	2,411	2,374	1,391	384	282	317	37	0
Anthropology	359	198	177	67	73	14	23	21	0

Table 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2019

(Number)

Citizenship status and field	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	491	390	365	48	150	86	81	25	0
Political science and government	504	366	344	D	164	D	54	22	0
Sociology	511	393	380	D	206	D	45	13	0
Other social sciences	1,509	951	900	170	375	97	258	50	1
Engineering	4,253	2,729	2,647	795	266	1,184	402	82	0
Aerospace, aeronautical, and astronautical engineering	212	162	D	D	22	60	49	D	0
Bioengineering and biomedical engineering	772	428	412	D	D	155	16	16	0
Chemical engineering	480	303	289	97	10	164	18	14	0
Civil engineering	200	122	D	24	D	45	24	D	0
Electrical, electronics, and communications engineering	518	353	347	51	27	198	71	6	0
Industrial and manufacturing engineering	84	58	58	5	14	28	11	0	0
Materials science engineering	501	315	306	D	D	147	28	9	0
Mechanical engineering	600	393	383	117	44	142	80	10	0
Other engineering	886	595	576	137	89	245	105	19	0
Education	3,848	2,738	2,699	219	1,386	134	960	39	0
Education administration	754	D	545	D	D	D	297	D	0
Education research	1,907	1,372	1,353	141	728	89	395	19	0
Teacher education	87	D	D	D	D	D	28	0	0
Teaching fields	772	537	523	D	309	D	154	14	0
Other education	328	221	D	D	105	8	86	D	0
Humanities and arts	3,988	2,196	2,088	364	1,216	137	371	108	0
Foreign languages and literature	383	229	212	24	140	D	D	17	0
History	741	430	404	115	196	20	73	26	0
Letters	1,188	630	615	86	423	D	D	15	0
Other humanities and arts	1,676	907	857	139	457	D	D	50	0
Other[d]	1,720	1,199	1,152	81	759	143	169	47	0
Business management and administration	747	557	532	21	367	90	54	25	0
Communication	349	232	226	22	169	17	18	6	0
Non-S&E fields nec	624	410	394	38	223	36	97	16	0

Table 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2019

(Number)

Citizenship status and field	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment[a]	Other[b]		
Temporary visa holder	18,351	11,892	9,163	4,120	1,530	3,218	295	2,706	23
Life sciences	3,406	2,173	1,717	1,223	125	316	53	456	0
Agricultural sciences and natural resources	648	381	262	178	33	45	6	119	0
Biological and biomedical sciences	2,136	1,393	1,180	882	55	212	31	213	0
Health sciences	622	399	275	163	37	59	16	124	0
Physical sciences and earth sciences	2,486	1,615	1,291	859	46	373	13	321	3
Chemistry	1,071	674	573	388	18	163	4	99	2
Geosciences, atmospheric sciences, and ocean sciences	430	277	201	152	10	35	4	76	0
Physics and astronomy	985	664	517	319	18	175	5	146	1
Mathematics and computer sciences	2,309	1,710	1,426	402	206	788	30	281	3
Computer and information sciences	1,333	989	851	173	120	540	18	136	2
Mathematics and statistics	976	721	575	229	86	248	12	145	1
Psychology and social sciences	1,917	1,291	763	289	272	146	56	523	5
Psychology	339	223	157	99	35	16	7	64	2
Anthropology	66	40	21	13	7	0	1	19	0
Economics	708	536	294	64	103	98	29	241	1
Political science and government	173	116	67	D	30	D	1	48	1
Sociology	105	63	42	D	20	D	1	21	0
Other social sciences	526	313	182	63	77	25	17	130	1
Engineering	5,683	3,560	2,949	1,154	179	1,524	92	600	11
Aerospace, aeronautical, and astronautical engineering	153	93	D	D	7	33	3	D	1
Bioengineering and biomedical engineering	359	217	187	D	D	55	2	30	0
Chemical engineering	479	291	243	100	6	134	3	46	2
Civil engineering	462	274	D	87	D	91	11	D	2
Electrical, electronics, and communications engineering	1,198	780	679	167	27	459	26	98	3
Industrial and manufacturing engineering	140	95	78	22	12	41	3	17	0
Materials science engineering	461	267	228	D	D	96	8	37	2
Mechanical engineering	880	531	442	212	26	199	5	88	1
Other engineering	1,551	1,012	811	287	77	416	31	201	0

Table 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2019

(Number)

Citizenship status and field	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	615	317	171	49	90	13	19	146	0
Education administration	54	D	10	D	D	D	1	D	0
Education research	317	170	92	26	47	7	12	78	0
Teacher education	16	D	D	0	D	0	1	5	0
Teaching fields	165	89	50	D	29	D	3	39	0
Other education	63	26	D	6	6	D	2	D	0
Humanities and arts	827	436	282	85	173	6	18	154	0
Foreign languages and literature	202	114	90	19	65	D	D	24	0
History	130	73	39	16	23	0	0	34	0
Letters	149	78	50	15	32	D	D	28	0
Other humanities and arts	346	171	103	35	53	D	D	68	0
Other[d]	1,108	790	564	59	439	52	14	225	1
Business management and administration	690	549	407	24	336	39	8	141	1
Communication	163	104	76	8	60	5	3	28	0
Non-S&E fields nec	255	137	81	27	43	8	3	56	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: 2019

(Number)

Sex and field	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]	55,703	35,090	31,515	12,091	8,019	7,476	3,929	3,544	31
Life sciences	12,781	7,942	7,331	4,326	1,082	1,273	650	609	2
Agricultural sciences and natural resources	1,491	889	752	362	148	161	81	136	1
Biological and biomedical sciences	8,702	5,386	5,054	3,426	442	892	294	332	0
Health sciences	2,588	1,667	1,525	538	492	220	275	141	1
Physical sciences and earth sciences	6,585	4,138	3,670	2,054	276	1,115	225	464	4
Chemistry	2,941	1,770	1,632	893	106	577	56	135	3
Geosciences, atmospheric sciences, and ocean sciences	1,274	823	707	413	77	115	102	116	0
Physics and astronomy	2,370	1,545	1,331	748	93	423	67	213	1
Mathematics and computer sciences	4,240	2,973	2,603	726	516	1,198	163	366	4
Computer and information sciences	2,228	1,578	1,414	276	254	789	95	161	3
Mathematics and statistics	2,012	1,395	1,189	450	262	409	68	205	1
Psychology and social sciences	9,071	6,015	5,315	2,170	1,625	680	840	694	6
Psychology	3,936	2,641	2,538	1,491	419	302	326	101	2
Anthropology	445	239	198	80	80	14	24	41	0
Economics	1,247	929	660	112	253	184	111	268	1
Political science and government	707	482	411	132	194	30	55	70	1
Sociology	633	457	423	122	227	28	46	34	0
Other social sciences	2,103	1,267	1,085	233	452	122	278	180	2
Engineering	10,303	6,319	5,621	1,955	446	2,723	497	686	12
Aerospace, aeronautical, and astronautical engineering	379	255	233	59	29	93	52	21	1
Bioengineering and biomedical engineering	1,164	648	600	342	29	210	19	48	0
Chemical engineering	981	596	534	197	16	300	21	60	2
Civil engineering	701	397	325	111	42	137	35	70	2
Electrical, electronics, and communications engineering	1,799	1,142	1,033	221	54	660	98	105	4
Industrial and manufacturing engineering	234	155	138	27	26	70	15	17	0
Materials science engineering	992	582	534	242	13	243	36	46	2
Mechanical engineering	1,533	931	831	331	70	345	85	99	1
Other engineering	2,520	1,613	1,393	425	167	665	136	220	0

Table 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2019

(Number)

Sex and field	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	4,635	3,065	2,877	269	1,481	147	980	187	1
Education administration	839	571	555	14	222	21	298	16	0
Education research	2,303	1,547	1,448	167	778	96	407	98	1
Teacher education	104	69	64	D	30	D	29	5	0
Teaching fields	960	630	576	61	340	18	157	54	0
Other education	429	248	234	D	111	D	89	14	0
Humanities and arts	5,054	2,642	2,377	450	1,394	144	389	265	0
Foreign languages and literature	610	345	304	43	207	11	43	41	0
History	912	505	443	131	219	20	73	62	0
Letters	1,387	710	667	102	456	33	76	43	0
Other humanities and arts	2,145	1,082	963	174	512	80	197	119	0
Other[d]	3,034	1,996	1,721	141	1,199	196	185	273	2
Business management and administration	1,536	1,109	941	45	704	130	62	167	1
Communication	543	336	302	30	229	22	21	34	0
Non-S&E fields nec	955	551	478	66	266	44	102	72	1
Male	30,151	19,272	16,963	6,567	3,567	5,033	1,796	2,288	21
Life sciences	5,819	3,699	3,375	2,121	387	627	240	323	1
Agricultural sciences and natural resources	761	482	395	199	66	84	46	86	1
Biological and biomedical sciences	4,200	2,652	2,483	1,718	180	458	127	169	0
Health sciences	858	565	497	204	141	85	67	68	0
Physical sciences and earth sciences	4,368	2,772	2,436	1,392	151	760	133	332	4
Chemistry	1,790	1,101	1,012	591	47	344	30	86	3
Geosciences, atmospheric sciences, and ocean sciences	740	463	386	233	39	67	47	77	0
Physics and astronomy	1,838	1,208	1,038	568	65	349	56	169	1
Mathematics and computer sciences	3,144	2,216	1,934	531	344	950	109	278	4
Computer and information sciences	1,717	1,241	1,116	216	175	662	63	122	3
Mathematics and statistics	1,427	975	818	315	169	288	46	156	1
Psychology and social sciences	3,672	2,488	2,092	709	716	320	347	393	3
Psychology	1,118	759	725	388	140	101	96	34	0
Anthropology	155	79	62	30	21	6	5	17	0
Economics	818	625	442	71	177	122	72	182	1

Table 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2019

(Number)

Sex and field	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	433	294	248	83	111	21	33	45	1
Sociology	229	161	151	42	85	9	15	10	0
Other social sciences	919	570	464	95	182	61	126	105	1
Engineering	7,833	4,895	4,311	1,478	304	2,147	382	576	8
Aerospace, aeronautical, and astronautical engineering	323	217	D	51	D	78	47	D	0
Bioengineering and biomedical engineering	720	416	384	221	16	136	11	32	0
Chemical engineering	665	413	364	146	7	198	13	47	2
Civil engineering	542	307	247	88	30	105	24	59	1
Electrical, electronics, and communications engineering	1,501	982	881	190	40	567	84	99	2
Industrial and manufacturing engineering	172	115	D	22	D	54	10	D	0
Materials science engineering	701	405	369	175	7	163	24	34	2
Mechanical engineering	1,283	786	697	274	57	301	65	88	1
Other engineering	1,926	1,254	1,070	311	110	545	104	184	0
Education	1,422	950	870	73	451	44	302	80	0
Education administration	342	230	221	D	D	5	128	9	0
Education research	653	447	403	44	236	29	94	44	0
Teacher education	20	11	11	0	D	D	5	0	0
Teaching fields	260	179	159	D	88	D	48	20	0
Other education	147	83	76	D	38	D	27	7	0
Humanities and arts	2,479	1,293	1,129	206	640	63	220	164	0
Foreign languages and literature	215	127	103	19	68	5	11	24	0
History	529	289	247	74	119	8	46	42	0
Letters	560	279	261	37	185	9	30	18	0
Other humanities and arts	1,175	598	518	76	268	41	133	80	0
Other[d]	1,414	959	816	57	574	122	63	142	1
Business management and administration	874	640	530	21	391	90	28	109	1
Communication	205	126	117	12	87	13	5	9	0
Non-S&E fields nec	335	193	169	24	96	19	30	24	0
Female	25,542	15,817	14,551	5,524	4,451	2,443	2,133	1,256	10

Table 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2019

(Number)

Sex and field	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment[a]	Other[b]		
Life sciences	6,961	4,243	3,956	2,205	695	646	410	286	1
Agricultural sciences and natural resources	730	407	357	163	82	77	35	50	0
Biological and biomedical sciences	4,501	2,734	2,571	1,708	262	434	167	163	0
Health sciences	1,730	1,102	1,028	334	351	135	208	73	1
Physical sciences and earth sciences	2,213	1,366	1,234	662	125	355	92	132	0
Chemistry	1,151	669	620	302	59	233	26	49	0
Geosciences, atmospheric sciences, and ocean sciences	533	360	321	180	38	48	55	39	0
Physics and astronomy	529	337	293	180	28	74	11	44	0
Mathematics and computer sciences	1,095	757	669	195	172	248	54	88	0
Computer and information sciences	510	337	298	60	79	127	32	39	0
Mathematics and statistics	585	420	371	135	93	121	22	49	0
Psychology and social sciences	5,399	3,527	3,223	1,461	909	360	493	301	3
Psychology	2,818	1,882	1,813	1,103	279	201	230	67	2
Anthropology	290	160	136	50	59	8	19	24	0
Economics	429	304	218	41	76	62	39	86	0
Political science and government	274	188	163	49	83	9	22	25	0
Sociology	404	296	272	80	142	19	31	24	0
Other social sciences	1,184	697	621	138	270	61	152	75	1
Engineering	2,468	1,424	1,310	477	142	576	115	110	4
Aerospace, aeronautical, and astronautical engineering	56	38	D	8	D	15	5	D	1
Bioengineering and biomedical engineering	444	232	216	121	13	74	8	16	0
Chemical engineering	316	183	170	51	9	102	8	13	0
Civil engineering	159	90	78	23	12	32	11	11	1
Electrical, electronics, and communications engineering	297	160	152	31	14	93	14	6	2
Industrial and manufacturing engineering	62	40	D	5	D	16	5	D	0
Materials science engineering	290	177	165	67	6	80	12	12	0
Mechanical engineering	250	145	134	57	13	44	20	11	0
Other engineering	594	359	323	114	57	120	32	36	0

Table 52

Definite postgraduation commitments of doctorate recipients, by sex and major field of study: 2019

(Number)

Sex and field	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	3,213	2,115	2,007	196	1,030	103	678	107	1
Education administration	497	341	334	D	D	16	170	7	0
Education research	1,650	1,100	1,045	123	542	67	313	54	1
Teacher education	84	58	53	D	D	D	24	5	0
Teaching fields	700	451	417	D	252	D	109	34	0
Other education	282	165	158	18	73	5	62	7	0
Humanities and arts	2,573	1,348	1,247	244	753	81	169	101	0
Foreign languages and literature	394	218	201	24	139	6	32	17	0
History	383	216	196	57	100	12	27	20	0
Letters	827	431	406	65	271	24	46	25	0
Other humanities and arts	969	483	444	98	243	39	64	39	0
Other[d]	1,620	1,037	905	84	625	74	122	131	1
Business management and administration	662	469	411	24	313	40	34	58	0
Communication	338	210	185	18	142	9	16	25	0
Non-S&E fields nec	620	358	309	42	170	25	72	48	1

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: 2013–19

(Number and percent)

Country of citizenship	Total, 2013–19		2013		2014		2015		2016		2017		2018		2019	
	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying
All temporary visa holders	116,341	71.8	15,674	70.1	15,839	71.1	16,129	71.3	16,477	72.5	16,287	74.3	17,584	71.9	18,351	71.2
Africa	4,736	69.1	610	65.2	648	66.8	649	66.4	653	70.8	700	70.9	739	70.6	737	71.9
Egypt	996	68.9	140	61.4	135	70.4	129	62.8	117	66.7	156	69.9	156	73.7	163	74.8
Ghana	563	70.0	58	70.7	62	77.4	83	65.1	87	70.1	85	71.8	103	66.0	85	71.8
Kenya	414	68.8	79	68.4	72	70.8	57	68.4	60	66.7	57	63.2	50	68.0	39	79.5
Nigeria	751	80.2	65	87.7	87	82.8	83	75.9	112	83.9	113	77.9	146	75.3	145	81.4
Other	2,012	64.9	268	59.7	292	57.2	297	65.3	277	68.2	289	69.9	284	68.7	305	64.9
Americas	10,444	57.6	1,482	56.3	1,542	55.6	1,480	55.7	1,503	57.5	1,443	56.6	1,466	60.2	1,528	60.9
Argentina	441	60.1	81	49.4	67	64.2	64	53.1	65	61.5	52	69.2	60	66.7	52	61.5
Brazil	1,183	56.7	142	46.5	139	50.4	149	50.3	156	56.4	167	61.7	178	61.2	252	63.5
Canada	3,089	58.3	485	55.5	488	55.1	454	56.6	408	56.6	408	59.3	424	63.0	422	62.8
Chile	724	33.3	74	36.5	99	35.4	103	32.0	130	32.3	128	25.8	91	39.6	99	35.4
Colombia	1,363	57.0	179	53.1	216	56.9	183	68.3	187	61.5	190	48.4	205	52.7	203	58.6
Mexico	1,338	62.1	177	61.6	193	54.9	194	53.1	221	61.1	180	69.4	185	71.4	188	64.4
Venezuela	221	79.6	40	82.5	40	82.5	29	75.9	27	88.9	31	67.7	26	76.9	28	82.1
Other	2,085	60.0	304	64.1	300	59.7	304	57.6	309	61.2	287	57.5	297	57.6	284	62.0
Asia	76,739	77.1	10,560	75.0	10,752	75.8	10,885	76.0	11,016	78.1	10,638	80.0	11,294	77.5	11,594	77.2
Bangladesh	1,391	86.7	107	78.5	139	83.5	154	87.7	185	90.3	236	88.1	279	88.2	291	85.9
China[a]	38,713	81.0	4,796	82.0	4,982	81.3	5,374	81.1	5,527	81.0	5,553	83.3	6,176	79.4	6,305	79.3
India	15,001	86.2	2,204	84.3	2,316	86.2	2,229	84.6	2,195	87.2	1,969	88.5	2,038	87.0	2,050	86.0
Indonesia	523	42.4	71	49.3	78	38.5	53	37.7	92	43.5	69	50.7	81	34.6	79	43.0
Japan	1,083	49.3	217	47.5	173	48.6	164	39.6	166	53.6	117	58.1	117	50.4	129	51.2
Nepal	1,405	89.0	150	90.0	172	84.9	177	88.1	222	88.7	221	91.9	224	89.3	239	89.5
Pakistan	784	53.3	98	49.0	127	47.2	124	54.0	102	45.1	113	54.0	110	59.1	110	64.5
Philippines	394	70.1	92	66.3	70	67.1	40	75.0	51	76.5	47	70.2	56	73.2	38	65.8
Singapore	663	37.0	91	38.5	97	38.1	102	36.3	91	38.5	101	41.6	81	25.9	100	38.0
South Korea	8,456	63.7	1,383	59.1	1,284	60.7	1,234	62.9	1,229	66.7	1,127	68.5	1,035	63.6	1,164	65.2
Taiwan	4,097	72.8	699	67.4	668	68.6	614	70.4	592	77.9	520	76.7	513	78.0	491	73.5
Thailand	1,407	27.9	264	31.1	231	26.4	220	21.4	185	30.3	171	25.7	177	31.1	159	30.2
Vietnam	963	75.3	140	71.4	142	76.8	134	74.6	124	71.8	133	75.9	122	80.3	168	76.2
Other	1,859	67.6	248	61.7	273	65.9	266	62.4	255	68.2	261	68.6	285	73.0	271	72.3
Australia-Oceania	516	59.3	80	58.8	64	45.3	83	55.4	65	61.5	79	62.0	64	57.8	81	71.6
Australia	335	60.3	60	55.0	44	43.2	52	48.1	42	66.7	47	72.3	37	64.9	53	73.6

Table 53

Doctorate recipients with temporary visas intending to stay in the United States after doctorate receipt, by country of citizenship: 2013–19

(Number and percent)

