Table 1-7

Research doctorate recipients, by historical major field of doctorate and citizenship status: 2011–21

(Number and percent)

Field and citizenship status	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	% change 2011–21
All doctorate recipients[a]	48,909	50,943	52,703	53,986	54,886	54,809	54,552	55,080	55,609	55,224	52,250	6.8
Life sciences	11,535	11,964	12,207	12,484	12,493	12,539	12,554	12,754	12,748	12,549	11,814	2.4
Agricultural sciences and natural resources	1,206	1,255	1,324	1,338	1,434	1,379	1,493	1,442	1,488	1,470	1,334	10.6
Biological and biomedical sciences	8,152	8,322	8,354	8,868	8,783	8,863	8,566	8,782	8,678	8,410	8,149	0.0
Health sciences	2,177	2,387	2,529	2,278	2,276	2,297	2,495	2,530	2,582	2,669	2,331	7.1
Physical sciences and earth sciences	5,271	5,419	5,584	5,910	5,916	6,251	6,082	6,330	6,579	6,241	5,757	9.2
Chemistry	2,432	2,416	2,484	2,673	2,666	2,703	2,699	2,807	2,939	2,761	2,555	5.1
Geosciences, atmospheric sciences, and ocean sciences	852	941	989	1,098	1,057	1,227	1,169	1,185	1,272	1,241	1,064	24.9
Physics and astronomy	1,987	2,062	2,111	2,139	2,193	2,321	2,214	2,338	2,368	2,239	2,138	7.6
Mathematics and computer sciences	3,273	3,496	3,660	3,862	3,818	3,954	3,842	4,022	4,230	4,387	4,373	33.6
Computer and information sciences	1,667	1,793	1,843	1,988	2,003	2,082	1,998	2,000	2,220	2,363	2,361	41.6
Mathematics and statistics	1,606	1,703	1,817	1,874	1,815	1,872	1,844	2,022	2,010	2,024	2,012	25.3
Psychology and social sciences	8,220	8,498	8,580	8,748	9,073	9,037	9,034	8,876	9,043	8,932	8,675	5.5
Psychology	3,576	3,599	3,592	3,724	3,776	3,910	3,925	3,821	3,909	3,871	3,797	6.2
Anthropology	553	547	550	523	492	460	446	424	445	447	400	-27.7
Economics	1,121	1,243	1,183	1,196	1,255	1,236	1,239	1,245	1,247	1,212	1,230	9.7
Political science and government	685	724	803	775	859	745	743	734	707	636	581	-15.2
Sociology	656	633	636	678	741	613	683	668	632	606	560	-14.6
Other social sciences	1,629	1,752	1,816	1,852	1,950	2,073	1,998	1,984	2,103	2,160	2,107	29.3
Engineering	8,032	8,469	9,000	9,626	9,875	9,459	9,776	10,164	10,298	10,471	10,240	27.5
Aerospace, aeronautical, and astronautical engineering	262	307	348	386	361	370	379	383	379	399	373	42.4
Bioengineering and biomedical engineering	898	943	1,039	1,046	1,125	1,089	1,032	1,133	1,163	1,082	1,064	18.5
Chemical engineering	823	840	824	973	1,002	921	931	981	980	994	1,024	24.4
Civil engineering	634	495	542	617	632	564	713	675	700	795	621	-2.1
Electrical, electronics, and communications engineering	1,886	1,938	1,897	1,952	1,997	1,823	1,879	1,943	1,799	1,973	2,081	10.3
Industrial and manufacturing engineering	258	226	241	298	243	256	249	272	234	304	361	39.9
Materials science engineering	662	743	815	832	871	984	937	992	992	879	936	41.4
Mechanical engineering	1,084	1,220	1,277	1,331	1,466	1,297	1,398	1,503	1,532	1,633	1,444	33.2
Other engineering	1,525	1,757	2,017	2,191	2,178	2,155	2,258	2,282	2,519	2,412	2,336	53.2
Education	4,670	4,802	4,934	4,789	5,098	5,146	4,826	4,818	4,633	4,715	4,252	-9.0
Education administration	924	1,057	965	893	920	824	922	895	839	931	710	-23.2
Education research	2,378	2,516	2,638	2,490	2,717	2,328	2,373	2,457	2,253	2,275	2,167	-8.9
Teacher education	204	156	109	152	156	180	114	96	104	113	111	-45.6
Teaching fields	805	757	892	915	953	1,166	925	959	957	939	797	-1.0
Other education	359	316	330	339	352	648	492	411	480	457	467	30.1
Humanities and arts	5,225	5,561	5,715	5,524	5,594	5,482	5,286	5,139	5,051	4,924	4,137	-20.8

