

TABLE 4-1

**Distribution of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers across science, engineering, and health fields: 2020**

(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	697,813	100.0	414,478	100.0	283,335	100.0	65,681	100.0	29,661	100.0
Science	464,646	66.6	267,904	64.6	196,742	69.4	38,741	59.0	18,212	61.4
Agricultural and veterinary sciences	10,800	1.5	6,487	1.6	4,313	1.5	1,678	2.6	964	3.3
Agricultural sciences	9,380	1.3	5,589	1.3	3,791	1.3	1,046	1.6	650	2.2
Veterinary biomedical and clinical sciences	1,420	0.2	898	0.2	522	0.2	632	1.0	314	1.1
Biological and biomedical sciences	94,825	13.6	39,920	9.6	54,905	19.4	21,902	33.3	8,112	27.3
Biochemistry	5,537	0.8	889	0.2	4,648	1.6	1,863	2.8	800	2.7
Biology	15,649	2.2	8,381	2.0	7,268	2.6	2,169	3.3	776	2.6
Biomedical sciences	10,412	1.5	5,898	1.4	4,514	1.6	1,879	2.9	406	1.4
Biophysics	868	0.1	8	*	860	0.3	147	0.2	66	0.2
Biostatistics and bioinformatics	6,482	0.9	3,143	0.8	3,339	1.2	830	1.3	380	1.3
Biotechnology	3,244	0.5	3,143	0.8	101	*	96	0.1	95	0.3
Botany and plant biology	1,631	0.2	376	0.1	1,255	0.4	579	0.9	258	0.9
Cell, cellular biology, and anatomical sciences	5,962	0.9	954	0.2	5,008	1.8	1,661	2.5	548	1.8
Ecology and population biology	3,777	0.5	1,052	0.3	2,725	1.0	467	0.7	230	0.8
Epidemiology	5,185	0.7	3,153	0.8	2,032	0.7	307	0.5	126	0.4
Genetics	2,802	0.4	620	0.1	2,182	0.8	1,485	2.3	545	1.8
Microbiological sciences and immunology	5,773	0.8	1,649	0.4	4,124	1.5	2,028	3.1	750	2.5
Molecular biology	1,618	0.2	378	0.1	1,240	0.4	722	1.1	225	0.8
Neurobiology and neuroscience	5,820	0.8	545	0.1	5,275	1.9	2,075	3.2	789	2.7
Nutrition science	3,359	0.5	2,370	0.6	989	0.3	191	0.3	143	0.5
Pathology and experimental pathology	858	0.1	105	*	753	0.3	1,263	1.9	401	1.4
Pharmacology and toxicology	2,944	0.4	770	0.2	2,174	0.8	1,026	1.6	394	1.3
Physiology	5,802	0.8	3,044	0.7	2,758	1.0	1,804	2.7	731	2.5
Zoology and animal biology	2,047	0.3	869	0.2	1,178	0.4	397	0.6	137	0.5
Biological and biomedical sciences nec	5,055	0.7	2,573	0.6	2,482	0.9	913	1.4	312	1.1
Computer and information sciences	98,864	14.2	80,690	19.5	18,174	6.4	823	1.3	458	1.5
Artificial intelligence, informatics, and computer and information science topics	4,375	0.6	3,419	0.8	956	0.3	37	0.1	43	0.1
Computer and information sciences	29,107	4.2	23,625	5.7	5,482	1.9	187	0.3	104	0.4
Computer and information systems security	7,293	1.0	7,023	1.7	270	0.1	6	*	2	*
Computer science	32,328	4.6	22,670	5.5	9,658	3.4	466	0.7	218	0.7
Information science and studies	12,916	1.9	11,671	2.8	1,245	0.4	40	0.1	21	0.1
Information technology	6,023	0.9	5,618	1.4	405	0.1	18	*	14	*
Computer and information sciences nec	6,822	1.0	6,664	1.6	158	0.1	69	0.1	56	0.2
Geosciences, atmospheric sciences, and ocean sciences	11,792	1.7	5,277	1.3	6,515	2.3	1,790	2.7	2,150	7.2
Atmospheric sciences and meteorology	1,305	0.2	458	0.1	847	0.3	266	0.4	461	1.6
Geological and earth sciences	7,726	1.1	3,561	0.9	4,165	1.5	879	1.3	1,046	3.5
Ocean and marine sciences	2,761	0.4	1,258	0.3	1,503	0.5	360	0.5	330	1.1
Geosciences, atmospheric sciences, and ocean sciences nec	ne	ne	ne	ne	ne	ne	285	0.4	313	1.1
Mathematics and statistics	31,971	4.6	18,284	4.4	13,687	4.8	1,076	1.6	201	0.7
Applied mathematics	8,889	1.3	6,678	1.6	2,211	0.8	207	0.3	50	0.2
Mathematics	12,469	1.8	4,380	1.1	8,089	2.9	717	1.1	94	0.3

