

TABLE 4-2

Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2020

(Number and percent)

Detailed field	Graduate students						Postdoctoral appointees		Doctorate-holding nonfaculty researchers	
	All graduate students		Master's		Doctoral					
	Total number	Percent female	Total number	Percent female	Total number	Percent female	Total number	Percent female	Total number	Percent female
All detailed fields	697,813	48.4	414,478	51.2	283,335	44.3	65,681	41.8	29,661	41.8
Science	464,646	51.1	267,904	53.1	196,742	48.5	38,741	41.2	18,212	41.6
Agricultural and veterinary sciences	10,800	59.2	6,487	62.3	4,313	54.6	1,678	48.7	964	48.9
Agricultural sciences	9,380	57.7	5,589	60.4	3,791	53.6	1,046	42.4	650	44.2
Veterinary biomedical and clinical sciences	1,420	69.7	898	74.3	522	61.9	632	59.2	314	58.6
Biological and biomedical sciences	94,825	60.0	39,920	65.1	54,905	56.3	21,902	45.3	8,112	47.3
Biochemistry	5,537	51.9	889	55.7	4,648	51.2	1,863	39.9	800	40.5
Biology	15,649	60.2	8,381	64.0	7,268	55.8	2,169	45.4	776	47.4
Biomedical sciences	10,412	62.1	5,898	64.5	4,514	58.9	1,879	48.0	406	43.8
Biophysics	868	38.6	8	62.5	860	38.4	147	33.3	66	28.8
Biostatistics and bioinformatics	6,482	51.4	3,143	57.4	3,339	45.8	830	39.5	380	42.9
Biotechnology	3,244	59.7	3,143	59.6	101	65.3	96	39.6	95	40.0
Botany and plant biology	1,631	53.3	376	55.6	1,255	52.7	579	43.7	258	45.0
Cell, cellular biology, and anatomical sciences	5,962	56.9	954	60.3	5,008	56.2	1,661	46.7	548	46.9
Ecology and population biology	3,777	59.5	1,052	62.5	2,725	58.3	467	48.0	230	42.2
Epidemiology	5,185	73.2	3,153	74.3	2,032	71.4	307	60.3	126	63.5
Genetics	2,802	61.6	620	80.5	2,182	56.2	1,485	43.6	545	46.2
Microbiological sciences and immunology	5,773	60.1	1,649	67.0	4,124	57.3	2,028	48.1	750	52.7
Molecular biology	1,618	58.2	378	65.9	1,240	55.9	722	40.9	225	36.4
Neurobiology and neuroscience	5,820	57.6	545	65.0	5,275	56.9	2,075	45.1	789	48.5
Nutrition science	3,359	85.0	2,370	87.4	989	79.3	191	62.8	143	57.3
Pathology and experimental pathology	858	61.4	105	72.4	753	59.9	1,263	43.2	401	55.4
Pharmacology and toxicology	2,944	60.6	770	67.4	2,174	58.2	1,026	45.6	394	45.7
Physiology	5,802	56.4	3,044	58.3	2,758	54.2	1,804	48.4	731	52.9
Zoology and animal biology	2,047	56.2	869	59.1	1,178	54.0	397	42.3	137	45.3
Biological and biomedical sciences nec	5,055	62.4	2,573	66.2	2,482	58.4	913	45.6	312	47.8
Computer and information sciences	98,864	31.1	80,690	32.0	18,174	26.9	823	21.4	458	24.5
Artificial intelligence, informatics, and computer and information science topics	4,375	37.6	3,419	38.4	956	34.6	37	29.7	43	25.6
Computer and information sciences	29,107	25.4	23,625	25.8	5,482	23.7	187	17.6	104	20.2
Computer and information systems security	7,293	26.7	7,023	26.9	270	23.0	6	66.7	2	0.0
Computer science	32,328	27.1	22,670	28.3	9,658	24.4	466	18.9	218	21.1
Information science and studies	12,916	47.0	11,671	46.8	1,245	49.4	40	27.5	21	52.4
Information technology	6,023	42.5	5,618	42.4	405	43.0	18	61.1	14	35.7