Table 1-7

Research doctorate recipients, by historical major field of doctorate and citizenship status: 2011–21

(Number and percent)

Field and citizenship status	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	% change 2011–21
Foreign languages and literature	644	684	701	674	656	599	618	617	610	564	377	-41.5
History	1,065	1,086	1,148	1,186	1,146	1,148	1,058	948	912	884	725	-31.9
Letters	1,513	1,638	1,606	1,551	1,583	1,531	1,462	1,439	1,386	1,389	1,192	-21.2
Other humanities and arts	2,003	2,153	2,260	2,113	2,209	2,204	2,148	2,135	2,143	2,087	1,843	-8.0
Other	2,683	2,734	3,023	3,043	3,019	2,941	3,152	2,977	3,027	3,005	3,002	11.9
Business management and administration	1,327	1,404	1,551	1,584	1,582	1,509	1,565	1,473	1,533	1,468	1,392	4.9
Communication	650	595	645	663	667	672	622	630	543	591	507	-22.0
Non-science and engineering fields nec	706	735	827	796	770	760	965	874	951	946	1,103	56.2
U.S. citizen or permanent resident	31,725	32,981	33,964	34,003	35,071	35,678	35,736	35,350	35,227	34,473	31,674	-0.2
Life sciences	7,892	8,184	8,352	8,390	8,470	8,683	8,827	9,028	9,035	8,706	8,214	4.1
Agricultural sciences and natural resources	697	675	737	754	774	771	822	792	821	796	733	5.2
Biological and biomedical sciences	5,614	5,790	5,768	5,993	6,029	6,215	6,147	6,396	6,368	6,006	5,809	3.5
Health sciences	1,581	1,719	1,847	1,643	1,667	1,697	1,858	1,840	1,846	1,904	1,672	5.8
Physical sciences and earth sciences	3,048	3,148	3,247	3,300	3,481	3,669	3,715	3,769	3,900	3,739	3,340	9.6
Chemistry	1,407	1,385	1,443	1,447	1,572	1,581	1,696	1,710	1,780	1,696	1,506	7.0
Geosciences, atmospheric sciences, and ocean sciences	555	623	654	722	704	803	790	760	808	809	678	22.2
Physics and astronomy	1,086	1,140	1,150	1,131	1,205	1,285	1,229	1,299	1,312	1,234	1,156	6.4
Mathematics and computer sciences	1,603	1,627	1,631	1,738	1,663	1,729	1,748	1,736	1,785	1,734	1,671	4.2
Computer and information sciences	790	785	758	807	774	783	801	742	799	807	774	-2.0
Mathematics and statistics	813	842	873	931	889	946	947	994	986	927	897	10.3
Psychology and social sciences	6,070	6,319	6,464	6,389	6,685	6,798	6,843	6,691	6,702	6,597	6,167	1.6
Psychology	3,062	3,046	3,067	3,042	3,103	3,341	3,376	3,309	3,326	3,311	3,127	2.1
Anthropology	455	445	457	405	397	360	349	336	360	366	298	-34.5
Economics	428	517	505	469	552	522	547	483	491	458	436	1.9
Political science and government	488	536	593	574	621	579	572	544	504	459	405	-17.0
Sociology	511	512	516	544	596	506	562	557	511	488	459	-10.2
Other social sciences	1,126	1,263	1,326	1,355	1,416	1,490	1,437	1,462	1,510	1,515	1,442	28.1
Engineering	3,350	3,579	3,767	4,066	4,219	4,181	4,311	4,213	4,251	4,153	4,073	21.6
Aerospace, aeronautical, and astronautical engineering	145	181	194	246	216	233	241	221	212	221	187	29.0
Bioengineering and biomedical engineering	564	602	637	674	723	746	695	743	771	688	730	29.4
Chemical engineering	393	377	365	445	488	470	469	469	480	465	462	17.6
Civil engineering	216	159	182	229	231	219	231	200	200	244	190	-12.0
Electrical, electronics, and communications engineering	617	614	603	575	632	548	581	543	518	552	591	-4.2
Industrial and manufacturing engineering	100	75	77	91	65	82	85	62	84	82	115	15.0
Materials science engineering	278	350	349	363	381	456	470	462	501	399	413	48.6
Mechanical engineering	440	505	547	558	620	585	591	608	600	601	577	31.1

