

TABLE 4-1

**Distribution of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers across science, engineering, and health fields: 2019**

(Number and percent)

Detailed field	Graduate students						Postdoctoral appointees		Doctorate-holding nonfaculty researchers	
	All graduate students		Master's		Doctoral					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All detailed fields	690,117	100.0	408,228	100.0	281,889	100.0	66,247	100.0	30,349	100.0
Science	453,691	65.7	259,795	63.6	193,896	68.8	38,503	58.1	18,819	62.0
Agricultural sciences	9,518	1.4	5,629	1.4	3,889	1.4	1,079	1.6	645	2.1
Biological and biomedical sciences	91,993	13.3	38,078	9.3	53,915	19.1	21,847	33.0	8,229	27.1
Biochemistry	5,342	0.8	808	0.2	4,534	1.6	1,912	2.9	755	2.5
Biology	15,801	2.3	8,635	2.1	7,166	2.5	2,203	3.3	766	2.5
Biomedical sciences	9,820	1.4	5,241	1.3	4,579	1.6	1,942	2.9	622	2.0
Biophysics	897	0.1	7	*	890	0.3	164	0.2	36	0.1
Biostatistics and bioinformatics	6,228	0.9	3,036	0.7	3,192	1.1	721	1.1	400	1.3
Biotechnology	3,255	0.5	3,157	0.8	98	*	87	0.1	91	0.3
Botany and plant biology	1,687	0.2	392	0.1	1,295	0.5	667	1.0	314	1.0
Cell, cellular biology, and anatomical sciences	5,902	0.9	927	0.2	4,975	1.8	1,785	2.7	579	1.9
Ecology and population biology	3,510	0.5	939	0.2	2,571	0.9	414	0.6	183	0.6
Epidemiology	4,692	0.7	2,776	0.7	1,916	0.7	285	0.4	99	0.3
Genetics	2,663	0.4	581	0.1	2,082	0.7	1,472	2.2	501	1.7
Microbiological sciences and immunology	5,307	0.8	1,370	0.3	3,937	1.4	1,985	3.0	764	2.5
Molecular biology	1,531	0.2	378	0.1	1,153	0.4	570	0.9	233	0.8
Neurobiology and neuroscience	5,500	0.8	362	0.1	5,138	1.8	2,216	3.3	726	2.4
Nutrition science	3,333	0.5	2,385	0.6	948	0.3	192	0.3	136	0.4
Pathology and experimental pathology	930	0.1	87	*	843	0.3	1,302	2.0	422	1.4
Pharmacology and toxicology	3,074	0.4	923	0.2	2,151	0.8	1,021	1.5	377	1.2
Physiology	5,297	0.8	2,594	0.6	2,703	1.0	1,640	2.5	723	2.4
Zoology and animal biology	2,089	0.3	891	0.2	1,198	0.4	406	0.6	168	0.6
Biological and biomedical sciences nec	5,135	0.7	2,589	0.6	2,546	0.9	863	1.3	334	1.1
Computer and information sciences	101,284	14.7	84,092	20.6	17,192	6.1	878	1.3	510	1.7
Computer science	33,274	4.8	24,628	6.0	8,646	3.1	487	0.7	274	0.9
Computer and information sciences, general	40,650	5.9	33,698	8.3	6,952	2.5	263	0.4	137	0.5
Computer and information sciences nec	27,360	4.0	25,766	6.3	1,594	0.6	128	0.2	99	0.3
Geosciences, atmospheric sciences, and ocean sciences	11,878	1.7	5,327	1.3	6,551	2.3	1,778	2.7	2,177	7.2
Atmospheric sciences and meteorology	1,339	0.2	473	0.1	866	0.3	249	0.4	434	1.4
Geological and earth sciences	7,849	1.1	3,610	0.9	4,239	1.5	845	1.3	1,104	3.6
Ocean and marine sciences	2,690	0.4	1,244	0.3	1,446	0.5	393	0.6	321	1.1
Geosciences, atmospheric sciences, and ocean sciences nec	ne	ne	ne	ne	ne	ne	291	0.4	318	1.0
Mathematics and statistics	33,159	4.8	19,594	4.8	13,565	4.8	1,070	1.6	305	1.0
Mathematics and applied mathematics	22,241	3.2	11,933	2.9	10,308	3.7	892	1.3	226	0.7
Statistics	10,918	1.6	7,661	1.9	3,257	1.2	178	0.3	79	0.3
Multidisciplinary and interdisciplinary studies	11,181	1.6	8,203	2.0	2,978	1.1	972	1.5	820	2.7
Natural resources and conservation	11,743	1.7	8,066	2.0	3,677	1.3	806	1.2	582	1.9
Environmental science and studies	5,621	0.8	3,883	1.0	1,738	0.6	277	0.4	215	0.7

