

Table 15

## Doctorate recipients, by sex and major field of study: 2010–19

(Number and percent)

Sex and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
All doctorate recipients <sup>a</sup>	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 <sup>b</sup>	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

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Non-S&E fields nec	725	706	735	827	796	770	760	962	876	955	31.7
Unknown field	0	0	0	0	0	0	0	3	0	0	0.0
Male	25,524	26,188	27,362	28,326	29,008	29,532	29,572	29,081	29,754	30,151	18.1
Life sciences	5,101	5,243	5,335	5,492	5,514	5,563	5,628	5,612	5,650	5,819	14.1
Agricultural sciences and natural resources	609	652	698	702	691	746	755	755	746	761	25.0
Biological and biomedical sciences	3,823	3,878	3,891	3,941	4,088	4,100	4,154	4,056	4,081	4,200	9.9
Health sciences	669	713	746	849	735	717	719	801	823	858	28.3
Physical sciences and earth sciences	3,379	3,629	3,684	3,717	3,968	3,928	4,285	4,068	4,212	4,368	29.3
Chemistry	1,440	1,508	1,521	1,497	1,642	1,592	1,712	1,667	1,742	1,790	24.3
Geosciences, atmospheric sciences, and ocean sciences	496	522	538	539	622	600	716	644	659	740	49.2
Physics and astronomy	1,443	1,599	1,625	1,681	1,704	1,736	1,857	1,757	1,811	1,838	27.4
Mathematics and computer sciences	2,409	2,456	2,638	2,792	2,912	2,877	2,994	2,867	3,038	3,144	30.5
Computer and information sciences	1,286	1,312	1,419	1,502	1,580	1,581	1,662	1,548	1,566	1,717	33.5
Mathematics and statistics	1,123	1,144	1,219	1,290	1,332	1,296	1,332	1,319	1,472	1,427	27.1
Psychology and social sciences	3,357	3,332	3,539	3,501	3,507	3,757	3,741	3,670	3,636	3,672	9.4
Psychology	1,031	1,003	1,040	997	1,063	1,057	1,133	1,123	1,095	1,118	8.4
Anthropology	201	223	187	188	195	185	171	155	126	155	-22.9
Economics	703	734	840	767	785	821	819	812	849	818	16.4
Political science and government	434	389	420	469	433	527	462	449	429	433	-0.2
Sociology	250	254	230	259	247	284	257	263	250	229	-8.4
Other social sciences	738	729	822	821	784	883	899	868	887	919	24.5
Engineering	5,829	6,242	6,565	6,946	7,401	7,578	7,267	7,341	7,712	7,833	34.4
Aerospace, aeronautical, and astronautical engineering	215	228	268	293	330	308	314	336	337	323	50.2
Bioengineering and biomedical engineering	509	563	608	684	660	698	686	605	687	720	41.5
Chemical engineering	574	566	583	566	682	685	624	659	688	665	15.9
Civil engineering	473	486	388	417	465	457	437	508	506	542	14.6
Electrical, electronics, and communications engineering	1,462	1,579	1,594	1,616	1,614	1,704	1,529	1,524	1,600	1,501	2.7
Industrial and manufacturing engineering	159	180	164	176	209	154	185	168	204	172	8.2
Materials science engineering	495	496	556	598	617	648	721	688	719	701	41.6
Mechanical engineering	858	934	1,042	1,081	1,126	1,265	1,096	1,160	1,285	1,283	49.5
Other engineering	1,084	1,210	1,362	1,515	1,698	1,659	1,675	1,693	1,686	1,926	77.7
Education	1,661	1,432	1,500	1,570	1,468	1,605	1,545	1,519	1,495	1,422	-14.4
Education administration	547	349	389	372	371	344	304	344	323	342	-37.5
Education research	706	699	761	826	723	849	718	772	764	653	-7.5
Teacher education	59	38	43	22	35	36	43	21	18	20	-66.1
Teaching fields	233	250	229	275	265	294	313	263	271	260	11.6
Other education	116	96	78	75	74	82	167	119	119	147	26.7
Humanities and arts	2,462	2,571	2,741	2,829	2,760	2,763	2,639	2,580	2,565	2,479	0.7
Foreign languages and literature	218	248	238	271	248	238	228	237	247	215	-1.4
History	556	586	602	632	664	632	621	594	513	529	-4.9
Letters	625	615	659	665	657	647	600	591	585	560	-10.4
Other humanities and arts	1,063	1,122	1,242	1,261	1,191	1,246	1,190	1,158	1,220	1,175	10.5
Other <sup>b</sup>	1,326	1,283	1,360	1,479	1,478	1,461	1,473	1,424	1,446	1,414	6.6
Business management and administration	814	792	837	909	909	934	932	872	863	874	7.4