Country of citizenship	Total, 2013–19		2013		2014		2015		2016		2017		2018		2019	
	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying	Number	% staying
Other	181	57.5	20	70.0	20	50.0	31	67.7	23	52.2	32	46.9	27	48.1	28	67.9
Europe	12,648	63.6	1,904	62.3	1,802	63.4	1,832	61.4	1,776	62.7	1,785	67.4	1,800	63.3	1,749	64.5
Bulgaria	241	78.8	47	78.7	42	66.7	34	70.6	44	88.6	30	86.7	23	78.3	21	85.7
France	805	65.2	97	62.9	114	67.5	131	58.8	105	66.7	107	69.2	133	64.7	118	67.8
Germany	1,233	56.0	202	51.5	203	51.2	195	51.3	183	61.2	154	68.2	144	54.2	152	57.9
Greece	630	73.8	88	76.1	81	72.8	84	71.4	84	71.4	89	73.0	113	77.9	91	72.5
Italy	1,072	66.2	154	61.0	156	64.1	126	65.1	167	65.9	161	70.8	138	72.5	170	64.7
Romania	391	77.0	66	74.2	79	78.5	57	82.5	51	88.2	43	81.4	47	61.7	48	70.8
Russian Federation (former USSR)	818	74.2	110	71.8	106	72.6	118	78.0	108	69.4	112	81.3	154	73.4	110	72.7
Spain	654	62.8	82	65.9	68	60.3	98	60.2	73	61.6	100	74.0	104	61.5	129	57.4
Turkey	3,197	60.8	478	60.7	426	62.9	469	59.7	472	57.6	496	61.1	451	59.6	405	64.7
Ukraine	291	78.0	52	76.9	51	72.5	42	85.7	31	71.0	37	83.8	35	74.3	43	81.4
United Kingdom	764	59.8	113	56.6	97	70.1	100	55.0	115	54.8	103	60.2	109	60.6	127	62.2
Other	2,552	59.2	415	59.5	379	58.3	378	56.3	343	58.6	353	63.2	349	58.2	335	60.3
Middle East	9,561	62.4	865	65.2	938	65.9	1,131	66.9	1,309	63.9	1,500	62.1	1,744	62.3	2,074	56.5
Iran	4,874	90.7	409	86.8	483	89.2	629	89.7	695	91.1	767	92.6	932	91.5	959	91.4
Israel	552	55.4	81	60.5	81	61.7	86	59.3	83	51.8	77	49.4	64	50.0	80	53.8
Jordan	730	47.1	115	46.1	110	40.9	128	44.5	98	44.9	114	44.7	76	57.9	89	56.2
Lebanon	368	74.5	66	81.8	50	66.0	39	64.1	57	70.2	52	78.8	51	76.5	53	79.2
Saudi Arabia	1,845	12.7	73	11.0	105	17.1	134	14.2	238	10.1	339	10.3	403	14.9	553	12.8
Other	1,192	32.2	121	37.2	109	37.6	115	35.7	138	37.7	151	37.7	218	27.1	340	26.2
Country unknown	1,697	43.1	173	25.4	93	24.7	69	47.8	155	12.9	142	61.3	477	46.8	588	51.4

[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: 2019

(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]	55,703	12,781	6,585	4,240	9,071	10,303	4,635	5,054	3,034
Sex (%)									
Male	54.1	45.5	66.3	74.2	40.5	76.0	30.7	49.1	46.6
Female	45.9	54.5	33.6	25.8	59.5	24.0	69.3	50.9	53.4
Unknown	*	*	0.1	*	0.0	*	0.0	*	0.0
Citizenship (%)									
U.S. citizen or permanent resident	63.3	70.8	59.3	42.1	74.1	41.3	83.0	78.9	56.7
Temporary visa holder	32.9	26.6	37.8	54.5	21.1	55.2	13.3	16.4	36.5
Unknown	3.7	2.5	3.0	3.4	4.8	3.6	3.7	4.7	6.8
Marital status (%)									
Never married	36.2	37.0	48.1	43.3	31.6	43.2	19.2	28.7	25.0
Married	42.5	42.7	33.7	39.2	41.5	40.6	57.7	45.1	48.3
Marriage-like relationship	6.7	8.5	7.7	4.9	8.6	4.0	4.1	8.3	4.4
Separated, divorced, widowed	3.3	2.9	1.4	1.9	4.7	1.3	7.2	4.4	5.6
Unknown	11.3	8.8	9.2	10.8	13.6	11.0	11.9	13.5	16.6
Bachelor's in same field as doctorate (%)[d]	55.8	50.3	69.1	61.1	51.4	77.1	24.6	53.1	34.8
Master's earned (%)	69.9	52.1	53.1	71.6	82.9	72.0	88.8	84.1	80.4
Age at doctorate (median years)	31.5	31.0	29.5	30.3	32.4	30.1	38.3	34.2	34.9
Time to doctorate (median years)									
From bachelor's	8.7	8.3	6.9	7.8	9.4	7.4	14.8	11.0	11.4
From graduate school start	7.5	6.9	6.3	6.9	8.0	6.8	11.9	9.5	9.3
From doctoral program start[e]	5.8	5.5	5.6	5.7	6.0	5.3	5.7	6.8	5.1
Male doctorate recipients (number)	30,151	5,819	4,368	3,144	3,672	7,833	1,422	2,479	1,414
Citizenship (%)									
U.S. citizen or permanent resident	57.3	68.3	58.4	41.6	68.4	39.8	81.4	78.8	49.9
Temporary visa holder	39.1	29.1	38.5	54.9	27.4	56.8	14.9	16.4	42.9
Unknown	3.6	2.5	3.2	3.5	4.3	3.4	3.7	4.8	7.2

Table 54

Statistical profile of doctorate recipients, by sex and broad field of study: 2019

(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	38.2	37.6	48.1	44.0	32.2	43.1	18.6	27.2	25.0
Married	42.6	43.7	34.5	38.8	43.2	41.2	61.4	47.6	50.7
Marriage-like relationship	5.9	8.0	7.0	4.9	7.5	3.6	3.7	7.7	3.7
Separated, divorced, widowed	2.2	1.8	1.2	1.8	3.9	1.1	4.9	3.8	3.7
Unknown	11.1	9.0	9.2	10.6	13.3	10.9	11.4	13.7	16.9
Bachelor's in same field as doctorate (%)[d]	59.6	49.0	70.1	61.4	48.3	78.8	23.0	55.5	34.5
Master's earned (%)	68.5	49.4	54.4	70.5	82.4	73.1	88.0	83.6	79.1
Age at doctorate (median years)	31.3	31.0	29.6	30.3	32.9	30.3	38.2	34.5	35.0
Time to doctorate (median years)									
From bachelor's	8.3	8.1	7.0	7.6	9.6	7.5	14.1	11.1	11.2
From graduate school start	7.3	6.8	6.3	6.9	8.0	6.8	11.3	9.7	9.0
From doctoral program start[e]	5.7	5.5	5.7	5.7	5.9	5.3	5.5	6.8	5.0
Female doctorate recipients (number)	25,542	6,961	2,213	1,095	5,399	2,468	3,213	2,573	1,620
Citizenship (%)									
U.S. citizen or permanent resident	70.4	72.9	61.2	43.7	78.0	45.9	83.8	79.1	62.7
Temporary visa holder	25.7	24.6	36.3	53.3	16.9	50.0	12.5	16.3	30.9
Unknown	3.8	2.5	2.5	2.9	5.1	4.1	3.7	4.6	6.4
Marital status (%)									
Never married	33.8	36.5	48.1	41.4	31.2	43.4	19.4	30.1	25.0
Married	42.4	41.9	32.1	40.5	40.3	38.4	56.0	42.7	46.2
Marriage-like relationship	7.7	9.0	9.0	4.8	9.4	5.1	4.3	9.0	5.0
Separated, divorced, widowed	4.6	3.9	1.8	2.0	5.3	1.7	8.2	5.0	7.3
Unknown	11.5	8.7	9.0	11.2	13.8	11.4	12.1	13.3	16.4
Bachelor's in same field as doctorate (%)[d]	51.2	51.5	67.2	60.3	53.5	71.7	25.3	50.8	35.1
Master's earned (%)	71.5	54.4	50.5	74.8	83.2	68.5	89.1	84.5	81.4

Table 54

Statistical profile of doctorate recipients, by sex and broad field of study: 2019

(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)	31.9	31.0	29.3	30.3	32.0	29.6	38.3	33.9	34.8
Time to doctorate (median years)									
From bachelor's	9.2	8.3	6.8	7.9	9.3	7.1	15.0	11.0	11.6
From graduate school start	7.8	7.0	6.0	7.0	7.9	6.3	12.3	9.3	9.8
From doctoral program start[e]	5.8	5.6	5.3	5.5	6.0	5.1	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: 2019

(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]
All doctorate recipients (number)[c]	55,703	12,781	6,585	4,240	9,071	10,303	4,635	5,054	3,034
Postgraduation status (number)[d]									
Definite postgraduation study	13,462	4,605	2,385	912	2,385	2,170	282	549	174
Definite employment	21,628	3,337	1,753	2,061	3,630	4,149	2,783	2,093	1,822
Seeking employment or study	14,086	3,338	1,857	861	1,864	2,893	1,025	1,692	556
Other[e]	1,685	647	137	64	223	233	127	185	69
Definite postgraduation study (%)[f]									
Postdoc fellowship or research associateship	94.1	93.6	97.5	95.9	90.6	95.3	91.8	93.6	89.7
Other or unknown[g]	5.9	6.4	2.5	4.1	9.4	4.7	8.2	6.4	10.3
Definite employment (%)[h]									
Academe	43.4	38.2	18.8	30.3	53.4	16.7	57.5	73.1	76.6
Government	7.6	9.1	9.2	4.8	13.3	8.3	4.3	1.8	5.4
Industry or business[i]	36.5	40.0	67.1	60.5	19.9	69.6	5.7	7.4	12.0
Nonprofit organization	6.1	9.6	2.4	2.4	8.5	3.2	7.1	9.7	3.9
Other or unknown[j]	6.4	3.0	2.6	2.0	5.0	2.3	25.4	8.0	2.2
Primary activity[k]									
R&D	44.9	47.4	65.8	68.4	35.8	71.4	13.1	8.8	40.7
Teaching	30.3	24.0	14.6	21.1	34.4	10.0	42.6	71.1	40.7
Management or administration	10.4	9.5	4.0	1.8	10.0	3.9	32.5	9.1	11.0
Professional services	13.6	17.8	14.5	7.9	19.2	13.7	11.3	10.1	7.5
Other	0.8	1.2	1.1	0.9	0.6	0.9	0.4	0.9	0.1
Secondary activity[l]									
R&D	24.7	24.4	13.8	18.3	30.2	13.1	27.0	39.6	37.8
Teaching	14.0	9.6	2.8	9.6	19.9	6.8	19.2	11.3	37.0
Management or administration	10.5	15.7	12.9	6.1	9.4	12.6	9.8	7.6	5.0
Professional services	6.2	8.0	4.8	4.5	7.7	4.9	8.2	5.3	4.1
Other	0.6	0.6	0.7	0.6	0.8	0.6	0.7	1.1	0.2
No secondary activity	44.0	41.7	65.0	60.8	32.0	61.9	35.1	35.2	16.0
Activity unknown	4.9	4.9	4.2	4.0	5.1	5.2	4.8	6.1	4.6
Postgraduation location (%)[m]									

Table 55

Statistical profile of postgraduation plans of doctorate recipients, by sex and broad field of study: 2019

(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]	89.8	92.3	88.7	87.6	88.4	89.0	93.9	90.0	86.2
New England	8.8	10.9	10.7	7.5	9.1	8.0	4.5	9.6	6.3
Middle Atlantic	12.2	12.5	11.1	13.8	13.7	9.2	11.0	16.7	12.6
East North Central	11.3	10.6	10.9	8.6	10.5	11.3	14.5	13.6	12.6
West North Central	4.8	6.2	3.6	2.8	4.7	3.4	7.5	5.1	5.4
South Atlantic	15.8	17.5	13.0	11.7	18.5	12.6	19.2	14.5	18.8
East South Central	3.7	3.8	2.5	1.8	3.1	2.7	8.1	4.5	4.9
West South Central	7.3	6.4	6.1	4.8	6.7	7.7	11.2	7.8	10.1
Mountain	5.8	5.3	6.9	4.1	5.6	6.9	7.8	4.2	4.1
Pacific and insular	19.3	18.3	23.2	31.8	15.5	26.4	9.4	12.6	10.2
Not in United States	10.1	7.7	11.2	12.3	11.5	10.9	6.1	10.0	13.7
Location unknown	0.1	*	0.1	0.1	0.1	0.2	*	0.0	0.1
Male doctorate recipients (number)	30,151	5,819	4,368	3,144	3,672	7,833	1,422	2,479	1,414
Postgraduation status (number)[d]									
Definite postgraduation study	7,441	2,263	1,629	678	809	1,643	80	266	73
Definite employment	11,831	1,436	1,143	1,538	1,679	3,252	870	1,027	886
Seeking employment or study	7,496	1,405	1,215	629	727	2,133	314	845	228
Other[e]	862	327	82	52	80	172	34	86	29
Definite postgraduation study (%)[f]									
Postdoc fellowship or research associateship	94.6	92.5	97.7	96.0	91.8	95.6	93.8	94.0	89.0
Other or unknown[g]	5.4	7.5	2.3	4.0	8.2	4.4	6.3	6.0	11.0
Definite employment (%)[h]									
Academe	37.1	34.3	16.2	27.0	53.3	15.6	57.6	70.3	76.0
Government	8.1	9.7	8.0	4.6	16.0	8.6	4.8	2.4	4.5
Industry or business[i]	45.2	46.0	71.0	64.6	20.4	70.4	5.6	6.6	15.3
Nonprofit organization	4.9	7.1	2.2	2.2	6.9	3.0	5.7	12.7	2.4
Other or unknown[j]	4.7	2.9	2.6	1.6	3.5	2.3	26.2	8.0	1.8
Primary activity[k]									
R&D	53.4	54.4	68.6	72.1	39.2	72.7	14.1	8.5	45.5
Teaching	25.8	21.5	12.8	17.3	35.2	9.9	40.5	71.5	37.7
Management or administration	8.0	7.4	2.8	1.9	9.4	4.0	36.1	8.2	9.8

Table 55

Statistical profile of postgraduation plans of doctorate recipients, by sex and broad field of study: 2019

(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]
Professional services	12.2	15.8	14.7	7.9	15.7	12.6	9.1	11.1	6.8
Other	0.7	1.0	1.1	0.7	0.5	0.8	0.2	0.6	0.1
Secondary activity[l]									
R&D	22.3	22.5	13.4	15.5	32.4	13.3	27.8	38.0	35.3
Teaching	12.8	8.3	2.8	9.5	20.1	6.5	21.5	10.9	41.0
Management or administration	10.4	16.7	12.3	5.5	8.6	13.1	10.3	7.1	4.8
Professional services	5.8	7.8	5.0	5.2	7.2	5.2	7.2	5.6	3.7
Other	0.6	0.5	0.6	0.6	0.7	0.5	0.5	0.8	0.1
No secondary activity	48.1	44.2	65.8	63.7	31.0	61.4	32.8	37.6	15.1
Activity unknown	5.1	5.5	4.7	3.9	4.6	5.5	5.2	6.4	4.3
Postgraduation location (%)[m]									
United States[n]	88.0	91.2	87.9	87.3	84.1	88.1	91.6	87.3	85.1
New England	8.6	11.0	10.8	7.2	9.1	7.7	4.0	8.6	4.7
Middle Atlantic	11.6	12.3	10.9	13.5	13.6	8.5	10.4	17.2	11.6
East North Central	10.8	10.1	10.8	8.3	10.0	11.3	13.9	13.5	12.5
West North Central	4.5	6.9	3.4	2.3	3.7	3.6	6.8	5.2	5.9
South Atlantic	14.5	16.3	12.8	11.4	18.4	12.2	17.6	14.7	17.9
East South Central	3.2	3.3	2.4	1.5	2.9	2.7	8.2	4.3	5.4
West South Central	6.9	6.1	6.0	4.8	6.4	7.7	10.7	7.2	10.6
Mountain	5.7	5.0	6.9	4.1	5.0	7.1	8.7	3.8	4.0
Pacific and insular	21.3	19.4	23.1	33.8	14.1	26.5	9.9	11.4	11.2
Not in United States	11.9	8.7	12.0	12.5	15.8	11.8	8.4	12.7	14.8
Location unknown	0.1	*	0.1	0.2	0.1	0.2	0.0	0.0	0.1
Female doctorate recipients (number)	25,542	6,961	2,213	1,095	5,399	2,468	3,213	2,573	1,620
Postgraduation status (number)[d]									
Definite postgraduation study	6,021	2,342	756	234	1,576	527	202	283	101
Definite employment	9,796	1,901	610	523	1,951	897	1,913	1,065	936
Seeking employment or study	6,590	1,933	642	232	1,137	760	711	847	328
Other[e]	823	320	55	12	143	61	93	99	40
Definite postgraduation study (%)[f]									
Postdoc fellowship or research associateship	93.5	94.6	97.1	95.7	89.9	94.3	91.1	93.3	90.1

Table 55

Statistical profile of postgraduation plans of doctorate recipients, by sex and broad field of study: 2019

(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]
Other or unknown[g]	6.5	5.4	2.9	4.3	10.1	5.7	8.9	6.7	9.9
Definite employment (%)[h]									
Academe	51.0	41.2	23.6	40.2	53.5	20.5	57.4	75.7	77.1
Government	7.0	8.6	11.3	5.4	11.0	7.0	4.1	1.2	6.2
Industry or business[i]	26.0	35.6	59.8	48.6	19.4	66.4	5.7	8.1	8.8
Nonprofit organization	7.7	11.5	2.8	2.9	9.9	3.9	7.7	6.9	5.3
Other or unknown[j]	8.4	3.1	2.5	3.1	6.3	2.1	25.0	8.1	2.6
Primary activity[k]									
R&D	34.7	42.2	60.7	57.3	32.9	66.9	12.7	9.1	36.0
Teaching	35.8	25.8	18.0	32.3	33.7	10.3	43.6	70.8	43.5
Management or administration	13.3	11.2	6.1	1.4	10.5	3.6	30.9	9.9	12.2
Professional services	15.3	19.4	14.1	7.8	22.3	17.7	12.3	9.1	8.1
Other	0.9	1.4	1.2	1.2	0.6	1.5	0.5	1.2	0.1
Secondary activity[l]									
R&D	27.6	25.8	14.4	26.7	28.3	12.7	26.6	41.1	40.2
Teaching	15.3	10.6	2.7	9.8	19.8	7.7	18.2	11.6	33.1
Management or administration	10.5	14.9	14.1	8.0	10.1	11.2	9.6	8.1	5.2
Professional services	6.7	8.2	4.6	2.6	8.2	4.0	8.7	5.1	4.5
Other	0.8	0.6	0.8	0.6	0.9	0.8	0.8	1.3	0.2
No secondary activity	39.1	39.8	63.4	52.3	32.8	63.7	36.1	32.9	16.8
Activity unknown	4.8	4.5	3.3	4.2	5.5	4.1	4.6	5.8	4.8
Postgraduation location (%)[m]									
United States[n]	92.0	93.2	90.3	88.4	91.4	92.0	94.9	92.5	87.3
New England	9.1	10.8	10.6	8.6	9.1	9.1	4.7	10.6	7.8
Middle Atlantic	13.0	12.6	11.6	14.5	13.8	11.4	11.2	16.2	13.5
East North Central	11.8	11.1	11.3	9.6	10.9	11.2	14.7	13.8	12.7
West North Central	5.2	5.5	3.8	4.0	5.4	2.5	7.8	5.0	4.9
South Atlantic	17.3	18.5	13.3	12.8	18.6	14.0	19.9	14.4	19.6
East South Central	4.3	4.3	2.8	2.9	3.3	2.6	8.0	4.6	4.4
West South Central	7.7	6.7	6.2	4.9	7.0	7.9	11.4	8.4	9.6
Mountain	5.8	5.5	7.0	4.2	6.0	6.5	7.3	4.5	4.2
Pacific and insular	17.0	17.3	23.4	26.2	16.5	26.3	9.1	13.6	9.4

Table 55

Statistical profile of postgraduation plans of doctorate recipients, by sex and broad field of study: 2019

(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]
Not in United States	7.9	6.7	9.7	11.6	8.5	7.7	5.1	7.5	12.6
Location unknown	0.1	*	0.0	0.0	0.1	0.3	*	0.0	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: 2019

(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]	12,781	1,491	8,702	2,588
Sex (%)				
Male	45.5	51.0	48.3	33.2
Female	54.5	49.0	51.7	66.8
Unknown	*	0.0	*	0.0
Citizenship (%)				
U.S. citizen or permanent resident	70.8	55.1	73.3	71.5
Temporary visa holder	26.6	43.5	24.5	24.0
Unknown	2.5	1.4	2.1	4.5
Marital status (%)				
Never married	37.0	31.1	41.3	26.1
Married	42.7	49.5	39.3	50.2
Marriage-like relationship	8.5	6.8	9.7	5.5
Separated, divorced, widowed	2.9	2.3	2.4	5.0
Unknown	8.8	10.3	7.3	13.2
Bachelor's in same field as doctorate (%)[b]	50.3	43.9	53.3	43.9
Master's earned (%)	52.1	77.2	41.2	74.3
Age at doctorate (median years)	31.0	31.8	30.4	34.1
Time to doctorate (median years)				
From bachelor's	8.3	8.8	7.9	11.0
From graduate school start	6.9	7.3	6.5	8.8
From doctoral program start[c]	5.5	4.9	5.8	5.1
Male doctorate recipients (number)	5,819	761	4,200	858
Citizenship (%)				
U.S. citizen or permanent resident	68.3	52.8	72.5	62.0
Temporary visa holder	29.1	46.0	25.1	33.9
Unknown	2.5	1.2	2.4	4.1
Marital status (%)				
Never married	37.6	28.4	41.3	27.4
Married	43.7	54.1	40.1	51.7
Marriage-like relationship	8.0	5.9	8.9	5.0
Separated, divorced, widowed	1.8	1.7	1.8	2.1
Unknown	9.0	9.9	7.8	13.8
Bachelor's in same field as doctorate (%)[b]	49.0	46.5	51.2	40.1
Master's earned (%)	49.4	79.2	39.8	69.9
Age at doctorate (median years)	31.0	32.8	30.6	32.8
Time to doctorate (median years)				
From bachelor's	8.1	9.2	7.9	9.4
From graduate school start	6.8	7.7	6.5	7.9
From doctoral program start[c]	5.5	4.9	5.8	5.0
Female doctorate recipients (number)	6,961	730	4,501	1,730
Citizenship (%)				