Table 1-7

Research doctorate recipients, by historical major field of doctorate and citizenship status: 2011–21

(Number and percent)

Field and citizenship status	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	% change 2011–21
Other engineering	597	716	813	885	863	842	948	905	885	901	808	35.3
Education	3,878	4,040	4,118	3,934	4,196	4,303	4,052	4,025	3,848	3,898	3,431	-11.5
Education administration	833	936	844	763	797	727	792	783	755	822	601	-27.9
Education research	1,943	2,107	2,165	2,064	2,234	1,942	1,995	2,026	1,874	1,853	1,760	-9.4
Teacher education	156	134	90	132	134	158	97	87	87	94	89	-42.9
Teaching fields	679	613	741	732	762	950	763	785	769	751	625	-8.0
Other education	267	250	278	243	269	526	405	344	363	378	356	33.3
Humanities and arts	4,191	4,434	4,535	4,361	4,478	4,450	4,297	4,145	3,988	3,908	3,142	-25.0
Foreign languages and literature	426	472	467	469	463	399	430	405	383	350	236	-44.6
History	893	889	947	968	944	950	890	800	741	745	566	-36.6
Letters	1,289	1,383	1,354	1,304	1,353	1,314	1,277	1,232	1,187	1,163	945	-26.7
Other humanities and arts	1,583	1,690	1,767	1,620	1,718	1,787	1,700	1,708	1,677	1,650	1,395	-11.9
Other	1,693	1,650	1,850	1,825	1,879	1,865	1,943	1,743	1,718	1,738	1,636	-3.4
Business management and administration	755	736	831	849	892	845	859	740	748	710	602	-20.3
Communication	473	426	471	473	479	472	458	434	349	411	343	-27.5
Non-science and engineering fields nec	465	488	548	503	508	548	626	569	621	617	691	48.6
Temporary visa holder	14,235	14,784	15,674	15,839	16,129	16,477	16,288	17,582	18,324	18,476	17,638	23.9
Life sciences	3,029	3,197	3,177	3,169	3,264	3,352	3,331	3,360	3,395	3,427	3,069	1.3
Agricultural sciences and natural resources	472	529	516	504	555	561	607	607	646	632	544	15.3
Biological and biomedical sciences	2,124	2,166	2,154	2,229	2,266	2,304	2,180	2,157	2,129	2,173	2,018	-5.0
Health sciences	433	502	507	436	443	487	544	596	620	622	507	17.1
Physical sciences and earth sciences	1,955	1,959	2,032	2,196	2,099	2,313	2,160	2,373	2,484	2,311	2,171	11.0
Chemistry	907	880	888	1,000	929	1,000	919	1,021	1,071	993	940	3.6
Geosciences, atmospheric sciences, and ocean sciences	246	281	290	326	307	390	332	392	429	391	343	39.4
Physics and astronomy	802	798	854	870	863	923	909	960	984	927	888	10.7
Mathematics and computer sciences	1,449	1,617	1,833	1,850	1,917	2,053	1,926	2,128	2,303	2,475	2,450	69.1
Computer and information sciences	759	870	990	1,029	1,094	1,201	1,105	1,163	1,328	1,455	1,420	87.1
Mathematics and statistics	690	747	843	821	823	852	821	965	975	1,020	1,030	49.3
Psychology and social sciences	1,588	1,601	1,634	1,549	1,622	1,753	1,668	1,768	1,915	1,834	1,888	18.9
Psychology	238	254	282	249	260	305	286	284	339	257	334	40.3
Anthropology	73	74	76	86	68	76	65	70	66	63	81	11.0
Economics	623	656	615	627	606	656	641	707	708	690	721	15.7
Political science and government	150	150	163	145	178	128	140	159	173	152	139	-7.3
Sociology	113	85	92	90	101	89	93	88	104	102	83	-26.5
Other social sciences	391	382	406	352	409	499	443	460	525	570	530	35.5
Engineering	4,164	4,355	4,759	4,961	5,108	4,842	5,037	5,575	5,680	5,953	5,638	35.4