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(Number and percent)

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	All graduate students		Master's		Doctoral					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Forestry, natural resources, and conservation	6,122	0.9	4,183	1.0	1,939	0.7	529	0.8	367	1.2
Physical sciences	42,867	6.2	6,361	1.6	36,506	13.0	7,159	10.8	3,316	10.9
Astronomy and astrophysics	1,450	0.2	77	*	1,373	0.5	571	0.9	602	2.0
Chemistry	22,900	3.3	3,152	0.8	19,748	7.0	3,383	5.1	983	3.2
Materials sciences	1,552	0.2	539	0.1	1,013	0.4	259	0.4	64	0.2
Physics	16,115	2.3	2,164	0.5	13,951	4.9	2,721	4.1	1,458	4.8
Physical sciences nec	850	0.1	429	0.1	421	0.1	225	0.3	209	0.7
Psychology	61,069	8.8	40,838	10.0	20,231	7.2	1,152	1.7	576	1.9
Clinical psychology	7,372	1.1	3,587	0.9	3,785	1.3	72	0.1	11	*
Counseling and applied psychology	35,859	5.2	29,322	7.2	6,537	2.3	167	0.3	120	0.4
Psychology, general	13,106	1.9	6,357	1.6	6,749	2.4	663	1.0	328	1.1
Research and experimental psychology	4,732	0.7	1,572	0.4	3,160	1.1	250	0.4	117	0.4
Social sciences	78,999	11.4	43,607	10.7	35,392	12.6	1,762	2.7	1,659	5.5
Agricultural economics	1,506	0.2	700	0.2	806	0.3	52	0.1	51	0.2
Anthropology	6,598	1.0	2,233	0.5	4,365	1.5	148	0.2	99	0.3
Criminal justice and safety studies	5,817	0.8	4,917	1.2	900	0.3	16	*	13	*
Economics (except agricultural)	14,129	2.0	6,084	1.5	8,045	2.9	132	0.2	155	0.5
Geography and cartography	4,401	0.6	2,660	0.7	1,741	0.6	128	0.2	110	0.4
History and philosophy of science	289	*	32	*	257	0.1	21	*	3	*
Human development	2,070	0.3	1,339	0.3	731	0.3	156	0.2	164	0.5
International relations and national security studies	7,070	1.0	6,657	1.6	413	0.1	85	0.1	50	0.2
Linguistics	2,769	0.4	1,153	0.3	1,616	0.6	39	0.1	29	0.1
Political science and government	8,385	1.2	2,897	0.7	5,488	1.9	170	0.3	83	0.3
Public policy analysis	8,711	1.3	6,297	1.5	2,414	0.9	220	0.3	337	1.1
Sociology	7,333	1.1	2,263	0.6	5,070	1.8	159	0.2	164	0.5
Social sciences nec	9,921	1.4	6,375	1.6	3,546	1.3	436	0.7	401	1.3
Engineering	164,004	23.8	91,939	22.5	72,065	25.6	8,266	12.5	3,909	12.9
Aerospace, aeronautical, and astronautical engineering	6,255	0.9	3,701	0.9	2,554	0.9	227	0.3	124	0.4
Agricultural engineering	1,156	0.2	494	0.1	662	0.2	112	0.2	55	0.2
Bioengineering and biomedical engineering	12,050	1.7	4,335	1.1	7,715	2.7	1,515	2.3	492	1.6
Biological and biosystems engineering	308	*	89	*	219	0.1	87	0.1	53	0.2
Chemical engineering	9,689	1.4	2,632	0.6	7,057	2.5	1,157	1.7	328	1.1
Civil engineering	19,625	2.8	11,873	2.9	7,752	2.8	865	1.3	492	1.6
Electrical, electronics, and communications engineering	46,754	6.8	28,177	6.9	18,577	6.6	1,305	2.0	637	2.1
Engineering mechanics, physics, and science	2,299	0.3	852	0.2	1,447	0.5	180	0.3	186	0.6
Industrial and manufacturing engineering	15,674	2.3	11,912	2.9	3,762	1.3	167	0.3	137	0.5
Mechanical engineering	26,108	3.8	14,861	3.6	11,247	4.0	1,142	1.7	531	1.7
Metallurgical and materials engineering	6,590	1.0	1,974	0.5	4,616	1.6	642	1.0	242	0.8
Mining engineering	493	0.1	292	0.1	201	0.1	23	*	61	0.2
Nanotechnology	195	*	49	*	146	0.1	151	0.2	76	0.3
Nuclear engineering	1,449	0.2	418	0.1	1,031	0.4	80	0.1	41	0.1

