

Table 51. Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2016

Citizenship status and major field of study	All recipients	Recipients with definite commitments	Location of definite commitments						
			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
All doctorate recipients ^c	54,904	29,300	26,514	10,209	7,268	5,639	3,398	2,740	46
Life sciences	12,568	6,660	6,148	3,847	882	865	554	503	9
Agricultural sciences and natural resources	1,385	710	591	264	119	130	78	D	D
Biological and biomedical sciences	8,884	4,716	4,414	3,193	374	577	270	D	D
Health sciences	2,299	1,234	1,143	390	389	158	206	D	D
Physical sciences and earth sciences	6,252	3,466	3,088	1,824	253	831	180	D	D
Chemistry	2,704	1,436	1,324	757	108	418	41	112	0
Geosciences, atmospheric, and ocean sciences	1,227	738	646	414	74	92	66	92	0
Physics and astronomy	2,321	1,292	1,118	653	71	321	73	D	D
Mathematics and computer sciences	3,957	2,330	2,089	610	437	916	126	237	4
Computer and information sciences	2,085	1,212	1,112	220	201	616	75	97	3
Mathematics and statistics	1,872	1,118	977	390	236	300	51	140	1
Psychology and social sciences	9,078	5,175	4,586	1,740	1,543	544	759	579	10
Psychology	3,946	2,297	2,210	1,232	411	247	320	84	3
Anthropology	460	197	162	72	58	10	22	34	1
Economics	1,238	857	623	87	258	147	131	232	2
Political science and government	745	431	374	94	193	25	62	57	0
Sociology	615	362	326	82	186	14	44	36	0
Other social sciences	2,074	1,031	891	173	437	101	180	136	4
Engineering	9,469	4,846	4,396	1,469	412	2,133	382	433	17
Aerospace, aeronautical, and astronautical engineering	369	215	198	68	24	59	47	17	0
Bioengineering and biomedical engineering	1,089	538	511	287	36	167	21	26	1
Chemical engineering	923	485	440	161	14	248	17	44	1
Civil engineering	565	278	245	91	40	85	29	31	2
Electrical, electronics, and communications engineering	1,827	929	860	186	56	537	81	66	3
Industrial and manufacturing engineering	256	135	110	20	25	55	10	24	1
Materials science engineering	985	474	436	184	23	202	27	34	4

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Mechanical engineering	1,299	662	606	199	60	291	56	54	2
Other engineering	2,156	1,130	990	273	134	489	94	137	3
Education	5,153	2,787	2,634	201	1,415	116	902	D	D
Education administration	829	461	450	11	183	14	242	11	0
Education research	2,386	1,303	1,228	127	672	74	355	D	D
Teacher education	181	D	D	D	48	D	32	D	0
Teaching fields	1,167	649	596	41	366	16	173	53	0
Other education	590	D	D	D	146	D	100	D	0
Humanities and arts	5,484	2,386	2,124	408	1,311	88	317	260	2
Foreign languages and literature	599	263	235	37	173	D	D	28	0
History	1,147	492	441	124	222	19	76	50	1
Letters	1,533	699	648	102	463	D	D	51	0
Other humanities and arts	2,205	932	800	145	453	44	158	131	1
Other ^d	2,943	1,650	1,449	110	1,015	146	178	199	2
Business management and administration	1,510	923	789	24	613	90	62	132	2
Communication	673	346	317	40	222	24	31	29	0
Non-S&E fields not elsewhere classified	760	381	343	46	180	32	85	38	0
Unknown field	0	0	0	0	0	0	0	0	0
U.S. citizen or permanent resident	35,719	20,443	19,634	7,062	6,093	3,327	3,152	792	17
Life sciences	8,697	4,903	4,739	2,799	769	651	520	160	4
Agricultural sciences and natural resources	773	452	435	167	98	96	74	17	0
Biological and biomedical sciences	6,225	3,476	3,345	2,340	318	437	250	127	4
Health sciences	1,699	975	959	292	353	118	196	16	0
Physical sciences and earth sciences	3,666	2,210	2,055	1,134	197	556	168	D	D
Chemistry	1,579	920	876	451	80	307	38	44	0
Geosciences, atmospheric, and ocean sciences	802	506	471	285	61	63	62	35	0
Physics and astronomy	1,285	784	708	398	56	186	68	D	D
Mathematics and computer sciences	1,730	1,082	1,016	282	291	344	99	66	0
Computer and information sciences	783	496	479	79	125	222	53	17	0