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Communication	247	233	244	244	277	256	261	197	234	205	-17.0
Non-S&E fields nec	265	258	279	326	292	271	280	353	349	335	26.4
Unknown field	0	0	0	0	0	0	0	2	0	0	0.0
Female	22,488	22,699	23,526	24,365	24,813	25,347	25,222	25,451	25,321	25,542	13.6
Life sciences	6,213	6,289	6,614	6,712	6,930	6,929	6,908	6,937	7,101	6,961	12.0
Agricultural sciences and natural resources	490	554	554	622	646	688	623	736	694	730	49.0
Biological and biomedical sciences	4,219	4,272	4,422	4,410	4,747	4,682	4,707	4,508	4,699	4,501	6.7
Health sciences	1,504	1,463	1,638	1,680	1,537	1,559	1,578	1,693	1,708	1,730	15.0
Physical sciences and earth sciences	1,615	1,640	1,730	1,864	1,924	1,987	1,963	2,013	2,117	2,213	37.0
Chemistry	864	922	894	985	1,021	1,074	991	1,031	1,067	1,151	33.2
Geosciences, atmospheric sciences, and ocean sciences	366	330	403	449	475	457	510	525	526	533	45.6
Physics and astronomy	385	388	433	430	428	456	462	457	524	529	37.4
Mathematics and computer sciences	814	813	855	868	934	939	959	974	982	1,095	34.5
Computer and information sciences	347	353	374	341	400	422	420	450	434	510	47.0
Mathematics and statistics	467	460	481	527	534	517	539	524	548	585	25.3
Psychology and social sciences	4,524	4,887	4,955	5,077	5,217	5,315	5,295	5,362	5,241	5,399	19.3
Psychology	2,389	2,573	2,558	2,594	2,648	2,719	2,776	2,803	2,728	2,818	18.0
Anthropology	306	330	360	362	328	307	289	291	298	290	-5.2
Economics	369	387	402	416	404	434	417	425	396	429	16.3
Political science and government	294	296	303	333	341	332	283	294	304	274	-6.8
Sociology	389	402	402	377	431	457	356	419	418	404	3.9
Other social sciences	777	899	930	995	1,065	1,066	1,174	1,130	1,097	1,184	52.4
Engineering	1,746	1,782	1,887	2,052	2,184	2,297	2,189	2,429	2,450	2,468	41.4
Aerospace, aeronautical, and astronautical engineering	37	34	39	55	55	53	56	43	46	56	51.4
Bioengineering and biomedical engineering	315	335	335	355	384	427	403	427	445	444	41.0
Chemical engineering	248	256	256	258	290	317	296	271	293	316	27.4
Civil engineering	169	147	106	125	147	175	127	203	170	159	-5.9
Electrical, electronics, and communications engineering	315	301	336	279	325	293	293	355	344	297	-5.7
Industrial and manufacturing engineering	55	78	62	65	89	89	71	80	68	62	12.7
Materials science engineering	175	166	184	217	211	223	262	249	274	290	65.7
Mechanical engineering	125	150	177	196	197	201	201	239	216	250	100.0
Other engineering	307	315	392	502	486	519	480	562	594	594	93.5
Education	3,624	3,234	3,298	3,364	3,311	3,492	3,601	3,305	3,328	3,213	-11.3
Education administration	892	574	665	593	522	576	520	578	573	497	-44.3
Education research	1,736	1,736	1,807	1,877	1,828	1,922	1,666	1,645	1,738	1,650	-5.0
Teacher education	186	166	113	87	117	120	137	92	78	84	-54.8
Teaching fields	566	555	527	617	649	659	853	662	689	700	23.7
Other education	244	203	186	190	195	215	425	328	250	282	15.6
Humanities and arts	2,552	2,654	2,818	2,885	2,760	2,830	2,842	2,705	2,572	2,573	0.8
Foreign languages and literature	382	396	446	430	424	418	371	381	370	394	3.1
History	449	479	484	516	521	514	527	464	435	383	-14.7
Letters	891	898	978	941	894	936	931	871	853	827	-7.2
Other humanities and arts	830	881	910	998	921	962	1,013	989	914	969	16.7
Other <sup>b</sup>	1,400	1,400	1,369	1,543	1,553	1,558	1,465	1,726	1,530	1,620	15.7

**Table 15****Doctorate recipients, by sex and major field of study: 2010–19**

(Number and percent)

Sex and field	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% change 2010–19
Business management and administration	550	535	564	641	669	648	575	692	609	662	20.4
Communication	390	417	350	401	383	411	410	425	395	338	-13.3
Non-S&E fields nec	460	448	455	501	501	499	480	609	526	620	34.8
Unknown field	0	0	0	0	0	0	0	0	0	0	0.0

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

<sup>a</sup> Includes respondents who did not report sex.<sup>b</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.

**Source(s):**

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