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	All graduate students		Master's		Doctoral					
	Total number	Percent female	Total number	Percent female	Total number	Percent female	Total number	Percent female	Total number	Percent female
Computer and information sciences nec	6,822	34.2	6,664	34.3	158	29.7	69	26.1	56	32.1
Geosciences, atmospheric sciences, and ocean sciences	11,792	48.9	5,277	50.0	6,515	48.1	1,790	39.9	2,150	31.0
Atmospheric sciences and meteorology	1,305	39.6	458	40.2	847	39.3	266	33.5	461	26.2
Geological and earth sciences	7,726	46.3	3,561	46.3	4,165	46.4	879	37.7	1,046	31.6
Ocean and marine sciences	2,761	60.6	1,258	64.1	1,503	57.7	360	49.2	330	40.3
Geosciences, atmospheric sciences, and ocean sciences nec	ne	ne	ne	ne	ne	ne	285	41.1	313	26.2
Mathematics and statistics	31,971	36.2	18,284	41.1	13,687	29.6	1,076	21.0	201	31.3
Applied mathematics	8,889	36.7	6,678	38.2	2,211	32.3	207	19.3	50	32.0
Mathematics	12,469	31.3	4,380	40.5	8,089	26.4	717	20.9	94	28.7
Statistics	10,613	41.4	7,226	44.2	3,387	35.5	152	23.7	57	35.1
Multidisciplinary and interdisciplinary studies	14,533	52.4	10,980	52.4	3,553	52.6	832	45.8	679	39.5
Biological and physical sciences	1,808	56.8	993	58.2	815	55.1	119	44.5	56	41.1
Computational science	2,266	30.4	1,968	31.4	298	24.2	26	42.3	38	13.2
Data science and data analytics	2,166	38.2	2,124	38.3	42	33.3	57	38.6	22	27.3
International and global studies	1,514	54.1	1,341	53.3	173	60.1	13	61.5	16	62.5
Multidisciplinary and interdisciplinary studies nec	6,779	62.8	4,554	66.4	2,225	55.3	617	46.5	547	41.0
Natural resources and conservation	12,498	58.7	8,793	60.0	3,705	55.6	845	43.0	573	39.3
Environmental science and studies	5,866	61.7	4,067	62.6	1,799	59.8	279	47.3	167	43.1
Forestry, natural resources, and conservation	6,632	56.0	4,726	57.8	1,906	51.7	566	40.8	406	37.7
Physical sciences	42,616	35.2	6,275	39.5	36,341	34.5	6,937	24.7	2,890	22.7
Astronomy and astrophysics	1,506	43.0	76	39.5	1,430	43.1	544	29.0	569	20.7
Chemistry	22,485	43.7	3,096	48.9	19,389	42.9	3,294	27.3	906	27.6
Materials sciences	1,492	32.6	464	30.2	1,028	33.8	225	24.9	73	20.5
Physics	16,126	22.0	2,141	23.3	13,985	21.8	2,676	20.7	1,151	19.6
Physical sciences nec	1,007	49.1	498	59.8	509	38.5	198	24.7	191	24.1
Psychology	68,394	79.0	47,279	81.1	21,115	74.3	1,312	63.9	749	66.5
Applied psychology	22,506	79.8	17,673	80.8	4,833	76.1	92	71.7	64	65.6
Clinical psychology	7,148	79.5	3,480	81.2	3,668	77.9	84	67.9	16	75.0
Counseling psychology	17,339	82.0	15,979	82.4	1,360	77.2	31	77.4	26	73.1
Human development	2,241	88.8	1,499	91.1	742	84.1	122	76.2	137	83.2
Psychology, general	13,427	74.6	6,826	76.6	6,601	72.6	722	61.5	348	61.5
Research and experimental psychology	5,733	72.7	1,822	81.2	3,911	68.7	261	59.4	158	61.4
Social sciences	78,353	53.9	43,919	55.5	34,434	51.9	1,546	53.0	1,436	54.3
Agricultural and natural resource economics	1,242	47.0	603	47.8	639	46.3	33	45.5	52	46.2

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Anthropology	6,463	66.5	2,167	69.2	4,296	65.2	153	65.4	81	58.0
Area, ethnic, cultural, gender, and group studies	5,124	66.2	2,642	66.3	2,482	66.2	226	57.5	134	63.4
Criminal justice and safety studies	6,662	62.0	5,674	63.1	988	56.0	17	76.5	12	91.7
Criminology	1,626	71.0	1,308	71.9	318	67.6	2	100.0	7	71.4
Economics (except agricultural and natural resource)	14,073	37.4	6,114	40.6	7,959	34.9	123	35.8	176	43.2
Geography and cartography	4,397	48.5	2,745	45.3	1,652	53.8	140	47.9	103	37.9
International relations and national security studies	7,730	48.7	7,322	48.9	408	45.6	68	36.8	51	41.2
Linguistics	2,850	60.4	1,164	64.9	1,686	57.2	41	53.7	39	64.1
Political science and government	8,438	45.1	3,072	46.1	5,366	44.4	148	37.2	64	56.3
Public policy analysis	8,899	57.0	6,352	58.6	2,547	53.2	229	62.9	361	54.6
Sociology and population studies	7,409	65.7	2,342	69.8	5,067	63.9	155	59.4	148	60.8
Urban studies and affairs	1,312	60.0	907	59.8	405	60.5	5	60.0	18	33.3
Social sciences, other	2,128	60.2	1,507	62.4	621	54.9	206	52.4	190	62.1
Engineering	157,729	27.0	86,450	26.5	71,279	27.6	8,462	24.8	3,921	23.0
Aerospace, aeronautical, and astronautical engineering	6,971	17.9	4,326	17.6	2,645	18.6	233	15.5	149	16.8
Biological, biomedical, and biosystems engineering	12,775	45.0	4,536	47.0	8,239	43.9	1,696	35.8	525	36.8
Chemical, petroleum, and chemical-related engineering	10,554	31.8	2,942	30.7	7,612	32.3	1,157	27.7	330	26.4
Chemical engineering	9,457	33.4	2,426	33.4	7,031	33.5	1,108	28.5	274	29.2
Petroleum engineering	1,097	18.0	516	18.2	581	17.7	49	10.2	56	12.5
Civil, environmental, transportation and related engineering fields	18,304	34.8	10,819	35.3	7,485	34.1	1,006	28.1	488	24.2
Civil engineering	15,220	32.6	8,703	32.7	6,517	32.3	904	27.5	451	23.1
Architectural, environmental, construction and surveying engineering	3,084	45.8	2,116	45.6	968	46.4	102	33.3	37	37.8
Electrical, electronics, communications and computer engineering	43,032	21.9	25,312	23.3	17,720	19.8	1,302	16.7	706	16.1
Electrical, electronics, and communications engineering	31,440	20.2	16,746	20.8	14,694	19.4	1,242	16.7	647	15.6
Computer engineering	11,592	26.4	8,566	28.2	3,026	21.3	60	15.0	59	22.0
Industrial, manufacturing, systems engineering and operations research	14,869	30.1	11,030	29.8	3,839	31.0	194	18.6	155	20.0
Industrial and manufacturing engineering	7,982	31.7	5,569	30.9	2,413	33.4	83	19.3	53	20.8
Systems engineering and operations research	6,887	28.2	5,461	28.6	1,426	27.0	111	18.0	102	19.6
Mechanical engineering	25,782	18.2	14,305	16.8	11,477	20.0	1,149	17.8	469	16.6