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			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Mathematics and statistics	947	586	537	203	166	122	46	49	0
Psychology and social sciences	6,830	4,169	4,013	1,566	1,307	438	702	152	4
Psychology	3,371	2,123	2,086	1,155	379	239	313	35	2
Anthropology	360	163	145	62	52	10	21	18	0
Economics	521	402	380	D	161	D	94	22	0
Political science and government	579	355	332	D	169	D	59	23	0
Sociology	508	313	304	D	174	D	44	9	0
Other social sciences	1,491	813	766	142	372	81	171	45	2
Engineering	4,181	2,374	2,285	681	254	1,029	321	85	4
Aerospace, aeronautical, and astronautical engineering	233	146	D	D	D	41	45	D	0
Bioengineering and biomedical engineering	746	386	371	194	29	131	17	15	0
Chemical engineering	470	277	263	D	D	155	16	14	0
Civil engineering	219	130	125	33	29	39	24	D	D
Electrical, electronics, and communications engineering	547	330	321	49	30	178	64	9	0
Industrial and manufacturing engineering	82	45	D	D	7	21	7	D	0
Materials science engineering	456	238	231	77	14	116	24	7	0
Mechanical engineering	585	340	329	84	37	162	46	D	D
Other engineering	843	482	462	120	78	186	78	D	D
Education	4,303	2,521	2,495	170	1,338	108	879	D	D
Education administration	730	450	D	11	183	14	D	D	0
Education research	1,981	1,168	1,154	D	634	D	343	D	D
Teacher education	159	85	85	D	D	D	32	0	0
Teaching fields	949	561	554	32	339	D	D	7	0
Other education	484	257	D	15	D	D	96	D	0
Humanities and arts	4,447	2,056	1,940	348	1,203	D	D	114	2
Foreign languages and literature	399	191	181	32	126	D	D	10	0
History	949	423	407	102	213	19	73	15	1
Letters	1,314	640	622	D	441	D	60	18	0
Other humanities and arts	1,785	802	730	D	423	D	151	71	1
Other ^d	1,865	1,128	1,091	82	734	D	D	36	1

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Business management and administration	845	558	537	16	407	63	51	20	1
Communication	472	266	261	32	178	D	D	5	0
Non-S&E fields not elsewhere classified	548	304	293	34	149	D	D	11	0
Unknown field	0	0	0	0	0	0	0	0	0
Temporary visa holder	16,498	8,766	6,805	3,121	1,160	2,289	235	1,938	23
Life sciences	3,362	1,742	1,396	1,040	111	212	33	342	4
Agricultural sciences and natural resources	564	253	152	96	19	34	3	D	D
Biological and biomedical sciences	2,311	1,232	1,062	847	56	139	20	D	D
Health sciences	487	257	182	97	36	39	10	D	D
Physical sciences and earth sciences	2,313	1,242	1,021	684	56	269	12	221	0
Chemistry	1,000	511	444	304	28	109	3	67	0
Geosciences, atmospheric, and ocean sciences	390	230	173	127	13	29	4	57	0
Physics and astronomy	923	501	404	253	15	131	5	97	0
Mathematics and computer sciences	2,054	1,239	1,066	326	146	567	27	171	2
Computer and information sciences	1,204	711	629	139	76	392	22	80	2
Mathematics and statistics	850	528	437	187	70	175	5	91	0
Psychology and social sciences	1,756	990	560	169	235	103	53	426	4
Psychology	306	167	118	73	32	8	5	49	0
Anthropology	76	32	16	9	6	0	1	16	0
Economics	658	450	238	D	96	D	36	210	2
Political science and government	128	75	42	D	24	D	3	33	0
Sociology	89	49	22	D	12	D	0	27	0
Other social sciences	499	217	124	31	65	20	8	91	2
Engineering	4,848	2,452	2,093	785	156	1,097	55	347	12
Aerospace, aeronautical, and astronautical engineering	119	69	D	D	D	18	2	D	0
Bioengineering and biomedical engineering	300	150	139	93	7	36	3	11	0
Chemical engineering	403	207	176	D	D	92	1	30	1

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			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Civil engineering	308	145	117	57	11	44	5	D	D
Electrical, electronics, and communications engineering	1,164	597	537	137	26	358	16	57	3
Industrial and manufacturing engineering	164	89	D	D	18	34	3	D	1
Materials science engineering	496	235	204	107	9	85	3	27	4
Mechanical engineering	652	319	274	115	22	129	8	D	D
Other engineering	1,242	641	522	152	55	301	14	D	D
Education	563	262	136	30	75	8	23	126	0
Education administration	32	11	D	0	0	0	D	D	0
Education research	280	132	72	D	37	D	12	60	0
Teacher education	13	D	D	0	D	0	0	D	0
Teaching fields	181	88	42	9	27	D	D	46	0
Other education	57	D	18	D	D	D	4	8	0
Humanities and arts	712	320	177	59	102	D	D	143	0
Foreign languages and literature	164	70	52	5	45	0	2	18	0
History	142	67	33	21	9	0	3	34	0
Letters	126	57	24	D	20	0	D	33	0
Other humanities and arts	280	126	68	D	28	D	7	58	0
Other ^d	890	519	356	28	279	D	D	162	1
Business management and administration	553	363	251	8	205	27	11	111	1
Communication	160	80	56	8	44	D	D	24	0
Non-S&E fields not elsewhere classified	177	76	49	12	30	D	D	27	0
Unknown field	0	0	0	0	0	0	0	0	0

D = suppressed to avoid disclosure of confidential information.

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 Non-science and engineering fields.

NOTES: 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: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Earned Doctorates, 2016.