Table 56

Statistical profile of doctorate recipients in life sciences fields, by sex and field of study: 2019

(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	72.9	57.5	74.1	76.2
Temporary visa holder	24.6	40.8	24.0	19.1
Unknown	2.5	1.6	1.8	4.7
Marital status (%)				
Never married	36.5	34.0	41.2	25.4
Married	41.9	44.7	38.6	49.4
Marriage-like relationship	9.0	7.8	10.5	5.8
Separated, divorced, widowed	3.9	2.9	3.0	6.5
Unknown	8.7	10.7	6.7	12.9
Bachelor's in same field as doctorate (%)[b]	51.5	41.2	55.3	45.8
Master's earned (%)	54.4	75.1	42.5	76.5
Age at doctorate (median years)	31.0	31.2	30.2	35.0
Time to doctorate (median years)				
From bachelor's	8.3	8.3	7.8	11.6
From graduate school start	7.0	7.3	6.6	9.3
From doctoral program start[c]	5.6	5.0	5.8	5.3

* = 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: 2019

(Number and percent)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
All doctorate recipients (number)[a]	12,781	1,491	8,702	2,588
Postgraduation status (number)[b]				
Definite postgraduation study	4,605	400	3,640	565
Definite employment	3,337	489	1,746	1,102
Seeking employment or study	3,338	458	2,294	586
Other[c]	647	29	546	72
Definite postgraduation study (%)[d]				
Postdoc fellowship or research associateship	93.6	95.3	94.1	89.2
Other or unknown[e]	6.4	4.8	5.9	10.8
Definite employment (%)[f]				
Academe	38.2	41.3	29.0	51.5
Government	9.1	14.5	7.9	8.6
Industry or business[g]	40.0	36.6	52.9	21.1
Nonprofit organization	9.6	6.3	6.7	15.6
Other or unknown[h]	3.0	1.2	3.4	3.2
Primary activity[i]				
R&D	47.4	47.9	55.7	34.0
Teaching	24.0	26.7	15.5	36.3
Management or administration	9.5	11.0	6.6	13.5
Professional services	17.8	13.1	20.9	15.1
Other	1.2	1.3	1.3	1.2
Secondary activity[j]				
R&D	24.4	28.0	17.1	34.5
Teaching	9.6	12.7	6.1	13.8
Management or administration	15.7	13.8	16.2	15.7
Professional services	8.0	7.8	6.9	10.0
Other	0.6	0.8	0.7	0.3
No secondary activity	41.7	36.9	53.2	25.6
Activity unknown	4.9	3.5	5.0	5.4
Postgraduation location (%)[k]				
United States[l]	92.3	84.6	93.8	91.5
New England	10.9	4.2	12.6	9.0
Middle Atlantic	12.5	5.2	13.9	11.9
East North Central	10.6	11.9	10.3	11.1
West North Central	6.2	11.0	5.3	6.5
South Atlantic	17.5	16.6	15.9	23.2
East South Central	3.8	4.2	3.6	4.3
West South Central	6.4	8.7	5.8	7.3
Mountain	5.3	6.2	5.1	5.4
Pacific and insular	18.3	15.7	20.7	11.9
Not in United States	7.7	15.3	6.2	8.5
Location unknown	*	0.1	0.0	0.1
Male doctorate recipients (number)	5,819	761	4,200	858
Postgraduation status (number)[b]				
Definite postgraduation study	2,263	223	1,824	216
Definite employment	1,436	259	828	349
Seeking employment or study	1,405	210	1,011	184

Table 57

Statistical profile of postgraduation plans of doctorate recipients in life sciences fields, by sex and field of study: 2019

(Number and percent)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
Other[c]	327	12	297	18
Definite postgraduation study (%)[d]				
Postdoc fellowship or research associateship	92.5	96.0	93.4	81.9
Other or unknown[e]	7.5	4.0	6.6	18.1
Definite employment (%)[f]				
Academe	34.3	38.2	26.0	51.0
Government	9.7	17.4	7.6	9.2
Industry or business[g]	46.0	37.1	57.2	25.8
Nonprofit organization	7.1	5.8	5.6	11.7
Other or unknown[h]	2.9	1.5	3.6	2.3
Primary activity[i]				
R&D	54.4	49.6	62.0	40.2
Teaching	21.5	25.2	13.3	38.1
Management or administration	7.4	10.4	5.9	8.5
Professional services	15.8	12.8	17.9	13.0
Other	1.0	2.0	0.9	0.3
Secondary activity[j]				
R&D	22.5	28.0	15.6	34.7
Teaching	8.3	12.8	5.0	12.4
Management or administration	16.7	15.6	17.3	16.0
Professional services	7.8	6.0	7.2	10.6
Other	0.5	0.8	0.5	0.3
No secondary activity	44.2	36.8	54.4	26.0
Activity unknown	5.5	3.5	6.3	5.2
Postgraduation location (%)[k]				
United States[l]	91.2	82.0	93.6	88.0
New England	11.0	3.7	12.9	8.1
Middle Atlantic	12.3	3.7	14.2	10.8
East North Central	10.1	10.8	9.8	10.8
West North Central	6.9	12.9	5.9	6.7
South Atlantic	16.3	17.8	14.6	22.7
East South Central	3.3	4.4	3.1	3.5
West South Central	6.1	8.1	5.4	7.8
Mountain	5.0	6.2	4.8	5.0
Pacific and insular	19.4	13.7	22.1	11.5
Not in United States	8.7	17.8	6.4	12.0
Location unknown	*	0.2	0.0	0.0
Female doctorate recipients (number)	6,961	730	4,501	1,730
Postgraduation status (number)[b]				
Definite postgraduation study	2,342	177	1,816	349
Definite employment	1,901	230	918	753
Seeking employment or study	1,933	248	1,283	402
Other[c]	320	17	249	54
Definite postgraduation study (%)[d]				
Postdoc fellowship or research associateship	94.6	94.4	94.8	93.7
Other or unknown[e]	5.4	5.6	5.2	6.3

Table 57

Statistical profile of postgraduation plans of doctorate recipients in life sciences fields, by sex and field of study: 2019

(Number and percent)

Characteristic	All life sciences fields	Agricultural sciences and natural resources	Biological and biomedical sciences	Health sciences
Definite employment (%)[f]				
Academe	41.2	44.8	31.8	51.7
Government	8.6	11.3	8.2	8.4
Industry or business[g]	35.6	36.1	49.0	19.0
Nonprofit organization	11.5	7.0	7.7	17.4
Other or unknown[h]	3.1	0.9	3.3	3.6
Primary activity[i]				
R&D	42.2	45.9	50.2	31.1
Teaching	25.8	28.4	17.4	35.4
Management or administration	11.2	11.7	7.2	15.9
Professional services	19.4	13.5	23.6	16.0
Other	1.4	0.5	1.6	1.5
Secondary activity[j]				
R&D	25.8	27.9	18.3	34.5
Teaching	10.6	12.6	7.0	14.5
Management or administration	14.9	11.7	15.2	15.6
Professional services	8.2	9.9	6.6	9.7
Other	0.6	0.9	0.8	0.3
No secondary activity	39.8	36.9	52.1	25.5
Activity unknown	4.5	3.5	3.8	5.6
Postgraduation location (%)[k]				
United States[l]	93.2	87.7	94.0	93.3
New England	10.8	4.7	12.3	9.4
Middle Atlantic	12.6	6.9	13.5	12.5
East North Central	11.1	13.3	10.8	11.3
West North Central	5.5	8.8	4.6	6.4
South Atlantic	18.5	15.2	17.1	23.4
East South Central	4.3	3.9	4.2	4.6
West South Central	6.7	9.3	6.1	7.0
Mountain	5.5	6.1	5.4	5.6
Pacific and insular	17.3	18.2	19.3	12.1
Not in United States	6.7	12.3	6.0	6.6
Location unknown	*	0.0	0.0	0.1

* = 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: 2019

(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]	6,585	2,941	1,274	2,370
Sex (%)				
Male	66.3	60.9	58.1	77.6
Female	33.6	39.1	41.8	22.3
Unknown	0.1	0.0	0.1	0.1
Citizenship (%)				
U.S. citizen or permanent resident	59.3	60.6	63.5	55.4
Temporary visa holder	37.8	36.4	33.8	41.6
Unknown	3.0	3.0	2.7	3.0
Marital status (%)				
Never married	48.1	48.9	44.0	49.2
Married	33.7	32.2	36.4	34.0
Marriage-like relationship	7.7	7.5	9.3	6.9
Separated, divorced, widowed	1.4	1.2	2.3	1.3
Unknown	9.2	10.2	8.0	8.6
Bachelor's in same field as doctorate (%)[b]	69.1	73.2	46.8	75.9
Master's earned (%)	53.1	37.2	66.6	65.6
Age at doctorate (median years)	29.5	28.9	30.8	29.6
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	6.4
From doctoral program start[c]	5.6	5.3	5.3	5.9
Male doctorate recipients (number)	4,368	1,790	740	1,838
Citizenship (%)				
U.S. citizen or permanent resident	58.4	60.2	58.9	56.3
Temporary visa holder	38.5	36.5	37.7	40.8
Unknown	3.2	3.3	3.4	2.9
Marital status (%)				
Never married	48.1	48.2	44.2	49.6
Married	34.5	33.1	38.0	34.5
Marriage-like relationship	7.0	7.2	7.3	6.6
Separated, divorced, widowed	1.2	0.9	1.8	1.4
Unknown	9.2	10.7	8.8	7.9
Bachelor's in same field as doctorate (%)[b]	70.1	73.2	47.7	76.0
Master's earned (%)	54.4	38.5	68.4	64.4
Age at doctorate (median years)	29.6	29.0	31.0	29.7
Time to doctorate (median years)				
From bachelor's	7.0	6.3	8.1	7.0

Table 58

Statistical profile of doctorate recipients in physical sciences and earth sciences fields, by sex and field of study: 2019

(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	6.4
From doctoral program start[c]	5.7	5.3	5.4	5.9
Female doctorate recipients (number)	2,213	1,151	533	529
Citizenship (%)				
U.S. citizen or permanent resident	61.2	61.1	70.0	52.6
Temporary visa holder	36.3	36.3	28.3	44.4
Unknown	2.5	2.6	1.7	3.0
Marital status (%)				
Never married	48.1	50.1	43.9	47.8
Married	32.1	30.8	34.3	32.5
Marriage-like relationship	9.0	8.1	12.0	8.1
Separated, divorced, widowed	1.8	1.6	3.0	0.9
Unknown	9.0	9.4	6.8	10.6
Bachelor's in same field as doctorate (%)[b]	67.2	73.2	45.6	76.2
Master's earned (%)	50.5	35.1	64.2	70.1
Age at doctorate (median years)	29.3	28.8	30.3	29.4
Time to doctorate (median years)				
From bachelor's	6.8	6.3	8.0	7.0
From graduate school start	6.0	5.8	6.8	6.3
From doctoral program start[c]	5.3	5.3	5.3	5.9

[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 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: 2019

(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]	6,585	2,941	1,274	2,370
Postgraduation status (number)[b]				
Definite postgraduation study	2,385	982	482	921
Definite employment	1,753	788	341	624
Seeking employment or study	1,857	878	351	628
Other[c]	137	63	25	49
Definite postgraduation study (%)[d]				
Postdoc fellowship or research associateship	97.5	96.9	98.5	97.6
Other or unknown[e]	2.5	3.1	1.5	2.4
Definite employment (%)[f]				
Academe	18.8	16.2	27.0	17.5
Government	9.2	4.4	23.5	7.4
Industry or business[g]	67.1	75.8	41.3	70.2
Nonprofit organization	2.4	1.0	5.0	2.7
Other or unknown[h]	2.6	2.5	3.2	2.2
Primary activity[i]				
R&D	65.8	70.4	51.1	68.1
Teaching	14.6	14.0	17.1	13.9
Management or administration	4.0	3.7	10.1	1.0
Professional services	14.5	11.2	20.2	15.5
Other	1.1	0.7	1.5	1.5
Secondary activity[j]				
R&D	13.8	10.2	22.3	13.6
Teaching	2.8	2.0	6.4	1.8
Management or administration	12.9	15.5	13.8	9.2
Professional services	4.8	3.8	6.1	5.4
Other	0.7	0.8	0.9	0.5
No secondary activity	65.0	67.8	50.5	69.4
Activity unknown	4.2	3.9	4.1	4.6
Postgraduation location (%)[k]				
United States[l]	88.7	92.2	85.9	86.1
New England	10.7	12.9	7.8	9.8
Middle Atlantic	11.1	13.6	5.7	11.2
East North Central	10.9	14.0	5.8	10.2
West North Central	3.6	4.5	4.0	2.2
South Atlantic	13.0	12.7	13.7	12.9
East South Central	2.5	2.7	2.8	2.3
West South Central	6.1	5.6	11.4	3.8
Mountain	6.9	4.8	11.4	6.9
Pacific and insular	23.2	20.7	22.5	26.3
Not in United States	11.2	7.6	14.1	13.8
Location unknown	0.1	0.2	0.0	0.1
Male doctorate recipients (number)	4,368	1,790	740	1,838
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: 2019

(Number and percent)

Characteristic	All physical sciences and earth sciences fields	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy
Definite postgraduation study	1,629	650	275	704
Definite employment	1,143	451	188	504
Seeking employment or study	1,215	510	208	497
Other[c]	82	37	18	27
Definite postgraduation study (%)[d]				
Postdoc fellowship or research associateship	97.7	97.5	98.5	97.6
Other or unknown[e]	2.3	2.5	1.5	2.4
Definite employment (%)[f]				
Academe	16.2	D	26.1	D
Government	8.0	3.5	19.7	7.7
Industry or business[g]	71.0	79.6	47.3	72.0
Nonprofit organization	2.2	D	4.3	D
Other or unknown[h]	2.6	2.9	2.7	2.4
Primary activity[i]				
R&D	68.6	74.5	50.5	70.2
Teaching	12.8	9.9	19.2	12.8
Management or administration	2.8	D	8.8	D
Professional services	14.7	D	20.9	D
Other	1.1	1.2	0.5	1.2
Secondary activity[j]				
R&D	13.4	D	24.2	D
Teaching	2.8	D	6.6	D
Management or administration	12.3	15.3	15.9	8.3
Professional services	5.0	3.5	6.6	5.6
Other	0.6	0.7	0.5	0.6
No secondary activity	65.8	69.1	46.2	70.4
Activity unknown	4.7	6.0	3.2	4.2
Postgraduation location (%)[k]				
United States[l]	87.9	91.9	83.4	85.9
New England	10.8	13.0	7.1	10.1
Middle Atlantic	10.9	13.2	5.2	11.0
East North Central	10.8	14.2	6.7	9.3
West North Central	3.4	4.6	3.5	2.3
South Atlantic	12.8	11.7	13.0	13.8
East South Central	2.4	2.5	2.6	2.3
West South Central	6.0	5.5	12.7	3.9
Mountain	6.9	4.9	11.0	7.1
Pacific and insular	23.1	21.3	21.0	25.4
Not in United States	12.0	7.8	16.6	14.0
Location unknown	0.1	0.3	0.0	0.1
Female doctorate recipients (number)	2,213	1,151	533	529
Postgraduation status (number)[b]				
Definite postgraduation study	756	332	207	217

Table 59

Statistical profile of postgraduation plans of doctorate recipients in physical sciences and earth sciences fields, by sex and field of study: 2019

(Number and percent)

Characteristic	All physical sciences and earth sciences fields	Chemistry	Geosciences, atmospheric sciences, and ocean sciences	Physics and astronomy
Definite employment	610	337	153	120
Seeking employment or study	642	368	143	131
Other[c]	55	26	7	22
Definite postgraduation study (%)[d]				
Postdoc fellowship or research associateship	97.1	95.8	98.6	97.7
Other or unknown[e]	2.9	4.2	1.4	2.3
Definite employment (%)[f]				
Academe	23.6	D	28.1	D
Government	11.3	5.6	28.1	5.8
Industry or business[g]	59.8	70.6	34.0	62.5
Nonprofit organization	2.8	D	5.9	D
Other or unknown[h]	2.5	2.1	3.9	1.7
Primary activity[i]				
R&D	60.7	65.2	51.7	58.9
Teaching	18.0	19.2	14.5	18.8
Management or administration	6.1	D	11.7	D
Professional services	14.1	D	19.3	D
Other	1.2	0.0	2.8	2.7
Secondary activity[j]				
R&D	14.4	D	20.0	D
Teaching	2.7	D	6.2	D
Management or administration	14.1	15.6	11.0	13.4
Professional services	4.6	4.2	5.5	4.5
Other	0.8	0.9	1.4	0.0
No secondary activity	63.4	66.1	55.9	65.2
Activity unknown	3.3	1.2	5.2	6.7
Postgraduation location (%)[k]				
United States[l]	90.3	92.7	89.2	86.9
New England	10.6	12.7	8.6	8.6
Middle Atlantic	11.6	14.2	6.4	11.9
East North Central	11.3	13.6	4.7	13.6
West North Central	3.8	4.3	4.7	1.8
South Atlantic	13.3	14.2	14.7	9.8
East South Central	2.8	3.0	3.1	2.1
West South Central	6.2	5.8	9.7	3.3
Mountain	7.0	4.6	11.9	6.2
Pacific and insular	23.4	19.7	24.4	29.4
Not in United States	9.7	7.3	10.8	13.1
Location unknown	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 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: 2019

(Number, percent, and median years)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
All doctorate recipients (number)[a]	4,240	2,228	2,012
Sex (%)			
Male	74.2	77.1	70.9
Female	25.8	22.9	29.1
Unknown	*	*	0.0
Citizenship (%)			
U.S. citizen or permanent resident	42.1	35.9	49.1
Temporary visa holder	54.5	59.8	48.5
Unknown	3.4	4.3	2.4
Marital status (%)			
Never married	43.3	38.2	48.9
Married	39.2	44.6	33.3
Marriage-like relationship	4.9	4.1	5.7
Separated, divorced, widowed	1.9	1.9	1.8
Unknown	10.8	11.1	10.3
Bachelor's in same field as doctorate (%)[b]	61.1	48.5	75.0
Master's earned (%)	71.6	74.5	68.4
Age at doctorate (median years)	30.3	31.3	29.5
Time to doctorate (median years)			
From bachelor's	7.8	8.6	7.0
From graduate school start	6.9	7.7	6.3
From doctoral program start[c]	5.7	5.8	5.3
Male doctorate recipients (number)	3,144	1,717	1,427
Citizenship (%)			
U.S. citizen or permanent resident	41.6	33.9	50.9
Temporary visa holder	54.9	61.6	46.8
Unknown	3.5	4.5	2.3
Marital status (%)			
Never married	44.0	38.6	50.5
Married	38.8	44.6	31.9
Marriage-like relationship	4.9	4.1	5.8
Separated, divorced, widowed	1.8	1.5	2.2
Unknown	10.6	11.3	9.7
Bachelor's in same field as doctorate (%)[b]	61.4	50.6	74.5
Master's earned (%)	70.5	74.1	66.2
Age at doctorate (median years)	30.3	31.2	29.5
Time to doctorate (median years)			
From bachelor's	7.6	8.4	7.0
From graduate school start	6.9	7.6	6.3
From doctoral program start[c]	5.7	5.8	5.3
Female doctorate recipients (number)	1,095	510	585
Citizenship (%)			
U.S. citizen or permanent resident	43.7	42.7	44.6

Table 60

Statistical profile of doctorate recipients in mathematics and computer sciences fields, by sex and field of study: 2019

(Number, percent, and median years)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
Temporary visa holder	53.3	54.1	52.6
Unknown	2.9	3.1	2.7
Marital status (%)			
Never married	41.4	37.3	45.0
Married	40.5	44.7	36.9
Marriage-like relationship	4.8	4.3	5.3
Separated, divorced, widowed	2.0	3.3	0.9
Unknown	11.2	10.4	12.0
Bachelor's in same field as doctorate (%)[b]	60.3	41.8	76.4
Master's earned (%)	74.8	75.9	73.8
Age at doctorate (median years)	30.3	31.6	29.4
Time to doctorate (median years)			
From bachelor's	7.9	9.2	7.2
From graduate school start	7.0	8.0	6.5
From doctoral program start[c]	5.5	5.8	5.3