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Petroleum engineering	1,249	0.2	642	0.2	607	0.2	72	0.1	82	0.3
Engineering nec	14,110	2.0	9,638	2.4	4,472	1.6	541	0.8	372	1.2
Health	72,422	10.5	56,494	13.8	15,928	5.7	19,478	29.4	7,621	25.1
Clinical medicine <sup>a</sup>	30,822	4.5	26,251	6.4	4,571	1.6	16,650	25.1	6,273	20.7
Anesthesiology	ne	ne	ne	ne	ne	ne	494	0.7	155	0.5
Cardiology	ne	ne	ne	ne	ne	ne	788	1.2	200	0.7
Endocrinology	ne	ne	ne	ne	ne	ne	345	0.5	107	0.4
Gastroenterology	ne	ne	ne	ne	ne	ne	287	0.4	98	0.3
Hematology	ne	ne	ne	ne	ne	ne	434	0.7	160	0.5
Neurology	ne	ne	ne	ne	ne	ne	1,466	2.2	496	1.6
Obstetrics and gynecology	ne	ne	ne	ne	ne	ne	312	0.5	104	0.3
Oncology and cancer research	ne	ne	ne	ne	ne	ne	1,830	2.8	630	2.1
Ophthalmology	ne	ne	ne	ne	ne	ne	523	0.8	261	0.9
Otorhinolaryngology	ne	ne	ne	ne	ne	ne	275	0.4	121	0.4
Pediatrics	ne	ne	ne	ne	ne	ne	1,264	1.9	597	2.0
Psychiatry	ne	ne	ne	ne	ne	ne	1,004	1.5	241	0.8
Public health	29,594	4.3	25,403	6.2	4,191	1.5	843	1.3	687	2.3
Pulmonary disease	ne	ne	ne	ne	ne	ne	275	0.4	107	0.4
Radiological sciences	ne	ne	ne	ne	ne	ne	1,152	1.7	391	1.3
Surgery	ne	ne	ne	ne	ne	ne	1,376	2.1	527	1.7
Clinical medicine nec	1,228	0.2	848	0.2	380	0.1	3,982	6.0	1,391	4.6
Other health	41,600	6.0	30,243	7.4	11,357	4.0	2,828	4.3	1,348	4.4
Communication disorders sciences	17,257	2.5	16,346	4.0	911	0.3	75	0.1	46	0.2
Dental sciences	1,523	0.2	1,315	0.3	208	0.1	316	0.5	110	0.4
Nursing science	5,300	0.8	1,861	0.5	3,439	1.2	120	0.2	97	0.3
Pharmaceutical sciences	4,308	0.6	1,187	0.3	3,121	1.1	1,091	1.6	392	1.3
Veterinary biomedical and clinical sciences	1,573	0.2	881	0.2	692	0.2	679	1.0	290	1.0
Other health nec	11,639	1.7	8,653	2.1	2,986	1.1	547	0.8	413	1.4

\* = value &lt; 0.05%; ne = not eligible.

nec = not elsewhere classified.

<sup>a</sup> Clinical medicine includes graduate students in public health and clinical medicine nec. Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.