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(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
Statistics	10,613	1.5	7,226	1.7	3,387	1.2	152	0.2	57	0.2
Multidisciplinary and interdisciplinary studies	14,533	2.1	10,980	2.6	3,553	1.3	832	1.3	679	2.3
Biological and physical sciences	1,808	0.3	993	0.2	815	0.3	119	0.2	56	0.2
Computational science	2,266	0.3	1,968	0.5	298	0.1	26	*	38	0.1
Data science and data analytics	2,166	0.3	2,124	0.5	42	*	57	0.1	22	0.1
International and global studies	1,514	0.2	1,341	0.3	173	0.1	13	*	16	0.1
Multidisciplinary and interdisciplinary studies nec	6,779	1.0	4,554	1.1	2,225	0.8	617	0.9	547	1.8
Natural resources and conservation	12,498	1.8	8,793	2.1	3,705	1.3	845	1.3	573	1.9
Environmental science and studies	5,866	0.8	4,067	1.0	1,799	0.6	279	0.4	167	0.6
Forestry, natural resources, and conservation	6,632	1.0	4,726	1.1	1,906	0.7	566	0.9	406	1.4
Physical sciences	42,616	6.1	6,275	1.5	36,341	12.8	6,937	10.6	2,890	9.7
Astronomy and astrophysics	1,506	0.2	76	*	1,430	0.5	544	0.8	569	1.9
Chemistry	22,485	3.2	3,096	0.7	19,389	6.8	3,294	5.0	906	3.1
Materials sciences	1,492	0.2	464	0.1	1,028	0.4	225	0.3	73	0.2
Physics	16,126	2.3	2,141	0.5	13,985	4.9	2,676	4.1	1,151	3.9
Physical sciences nec	1,007	0.1	498	0.1	509	0.2	198	0.3	191	0.6
Psychology	68,394	9.8	47,279	11.4	21,115	7.5	1,312	2.0	749	2.5
Applied psychology	22,506	3.2	17,673	4.3	4,833	1.7	92	0.1	64	0.2
Clinical psychology	7,148	1.0	3,480	0.8	3,668	1.3	84	0.1	16	0.1
Counseling psychology	17,339	2.5	15,979	3.9	1,360	0.5	31	*	26	0.1
Human development	2,241	0.3	1,499	0.4	742	0.3	122	0.2	137	0.5
Psychology, general	13,427	1.9	6,826	1.6	6,601	2.3	722	1.1	348	1.2
Research and experimental psychology	5,733	0.8	1,822	0.4	3,911	1.4	261	0.4	158	0.5
Social sciences	78,353	11.2	43,919	10.6	34,434	12.2	1,546	2.4	1,436	4.8
Agricultural and natural resource economics	1,242	0.2	603	0.1	639	0.2	33	0.1	52	0.2
Anthropology	6,463	0.9	2,167	0.5	4,296	1.5	153	0.2	81	0.3
Area, ethnic, cultural, gender, and group studies	5,124	0.7	2,642	0.6	2,482	0.9	226	0.3	134	0.5
Criminal justice and safety studies	6,662	1.0	5,674	1.4	988	0.3	17	*	12	*
Criminology	1,626	0.2	1,308	0.3	318	0.1	2	*	7	*
Economics (except agricultural and natural resource)	14,073	2.0	6,114	1.5	7,959	2.8	123	0.2	176	0.6
Geography and cartography	4,397	0.6	2,745	0.7	1,652	0.6	140	0.2	103	0.3
International relations and national security studies	7,730	1.1	7,322	1.8	408	0.1	68	0.1	51	0.2
Linguistics	2,850	0.4	1,164	0.3	1,686	0.6	41	0.1	39	0.1
Political science and government	8,438	1.2	3,072	0.7	5,366	1.9	148	0.2	64	0.2
Public policy analysis	8,899	1.3	6,352	1.5	2,547	0.9	229	0.3	361	1.2
Sociology and population studies	7,409	1.1	2,342	0.6	5,067	1.8	155	0.2	148	0.5
Urban studies and affairs	1,312	0.2	907	0.2	405	0.1	5	*	18	0.1
Social sciences, other	2,128	0.3	1,507	0.4	621	0.2	206	0.3	190	0.6
Engineering	157,729	22.6	86,450	20.9	71,279	25.2	8,462	12.9	3,921	13.2
Aerospace, aeronautical, and astronautical engineering	6,971	1.0	4,326	1.0	2,645	0.9	233	0.4	149	0.5

