

**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 <sup>a</sup>	Other <sup>b</sup>		
All doctorate recipients <sup>c</sup>	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

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Other engineering	2,520	1,613	1,393	425	167	665	136	220	0
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 <sup>d</sup>	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

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Anthropology	359	198	177	67	73	14	23	21	0	
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 <sup>d</sup>	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	

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Non-S&E fields nec	624	410	394	38	223	36	97	16	0	
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	

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Mechanical engineering	880	531	442	212	26	199	5	88	1
Other engineering	1,551	1,012	811	287	77	416	31	201	0
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 <sup>d</sup>	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&amp;E = science and engineering.

<sup>a</sup> Includes doctorate recipients who indicated self-employment.<sup>b</sup> Includes doctorate recipients who indicated government, nonprofit, elementary or secondary school, or other employment and those with unknown employment.<sup>c</sup> Includes respondents who did not report citizenship status.<sup>d</sup> 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.