

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

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			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
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 ^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

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			United States					Abroad	Unknown
			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Economics	818	625	442	71	177	122	72	182	1
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

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			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
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
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

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			Total	Postdoctoral study	Academic employment	Industry employment ^a	Other ^b		
Mechanical engineering	250	145	134	57	13	44	20	11	0
Other engineering	594	359	323	114	57	120	32	36	0
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.