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Biological, biomedical, and biosystems engineering	12,775	1.8	4,536	1.1	8,239	2.9	1,696	2.6	525	1.8
Chemical, petroleum, and chemical-related engineering	10,554	1.5	2,942	0.7	7,612	2.7	1,157	1.8	330	1.1
Chemical engineering	9,457	1.4	2,426	0.6	7,031	2.5	1,108	1.7	274	0.9
Petroleum engineering	1,097	0.2	516	0.1	581	0.2	49	0.1	56	0.2
Civil, environmental, transportation and related engineering fields	18,304	2.6	10,819	2.6	7,485	2.6	1,006	1.5	488	1.6
Civil engineering	15,220	2.2	8,703	2.1	6,517	2.3	904	1.4	451	1.5
Architectural, environmental, construction and surveying engineering	3,084	0.4	2,116	0.5	968	0.3	102	0.2	37	0.1
Electrical, electronics, communications and computer engineering	43,032	6.2	25,312	6.1	17,720	6.3	1,302	2.0	706	2.4
Electrical, electronics, and communications engineering	31,440	4.5	16,746	4.0	14,694	5.2	1,242	1.9	647	2.2
Computer engineering	11,592	1.7	8,566	2.1	3,026	1.1	60	0.1	59	0.2
Industrial, manufacturing, systems engineering and operations research	14,869	2.1	11,030	2.7	3,839	1.4	194	0.3	155	0.5
Industrial and manufacturing engineering	7,982	1.1	5,569	1.3	2,413	0.9	83	0.1	53	0.2
Systems engineering and operations research	6,887	1.0	5,461	1.3	1,426	0.5	111	0.2	102	0.3
Mechanical engineering	25,782	3.7	14,305	3.5	11,477	4.1	1,149	1.7	469	1.6
Metallurgical, mining, materials and related engineering fields	7,181	1.0	2,299	0.6	4,882	1.7	630	1.0	299	1.0
Other engineering	18,261	2.6	10,881	2.6	7,380	2.6	1,095	1.7	800	2.7
Agricultural engineering	1,058	0.2	404	0.1	654	0.2	122	0.2	54	0.2
Engineering mechanics, physics, and science	2,208	0.3	740	0.2	1,468	0.5	199	0.3	177	0.6
Nuclear engineering	1,479	0.2	441	0.1	1,038	0.4	81	0.1	45	0.2
Engineering, other	13,516	1.9	9,296	2.2	4,220	1.5	693	1.1	524	1.8
Health	75,438	10.8	60,124	14.5	15,314	5.4	18,478	28.1	7,528	25.4
Clinical medicine <sup>a</sup>	34,544	5.0	29,748	7.2	4,796	1.7	16,287	24.8	6,500	21.9
Medical clinical sciences and clinical and medical laboratory sciences	1,370	0.2	927	0.2	443	0.2	430	0.7	167	0.6
Public health	33,174	4.8	28,821	7.0	4,353	1.5	914	1.4	616	2.1
Anesthesiology	ne	ne	ne	ne	ne	ne	466	0.7	122	0.4
Cardiology and cardiovascular disease	ne	ne	ne	ne	ne	ne	706	1.1	182	0.6
Endocrinology, diabetes, and metabolism	ne	ne	ne	ne	ne	ne	334	0.5	91	0.3
Gastroenterology	ne	ne	ne	ne	ne	ne	277	0.4	96	0.3
Hematology	ne	ne	ne	ne	ne	ne	429	0.7	164	0.6
Neurology and neurosurgery	ne	ne	ne	ne	ne	ne	1,491	2.3	469	1.6
Obstetrics and gynecology	ne	ne	ne	ne	ne	ne	289	0.4	93	0.3
Oncology and cancer research	ne	ne	ne	ne	ne	ne	1,541	2.3	644	2.2
Ophthalmology	ne	ne	ne	ne	ne	ne	456	0.7	287	1.0
Otorhinolaryngology	ne	ne	ne	ne	ne	ne	314	0.5	125	0.4
Pediatrics	ne	ne	ne	ne	ne	ne	1,337	2.0	643	2.2
Psychiatry	ne	ne	ne	ne	ne	ne	1,088	1.7	307	1.0
Pulmonary disease	ne	ne	ne	ne	ne	ne	296	0.5	119	0.4

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	All graduate students		Master's		Doctoral					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Radiological sciences	ne	ne	ne	ne	ne	ne	1,180	1.8	401	1.4
Surgery	ne	ne	ne	ne	ne	ne	1,193	1.8	507	1.7
Clinical medicine nec	ne	ne	ne	ne	ne	ne	3,546	5.4	1,467	4.9
Other health	40,894	5.9	30,376	7.3	10,518	3.7	2,191	3.3	1,028	3.5
Communication disorders sciences	17,606	2.5	16,762	4.0	844	0.3	82	0.1	49	0.2
Dental sciences	1,583	0.2	1,366	0.3	217	0.1	292	0.4	103	0.3
Kinesiology and exercise science	6,001	0.9	4,977	1.2	1,024	0.4	84	0.1	46	0.2
Nursing science	4,847	0.7	1,488	0.4	3,359	1.2	127	0.2	103	0.3
Pharmaceutical sciences	4,512	0.6	1,619	0.4	2,893	1.0	1,141	1.7	377	1.3
Other health nec	6,345	0.9	4,164	1.0	2,181	0.8	465	0.7	350	1.2

\* = 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, radiological sciences, 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 (GSS). Percentages may not add to total because of rounding. For more information on the mapping of GSS fields and codes, see technical table A-17.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2020.