* = 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: 2019

(Number and percent)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
All doctorate recipients (number)[a]	4,240	2,228	2,012
Postgraduation status (number)[b]			
Definite postgraduation study	912	311	601
Definite employment	2,061	1,267	794
Seeking employment or study	861	434	427
Other[c]	64	34	30
Definite postgraduation study (%)[d]			
Postdoc fellowship or research associateship	95.9	93.9	97.0
Other or unknown[e]	4.1	6.1	3.0
Definite employment (%)[f]			
Academe	30.3	26.0	37.2
Government	4.8	4.7	4.9
Industry or business[g]	60.5	65.1	53.1
Nonprofit organization	2.4	2.4	2.3
Other or unknown[h]	2.0	1.7	2.5
Primary activity[i]			
R&D	68.4	76.6	55.4
Teaching	21.1	15.1	30.7
Management or administration	1.8	2.1	1.3
Professional services	7.9	5.6	11.5
Other	0.9	0.7	1.2
Secondary activity[j]			
R&D	18.3	14.8	23.9
Teaching	9.6	10.8	7.7
Management or administration	6.1	6.9	4.8
Professional services	4.5	3.9	5.6
Other	0.6	0.7	0.5
No secondary activity	60.8	62.9	57.4
Activity unknown	4.0	4.3	3.5
Postgraduation location (%)[k]			
United States[l]	87.6	89.6	85.2
New England	7.5	6.8	8.3
Middle Atlantic	13.8	12.5	15.3
East North Central	8.6	6.5	11.0
West North Central	2.8	1.8	3.8
South Atlantic	11.7	9.9	13.8
East South Central	1.8	1.3	2.4
West South Central	4.8	4.4	5.3
Mountain	4.1	2.9	5.4
Pacific and insular	31.8	42.5	19.8
Not in United States	12.3	10.2	14.7
Location unknown	0.1	0.2	0.1
Male doctorate recipients (number)	3,144	1,717	1,427
Postgraduation status (number)[b]			
Definite postgraduation study	678	244	434
Definite employment	1,538	997	541

Table 61

Statistical profile of postgraduation plans of doctorate recipients in mathematics and computer sciences fields, by sex and field of study: 2019

(Number and percent)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
Seeking employment or study	629	310	319
Other[c]	52	29	23
Definite postgraduation study (%)[d]			
Postdoc fellowship or research associateship	96.0	93.4	97.5
Other or unknown[e]	4.0	6.6	2.5
Definite employment (%)[f]			
Academe	27.0	22.7	34.9
Government	4.6	D	D
Industry or business[g]	64.6	69.4	55.6
Nonprofit organization	2.2	D	D
Other or unknown[h]	1.6	1.5	1.8
Primary activity[i]			
R&D	72.1	79.8	58.1
Teaching	17.3	11.8	27.3
Management or administration	1.9	1.9	1.9
Professional services	7.9	5.9	11.7
Other	0.7	0.6	1.0
Secondary activity[j]			
R&D	15.5	12.1	21.6
Teaching	9.5	10.4	8.0
Management or administration	5.5	D	D
Professional services	5.2	D	D
Other	0.6	0.8	0.2
No secondary activity	63.7	66.6	58.3
Activity unknown	3.9	4.2	3.3
Postgraduation location (%)[k]			
United States[l]	87.3	89.9	83.9
New England	7.2	6.8	7.7
Middle Atlantic	13.5	11.6	16.0
East North Central	8.3	6.6	10.4
West North Central	2.3	1.5	3.4
South Atlantic	11.4	10.2	12.9
East South Central	1.5	1.1	1.9
West South Central	4.8	3.9	5.8
Mountain	4.1	3.1	5.3
Pacific and insular	33.8	44.3	20.3
Not in United States	12.5	9.8	16.0
Location unknown	0.2	0.2	0.1
Female doctorate recipients (number)	1,095	510	585
Postgraduation status (number)[b]			
Definite postgraduation study	234	67	167
Definite employment	523	270	253
Seeking employment or study	232	124	108
Other[c]	12	5	7
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: 2019

(Number and percent)

Characteristic	All mathematics and computer sciences fields	Computer and information sciences	Mathematics and statistics
Postdoc fellowship or research associateship	95.7	95.5	95.8
Other or unknown[e]	4.3	4.5	4.2
Definite employment (%)[f]			
Academe	40.2	38.5	41.9
Government	5.4	D	D
Industry or business[g]	48.6	49.3	47.8
Nonprofit organization	2.9	D	D
Other or unknown[h]	3.1	2.2	4.0
Primary activity[i]			
R&D	57.3	64.7	49.4
Teaching	32.3	27.1	37.9
Management or administration	1.4	2.7	0.0
Professional services	7.8	4.7	11.1
Other	1.2	0.8	1.6
Secondary activity[j]			
R&D	26.7	24.8	28.8
Teaching	9.8	12.4	7.0
Management or administration	8.0	D	D
Professional services	2.6	D	D
Other	0.6	0.0	1.2
No secondary activity	52.3	49.2	55.6
Activity unknown	4.2	4.4	4.0
Postgraduation location (%)[k]			
United States[l]	88.4	88.4	88.3
New England	8.6	7.1	9.8
Middle Atlantic	14.5	15.7	13.6
East North Central	9.6	6.2	12.4
West North Central	4.0	3.0	4.8
South Atlantic	12.8	9.2	15.7
East South Central	2.9	2.1	3.6
West South Central	4.9	5.9	4.0
Mountain	4.2	2.4	5.7
Pacific and insular	26.2	35.6	18.6
Not in United States	11.6	11.6	11.7
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: 2019

(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]	9,071	3,936	445	1,247	707	633	2,103
Sex (%)							
Male	40.5	28.4	34.8	65.6	61.2	36.2	43.7
Female	59.5	71.6	65.2	34.4	38.8	63.8	56.3
Unknown	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Citizenship (%)							
U.S. citizen or permanent resident	74.1	85.1	80.7	39.4	71.3	80.7	71.8
Temporary visa holder	21.1	8.6	14.8	56.8	24.5	16.6	25.0
Unknown	4.8	6.3	4.5	3.8	4.2	2.7	3.2
Marital status (%)							
Never married	31.6	30.6	29.0	40.4	35.9	28.4	28.4
Married	41.5	38.1	45.4	37.5	39.6	47.6	48.1
Marriage-like relationship	8.6	9.8	10.3	5.9	8.5	10.3	7.2
Separated, divorced, widowed	4.7	4.2	5.6	2.8	4.8	6.2	6.1
Unknown	13.6	17.3	9.7	13.3	11.2	7.6	10.2
Bachelor's in same field as doctorate (%)[b]	51.4	64.1	42.9	56.1	61.0	44.1	25.7
Master's earned (%)	82.9	80.4	82.9	78.1	83.7	91.0	87.6
Age at doctorate (median years)	32.4	31.3	34.3	31.3	32.6	33.3	35.3
Time to doctorate (median years)							
From bachelor's	9.4	8.5	11.3	8.5	9.8	10.4	11.6
From graduate school start	8.0	7.0	9.4	7.8	8.3	8.8	9.8
From doctoral program start[c]	6.0	5.9	7.1	5.8	6.2	6.8	6.0
Male doctorate recipients (number)	3,672	1,118	155	818	433	229	919
Citizenship (%)							
U.S. citizen or permanent resident	68.4	85.3	79.4	39.9	70.7	78.2	67.7
Temporary visa holder	27.4	8.7	15.5	56.6	24.7	19.7	29.3
Unknown	4.3	6.0	5.2	3.5	4.6	2.2	3.0
Marital status (%)							
Never married	32.2	32.1	25.8	40.3	35.6	26.2	25.9
Married	43.2	39.6	47.1	36.9	39.0	49.3	53.0
Marriage-like relationship	7.5	7.8	9.0	6.4	7.9	10.0	7.1
Separated, divorced, widowed	3.9	2.8	5.2	3.1	5.3	5.7	4.6
Unknown	13.3	17.7	12.9	13.3	12.2	8.7	9.5
Bachelor's in same field as doctorate (%)[b]	48.3	59.5	40.6	55.9	58.4	39.7	26.8
Master's earned (%)	82.4	78.1	85.8	77.9	83.4	91.7	88.1

Table 62

Statistical profile of doctorate recipients in psychology and social sciences fields, by sex and field of study: 2019

(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)	32.9	31.8	36.0	31.6	32.7	34.2	35.8
Time to doctorate (median years)							
From bachelor's	9.6	8.5	12.0	8.3	9.6	10.3	11.9
From graduate school start	8.0	6.8	10.0	7.7	8.0	8.8	9.8
From doctoral program start[c]	5.9	5.8	7.2	5.8	6.0	6.8	6.0
Female doctorate recipients (number)	5,399	2,818	290	429	274	404	1,184
Citizenship (%)							
U.S. citizen or permanent resident	78.0	85.0	81.4	38.5	72.3	82.2	74.9
Temporary visa holder	16.9	8.6	14.5	57.1	24.1	14.9	21.7
Unknown	5.1	6.4	4.1	4.4	3.6	3.0	3.4
Marital status (%)							
Never married	31.2	30.0	30.7	40.6	36.5	29.7	30.4
Married	40.3	37.5	44.5	38.7	40.5	46.5	44.3
Marriage-like relationship	9.4	10.6	11.0	5.1	9.5	10.4	7.3
Separated, divorced, widowed	5.3	4.8	5.9	2.3	4.0	6.4	7.3
Unknown	13.8	17.1	7.9	13.3	9.5	6.9	10.7
Bachelor's in same field as doctorate (%)[b]	53.5	65.9	44.1	56.4	65.0	46.5	24.9
Master's earned (%)	83.2	81.3	81.4	78.6	84.3	90.6	87.2
Age at doctorate (median years)	32.0	31.2	33.4	31.1	32.4	33.2	34.8
Time to doctorate (median years)							
From bachelor's	9.3	8.5	11.0	8.9	10.0	10.4	11.3
From graduate school start	7.9	7.0	9.3	7.8	8.8	8.8	9.8
From doctoral program start[c]	6.0	6.0	7.0	5.8	6.7	6.8	6.0

[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 doctorate: 2019

(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]	9,071	3,936	445	1,247	707	633	2,103
Postgraduation status (number)[b]							
Definite postgraduation study	2,385	1,538	101	154	164	141	287
Definite employment	3,630	1,103	138	775	318	316	980
Seeking employment or study	1,864	655	152	166	147	123	621
Other[c]	223	93	21	18	14	19	58
Definite postgraduation study (%)[d]							
Postdoc fellowship or research associateship	90.6	87.2	94.1	96.8	98.8	97.2	96.2
Other or unknown[e]	9.4	12.8	5.9	3.2	1.2	2.8	3.8
Definite employment (%)[f]							
Academe	53.4	41.1	67.4	51.6	69.5	75.6	54.3
Government	13.3	11.7	8.0	15.1	11.0	7.0	17.1
Industry or business[g]	19.9	28.3	11.6	25.4	10.1	8.9	13.9
Nonprofit organization	8.5	11.7	10.1	5.2	5.7	6.6	8.9
Other or unknown[h]	5.0	7.3	2.9	2.7	3.8	1.9	5.8
Primary activity[i]							
R&D	35.8	27.5	19.5	59.5	36.0	32.3	29.5
Teaching	34.4	26.5	59.4	22.0	47.3	51.8	39.8
Management or administration	10.0	9.5	9.0	2.6	8.7	8.6	17.6
Professional services	19.2	36.0	12.0	15.5	7.3	6.9	12.4
Other	0.6	0.6	0.0	0.4	0.7	0.3	0.8
Secondary activity[j]							
R&D	30.2	23.9	35.3	25.1	39.3	40.3	34.4
Teaching	19.9	14.3	9.8	29.7	22.3	20.8	18.9
Management or administration	9.4	11.1	9.8	6.7	9.3	6.3	10.6
Professional services	7.7	10.0	6.0	7.3	4.0	5.3	7.8
Other	0.8	0.8	0.8	0.7	1.3	1.0	0.6
No secondary activity	32.0	39.9	38.3	30.5	23.7	26.4	27.8
Activity unknown	5.1	6.0	3.6	4.0	5.7	4.1	5.3
Postgraduation location (%)[k]							
United States[l]	88.4	96.1	82.8	71.0	85.3	92.6	85.6
New England	9.1	9.1	7.1	8.9	9.8	10.5	8.8
Middle Atlantic	13.7	14.8	14.2	10.0	16.2	15.8	12.3

Table 63

Statistical profile of postgraduation plans of doctorate recipients in psychology and social sciences fields, by sex and field of doctorate: 2019

(Number and percent)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
East North Central	10.5	11.9	D	7.9	7.7	D	9.4
West North Central	4.7	6.2	4.6	2.4	3.1	5.3	3.7
South Atlantic	18.5	17.4	14.6	21.3	19.9	17.9	19.2
East South Central	3.1	3.4	2.9	1.9	3.1	4.6	3.0
West South Central	6.7	8.2	D	4.1	4.6	D	7.5
Mountain	5.6	6.3	5.9	2.9	4.8	5.0	6.5
Pacific and insular	15.5	18.1	18.8	11.2	14.7	13.3	13.9
Not in United States	11.5	3.8	17.2	28.8	14.5	7.4	14.2
Location unknown	0.1	0.1	0.0	0.1	0.2	0.0	0.2
Male doctorate recipients (number)	3,672	1,118	155	818	433	229	919
Postgraduation status (number)[b]							
Definite postgraduation study	809	401	38	103	100	47	120
Definite employment	1,679	358	41	522	194	114	450
Seeking employment or study	727	172	53	97	88	50	267
Other[c]	80	30	8	10	7	6	19
Definite postgraduation study (%)[d]							
Postdoc fellowship or research associateship	91.8	86.8	97.4	96.1	99.0	95.7	95.8
Other or unknown[e]	8.2	13.2	2.6	3.9	1.0	4.3	4.2
Definite employment (%)[f]							
Academe	53.3	42.7	63.4	51.7	67.5	78.1	50.2
Government	16.0	14.5	D	D	11.3	7.0	21.8
Industry or business[g]	20.4	29.1	14.6	24.7	11.9	7.9	15.8
Nonprofit organization	6.9	10.1	D	D	5.7	5.3	7.1
Other or unknown[h]	3.5	3.6	2.4	2.3	3.6	1.8	5.1
Primary activity[i]							
R&D	39.2	30.3	12.8	58.2	33.5	29.4	31.3
Teaching	35.2	31.5	61.5	23.8	48.1	56.0	38.4
Management or administration	9.4	8.5	D	D	8.6	8.3	17.6
Professional services	15.7	29.2	D	D	9.2	5.5	12.2
Other	0.5	0.6	0.0	0.4	0.5	0.9	0.5
Secondary activity[j]							
R&D	32.4	29.4	33.3	27.2	37.8	47.7	34.6
Teaching	20.1	11.4	D	28.6	D	21.1	18.1

Table 63

Statistical profile of postgraduation plans of doctorate recipients in psychology and social sciences fields, by sex and field of doctorate: 2019

(Number and percent)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
Management or administration	8.6	11.1	17.9	7.2	8.1	5.5	8.2
Professional services	7.2	10.2	D	6.6	D	4.6	7.3
Other	0.7	0.3	2.6	0.6	1.6	0.0	0.7
No secondary activity	31.0	37.6	33.3	29.8	27.6	21.1	31.1
Activity unknown	4.6	4.2	4.9	4.2	4.6	4.4	5.6
Postgraduation location (%)[k]							
United States[l]	84.1	95.5	78.5	70.7	84.4	93.8	81.4
New England	9.1	10.8	7.6	8.3	10.2	9.3	7.2
Middle Atlantic	13.6	15.4	16.5	10.9	16.3	14.3	12.1
East North Central	10.0	10.3	12.7	8.5	9.2	15.5	9.6
West North Central	3.7	D	D	2.4	2.7	5.0	2.8
South Atlantic	18.4	16.1	11.4	21.3	18.7	21.1	18.2
East South Central	2.9	D	0.0	1.8	3.1	D	3.3
West South Central	6.4	8.7	D	4.0	4.1	D	7.7
Mountain	5.0	6.3	7.6	2.6	4.8	5.0	5.6
Pacific and insular	14.1	18.1	15.2	10.6	13.6	14.3	12.8
Not in United States	15.8	4.5	21.5	29.1	15.3	6.2	18.4
Location unknown	0.1	0.0	0.0	0.2	0.3	0.0	0.2
Female doctorate recipients (number)	5,399	2,818	290	429	274	404	1,184
Postgraduation status (number)[b]							
Definite postgraduation study	1,576	1,137	63	51	64	94	167
Definite employment	1,951	745	97	253	124	202	530
Seeking employment or study	1,137	483	99	69	59	73	354
Other[c]	143	63	13	8	7	13	39
Definite postgraduation study (%)[d]							
Postdoc fellowship or research associateship	89.9	87.3	92.1	98.0	98.4	97.9	96.4
Other or unknown[e]	10.1	12.7	7.9	2.0	1.6	2.1	3.6
Definite employment (%)[f]							
Academe	53.5	40.3	69.1	51.4	72.6	74.3	57.7
Government	11.0	10.3	D	D	10.5	6.9	13.2
Industry or business[g]	19.4	27.9	10.3	26.9	7.3	9.4	12.3
Nonprofit organization	9.9	12.5	D	D	5.6	7.4	10.4
Other or unknown[h]	6.3	9.0	3.1	3.6	4.0	2.0	6.4

Table 63

Statistical profile of postgraduation plans of doctorate recipients in psychology and social sciences fields, by sex and field of doctorate: 2019

(Number and percent)

Characteristic	All psychology and social sciences fields	Psychology	Anthropology	Economics	Political science and government	Sociology	Other social sciences
Primary activity[i]							
R&D	32.9	26.1	22.3	62.3	40.0	34.0	28.0
Teaching	33.7	24.1	58.5	18.4	46.1	49.5	41.0
Management or administration	10.5	9.9	D	D	8.7	8.8	17.5
Professional services	22.3	39.3	D	D	4.3	7.7	12.5
Other	0.6	0.6	0.0	0.4	0.9	0.0	1.0
Secondary activity[j]							
R&D	28.3	21.2	36.2	20.9	41.7	36.1	34.2
Teaching	19.8	15.7	D	32.0	D	20.6	19.5
Management or administration	10.1	11.1	6.4	5.7	11.3	6.7	12.5
Professional services	8.2	9.9	D	8.6	D	5.7	8.2
Other	0.9	1.0	0.0	0.8	0.9	1.5	0.6
No secondary activity	32.8	41.1	40.4	32.0	17.4	29.4	25.0
Activity unknown	5.5	6.8	3.1	3.6	7.3	4.0	5.1
Postgraduation location (%)[k]							
United States[l]	91.4	96.3	85.0	71.7	86.7	91.9	89.1
New England	9.1	8.4	6.9	10.2	9.0	11.1	10.2
Middle Atlantic	13.8	14.6	13.1	8.2	16.0	16.6	12.5
East North Central	10.9	12.6	D	6.6	5.3	D	9.2
West North Central	5.4	D	D	2.3	3.7	5.4	4.4
South Atlantic	18.6	18.0	16.3	21.4	21.8	16.2	19.9
East South Central	3.3	D	4.4	2.3	3.2	D	2.7
West South Central	7.0	8.0	D	4.3	5.3	D	7.3
Mountain	6.0	6.3	5.0	3.6	4.8	5.1	7.2
Pacific and insular	16.5	18.1	20.6	12.5	16.5	12.8	14.8
Not in United States	8.5	3.6	15.0	28.3	13.3	8.1	10.8
Location unknown	0.1	0.1	0.0	0.0	0.0	0.0	0.1

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 doctorate: 2019

(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
All doctorate recipients (number)[a]	10,303	379	1,164	981	701	1,799	234	992	1,533	2,520
Sex (%)										
Male	76.0	85.2	61.9	67.8	77.3	83.4	73.5	70.7	83.7	76.4
Female	24.0	14.8	38.1	32.2	22.7	16.5	26.5	29.2	16.3	23.6
Unknown	*	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Citizenship (%)										
U.S. citizen or permanent resident	41.3	55.9	66.3	48.9	28.5	28.8	35.9	50.5	39.1	35.2
Temporary visa holder	55.2	40.4	30.8	48.8	65.9	66.6	59.8	46.5	57.4	61.5
Unknown	3.6	3.7	2.8	2.2	5.6	4.6	4.3	3.0	3.5	3.3
Marital status (%)										
Never married	43.2	46.7	49.0	50.8	33.0	41.0	38.0	49.2	42.5	39.8
Married	40.6	30.9	33.8	33.7	47.8	44.1	44.4	32.7	40.7	45.9
Marriage-like relationship	4.0	D	6.9	5.2	2.7	2.7	D	5.6	3.7	2.8
Separated, divorced, widowed	1.3	D	1.5	0.8	1.0	1.6	D	1.0	0.8	1.6
Unknown	11.0	15.0	8.8	9.5	15.5	10.7	13.7	11.5	12.3	9.8
Bachelor's in same field as doctorate (%)[b]	77.1	80.7	71.3	83.5	79.5	82.1	71.8	66.5	85.1	72.2
Master's earned (%)	72.0	81.3	54.6	51.2	83.5	78.2	81.2	59.1	76.6	80.6
Age at doctorate (median years)	30.1	29.8	29.4	28.8	31.4	30.6	31.3	29.2	30.1	30.8
Time to doctorate (median years)										