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Metallurgical, mining, materials and related engineering fields	7,181	31.9	2,299	32.9	4,882	31.4	630	21.6	299	22.4
Other engineering	18,261	27.3	10,881	27.3	7,380	27.3	1,095	23.9	800	23.4
Agricultural engineering	1,058	41.1	404	44.3	654	39.1	122	36.9	54	31.5
Engineering mechanics, physics, and science	2,208	27.0	740	28.6	1,468	26.2	199	17.1	177	18.6
Nuclear engineering	1,479	18.6	441	18.6	1,038	18.6	81	14.8	45	24.4
Engineering, other	13,516	27.2	9,296	26.9	4,220	28.1	693	24.7	524	24.0
Health	75,438	76.4	60,124	78.4	15,314	68.9	18,478	50.7	7,528	52.2
Clinical medicine ^a	34,544	75.5	29,748	76.2	4,796	70.9	16,287	50.4	6,500	51.9
Medical clinical sciences and clinical and medical laboratory sciences	1,370	61.0	927	60.3	443	62.5	430	52.3	167	58.7
Public health	33,174	76.1	28,821	76.7	4,353	71.7	914	64.2	616	66.2
Anesthesiology	ne	ne	ne	ne	ne	ne	466	45.3	122	46.7
Cardiology and cardiovascular disease	ne	ne	ne	ne	ne	ne	706	43.6	182	46.2
Endocrinology, diabetes, and metabolism	ne	ne	ne	ne	ne	ne	334	50.6	91	57.1
Gastroenterology	ne	ne	ne	ne	ne	ne	277	46.2	96	53.1
Hematology	ne	ne	ne	ne	ne	ne	429	48.3	164	48.2
Neurology and neurosurgery	ne	ne	ne	ne	ne	ne	1,491	51.5	469	53.5
Obstetrics and gynecology	ne	ne	ne	ne	ne	ne	289	66.8	93	79.6
Oncology and cancer research	ne	ne	ne	ne	ne	ne	1,541	48.5	644	45.2
Ophthalmology	ne	ne	ne	ne	ne	ne	456	49.3	287	43.2
Otorhinolaryngology	ne	ne	ne	ne	ne	ne	314	48.7	125	49.6
Pediatrics	ne	ne	ne	ne	ne	ne	1,337	59.2	643	53.7
Psychiatry	ne	ne	ne	ne	ne	ne	1,088	61.6	307	62.2
Pulmonary disease	ne	ne	ne	ne	ne	ne	296	50.3	119	52.1
Radiological sciences	ne	ne	ne	ne	ne	ne	1,180	37.5	401	30.2
Surgery	ne	ne	ne	ne	ne	ne	1,193	43.4	507	47.9
Clinical medicine nec	ne	ne	ne	ne	ne	ne	3,546	48.6	1,467	53.2
Other health	40,894	77.2	30,376	80.4	10,518	68.0	2,191	52.4	1,028	54.4
Communication disorders sciences	17,606	95.1	16,762	95.8	844	80.9	82	67.1	49	71.4
Dental sciences	1,583	54.3	1,366	53.9	217	56.7	292	54.5	103	52.4
Kinesiology and exercise science	6,001	49.5	4,977	49.6	1,024	49.1	84	56.0	46	47.8
Nursing science	4,847	87.3	1,488	87.8	3,359	87.1	127	89.0	103	84.5
Pharmaceutical sciences	4,512	57.2	1,619	64.1	2,893	53.3	1,141	44.2	377	41.1
Other health nec	6,345	66.2	4,164	67.9	2,181	62.9	465	57.8	350	58.9

ne = not eligible.

nec = not elsewhere classified.

^a Clinical medicine includes graduate students in public health and in medical clinical sciences and clinical and medical laboratory sciences. 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.