

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
Non-S&E fields nec	725	706	735	827	796	770	760	962	876	955	31.7

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
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
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

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(Number and percent)

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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
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

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(Number and percent)

Citizenship status and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
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.