Table 64

Statistical profile of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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	7.4	7.3	7.0	6.2	8.5	8.0	8.6	6.6	7.3	8.0
From graduate school start	6.8	6.8	6.1	5.8	7.5	7.3	7.7	6.0	6.8	7.3
From doctoral program start[c]	5.3	5.3	5.3	5.0	4.8	5.4	5.0	5.0	5.3	5.0
Male doctorate recipients (number)	7,833	323	720	665	542	1,501	172	701	1,283	1,926
Citizenship (%)										
U.S. citizen or permanent resident	39.8	56.3	64.3	49.6	27.3	29.1	31.4	49.1	39.4	34.1
Temporary visa holder	56.8	40.2	33.1	48.3	67.3	67.0	64.0	47.9	57.2	62.9
Unknown	3.4	3.4	2.6	2.1	5.4	3.9	4.7	3.0	3.4	3.1
Marital status (%)										
Never married	43.1	45.8	50.4	51.0	D	42.4	D	50.1	42.9	39.3
Married	41.2	31.9	33.6	34.1	49.4	43.7	48.8	33.0	40.7	46.6
Marriage-like relationship	3.6	D	7.1	D	2.0	D	D	D	D	2.4
Separated, divorced, widowed	1.1	D	0.8	D	D	D	D	D	D	1.4
Unknown	10.9	15.2	8.1	9.0	15.9	9.7	14.0	11.4	11.9	10.2
Bachelor's in same field as doctorate (%)[b]	78.8	81.1	73.1	85.0	79.9	83.1	70.9	67.6	86.6	74.3
Master's earned (%)	73.1	81.4	54.4	49.8	83.6	78.5	80.2	58.2	77.5	81.5
Age at doctorate (median years)	30.3	29.8	29.5	28.9	31.8	30.7	31.8	29.3	30.2	31.0

Table 64

Statistical profile of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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	7.5	7.3	7.0	6.3	8.5	8.0	9.3	6.6	7.4	8.1
From graduate school start	6.8	6.8	6.3	5.8	7.6	7.3	7.8	6.0	6.8	7.3
From doctoral program start[c]	5.3	5.3	5.3	5.0	4.9	5.4	5.0	5.0	5.3	5.0
Female doctorate recipients (number)	2,468	56	444	316	159	297	62	290	250	594
Citizenship (%)										
U.S. citizen or permanent resident	45.9	53.6	69.6	47.5	32.7	27.3	48.4	54.1	37.6	38.7
Temporary visa holder	50.0	41.1	27.3	50.0	61.0	65.0	48.4	43.1	58.4	57.2
Unknown	4.1	5.4	3.2	2.5	6.3	7.7	3.2	2.8	4.0	4.0
Marital status (%)										
Never married	43.4	51.8	46.6	50.3	D	34.3	D	47.2	40.8	41.4
Married	38.4	25.0	34.2	32.9	42.1	46.1	32.3	32.1	40.8	43.6
Marriage-like relationship	5.1	8.9	6.5	D	5.0	D	D	D	D	4.0
Separated, divorced, widowed	1.7	0.0	2.5	D	D	D	D	D	D	2.4
Unknown	11.4	14.3	10.1	10.4	14.5	15.2	12.9	11.4	14.0	8.6
Bachelor's in same field as doctorate (%)[b]	71.7	78.6	68.5	80.4	78.0	77.1	74.2	64.1	77.2	65.5

Table 64

Statistical profile of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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 (%)	68.5	80.4	54.7	54.1	83.0	76.8	83.9	61.4	72.0	77.6
Age at doctorate (median years)	29.6	29.9	29.2	28.7	30.6	30.3	30.5	28.8	29.4	30.3
Time to doctorate (median years)										
From bachelor's	7.1	7.3	6.9	6.1	8.1	7.9	7.9	6.6	7.0	7.8
From graduate school start	6.3	6.8	5.9	5.8	7.3	7.3	7.0	6.0	6.5	6.9
From doctoral program start[c]	5.1	5.5	5.3	5.0	4.8	5.3	5.0	5.3	5.0	5.0

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

[a] Includes respondents who did not report sex.

[b] 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 doctorate: 2019

(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]	10,303	379	1,164	981	701	1,799	234	992	1,533	2,520
Postgraduation status (number)[b]										
Definite postgraduation study	2,170	67	365	224	131	241	28	265	371	478
Definite employment	4,149	188	283	372	266	901	127	317	560	1,135
Seeking employment or study	2,893	78	380	299	204	463	50	313	433	673
Other[c]	233	7	56	18	17	42	4	10	28	51
Definite postgraduation study (%)[d]										
Postdoc fellowship or research associateship	95.3	98.5	95.1	96.9	94.7	95.9	92.9	97.4	96.2	92.5
Other or unknown[e]	4.7	1.5	4.9	3.1	5.3	4.1	7.1	2.6	3.8	7.5
Definite employment (%)[f]										
Academe	16.7	16.5	15.2	8.3	28.6	11.5	26.0	6.6	17.9	22.3
Government	8.3	18.6	2.1	2.2	12.0	6.1	7.9	7.6	12.5	9.1
Industry or business[g]	69.6	53.2	76.7	86.0	54.9	76.4	58.3	81.1	65.4	63.3
Nonprofit organization	3.2	8.5	3.9	D	D	3.7	4.7	3.2	2.9	2.6
Other or unknown[h]	2.3	3.2	2.1	D	D	2.3	3.1	1.6	1.4	2.7
Primary activity[i]										
R&D	71.4	80.5	61.7	79.3	36.5	83.1	57.0	81.2	75.4	65.7
Teaching	10.0	5.9	6.2	5.1	22.5	7.7	14.9	4.4	11.5	12.6
Management or administration	3.9	4.7	5.5	2.3	6.4	1.6	9.1	2.7	2.5	5.6

Table 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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	13.7	7.7	24.1	13.3	32.9	7.1	17.4	11.1	10.1	15.0
Other	0.9	1.2	2.6	0.0	1.6	0.6	1.7	0.7	0.6	1.1
Secondary activity[j]										
R&D	13.1	10.7	12.4	9.3	25.3	9.0	15.7	7.4	13.4	16.6
Teaching	6.8	D	3.6	4.0	10.8	D	19.8	1.7	7.1	10.7
Management or administration	12.6	18.9	21.2	13.9	10.0	8.2	11.6	20.5	14.9	10.1
Professional services	4.9	D	4.0	5.1	6.8	D	7.4	5.0	4.6	6.3
Other	0.6	0.0	0.0	0.8	0.4	0.5	1.7	1.7	0.0	0.6
No secondary activity	61.9	64.5	58.8	66.9	46.6	75.8	43.8	63.8	60.1	55.6
Activity unknown	5.2	10.1	3.2	5.1	6.4	4.3	4.7	6.0	6.4	4.7
Postgraduation location (%)[k]										
United States[l]	89.0	91.4	92.6	89.6	81.9	90.5	89.0	91.8	89.3	86.4
New England	8.0	6.3	14.4	9.2	3.0	6.7	3.2	7.0	8.8	7.9
Middle Atlantic	9.2	4.7	13.1	10.9	10.3	8.4	11.6	9.5	6.8	8.9
East North Central	11.3	12.9	9.0	13.3	11.6	9.9	17.4	11.3	17.1	8.2
West North Central	3.4	2.0	4.0	D	5.3	2.0	D	3.6	2.9	3.7
South Atlantic	12.6	20.4	15.4	8.7	10.8	7.5	21.9	13.4	13.3	14.0
East South Central	2.7	3.5	2.2	2.5	3.5	1.3	8.4	2.7	2.6	3.0
West South Central	7.7	5.5	6.6	9.7	8.6	7.5	7.7	5.0	7.9	8.6
Mountain	6.9	10.2	2.9	D	7.6	7.1	D	8.2	7.5	6.8
Pacific and insular	26.4	25.1	24.5	22.0	19.9	39.1	11.6	30.2	21.3	24.8
Not in United States	10.9	8.2	7.4	10.1	17.6	9.2	11.0	7.9	10.6	13.6
Location unknown	0.2	0.4	0.0	0.3	0.5	0.4	0.0	0.3	0.1	0.0

Table 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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)	7,833	323	720	665	542	1,501	172	701	1,283	1,926
Postgraduation status (number)[b]										
Definite postgraduation study	1,643	58	235	169	100	206	23	194	309	349
Definite employment	3,252	159	181	244	207	776	92	211	477	905
Seeking employment or study	2,133	68	226	197	155	372	36	227	358	494
Other[c]	172	6	34	12	15	31	2	7	27	38
Definite postgraduation study (%)[d]										
Postdoc fellowship or research associateship	95.6	98.3	94.0	98.2	D	96.1	D	97.4	97.1	92.8
Other or unknown[e]	4.4	1.7	6.0	1.8	D	3.9	D	2.6	2.9	7.2
Definite employment (%)[f]										
Academe	15.6	15.1	13.8	7.4	29.5	11.2	21.7	4.7	17.4	19.9
Government	8.6	D	D	D	11.1	6.3	D	8.1	11.7	9.4
Industry or business[g]	70.4	52.2	77.9	87.3	54.6	76.5	63.0	82.5	67.3	65.6
Nonprofit organization	3.0	D	D	2.0	D	3.5	D	2.4	2.1	2.4
Other or unknown[h]	2.3	3.8	1.7	D	D	2.4	4.3	2.4	1.5	2.7
Primary activity[i]										
R&D	72.7	80.9	66.3	80.4	37.8	83.5	60.9	85.0	74.8	66.4
Teaching	9.9	D	5.7	3.9	23.3	7.5	11.5	D	11.9	12.6

Table 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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
Management or administration	4.0	5.7	5.7	D	8.3	D	D	D	D	5.8
Professional services	12.6	D	20.0	D	29.5	D	17.2	9.5	10.4	14.1
Other	0.8	1.4	2.3	0.0	1.0	0.4	D	0.5	D	1.0
Secondary activity[j]										
R&D	13.3	D	14.3	D	25.9	9.0	13.8	7.0	14.2	16.7
Teaching	6.5	D	D	D	11.4	3.5	21.8	D	6.8	9.3
Management or administration	13.1	D	21.7	13.0	D	8.7	D	22.0	15.8	11.0
Professional services	5.2	D	D	5.7	D	3.2	D	D	4.3	6.9
Other	0.5	0.0	0.0	0.4	0.5	0.5	0.0	2.5	0.0	0.5
No secondary activity	61.4	63.1	55.4	68.3	44.6	75.0	44.8	60.5	59.0	55.7
Activity unknown	5.5	11.3	3.3	5.7	6.8	4.1	5.4	5.2	6.9	5.2
Postgraduation location (%)[k]										
United States[l]	88.1	D	92.3	88.1	80.5	89.7	D	91.1	88.7	85.3
New England	7.7	D	13.9	9.4	D	7.2	D	5.2	9.2	7.2
Middle Atlantic	8.5	5.5	11.8	9.2	10.1	8.7	8.7	8.6	6.4	8.5
East North Central	11.3	D	D	11.9	10.7	10.1	19.1	12.8	17.4	8.1
West North Central	3.6	D	4.6	5.1	D	D	D	4.0	D	4.2
South Atlantic	12.2	19.8	16.8	8.7	9.4	7.4	18.3	13.6	13.7	12.8
East South Central	2.7	D	D	D	2.9	D	11.3	2.2	2.4	3.0
West South Central	7.7	D	7.2	9.2	8.5	7.2	D	5.4	7.6	8.7
Mountain	7.1	D	2.6	D	7.8	D	D	8.4	7.9	6.5
Pacific and insular	26.5	24.4	24.5	22.3	20.2	37.8	D	30.1	D	25.9

Table 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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
Not in United States	11.8	D	7.7	11.4	19.2	10.1	D	8.4	11.2	14.7
Location unknown	0.2	0.0	0.0	0.5	0.3	0.2	0.0	0.5	0.1	0.0
Female doctorate recipients (number)	2,468	56	444	316	159	297	62	290	250	594
Postgraduation status (number)[b]										
Definite postgraduation study	527	9	130	55	31	35	5	71	62	129
Definite employment	897	29	102	128	59	125	35	106	83	230
Seeking employment or study	760	10	154	102	49	91	14	86	75	179
Other[c]	61	1	22	6	2	11	2	3	1	13
Definite postgraduation study (%)[d]										
Postdoc fellowship or research associateship	94.3	100.0	96.9	92.7	D	94.3	D	97.2	91.9	91.5
Other or unknown[e]	5.7	0.0	3.1	7.3	D	5.7	D	2.8	8.1	8.5
Definite employment (%)[f]										
Academe	20.5	24.1	17.6	10.2	25.4	13.6	37.1	10.4	20.5	31.7
Government	7.0	D	D	D	15.3	4.8	D	6.6	16.9	7.8
Industry or business[g]	66.4	58.6	74.5	83.6	55.9	75.2	45.7	78.3	54.2	54.3
Nonprofit organization	3.9	D	D	D	D	4.8	D	4.7	7.2	3.0

Table 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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
Other or unknown[h]	2.1	0.0	2.9	D	D	1.6	0.0	0.0	1.2	3.0
Primary activity[i]										
R&D	66.9	78.6	53.5	77.2	32.1	80.5	47.1	73.5	78.8	62.9
Teaching	10.3	D	7.1	7.3	19.6	8.5	23.5	D	8.8	12.5
Management or administration	3.6	0.0	5.1	D	0.0	D	D	D	D	4.9
Professional services	17.7	D	31.3	D	44.6	D	17.6	14.3	8.8	18.3
Other	1.5	0.0	3.0	0.0	3.6	1.7	D	1.0	D	1.3
Secondary activity[j]										
R&D	12.7	D	9.1	D	23.2	9.3	20.6	8.2	8.8	16.5
Teaching	7.7	D	D	D	8.9	D	14.7	D	8.8	16.1
Management or administration	11.2	D	20.2	15.4	D	5.1	D	17.3	10.0	6.7
Professional services	4.0	D	D	4.1	D	D	D	D	6.3	4.0
Other	0.8	0.0	0.0	1.6	0.0	0.0	5.9	0.0	0.0	1.3
No secondary activity	63.7	71.4	64.6	64.2	53.6	80.5	41.2	70.4	66.3	55.4
Activity unknown	4.1	3.4	2.9	3.9	5.1	5.6	2.9	7.5	3.6	2.6
Postgraduation location (%)[k]										
United States[l]	92.0	D	93.1	92.9	86.7	95.0	D	93.2	92.4	90.0
New England	9.1	D	15.1	8.7	D	3.8	D	11.3	6.9	10.3
Middle Atlantic	11.4	0.0	15.5	14.8	11.1	6.9	20.0	11.3	9.0	10.6
East North Central	11.2	D	D	16.4	14.4	8.8	12.5	7.9	15.2	8.6
West North Central	2.5	D	3.0	D	D	D	D	2.8	D	1.9
South Atlantic	14.0	23.7	12.9	8.7	15.6	8.1	32.5	13.0	11.0	18.1
East South Central	2.6	D	D	D	5.6	D	0.0	4.0	3.4	3.1

Table 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of doctorate: 2019

(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
West South Central	7.9	D	5.6	10.9	8.9	9.4	D	4.0	9.7	8.4
Mountain	6.5	D	3.4	7.7	6.7	D	0.0	7.9	5.5	7.8
Pacific and insular	26.3	28.9	24.6	21.3	18.9	46.9	D	30.5	D	20.9
Not in United States	7.7	D	6.9	7.1	12.2	3.8	D	6.8	7.6	10.0
Location unknown	0.3	2.6	0.0	0.0	1.1	1.3	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 doctorate: 2019

(Number, percent, and median years)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
All doctorate recipients (number)[a]	4,635	839	2,303	104	960	429
Sex (%)						
Male	30.7	40.8	28.4	19.2	27.1	34.3
Female	69.3	59.2	71.6	80.8	72.9	65.7
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Citizenship (%)						
U.S. citizen or permanent resident	83.0	89.9	82.8	83.7	80.4	76.5
Temporary visa holder	13.3	6.4	13.8	15.4	17.2	14.7
Unknown	3.7	3.7	3.4	1.0	2.4	8.9
Marital status (%)						
Never married	19.2	13.0	21.8	11.5	20.2	16.6
Married	57.7	60.2	56.2	69.2	61.1	49.9
Marriage-like relationship	4.1	3.8	4.5	D	3.8	D
Separated, divorced, widowed	7.2	8.0	6.9	D	7.3	D
Unknown	11.9	15.0	10.6	4.8	7.6	24.0
Bachelor's in same field as doctorate (%)[b]	24.6	26.6	20.2	52.9	31.7	21.7
Master's earned (%)	88.8	88.8	88.9	98.1	92.9	76.7
Age at doctorate (median years)	38.3	42.3	37.1	41.0	37.6	38.8
Time to doctorate (median years)						
From bachelor's	14.8	18.3	13.8	17.6	14.3	14.6
From graduate school start	11.9	15.3	11.0	13.3	11.3	11.8
From doctoral program start[c]	5.7	5.7	5.8	5.6	5.3	5.8
Male doctorate recipients (number)	1,422	342	653	20	260	147
Citizenship (%)						
U.S. citizen or permanent resident	81.4	89.2	80.6	90.0	76.9	73.5
Temporary visa holder	14.9	7.0	16.4	10.0	20.4	17.7
Unknown	3.7	3.8	3.1	0.0	2.7	8.8
Marital status (%)						
Never married	18.6	D	22.5	D	19.6	15.6
Married	61.4	66.1	59.1	70.0	64.2	54.4
Marriage-like relationship	3.7	D	4.3	0.0	3.5	D
Separated, divorced, widowed	4.9	4.7	4.0	D	6.2	D
Unknown	11.4	13.5	10.1	0.0	6.5	22.4
Bachelor's in same field as doctorate (%)[b]	23.0	27.5	16.7	35.0	34.2	19.0
Master's earned (%)	88.0	89.5	87.4	100.0	91.9	78.2
Age at doctorate (median years)	38.2	41.9	36.9	38.8	36.8	40.6
Time to doctorate (median years)						
From bachelor's	14.1	17.3	13.0	14.3	13.0	15.4
From graduate school start	11.3	13.8	10.3	11.1	10.5	11.8

Table 66

Statistical profile of doctorate recipients in education fields, by sex and field of doctorate: 2019

(Number, percent, and median years)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
From doctoral program start[c]	5.5	5.5	5.7	4.6	5.0	5.8
Female doctorate recipients (number)	3,213	497	1,650	84	700	282
Citizenship (%)						
U.S. citizen or permanent resident	83.8	90.3	83.7	82.1	81.7	78.0
Temporary visa holder	12.5	6.0	12.7	16.7	16.0	13.1
Unknown	3.7	3.6	3.6	1.2	2.3	8.9
Marital status (%)						
Never married	19.4	D	21.6	D	20.4	17.0
Married	56.0	56.1	55.1	69.0	60.0	47.5
Marriage-like relationship	4.3	D	4.6	D	3.9	4.3
Separated, divorced, widowed	8.2	10.3	8.0	10.7	7.7	6.4
Unknown	12.1	16.1	10.7	6.0	8.0	24.8
Bachelor's in same field as doctorate (%)[b]	25.3	26.0	21.6	57.1	30.7	23.0
Master's earned (%)	89.1	88.3	89.5	97.6	93.3	75.9
Age at doctorate (median years)	38.3	42.8	37.2	41.0	37.9	37.7
Time to doctorate (median years)						
From bachelor's	15.0	18.9	14.0	17.8	15.0	14.3
From graduate school start	12.3	15.9	11.4	13.7	11.8	12.1
From doctoral program start[c]	5.8	5.8	5.8	5.8	5.6	5.8