Table 1-7

Research doctorate recipients, by historical major field of doctorate and citizenship status: 2011–21

(Number and percent)

Field and citizenship status	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	% change 2011–21
Aerospace, aeronautical, and astronautical engineering	100	107	138	124	132	121	123	146	153	163	162	62.0
Bioengineering and biomedical engineering	291	292	352	318	348	301	300	362	359	364	301	3.4
Chemical engineering	379	414	409	482	461	401	426	478	478	482	513	35.4
Civil engineering	373	303	333	339	359	307	427	442	461	513	384	2.9
Electrical, electronics, and communications engineering	1,109	1,181	1,160	1,217	1,237	1,160	1,215	1,316	1,198	1,344	1,394	25.7
Industrial and manufacturing engineering	152	140	156	185	161	164	157	196	140	199	232	52.6
Materials science engineering	350	334	435	419	448	494	428	500	461	463	474	35.4
Mechanical engineering	568	631	664	686	783	652	741	831	879	983	787	38.6
Other engineering	842	953	1,112	1,191	1,179	1,242	1,220	1,304	1,551	1,442	1,391	65.2
Education	497	460	515	478	539	562	534	611	615	659	553	11.3
Education administration	41	46	44	39	35	33	51	52	54	59	47	14.6
Education research	281	269	307	255	313	266	297	353	303	370	300	6.8
Teacher education	26	13	17	14	13	13	12	8	16	18	20	-23.1
Teaching fields	96	101	116	134	145	181	132	155	165	163	132	37.5
Other education	53	31	31	36	33	69	42	43	77	49	54	1.9
Humanities and arts	767	761	779	731	713	712	692	739	826	742	727	-5.2
Foreign languages and literature	180	160	179	142	151	164	159	181	202	185	117	-35.0
History	131	136	134	147	131	142	125	112	130	120	128	-2.3
Letters	157	141	150	140	122	126	122	139	149	132	172	9.6
Other humanities and arts	299	324	316	302	309	280	286	307	345	305	310	3.7
Other	786	834	945	905	867	890	940	1,028	1,106	1,075	1,142	45.3
Business management and administration	477	542	600	589	546	553	588	642	689	658	683	43.2
Communication	132	107	133	137	137	160	122	165	163	153	140	6.1
Non-science and engineering fields nec	177	185	212	179	184	177	230	221	254	264	319	80.2

nec = not elsewhere classified.

[a] Includes respondents who did not report citizenship status.

Note(s):
Beginning in 2021, a modified version of the 2020 Classification of Instructional Programs (CIP) codes was used in the survey data collection; the historical fields were constructed using the SED-CIP code crosswalk in table A-6. Therefore, the field of doctorate data in 2021 may not be comparable to prior years; see the "Technical Notes" for more information, table A-4 for a summary of SED-CIP codes in the new SED field taxonomy, and table A-5 for a full list of SED-CIP codes in the new field taxonomy.

Source(s):
National Center for Science and Engineering Statistics, Survey of Earned Doctorates.