

TABLE 18

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

(Number and percent)

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

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(Number and percent)

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

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

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(Number and percent)

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

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

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

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

Source(s)

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