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 doctorate: 2019

(Number and percent)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
All doctorate recipients (number)[a]	4,635	839	2,303	104	960	429
Postgraduation status (number)[b]						
Definite postgraduation study	282	14	177	D	63	D
Definite employment	2,783	557	1,370	D	567	D
Seeking employment or study	1,025	155	509	29	251	81
Other[c]	127	24	59	5	26	13
Definite postgraduation study (%)[d]						
Postdoc fellowship or research associateship	91.8	64.3	92.1	D	95.2	D
Other or unknown[e]	8.2	35.7	7.9	0.0	4.8	4.0
Definite employment (%)[f]						
Academe	57.5	41.3	60.9	50.0	67.2	54.3
Government	4.3	5.4	4.2	D	3.2	D
Industry or business[g]	5.7	3.8	7.6	D	3.4	D
Nonprofit organization	7.1	6.1	7.9	D	4.9	D
Other or unknown[h]	25.4	43.4	19.4	34.8	21.3	24.2
Primary activity[i]						
R&D	13.1	5.4	17.2	D	10.6	D
Teaching	42.6	23.5	38.1	64.5	69.7	41.6
Management or administration	32.5	63.3	28.8	21.0	13.9	31.8
Professional services	11.3	7.7	15.8	D	5.1	D
Other	0.4	0.2	0.2	1.6	0.7	1.4
Secondary activity[j]						
R&D	27.0	13.5	28.0	32.3	39.4	20.1
Teaching	19.2	19.4	20.6	8.1	17.0	19.2
Management or administration	9.8	8.7	10.0	D	D	12.1
Professional services	8.2	11.2	8.1	D	D	6.5
Other	0.7	0.8	0.6	1.6	0.5	0.9
No secondary activity	35.1	46.5	32.7	41.9	26.6	41.1
Activity unknown	4.8	6.6	4.7	6.1	3.4	4.0
Postgraduation location (%)[k]						
United States[l]	93.9	97.2	93.6	92.8	91.4	94.4
New England	4.5	5.4	4.2	D	3.8	D
Middle Atlantic	11.0	8.2	10.5	13.0	13.0	14.5
East North Central	14.5	19.1	14.7	10.1	11.1	11.7
West North Central	7.5	7.7	7.0	D	9.5	D
South Atlantic	19.2	15.9	21.2	21.7	17.3	18.1
East South Central	8.1	11.4	7.1	24.6	7.5	3.6
West South Central	11.2	14.7	10.5	8.7	11.0	8.9
Mountain	7.8	8.1	7.5	D	8.3	D
Pacific and insular	9.4	6.1	10.1	D	8.7	D
Not in United States	6.1	2.8	6.3	7.2	8.6	5.6
Location unknown	*	0.0	0.1	0.0	0.0	0.0
Male doctorate recipients (number)	1,422	342	653	20	260	147
Postgraduation status (number)[b]						
Definite postgraduation study	80	D	49	0	21	D
Definite employment	870	D	398	11	158	D
Seeking employment or study	314	69	145	7	60	33

Table 67

Statistical profile of postgraduation plans of doctorate recipients in education fields, by sex and field of doctorate: 2019

(Number and percent)

Characteristic	All education fields	Education administration	Education research	Teacher education	Teaching fields	Other education
Other[c]	34	9	13	2	6	4
Definite postgraduation study (%)[d]						
Postdoc fellowship or research associateship	93.8	D	95.9	0.0	95.2	D
Other or unknown[e]	6.3	50.0	4.1	0.0	4.8	0.0
Definite employment (%)[f]						
Academe	57.6	D	65.8	D	64.6	55.8
Government	4.8	5.8	3.5	D	D	7.8
Industry or business[g]	5.6	2.2	8.5	D	D	D
Nonprofit organization	5.7	4.0	6.8	0.0	4.4	9.1
Other or unknown[h]	26.2	48.7	15.3	36.4	23.4	20.8
Primary activity[i]						
R&D	14.1	6.6	20.2	D	9.2	D
Teaching	40.5	19.0	40.3	D	68.6	D
Management or administration	36.1	69.2	26.8	D	15.7	D
Professional services	9.1	4.7	12.7	0.0	6.5	9.6
Other	0.2	0.5	0.0	0.0	0.0	1.4
Secondary activity[j]						
R&D	27.8	13.3	31.6	D	41.2	D
Teaching	21.5	21.3	23.6	D	17.6	D
Management or administration	10.3	8.5	10.6	D	D	12.3
Professional services	7.2	10.0	6.6	D	D	D
Other	0.5	0.9	0.0	0.0	0.7	1.4
No secondary activity	32.8	46.0	27.6	18.2	24.2	42.5
Activity unknown	5.2	6.6	5.3	0.0	3.2	5.2
Postgraduation location (%)[k]						
United States[l]	91.6	96.1	90.2	100.0	88.8	91.6
New England	4.0	4.8	4.0	0.0	D	D
Middle Atlantic	10.4	10.0	10.1	0.0	11.7	12.0
East North Central	13.9	16.5	14.3	D	10.1	D
West North Central	6.8	7.4	6.0	D	D	D
South Atlantic	17.6	13.9	20.6	45.5	15.6	12.0
East South Central	8.2	11.3	6.7	D	8.9	D
West South Central	10.7	13.5	8.7	0.0	11.7	13.3
Mountain	8.7	10.4	6.3	0.0	12.3	10.8
Pacific and insular	9.9	7.4	12.1	0.0	5.6	15.7
Not in United States	8.4	3.9	9.8	0.0	11.2	8.4
Location unknown	0.0	0.0	0.0	0.0	0.0	0.0
Female doctorate recipients (number)	3,213	497	1,650	84	700	282
Postgraduation status (number)[b]						
Definite postgraduation study	202	D	128	D	42	19
Definite employment	1,913	D	972	D	409	146
Seeking employment or study	711	86	364	22	191	48
Other[c]	93	15	46	3	20	9

Table 67

Statistical profile of postgraduation plans of doctorate recipients in education fields, by sex and field of doctorate: 2019

(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	91.1	D	90.6	D	95.2	94.7
Other or unknown[e]	8.9	30.0	9.4	0.0	4.8	5.3
Definite employment (%)[f]						
Academe	57.4	D	59.0	D	68.2	53.4
Government	4.1	5.1	4.4	D	D	D
Industry or business[g]	5.7	4.8	7.2	D	D	4.1
Nonprofit organization	7.7	7.6	8.3	D	5.1	D
Other or unknown[h]	25.0	39.9	21.1	34.5	20.5	26.0
Primary activity[i]						
R&D	12.7	4.5	16.0	D	11.1	D
Teaching	43.6	26.5	37.1	D	70.1	D
Management or administration	30.9	59.2	29.6	D	13.2	D
Professional services	12.3	9.7	17.0	D	4.6	D
Other	0.5	0.0	0.2	2.0	1.0	1.4
Secondary activity[j]						
R&D	26.6	13.6	26.6	D	38.7	D
Teaching	18.2	18.1	19.4	D	16.7	D
Management or administration	9.6	8.7	9.7	11.8	9.1	12.1
Professional services	8.7	12.0	8.7	D	7.3	D
Other	0.8	0.6	0.9	2.0	0.5	0.7
No secondary activity	36.1	46.9	34.8	47.1	27.6	40.4
Activity unknown	4.6	6.6	4.4	7.3	3.4	3.4
Postgraduation location (%)[k]						
United States[l]	94.9	97.9	95.0	91.4	92.5	95.8
New England	4.7	5.9	4.3	D	D	6.7
Middle Atlantic	11.2	7.0	10.6	15.5	13.5	15.8
East North Central	14.7	20.8	14.9	D	11.5	D
West North Central	7.8	7.9	7.4	D	D	6.1
South Atlantic	19.9	17.3	21.5	17.2	18.0	21.2
East South Central	8.0	11.4	7.3	D	6.9	D
West South Central	11.4	15.5	11.2	10.3	10.6	6.7
Mountain	7.3	6.5	8.0	D	6.7	D
Pacific and insular	9.1	5.3	9.4	D	10.0	D
Not in United States	5.1	2.1	4.9	8.6	7.5	4.2
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 doctorate: 2019

(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]	5,054	610	912	1,387	2,145
Sex (%)					
Male	49.1	35.2	58.0	40.4	54.8
Female	50.9	64.6	42.0	59.6	45.2
Unknown	*	0.2	0.0	0.0	*
Citizenship (%)					
U.S. citizen or permanent resident	78.9	62.8	81.3	85.7	78.1
Temporary visa holder	16.4	33.1	14.3	10.7	16.1
Unknown	4.7	4.1	4.5	3.6	5.7
Marital status (%)					
Never married	28.7	28.5	28.1	30.8	27.6
Married	45.1	43.4	47.9	43.2	45.5
Marriage-like relationship	8.3	9.2	8.3	9.2	7.6
Separated, divorced, widowed	4.4	6.7	3.7	5.1	3.6
Unknown	13.5	12.1	12.0	11.8	15.6
Bachelor's in same field as doctorate (%)[b]	53.1	43.6	59.4	44.9	58.5
Master's earned (%)	84.1	84.9	85.1	84.5	83.1
Age at doctorate (median years)	34.2	34.5	33.9	33.6	34.7
Time to doctorate (median years)					
From bachelor's	11.0	11.1	11.0	10.6	11.6
From graduate school start	9.5	9.3	9.2	8.9	9.8
From doctoral program start[c]	6.8	6.8	6.9	6.4	6.8
Male doctorate recipients (number)	2,479	215	529	560	1,175
Citizenship (%)					
U.S. citizen or permanent resident	78.8	59.5	80.5	85.5	78.3
Temporary visa holder	16.4	36.3	15.1	10.7	16.1
Unknown	4.8	4.2	4.3	3.8	5.6
Marital status (%)					
Never married	27.2	32.1	27.0	28.2	26.0
Married	47.6	43.7	49.1	44.1	49.2
Marriage-like relationship	7.7	8.4	8.1	9.6	6.5
Separated, divorced, widowed	3.8	5.6	2.5	5.5	3.3
Unknown	13.7	10.2	13.2	12.5	15.1
Bachelor's in same field as doctorate (%)[b]	55.5	40.9	60.3	46.6	60.3
Master's earned (%)	83.6	85.1	84.3	83.4	83.1
Age at doctorate (median years)	34.5	35.0	34.2	33.8	35.0
Time to doctorate (median years)					
From bachelor's	11.1	11.1	11.0	10.6	11.6
From graduate school start	9.7	9.2	9.1	9.0	10.0
From doctoral program start[c]	6.8	6.3	6.9	6.7	6.8
Female doctorate recipients (number)	2,573	394	383	827	969
Citizenship (%)					
U.S. citizen or permanent resident	79.1	64.7	82.2	85.7	77.9
Temporary visa holder	16.3	31.5	13.1	10.8	16.2

Table 68

Statistical profile of doctorate recipients in humanities and arts fields, by sex and field of doctorate: 2019

(Number, percent, and median years)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
Unknown	4.6	3.8	4.7	3.5	5.9
Marital status (%)					
Never married	30.1	26.6	29.5	32.5	29.7
Married	42.7	43.4	46.2	42.6	41.1
Marriage-like relationship	9.0	9.6	8.6	8.8	9.0
Separated, divorced, widowed	5.0	7.4	5.5	4.8	3.9
Unknown	13.3	12.9	10.2	11.2	16.3
Bachelor's in same field as doctorate (%)[b]	50.8	45.2	58.2	43.8	56.2
Master's earned (%)	84.5	85.0	86.2	85.2	83.1
Age at doctorate (median years)	33.9	34.0	33.5	33.4	34.3
Time to doctorate (median years)					
From bachelor's	11.0	11.1	11.0	10.6	11.6
From graduate school start	9.3	9.4	9.3	8.8	9.8
From doctoral program start[c]	6.8	6.8	7.0	6.3	6.8

* = 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 69

Statistical profile of postgraduation plans of doctorate recipients in humanities and arts fields, by sex and field of doctorate: 2019

(Number and percent)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
All doctorate recipients (number)[a]	5,054	610	912	1,387	2,145
Postgraduation status (number)[b]					
Definite postgraduation study	549	53	166	111	219
Definite employment	2,093	292	339	599	863
Seeking employment or study	1,692	182	297	480	733
Other[c]	185	25	26	56	78
Definite postgraduation study (%)[d]					
Postdoc fellowship or research associateship	93.6	86.8	97.6	89.2	94.5
Other or unknown[e]	6.4	13.2	2.4	10.8	5.5
Definite employment (%)[f]					
Academe	73.1	79.8	71.1	81.5	65.7
Government	1.8	2.1	5.9	0.8	0.8
Industry or business[g]	7.4	4.5	6.8	5.7	9.7
Nonprofit organization	9.7	2.1	7.1	2.8	18.2
Other or unknown[h]	8.0	11.6	9.1	9.2	5.6
Primary activity[i]					
R&D	8.8	6.2	15.6	6.5	8.7
Teaching	71.1	83.3	64.8	78.3	64.3
Management or administration	9.1	4.3	10.0	8.9	10.4
Professional services	10.1	5.1	8.7	6.1	15.2
Other	0.9	1.1	0.9	0.2	1.4
Secondary activity[j]					
R&D	39.5	48.6	37.1	40.1	37.0
Teaching	11.2	6.9	13.4	9.1	13.4
Management or administration	7.6	8.0	9.7	7.7	6.5
Professional services	5.3	4.3	4.7	5.3	6.0
Other	1.1	1.4	0.6	0.7	1.4
No secondary activity	35.2	30.8	34.6	37.1	35.6
Activity unknown	6.1	5.5	5.3	4.7	7.6
Postgraduation location (%)[k]					
United States[l]	90.0	88.1	87.7	93.9	89.0
New England	9.6	13.0	12.3	7.9	8.4
Middle Atlantic	16.6	18.0	17.6	13.7	17.7
East North Central	13.7	14.2	9.3	12.8	16.2
West North Central	5.1	4.3	4.8	5.8	5.0
South Atlantic	14.5	13.9	15.4	18.6	11.6
East South Central	4.5	3.5	5.3	6.3	3.1
West South Central	7.8	5.5	7.5	9.6	7.5
Mountain	4.2	4.9	3.4	5.2	3.6
Pacific and insular	12.6	8.7	10.7	13.0	14.4
Not in United States	10.0	11.9	12.3	6.1	11.0
Location unknown	0.0	0.0	0.0	0.0	0.0
Male doctorate recipients (number)	2,479	215	529	560	1,175
Postgraduation status (number)[b]					
Definite postgraduation study	266	25	95	42	104
Definite employment	1,027	102	194	237	494
Seeking employment or study	845	64	176	199	406

Table 69

Statistical profile of postgraduation plans of doctorate recipients in humanities and arts fields, by sex and field of doctorate: 2019

(Number and percent)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
Other[c]	86	8	12	25	41
Definite postgraduation study (%)[d]					
Postdoc fellowship or research associateship	94.0	80.0	97.9	85.7	97.1
Other or unknown[e]	6.0	20.0	2.1	14.3	2.9
Definite employment (%)[f]					
Academe	70.3	82.4	70.1	83.5	61.5
Government	2.4	0.0	D	D	D
Industry or business[g]	6.6	D	D	3.8	D
Nonprofit organization	12.7	D	6.2	D	21.7
Other or unknown[h]	8.0	7.8	9.3	8.9	7.1
Primary activity[i]					
R&D	8.5	5.3	17.4	5.8	7.0
Teaching	71.5	83.2	62.5	83.9	66.6
Management or administration	8.2	D	11.4	6.3	D
Professional services	11.1	7.4	8.2	4.0	16.6
Other	0.6	D	0.5	0.0	D
Secondary activity[j]					
R&D	38.0	48.4	38.6	41.5	33.8
Teaching	10.9	5.3	14.7	8.9	11.6
Management or administration	7.1	6.3	7.6	4.5	8.3
Professional services	5.6	7.4	2.7	4.5	7.0
Other	0.8	1.1	1.1	0.9	0.7
No secondary activity	37.6	31.6	35.3	39.7	38.6
Activity unknown	6.4	6.9	5.2	5.5	7.3
Postgraduation location (%)[k]					
United States[l]	87.3	81.1	85.5	93.5	86.6
New England	8.6	D	10.4	6.5	D
Middle Atlantic	17.2	19.7	17.3	16.1	17.1
East North Central	13.5	12.6	8.0	12.2	16.9
West North Central	5.2	3.9	5.5	5.7	5.0
South Atlantic	14.7	10.2	14.9	21.5	12.4
East South Central	4.3	3.9	5.2	5.4	3.5
West South Central	7.2	4.7	6.9	8.2	7.4
Mountain	3.8	D	4.2	3.9	D
Pacific and insular	11.4	7.1	11.1	12.9	11.9
Not in United States	12.7	18.9	14.5	6.5	13.4
Location unknown	0.0	0.0	0.0	0.0	0.0
Female doctorate recipients (number)	2,573	394	383	827	969
Postgraduation status (number)[b]					
Definite postgraduation study	283	28	71	69	115
Definite employment	1,065	190	145	362	368
Seeking employment or study	847	118	121	281	327
Other[c]	99	17	14	31	37
Definite postgraduation study (%)[d]					
Postdoc fellowship or research associateship	93.3	92.9	97.2	91.3	92.2
Other or unknown[e]	6.7	7.1	2.8	8.7	7.8

Table 69

Statistical profile of postgraduation plans of doctorate recipients in humanities and arts fields, by sex and field of doctorate: 2019

(Number and percent)

Characteristic	All humanities and arts fields	Foreign languages and literature	History	Letters	Other humanities and arts
Definite employment (%)[f]					
Academe	75.7	78.4	72.4	80.1	71.2
Government	1.2	3.2	D	D	D
Industry or business[g]	8.1	D	D	6.9	D
Nonprofit organization	6.9	D	8.3	D	13.6
Other or unknown[h]	8.1	13.7	9.0	9.4	3.5
Primary activity[i]					
R&D	9.1	6.6	13.1	6.9	10.9
Teaching	70.8	83.4	67.9	74.6	61.2
Management or administration	9.9	D	8.0	10.7	D
Professional services	9.1	3.9	9.5	7.5	13.3
Other	1.2	D	1.5	0.3	D
Secondary activity[j]					
R&D	41.1	48.6	35.0	39.2	41.4
Teaching	11.6	7.7	11.7	9.2	16.0
Management or administration	8.1	8.8	12.4	9.8	4.1
Professional services	5.1	2.8	7.3	5.8	4.7
Other	1.3	1.7	0.0	0.6	2.4
No secondary activity	32.9	30.4	33.6	35.4	31.4
Activity unknown	5.8	4.7	5.5	4.1	8.2
Postgraduation location (%)[k]					
United States[l]	92.5	92.2	90.7	94.2	91.9
New England	10.6	D	14.8	8.8	D
Middle Atlantic	16.2	17.0	18.1	12.1	18.6
East North Central	13.8	15.1	11.1	13.2	14.9
West North Central	5.0	4.6	3.7	5.8	5.0
South Atlantic	14.4	16.1	16.2	16.7	10.8
East South Central	4.6	3.2	5.6	7.0	2.7
West South Central	8.4	6.0	8.3	10.4	7.7
Mountain	4.5	D	2.3	6.0	D
Pacific and insular	13.6	9.6	10.2	13.0	17.6
Not in United States	7.5	7.8	9.3	5.8	8.1
Location unknown	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 70

Statistical profile of doctorate recipients in other fields, by sex and field of study: 2019

(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]	3,034	1,536	543	955
Sex (%)				
Male	46.6	56.9	37.8	35.1
Female	53.4	43.1	62.2	64.9
Unknown	0.0	0.0	0.0	0.0
Citizenship (%)				
U.S. citizen or permanent resident	56.7	48.6	64.3	65.3
Temporary visa holder	36.5	44.9	30.0	26.7
Unknown	6.8	6.4	5.7	8.0
Marital status (%)				
Never married	25.0	25.1	28.9	22.7
Married	48.3	51.4	42.5	46.6
Marriage-like relationship	4.4	3.1	7.4	4.8
Separated, divorced, widowed	5.6	5.5	5.2	6.2
Unknown	16.6	15.0	16.0	19.7
Bachelor's in same field as doctorate (%)[c]	34.8	36.3	43.3	27.7
Master's earned (%)	80.4	78.1	84.3	81.8
Age at doctorate (median years)	34.9	34.0	34.0	36.8
Time to doctorate (median years)				
From bachelor's	11.4	11.0	10.3	13.4
From graduate school start	9.3	8.9	8.3	11.1
From doctoral program start[d]	5.1	5.0	5.0	5.8
Male doctorate recipients (number)	1,414	874	205	335
Citizenship (%)				
U.S. citizen or permanent resident	49.9	44.5	58.5	58.5
Temporary visa holder	42.9	49.3	34.1	31.6
Unknown	7.2	6.2	7.3	9.9
Marital status (%)				
Never married	25.0	25.7	27.8	21.5
Married	50.7	53.2	43.9	48.4
Marriage-like relationship	3.7	2.5	7.3	4.5
Separated, divorced, widowed	3.7	3.8	3.9	3.3
Unknown	16.9	14.8	17.1	22.4
Bachelor's in same field as doctorate (%)[c]	34.5	34.7	44.4	28.1
Master's earned (%)	79.1	78.1	83.9	78.8
Age at doctorate (median years)	35.0	34.3	33.9	37.4
Time to doctorate (median years)				
From bachelor's	11.2	11.0	10.0	13.6
From graduate school start	9.0	8.8	8.0	10.9
From doctoral program start[d]	5.0	5.0	5.0	5.8
Female doctorate recipients (number)	1,620	662	338	620
Citizenship (%)				
U.S. citizen or permanent resident	62.7	54.1	67.8	69.0
Temporary visa holder	30.9	39.1	27.5	24.0
Unknown	6.4	6.8	4.7	6.9
Marital status (%)				
Never married	25.0	24.2	29.6	23.4

Table 70

Statistical profile of doctorate recipients in other fields, by sex and field of study: 2019

(Number, percent, and median years)

Characteristic	All other fields[a]	Business management and administration	Communication	Non-S&E fields nec
Married	46.2	49.1	41.7	45.6
Marriage-like relationship	5.0	3.8	7.4	5.0
Separated, divorced, widowed	7.3	7.7	5.9	7.7
Unknown	16.4	15.3	15.4	18.2
Bachelor's in same field as doctorate (%)[c]	35.1	38.4	42.6	27.6
Master's earned (%)	81.4	77.9	84.6	83.4
Age at doctorate (median years)	34.8	33.7	34.0	36.5
Time to doctorate (median years)				
From bachelor's	11.6	11.0	10.8	13.3
From graduate school start	9.8	9.0	8.3	11.3
From doctoral program start[d]	5.3	5.0	5.0	5.8

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: 2019

(Number and percent)

Characteristic	All other fields[a]	Business management and administration	Communication	Non-S&E fields nec
All doctorate recipients (number)[b]	3,034	1,536	543	955
Postgraduation status (number)[c]				
Definite postgraduation study	174	57	33	84
Definite employment	1,822	1,052	303	467
Seeking employment or study	556	211	124	221
Other[d]	69	33	9	27
Definite postgraduation study (%)[e]				
Postdoc fellowship or research associateship	89.7	84.2	93.9	91.7
Other or unknown[f]	10.3	15.8	6.1	8.3
Definite employment (%)[g]				
Academe	76.6	79.0	84.5	66.0
Government	5.4	2.8	2.3	13.3
Industry or business[h]	12.0	13.9	7.9	10.3
Nonprofit organization	3.9	2.3	4.0	7.5
Other or unknown[i]	2.2	2.1	1.3	3.0
Primary activity[j]				
R&D	40.7	50.3	25.9	28.2
Teaching	40.7	35.4	60.7	39.8
Management or administration	11.0	8.7	7.2	18.9
Professional services	7.5	5.4	6.2	13.2
Other	0.1	0.2	0.0	0.0
Secondary activity[k]				
R&D	37.8	34.0	49.0	39.1
Teaching	37.0	46.0	21.4	26.6
Management or administration	5.0	3.9	6.2	6.8
Professional services	4.1	2.8	3.8	7.3
Other	0.2	0.2	0.3	0.0
No secondary activity	16.0	13.2	19.3	20.2
Activity unknown	4.6	4.1	4.3	5.8
Postgraduation location (%)[l]				
United States[m]	86.2	84.9	89.9	86.8
New England	6.3	6.9	4.5	6.2
Middle Atlantic	12.6	12.0	14.0	12.9
East North Central	12.6	12.5	15.5	11.1
West North Central	5.4	5.0	5.4	6.2
South Atlantic	18.8	17.2	19.3	21.6
East South Central	4.9	4.5	6.5	4.7
West South Central	10.1	11.5	8.0	8.7
Mountain	4.1	3.1	4.5	6.0
Pacific and insular	10.2	11.0	11.6	7.8
Not in United States	13.7	15.1	10.1	13.1
Location unknown	0.1	0.1	0.0	0.2
Male doctorate recipients (number)	1,414	874	205	335
Postgraduation status (number)[c]				
Definite postgraduation study	73	29	13	31
Definite employment	886	611	113	162
Seeking employment or study	228	115	45	68

Table 71

Statistical profile of postgraduation plans of doctorate recipients in other fields, by sex and field of study: 2019

(Number and percent)

Characteristic	All other fields[a]	Business management and administration	Communication	Non-S&E fields nec
Other[d]	29	15	4	10
Definite postgraduation study (%)[e]				
Postdoc fellowship or research associateship	89.0	79.3	D	93.5
Other or unknown[f]	11.0	20.7	D	6.5
Definite employment (%)[g]				
Academe	76.0	77.4	83.2	65.4
Government	4.5	2.1	D	D
Industry or business[h]	15.3	16.7	11.5	13.0
Nonprofit organization	2.4	2.1	D	D
Other or unknown[i]	1.8	1.6	0.0	3.7
Primary activity[j]				
R&D	45.5	53.6	D	D
Teaching	37.7	32.1	63.0	41.4
Management or administration	9.8	8.0	5.6	19.7
Professional services	6.8	6.1	D	D
Other	0.1	0.2	0.0	0.0
Secondary activity[k]				
R&D	35.3	31.1	50.0	40.8
Teaching	41.0	48.5	19.4	27.6
Management or administration	4.8	D	D	4.6
Professional services	3.7	D	D	5.3
Other	0.1	0.2	0.0	0.0
No secondary activity	15.1	12.4	20.4	21.7
Activity unknown	4.3	3.8	4.4	6.2
Postgraduation location (%)[l]				
United States[m]	85.1	82.8	92.9	87.6
New England	4.7	5.0	D	D
Middle Atlantic	11.6	10.8	11.9	14.0
East North Central	12.5	12.3	D	D
West North Central	5.9	6.4	4.0	5.7
South Atlantic	17.9	15.9	20.6	22.8
East South Central	5.4	5.0	7.9	5.2
West South Central	10.6	11.3	10.3	8.8
Mountain	4.0	3.4	4.8	5.2
Pacific and insular	11.2	11.7	13.5	7.8
Not in United States	14.8	17.0	7.1	12.4
Location unknown	0.1	0.2	0.0	0.0
Female doctorate recipients (number)	1,620	662	338	620
Postgraduation status (number)[c]				
Definite postgraduation study	101	28	20	53
Definite employment	936	441	190	305
Seeking employment or study	328	96	79	153
Other[d]	40	18	5	17
Definite postgraduation study (%)[e]				
Postdoc fellowship or research associateship	90.1	89.3	D	90.6
Other or unknown[f]	9.9	10.7	D	9.4

Table 71

Statistical profile of postgraduation plans of doctorate recipients in other fields, by sex and field of study: 2019

(Number and percent)

Characteristic	All other fields[a]	Business management and administration	Communication	Non-S&E fields nec
Definite employment (%)[g]				
Academe	77.1	81.2	85.3	66.2
Government	6.2	3.6	D	D
Industry or business[h]	8.8	10.0	5.8	8.9
Nonprofit organization	5.3	2.5	D	D
Other or unknown[i]	2.6	2.7	2.1	2.6
Primary activity[j]				
R&D	36.0	45.8	D	D
Teaching	43.5	39.9	59.3	38.9
Management or administration	12.2	9.7	8.2	18.4
Professional services	8.1	4.3	D	D
Other	0.1	0.2	0.0	0.0
Secondary activity[k]				
R&D	40.2	38.0	48.4	38.2
Teaching	33.1	42.5	22.5	26.0
Management or administration	5.2	D	D	8.0
Professional services	4.5	D	D	8.3
Other	0.2	0.2	0.5	0.0
No secondary activity	16.8	14.3	18.7	19.4
Activity unknown	4.8	4.5	4.2	5.6
Postgraduation location (%)[l]				
United States[m]	87.3	87.6	88.1	86.3
New England	7.8	9.6	D	D
Middle Atlantic	13.5	13.6	15.2	12.3
East North Central	12.7	12.8	D	D
West North Central	4.9	3.2	6.2	6.4
South Atlantic	19.6	19.0	18.6	20.9
East South Central	4.4	3.8	5.7	4.5
West South Central	9.6	11.7	6.7	8.7
Mountain	4.2	2.6	4.3	6.4
Pacific and insular	9.4	10.0	10.5	7.8
Not in United States	12.6	12.4	11.9	13.4
Location unknown	0.1	0.0	0.0	0.3

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: 2019

(Number, percent, and median years)

Characteristics	Total[a]	U.S. citizen	Non-U.S. citizen	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			
				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
All doctorate recipients (number)	55,703	35,274	18,351	2,848	1,149	120	5	3,421	11,731	2,512	572	24,248	3,775	1,121	144	381	477	623	498
Primary source of support (%)[b]																			
Teaching assistantships	21.4	20.2	23.5	19.2	20.8	11.9	0.0	19.0	24.2	12.1	23.6	21.5	23.0	18.1	20.1	18.9	18.4	18.6	17.6
Research or other assistantships or traineeships[c]	33.4	26.8	46.2	19.1	27.1	12.9	D	34.4	52.6	14.5	36.9	28.0	35.0	24.6	D	21.5	29.6	25.6	38.5
Fellowships, scholarships, or dissertation grants	24.8	27.5	19.6	35.9	27.7	45.5	0.0	31.6	16.2	26.1	21.8	25.6	26.3	34.3	30.9	30.6	29.1	25.6	30.8
Own resources	15.2	21.1	3.9	22.5	3.4	23.8	D	11.6	3.8	41.8	12.5	20.2	3.2	20.0	D	21.9	3.9	23.3	3.3
Employer	2.7	3.9	0.6	2.5	0.5	5.0	0.0	2.9	0.4	4.7	1.5	4.1	0.8	2.9	0.0	4.5	1.1	7.0	2.2
Other	2.5	0.6	6.2	0.9	20.6	1.0	D	0.5	2.8	0.7	3.7	0.6	11.6	0.2	D	2.6	17.9	0.0	7.7
Postgraduation status (number)[d]																			
Definite postgraduation study	13,462	8,477	4,947	726	349	26	D	820	3,341	371	130	6,140	1,015	311	D	57	39	26	32
Definite employment	21,628	14,602	6,945	1,050	409	52	D	1,302	4,591	1,166	209	10,368	1,536	450	D	143	99	71	40
Seeking employment or study	14,086	9,098	4,954	803	328	25	D	971	3,313	733	206	6,155	1,008	300	D	73	39	38	21
Other status[e]	1,685	1,291	370	108	15	2	D	203	198	107	15	787	120	50	D	22	13	12	5
Postgraduation study plans (%)[f]	38.4	36.7	41.6	40.9	46.0	33.3	D	38.6	42.1	24.1	38.3	37.2	39.8	40.9	D	28.5	28.3	26.8	44.4
Postgraduation employment plans (%)[g]																			

Table 72

Statistical profile of doctorate recipients, by ethnicity, race, and citizenship status: 2019

(Number, percent, and median years)

Characteristics	Total[a]	U.S. citizen	Non-U.S. citizen	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			
				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	43.4	45.7	38.8	48.8	50.4	46.2	D	34.5	33.2	44.9	48.8	46.9	49.3	44.7	D	48.3	46.5	38.0	47.5
Government	7.6	9.2	4.2	8.6	8.6	15.4	0.0	7.6	3.3	11.9	9.6	9.2	4.2	10.0	D	3.5	D	11.3	7.5
Industry or business[h]	36.5	29.3	51.6	26.2	32.3	15.4	0.0	46.9	59.1	17.7	31.1	28.8	40.2	29.3	23.3	28.7	32.3	32.4	37.5
Nonprofit	6.1	7.6	3.0	8.2	4.4	11.5	0.0	6.4	2.8	10.5	6.2	7.4	2.8	8.2	D	6.3	D	4.2	0.0
Other or unknown plans[i]	6.4	8.2	2.4	8.3	4.4	11.5	D	4.6	1.6	15.0	4.3	7.7	3.5	7.8	5.0	13.3	D	14.1	7.5
Employment location (%)[j]																			
United States	89.8	98.0	72.6	98.2	58.4	98.1	0.0	96.8	78.4	99.6	64.1	98.1	63.0	96.7	51.7	95.8	44.4	95.8	70.0
Not United States	10.1	2.0	27.3	1.8	41.6	0.0	D	3.2	21.6	0.4	35.9	1.9	36.8	3.3	D	4.2	54.5	4.2	27.5
Unknown	0.1	0.0	0.1	0.0	0.0	1.9	D	0.0	0.0	0.0	0.0	0.0	0.2	0.0	D	0.0	1.0	0.0	2.5
Age at doctorate (median years)	31.5	31.8	31.1	32.3	33.2	36.3	D	31.1	30.4	36.1	34.7	31.6	32.3	31.3	31.8	32.8	31.2	33.0	31.9
Time to degree (median years)																			
From bachelor's	8.7	9.0	8.3	9.0	9.5	11.4	D	8.5	7.9	12.0	10.7	8.8	9.3	8.5	9.0	10.0	8.6	10.0	8.6
From graduate school start	7.5	7.3	7.7	7.5	8.2	9.3	D	7.2	7.3	9.8	8.0	7.3	8.3	7.1	7.3	8.6	8.3	8.5	7.0
From doctoral program start[k]	5.8	5.8	5.3	5.9	5.3	6.5	D	5.8	5.3	5.9	5.0	5.8	5.3	5.8	5.6	6.0	5.3	5.8	5.7

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: 2019* 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 (2019 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 30 April 2022.

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 2018–19 (1 July 2018 to 30 June 2019).

Response unit. Individuals.

Sample or census. Census.

Population size. 55,703.

Sample size. Not applicable.

Survey Design

Target population. The population for the 2019 SED consists of all individuals receiving a research doctorate from a U.S. academic institution in the 12-month period beginning 1 July 2018 and ending 30 June 2019. 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 2019 (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 55,703 new research doctorates granted in 2019, 98.4% were PhDs (table A-2). The next most frequently occurring type of research doctorate was the doctor of education (EdD), which accounted for 0.8% of the total in 2019. No other type of doctoral degree accounted for more than 0.2% of the new research doctorates in 2019.

Sampling frame. The population eligible for the 2019 survey consisted of all individuals who received a research doctorate from a U.S. academic institution in the 12-month period ending 30 June 2019. Of the 454 institutions granting research doctorates, 5 institutions reported zero graduates, and 7 institutions refused to provide lists of graduates. For 6 of the 7 refusing institutions, the survey contractor was able to construct graduate lists using secondary data sources. Thus, the total universe consisted of 55,703 persons in 448 institutions that conferred research doctorates in 2019.

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 95.8% in 2019.

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 2.5% of SED completions were from CATI in 2019. 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 maintain a database of foreign institutions, updating it annually to include new entries for foreign institutions reported by SED respondents. About one-third of 2019 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 2019, 95.8% of survey responses were obtained via the Web survey, 2.5% via CATI, and 1.7% via the paper questionnaire.

Response rate. Of the 55,703 individuals who received a research doctorate in 2019, 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 2019 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 2019, 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 2019. 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.

Data reported for "other" fine fields are not considered confidential. However, a total of 23 "other" fine fields, including 7 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 2019, seven doctorate-granting universities declined to fully enumerate their doctorate recipients for AY 2019. Information on the graduates for six of these institutions were found from other sources, such as ProQuest, but no information could be found for one institution. This one institution was estimated to have had approximately one graduate, resulting in a small percentage (less than 0.1%) of under-coverage in the universe.

Nonresponse error.

- *Unit nonresponse.* Of the 55,703 individuals who received a research doctorate in 2019, 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 55,703 doctorate recipients for 2019.

  Nonresponse was concentrated in certain institutions: 7 of the 448 doctorate-granting institutions accounted for 25% of the total nonrespondents, and 42 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 55,703 individuals who received a research doctorate in 2019, 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 6.8% for location after graduation. Table A-4 shows item response rates for 2008–19 for all variables, by variable name (see clarifying notes the table).

Measurement error. The most likely source of measurement error in the SED is attributable to incomplete or vague information for degree or dissertation field of study provided by respondents or degree-granting institutions, and for educational history provided by respondents. For field of degree, some respondents (or institutions) fail to provide a degree code and instead provide a text string that must be manually coded by the survey contractor. Similarly, some aspects of the educational history timeline—including the field of study for earned associate's, bachelor's or master's degrees—require manual coding. When manual coding is required, a pair of trained reviewers independently code each text entry, and any discrepancies between the two coders are resolved by a third, more expert reviewer. All manual coding is subject to a final review by NCSES. Generally, the percentage of responses in these areas requiring manual coding is low. In 2019, 3.4% of PhD fields of study were manually coded, as well as 6.6% of associate's degree fields of study, 1.7% of bachelor's degree fields of study, and 2.9% of master's degree fields of study.

Data Comparability

Changes in survey coverage and population. For the 2019 cycle, fourteen institutions were added to the SED universe.

Changes in questionnaire. The following changes were made to the questionnaire in 2019:

New questions. None.

Questions dropped. None.

Question response options changed.

- *Graduate debt level.* Five new debt level values were added:

  $90,001–$100,000

  $100,001–$120,000

  $120,001–$140,000

  $140,001–$160,000

  $160,001 or more

- *Range of expected basic annual salary.* Three additional salary range values were added:

  $110,001–$120,000

  $120,001–$130,000

  $130,001 or above

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 available prior to 2019 ($90,001 or more) were assigned a value of $95,000 for the computation of mean debt levels. In 2019, additional response options were added at the upper range for graduate debt with the highest being $160,001 or more. Doctorate recipients who choose this uppermost category are assigned a value of $165,000 for the computation of mean debt levels. All valid responses, including “no debt,” are included in the computation of all average debt figures in this report.
- *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, the functional limitations items assess 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).

- *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 0.8% in 2019. Table A-1 lists the doctoral degrees that were eligible for inclusion in the SED in 2019.

- *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.

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 2019.

  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 this question, 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 or, if that is missing, the month and year of entry into the doctoral degree program. 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

Technical Tables

Table	Title
A-1	Types of research doctoral degrees recognized by the Survey of Earned Doctorates: 2019
A-2	Research degrees included in the Survey of Earned Doctorates: 2015–19
A-3	Survey response rates: 1980–2019
A-4	Item response rates: 2010–19
A-5	SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019
A-6	Aggregations used to determine major fields of study: 2019

Table A-1

Types of research doctoral degrees recognized by the Survey of Earned Doctorates: 2019

(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: 2015–19

(Number and percent)

Research degree	Degree title	2015		2016		2017		2018		2019	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All research doctorates		54,886	100.0	54,809	100.0	54,554	100.0	55,103	100.0	55,703	100.0
PhD	Doctor of Philosophy	53,802	98.0	53,778	98.1	53,474	98.0	54,154	98.3	54,800	98.4
EdD	Doctor of Education	615	1.1	616	1.1	589	1.1	571	1.0	473	0.8
DSc, ScD	Doctor of Science	105	0.2	103	0.2	108	0.2	92	0.2	92	0.2
DEng, DESc, DES	Doctor of Engineering or Engineering Science	36	0.1	33	0.1	28	0.1	21	*	43	0.1
DA	Doctor of Arts	4	*	7	*	4	*	5	*	1	*
DBA	Doctor of Business Administration	35	0.1	32	0.1	32	0.1	24	*	17	*
DMA	Doctor of Musical Arts	178	0.3	141	0.3	139	0.3	116	0.2	116	0.2
DDes	Doctor of Design	1	*	5	*	7	*	9	*	8	*
DPH	Doctor of Public Health	27	*	20	*	53	0.1	41	0.1	37	0.1
DHL	Doctor of Hebrew Letters	0	0.0	1	*	0	0.0	0	0.0	1	*
DME	Doctor of Music Education	2	*	0	0.0	3	*	0	0.0	1	*
DML	Doctor of Modern Languages	3	*	5	*	6	*	4	*	6	*
DNSc	Doctor of Nursing Science	2	*	2	*	10	*	0	0.0	2	*
ThD	Doctor of Theology	16	*	14	*	23	*	11	*	11	*
DFA	Doctor of Fine Arts	0	0.0	2	*	4	*	3	*	2	*
JSD, SJD	Doctor of Juridical Science	54	0.1	45	0.1	67	0.1	50	0.1	91	0.2
STD	Doctor of Sacred Theology	5	*	2	*	1	*	0	0.0	1	*
JCD	Doctor of Canon Law	1	*	2	*	6	*	2	*	1	*
All other research doctorates[a]		0	0.0	1	*	0	0.0	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: 1980–2019

(Percent)

Year	Self-report rate
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
2019	92.1

Note(s):
Rates for 1980–2018 include late responses. Rate for 2019 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: 2010–19

(Percent)

Variable name	Variable description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
AAEMONTH	First associate's degree start month	na	na	na	na	na	na	na	96.9	96.2	95.3
AAEYEAR	First associate's degree start year	na	na	na	na	na	na	na	97.6	96.3	95.8
AAFIELD	First associate's degree field	na	na	na	na	na	na	na	85.0	94.5	95.1
AAINST	First associate's degree institution	na	na	na	na	na	na	na	93.4	92.0	97.6
AAMONTH	First associate's degree month	na	na	na	na	na	na	na	97.6	96.8	95.9
AANID	First associate's degree institution (NCSES institution identification)	na	na	na	na	na	na	na	93.2	92.0	97.6
AAYEAR	First associate's degree year	na	na	na	na	na	na	na	98.3	97.0	96.7
AADEGRN	Number of associate's degrees received	na	na	na	na	na	na	na	90.3	93.4	93.5
AGEDOC	Age at doctorate	na	na	na	na	na	92.1	94.1	94.6	95.0	94.8
AMERIND	American Indian or Alaska Native race indicator	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.2	93.2
ASIAN	Asian race indicator	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.2	93.2
AUDIDIS	Deaf or hearing disability indicator	89.7	89.8	na	na	na	na	na	na	na	na
BA2EMONTH	Most recent baccalaureate start month	na	na	na	na	na	na	na	89.9	92.3	94.3
BA2EYEAR	Most recent baccalaureate start year	na	na	na	na	na	na	na	90.2	92.3	94.5
BA2FIELD	Most recent baccalaureate degree field	na	na	na	na	na	na	na	89.7	91.6	94.3
BA2INST	Most recent baccalaureate institution	na	na	na	na	na	na	na	88.4	90.5	94.4
BA2MONTH	Most recent baccalaureate month	na	na	na	na	na	na	na	90.0	92.4	94.3
BA2NID	Most recent baccalaureate institution (NCSES institution identification)	na	na	na	na	na	na	na	88.4	90.5	94.4
BA2YEAR	Most recent baccalaureate year	na	na	na	na	na	na	na	90.4	92.6	94.6
BADEGRN	Number of bachelor's degrees received	na	na	na	na	na	na	na	91.1	98.3	98.9
BADBLFIELD	First baccalaureate double major field	na	na	na	na	na	na	na	96.4	98.4	98.7
BADBLMAJ	First baccalaureate double major indicator	na	na	na	na	na	na	na	89.5	90.9	91.1
BAEMONTH	First baccalaureate start month	na	na	na	na	87.0	87.0	89.0	89.6	90.6	90.6
BAEYEAR[a]	First baccalaureate start year	86.9	87.6	88.2	88.8	87.3	87.3	89.4	89.7	90.6	90.7
BAFIELD	First baccalaureate field	88.5	89.0	88.5	89.5	87.9	87.9	89.7	90.4	90.6	90.8
BAINST	First baccalaureate institution	91.6	92.5	91.5	92.2	90.2	91.0	92.9	93.6	94.4	95.5
BAMONTH	First baccalaureate month	87.6	88.3	88.9	89.2	87.7	87.6	89.4	89.7	90.7	90.8
BANID	First baccalaureate institution (NCSES institution identification)	91.6	92.5	91.5	92.2	90.2	91.0	92.9	93.6	94.4	95.5
BANONE[b]	No bachelor's and/or master's degree indicator	14.6	16.4	18.2	20.4	21.4	21.7	22.4	22.0	91.6	91.7
BAPLACE	First baccalaureate institution location	91.6	92.5	91.5	92.2	90.2	91.0	92.9	93.6	94.4	95.5
BAYEAR	First baccalaureate year	91.7	92.3	92.0	92.3	90.3	90.8	93.1	94.4	94.9	95.4
BIRTHMO	Month of birth	92.3	92.2	92.1	92.5	90.7	91.6	93.2	93.9	94.6	94.3
BIRTHPL	Place of birth	93.4	94.3	94.2	93.5	91.9	92.1	94.5	95.0	95.9	96.5
BIRTHYR	Year of birth	93.0	93.0	92.8	93.1	91.3	92.1	94.1	94.5	95.0	94.8
BLACK	Black race indicator	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.2	93.2
CITIZ	Type of citizenship	94.2	94.0	93.8	94.2	92.3	93.3	95.2	95.4	96.0	96.3
CNTRYCIT[c]	Country of citizenship	93.8	93.7	93.6	93.8	92.1	93.1	94.8	95.0	95.0	95.0
COGNDIS	Learning or cognitive disability indicator	89.7	89.8	na	na	na	na	na	na	na	na
DDSDEG	Earned a professional dental degree	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.6	89.6	89.4
DDSSTUDY	Earning a professional dental degree	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.6	89.6	89.4
DEPEND18	Number of dependents-ages 6–18	88.3	89.2	89.9	89.5	88.4	88.3	89.7	90.1	90.7	90.6
DEPEND19	Number of dependents-ages 19 and older	88.3	89.2	89.9	89.5	88.4	88.3	89.7	90.1	90.7	90.6
DEPEND5	Number of dependents-ages 5 or younger	88.3	89.2	89.9	89.5	88.4	88.3	89.7	90.1	90.7	90.6
DIFAGE	Earliest age experienced difficulties	na	na	90.4	90.8	89.4	89.4	90.9	89.9	90.3	90.4
DIFCOGN	Degree of difficulty concentrating, remembering, or making decisions	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5	90.6
DIFHEAR	Degree of difficulty hearing	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5	90.6

Table A-4

Item response rates: 2010–19

(Percent)

Variable name	Variable description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
DIFLIFT	Degree of difficulty lifting	na	na	90.5	91.0	89.6	89.6	91.1	90.1	90.5	90.6
DIFSEE	Degree of difficulty seeing	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5	90.6
DIFWALK	Degree of difficulty walking	na	na	90.5	91.0	89.6	89.6	91.1	90.1	90.5	90.6
DISABILITY1	Disability status	89.7	89.8	na	na	na	na	na	na	na	na
DISABILITY2	Moderate or greater degree of difficulty in any domain	na	na	91.1	91.0	89.6	89.6	91.1	90.1	90.5	90.6
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	90.8	90.8	90.7	90.0	88.6	88.4	89.9	89.9	89.3	88.6
EDMOTHER	Mother/female guardian's education	90.9	90.9	90.8	90.1	88.6	88.5	89.9	90.0	89.7	89.2
GDEBTLVL	Graduate debt level	92.7	93.3	92.9	89.7	88.2	90.1	93.1	92.3	92.6	93.3
GEMONTH	Month of graduate program entry	87.4	88.0	88.4	88.5	90.1	89.7	90.7	90.3	91.9	92.0
GEYEAR	Year of graduate program entry	87.8	88.3	88.6	88.7	90.3	89.9	90.9	90.3	91.9	92.0
HAWAIIAN	Native Hawaiian or Other Pacific Islander race indicator	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.2	93.2
HISPANIC	Hispanic origin indicator	91.4	92.2	92.0	92.1	90.3	91.5	93.0	93.7	94.7	94.6
HSPLACE	Place of high school	90.8	91.8	91.7	91.2	89.7	89.5	91.6	90.1	90.4	90.6
JRCOLL	Junior college indicator	91.2	93.1	93.0	92.6	91.1	90.8	93.4	93.2	93.7	94.0
MA1CRED	Credits from first master's degree counted toward doctoral degree	na	na	na	na	na	na	na	97.6	99.5	99.4
MA1EMONTH	First master's degree start month	na	na	na	na	na	na	na	99.6	98.9	98.5
MA1EYEAR	First master's degree start year	na	na	na	na	na	na	na	99.7	99.0	98.7
MA1FIELD	First master's degree field	na	na	na	na	na	na	na	99.4	98.8	98.7
MA1INST	First master's degree institution	na	na	na	na	na	na	na	97.9	97.8	98.7
MA1MONTH	First master's degree month	na	na	na	na	na	na	na	99.8	98.9	98.7
MA1NID	First master's degree institution (NCSES institution identification)	na	na	na	na	na	na	na	97.9	97.8	98.7
MA1PART	First master's degree was required for doctoral program	na	na	na	na	na	na	na	98.4	99.4	99.1
MA1YEAR	First master's degree year	na	na	na	na	na	na	na	99.9	99.0	98.9
MACRED	Credits from most recent master's degree counted toward doctoral degree	na	na	na	na	na	na	na	99.2	99.8	99.9
MADEGRN	Number of master's degrees received	na	na	na	na	na	na	na	99.3	93.7	93.9
MAEMONTH	Most recent master's degree start month	na	na	na	na	6780	6750	6870	6900	6910	8870
MAEYEAR[b]	Most recent master's degree start year	na	na	na	na	68.0	67.7	68.9	69.1	69.1	88.8
MAFIELD	Most recent master's degree field	71.1	70.8	70.5	70.1	68.6	68.3	69.3	69.1	88.6	88.8
MAINST	Most recent master's degree institution	71.6	71.5	70.8	70.0	68.5	68.0	69.2	69.3	68.8	88.9
MAMONTH	Most recent master's degree month	70.3	70.1	70.2	69.9	68.3	68.0	69.1	69.1	69.1	88.9
MANID[b]	Most recent master's degree institution (NCSES institution identification)	71.6	71.5	70.8	70.0	68.5	68.0	69.2	69.3	68.8	88.9
MAPART	Most recent master's degree was required for doctoral program	na	na	na	na	na	na	na	69.1	88.4	88.7
MARITAL	Marital status	91.0	91.0	91.0	90.4	89.0	88.9	90.5	90.3	90.8	90.8
MAYEAR	Most recent master's degree year	71.6	71.2	70.9	70.3	68.7	68.2	69.4	69.8	88.7	89.0
MDDEG	Earned a professional medical degree	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.6	89.6	89.4
MDSTUDY	Earning a professional medical degree	87.7	88.6	88.9	88.8	87.6	87.9	88.3	88.6	89.6	89.4
MEDDENT	Additional professional medical or dental degree	89.9	90.3	90.5	90.4	89.1	89.2	90.5	90.6	91.4	91.4
MSPREREQ	Prerequisite master's degree for doctoral program	91.5	91.5	91.1	90.7	89.2	89.1	90.8	91.0	88.8	89.0
ORTHDIS	Physical or orthopedic disability indicator	89.7	89.8	na	na	na	na	na	na	na	na
OTHRDIS	Other or unknown disability indicator	89.7	89.8	na	na	na	na	na	na	na	na
PDEMPLOY	Postgraduation employer type	97.8	98.6	98.5	99.0	99.5	99.3	98.1	99.7	98.8	98.8
PDFACULTY	Employment in faculty position	na	na	na	na	na	na	na	na	61.0	63.7

Table A-4

Item response rates: 2010–19

(Percent)

Variable name	Variable description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
PDFORGN[b]	Postgraduation affiliation with a non-U.S. college or university	3.8	3.7	3.5	3.7	3.4	3.1	3.2	3.8	90.5	90.6
PDLOC	Postgraduation location	93.0	92.9	92.5	91.6	90.0	90.0	92.2	92.4	93.0	93.2
PDOCCODE[b]	Postgraduation institution affiliation in the U.S. (IPEDS)	31.9	31.1	30.6	28.4	26.7	26.1	26.4	21.9	87.1	89.2
PDOCNID[b]	Postgraduation institution affiliation in the U.S. (NCSES institution identification)	31.9	31.1	30.6	28.4	26.7	26.1	26.4	21.9	87.1	89.2
PDOCPLAN	Postgraduation plans	97.6	95.0	93.9	92.5	91.7	91.5	95.2	97.6	99.8	99.9
PDOCSTAT	Postgraduation status	91.3	91.4	91.4	90.8	89.3	89.3	90.9	90.8	91.3	91.4
PDSAMEEMP[b]	Postgraduation employer was employer before or during doctoral studies	na	na	na	na	na	na	na	6.9	51.3	55.3
PDSAMEPOSEMP	Employment in same position with same employer worked during doctoral studies	na	na	na	na	na	na	na	na	95.4	99.8
PDSEEKNEWEMP	Postgraduation plan to seek new employment	na	na	na	na	na	na	na	na	99.5	99.1
PDSTDSUP	Postdoctoral study support	93.9	94.6	95.8	96.7	97.5	97.8	95.5	96.9	97.0	96.5
PDUSFOR	Postgraduation location: U.S. or foreign	93.0	92.9	92.5	91.6	90.0	90.0	92.2	92.4	93.0	93.2
PDWK1ED	Edited primary work activity	92.8	91.8	91.5	90.7	90.8	90.5	91.3	97.7	98.6	98.8
PDWK2ED	Edited secondary work activity	50.6	50.1	50.8	50.2	49.8	49.4	50.6	48.9	47.4	46.7
PDWKPRIM	Primary work activity	92.8	91.8	91.5	90.7	90.8	90.5	91.3	97.7	98.6	98.8
PDWKSEC	Secondary work activity	50.6	50.1	50.8	50.2	49.8	49.4	50.6	48.9	47.4	46.7
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	92.5	92.4	91.8	91.6	90.2	90.0	91.6	91.1	91.5	91.4
PHDDISS2[b]	Secondary dissertation field	30.2	32.1	34.7	36.2	35.0	35.0	41.0	34.9	89.8	90.1
PHDEMONTH	Doctoral program start month	na	na	na	na	89.6	89.6	91.2	91.3	91.6	91.7
PHDEYEAR[d]	Doctoral program start year	90.4	90.7	90.8	90.9	89.9	89.7	91.4	91.3	91.6	91.7
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	Intention to take postdoc position	91.5	91.5	91.6	91.1	89.6	89.6	91.5	na	na	na
PROFDEG[b]	Type of professional doctorate	0.9	1.0	0.8	0.8	0.9	1.0	1.0	96.0	100.0	100.0
PROFEARN	Earned or earning a professional doctoral degree	na	na	na	na	na	na	na	90.7	91.4	91.4
PROFEMONTH	Professional doctorate start month	na	na	na	na	na	na	na	99.7	99.3	99.4
PROFEYEAR	Professional doctorate start year	na	na	na	na	na	na	na	99.8	99.1	99.4
PROFINST	Professional doctorate institution	na	na	na	na	na	na	na	98.0	98.2	98.5
PROFMONTH	Professional doctorate month	na	na	na	na	na	na	na	99.8	99.2	99.4
PROFNID	Professional doctorate institution (NCSES institution identification)	na	na	na	na	na	na	na	95.4	98.2	98.5
PROFYEAR[b]	Professional doctorate year	0.9	0.9	0.7	0.8	0.9	0.9	1.0	99.7	99.2	99.4
QUESTMON	Month questionnaire filled out	na	na	na	na	na	90.0	92.0	93.2	92.1	92.1
QUESTYR	Year questionnaire filled out	92.2	92.8	92.4	92.0	90.6	90.3	92.0	93.4	92.1	92.1
RACE	Edited race or ethnicity code	93.4	93.2	93.0	93.2	91.4	92.4	94.3	94.6	95.5	95.7
RACE2	Edited ethnicity or race code (NSF-revised)	93.4	93.2	93.0	93.2	91.4	92.4	94.3	94.9	95.5	95.7
SALARYR[e]	Range of expected basic annual salary	91.0	89.7	89.0	87.6	88.7	88.7	89.3	97.3	96.3	96.3
SALARYV	Expected basic annual salary	51.5	46.6	41.2	36.8	76.9	83.9	85.5	94.2	93.2	93.1
SALMONTH	Number of months expected basic annual salary covers	90.9	90.1	89.5	88.7	89.0	88.9	89.1	95.2	96.5	96.4
SEEKEMPBUS	Seeking or negotiating position in business or industry	na	na	na	na	na	na	na	na	98.8	98.9

Table A-4

Item response rates: 2010–19

(Percent)

Variable name	Variable description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
SEEKEMPCHOICE	Top choice of employer seeking or negotiating	na	na	na	na	na	na	na	na	97.7	97.7
SEEKEMPEDU	Seeking or negotiating position at an educational institution	na	na	na	na	na	na	na	na	98.8	98.9
SEEKEMPGOV	Seeking or negotiating position in government	na	na	na	na	na	na	na	na	98.8	98.9
SEEKEMPNPO	Seeking or negotiating position in nonprofit organization	na	na	na	na	na	na	na	na	98.8	98.9
SEEKEMPOTHR	Seeking or negotiating position in other sector	na	na	na	na	na	na	na	na	98.8	98.9
SEEKEMPSTAT	Employment status while seeking or negotiating employment	na	na	na	na	na	na	na	na	98.9	98.9
SEEKPOSEMP	Seeking or negotiating an employment position other than a postdoc	na	na	na	na	na	na	na	na	99.0	99.0
SEEKPOSOTHR	Seeking or negotiating other position	na	na	na	na	na	na	na	na	99.0	99.0
SEEKPOSPDOC	Seeking or negotiating a postdoc position	na	na	na	na	na	na	na	na	99.0	99.0
SEX	Sex of doctorate recipient	100.0	100.0	99.9	100.0	99.7	100.0	100.0	100.0	99.9	100.0
SRCE1ED	Edited primary source of support	90.9	91.0	91.1	90.7	89.7	89.5	91.2	90.0	90.6	90.6
SRCEPRIM	Primary source of support	90.9	91.0	91.1	90.7	89.7	89.5	91.2	90.0	90.6	90.6
SRCESEC	Secondary source of support	80.8	80.8	80.3	79.6	79.2	78.8	83.0	78.4	80.1	80.3
TICEPHD	Time in from college entry to doctorate	86.9	87.6	88.2	88.8	87.3	87.3	89.4	89.7	90.6	90.7
TOBAGE	Time out between baccalaureate to graduate school entry	85.8	86.4	86.9	87.2	87.2	87.2	88.5	87.4	88.4	88.5
TTDBAPHD	Total time elapsed from baccalaureate to doctorate	91.7	92.3	92.0	92.3	90.3	90.8	93.1	94.4	94.8	95.4
TTDDOC	Total elapsed time in doctorate	na	na	na	na	89.9	89.8	91.5	91.3	91.5	91.6
TTDGEPHD	Total time elapsed from graduate entry to doctorate	87.9	88.3	88.6	88.7	90.3	89.9	90.9	90.3	91.9	92.0
TUITREMS	Tuition remission-full or partial	90.4	91.3	91.5	91.2	90.0	89.8	91.4	91.0	91.6	91.6
UDEBTLVL	Undergraduate debt level	92.7	93.4	93.3	86.1	84.7	90.9	93.7	92.6	93.0	93.3
VISUDIS	Blind or visual disability indicator	89.7	89.8	na	na	na	na	na	na	na	na
VOCLDIS	Vocal or speech disability indicator	89.7	89.8	na	na	na	na	na	na	na	na
WHITE	White race indicator	91.6	91.6	91.5	91.9	90.2	91.0	93.0	92.8	93.2	93.2
YRSCOURS	Years of doctoral coursework	90.9	91.0	90.9	90.4	89.0	89.0	90.5	89.8	na	na
YRSDISST	Years preparing doctorate dissertation	91.0	91.1	91.0	90.5	89.0	89.0	90.5	89.7	na	na
YRSNOTWRK	Years not working on doctoral degree	91.0	91.2	91.0	90.8	89.2	89.2	90.8	90.9	na	na

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

IPEDS = Integrated Postsecondary Education Data System; NCSES = National Center for Science and Engineering Statistics.

[a] Methodology reports prior to 2014 reported BAEYEAR as CEYEAR.

[b] Logical skip edits to correct the universe of eligible respondents led to higher item response rates in the year it was implemented.

[c] Response rate counts respondents who reported being U.S. citizens or permanent residents or temporary visa holders and provided country of citizenship.

[d] Methodology reports prior to 2014 reported PHDEYEAR as PHDENTRY.

[e] Methodology reports prior to 2011 reported SALARYR as SALARY.

Note(s):
Item 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. For some data items introduced in the survey for the first time, not all eligible respondents were able to provide data because they completed earlier versions of the survey, leading to lower response rates.

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: 2019

(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: 2019

(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†
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

Table A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019

(Field)

Aggregated field name and constituent fields
Rehabilitation, therapeutic services
Speech-language pathology and audiology
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

Table A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019

(Field)

Aggregated field name and constituent fields
Marine sciences
Ocean and marine sciences, other*
Physics and astronomy
Astronomy and astrophysics
Astronomy
Astrophysics
Astronomy and astrophysics, other
Physics
Acoustics, optics / photonics†
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

Table A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019

(Field)

Aggregated field name and constituent fields
Clinical psychology
Cognitive neuroscience
Cognitive psychology and psycholinguistics
Community psychology
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

Table A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019

(Field)

Aggregated field name and constituent fields
Gender and women's studies
Geography
Health policy analysis
History, science and technology and society
International relations, international affairs
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

Table A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019

(Field)

Aggregated field name and constituent fields
Curriculum and instruction
Educational assessment, testing, measurement
Educational policy analysis
Educational psychology (education)
Educational statistics, research methods
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*

Table A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019

(Field)

Aggregated field name and constituent fields
Chinese language and literature*
Italian*
Japanese language and literature*
Latin American languages and literature
Russian language and literature*
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
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†

Table A-5

SED taxonomy of disciplines including aggregated fields and their constituent fine fields: 2019

(Field)

Aggregated field name and constituent fields
Archaeology (humanities)*
Bible, biblical studies
Music, other*
Humanities, general
Humanities, other
Other[a]
Business management and administration
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 2019.

* = fine field with fewer than 25 U.S. citizen or permanent resident doctorate recipients in 2019.

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: 2019

(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://ncses.nsf.gov/.

Interactive data tool

NCSES's interactive data tool (https://ncsesdata.nsf.gov/home) 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 *Publication of Data from the Survey of Earned Doctorates*, and other products related to SED—including *U.S. Research Universities in the 20th Century*, which documents the history of U.S. doctoral education from 1861 through 1999, and the data series *Science and Engineering Degrees, by Race/Ethnicity of Recipients*—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 SED data are included in the *Indicators 2020* report *Higher Education in Science and Engineering* (NSB-2019-7), available at https://ncses.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 SED data in the 2019 edition (NSF 19-304) are available at https://ncses.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.

For information on the Survey of Earned Doctorates and the data tables in this report, contact the survey manager. You may also reach the report author or NCSES using the contact information below.

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