

TABLE 4-2

Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2019
(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	690,117	47.1	408,228	49.6	281,889	43.5	66,247	40.9	30,349	40.8
Science	453,691	50.0	259,795	51.7	193,896	47.7	38,503	40.1	18,819	40.2
Agricultural sciences	9,518	55.5	5,629	57.8	3,889	52.2	1,079	42.4	645	43.9
Biological and biomedical sciences	91,993	58.8	38,078	63.8	53,915	55.4	21,847	44.5	8,229	47.4
Biochemistry	5,342	51.4	808	57.7	4,534	50.2	1,912	39.3	755	42.9
Biology	15,801	58.9	8,635	62.3	7,166	54.9	2,203	43.4	766	45.8
Biomedical sciences	9,820	59.8	5,241	60.7	4,579	58.7	1,942	47.8	622	47.1
Biophysics	897	36.8	7	42.9	890	36.7	164	34.1	36	25.0
Biostatistics and bioinformatics	6,228	50.9	3,036	57.1	3,192	45.0	721	38.6	400	48.0
Biotechnology	3,255	62.0	3,157	61.8	98	67.3	87	33.3	91	46.2
Botany and plant biology	1,687	51.5	392	54.3	1,295	50.7	667	41.5	314	43.3
Cell, cellular biology, and anatomical sciences	5,902	56.1	927	59.4	4,975	55.4	1,785	43.6	579	46.8
Ecology and population biology	3,510	58.5	939	63.4	2,571	56.8	414	44.4	183	44.3
Epidemiology	4,692	70.6	2,776	70.5	1,916	70.7	285	60.4	99	59.6
Genetics	2,663	62.4	581	80.9	2,082	57.2	1,472	44.2	501	43.9
Microbiological sciences and immunology	5,307	59.3	1,370	66.8	3,937	56.7	1,985	49.0	764	51.3
Molecular biology	1,531	55.7	378	61.6	1,153	53.8	570	40.7	233	36.9
Neurobiology and neuroscience	5,500	55.9	362	65.2	5,138	55.3	2,216	45.0	726	49.4
Nutrition science	3,333	84.9	2,385	87.7	948	77.7	192	60.4	136	58.8
Pathology and experimental pathology	930	60.1	87	79.3	843	58.1	1,302	43.2	422	56.6
Pharmacology and toxicology	3,074	60.1	923	67.1	2,151	57.0	1,021	44.2	377	46.9
Physiology	5,297	55.4	2,594	57.7	2,703	53.2	1,640	46.8	723	49.5
Zoology and animal biology	2,089	55.3	891	59.0	1,198	52.6	406	44.3	168	42.9
Biological and biomedical sciences nec	5,135	60.0	2,589	61.3	2,546	58.6	863	44.6	334	47.9
Computer and information sciences	101,284	31.1	84,092	32.1	17,192	26.3	878	21.4	510	23.9
Computer science	33,274	27.1	24,628	28.3	8,646	23.7	487	18.9	274	20.8
Computer and information sciences, general	40,650	29.5	33,698	30.3	6,952	25.7	263	21.7	137	27.7
Computer and information sciences nec	27,360	38.2	25,766	37.9	1,594	42.7	128	30.5	99	27.3
Geosciences, atmospheric sciences, and ocean sciences	11,878	47.5	5,327	48.4	6,551	46.8	1,778	38.2	2,177	31.0
Atmospheric sciences and meteorology	1,339	39.8	473	41.9	866	38.7	249	35.3	434	27.4
Geological and earth sciences	7,849	44.4	3,610	43.7	4,239	45.0	845	35.6	1,104	30.3
Ocean and marine sciences	2,690	60.4	1,244	64.5	1,446	56.8	393	46.1	321	42.7

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(Number and percent)

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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				
Geosciences, atmospheric sciences, and ocean sciences nec	ne	ne	ne	ne	ne	ne	291	37.5	318	26.7
Mathematics and statistics	33,159	37.4	19,594	43.1	13,565	29.1	1,070	25.3	305	29.8
Mathematics and applied mathematics	22,241	34.6	11,933	41.3	10,308	26.9	892	24.0	226	27.4
Statistics	10,918	43.1	7,661	46.0	3,257	36.2	178	32.0	79	36.7
Multidisciplinary and interdisciplinary studies	11,181	53.0	8,203	53.6	2,978	51.3	972	43.9	820	35.0
Natural resources and conservation	11,743	56.9	8,066	57.9	3,677	54.7	806	46.9	582	38.3
Environmental science and studies	5,621	60.3	3,883	61.0	1,738	58.6	277	50.9	215	47.0
Forestry, natural resources, and conservation	6,122	53.9	4,183	55.1	1,939	51.2	529	44.8	367	33.2
Physical sciences	42,867	34.6	6,361	38.5	36,506	34.0	7,159	23.7	3,316	20.3
Astronomy and astrophysics	1,450	40.7	77	33.8	1,373	41.1	571	28.9	602	21.3
Chemistry	22,900	43.3	3,152	48.1	19,748	42.5	3,383	26.2	983	25.8
Materials sciences	1,552	31.4	539	31.5	1,013	31.3	259	25.5	64	18.8
Physics	16,115	21.2	2,164	21.6	13,951	21.2	2,721	19.3	1,458	15.4
Physical sciences nec	850	51.6	429	62.2	421	40.9	225	24.0	209	25.4
Psychology	61,069	77.9	40,838	80.3	20,231	73.0	1,152	58.9	576	61.1
Clinical psychology	7,372	79.4	3,587	80.8	3,785	78.0	72	75.0	11	63.6
Counseling and applied psychology	35,859	80.2	29,322	81.3	6,537	74.9	167	68.3	120	63.3
Psychology, general	13,106	73.1	6,357	75.5	6,749	70.8	663	57.9	328	60.1
Research and experimental psychology	4,732	71.3	1,572	78.8	3,160	67.6	250	50.4	117	61.5
Social sciences	78,999	54.2	43,607	56.1	35,392	52.0	1,762	52.8	1,659	57.9
Agricultural economics	1,506	47.5	700	47.9	806	47.1	52	50.0	51	47.1
Anthropology	6,598	66.7	2,233	69.6	4,365	65.2	148	60.1	99	54.5
Criminal justice and safety studies	5,817	60.4	4,917	61.1	900	56.3	16	50.0	13	69.2
Economics (except agricultural)	14,129	37.8	6,084	42.6	8,045	34.2	132	31.8	155	40.6
Geography and cartography	4,401	47.3	2,660	43.8	1,741	52.6	128	39.1	110	40.9
History and philosophy of science	289	52.2	32	68.8	257	50.2	21	38.1	3	33.3
Human development	2,070	86.8	1,339	88.9	731	82.9	156	78.8	164	82.9
International relations and national security studies	7,070	48.3	6,657	48.6	413	43.3	85	34.1	50	42.0
Linguistics	2,769	59.2	1,153	64.6	1,616	55.4	39	41.0	29	65.5
Political science and government	8,385	43.7	2,897	43.7	5,488	43.7	170	42.4	83	56.6
Public policy analysis	8,711	57.2	6,297	58.3	2,414	54.3	220	63.6	337	57.0
Sociology	7,333	65.0	2,263	69.6	5,070	63.0	159	58.5	164	64.0
Social sciences nec	9,921	64.3	6,375	64.2	3,546	64.5	436	53.9	401	60.8
Engineering	164,004	26.3	91,939	26.0	72,065	26.8	8,266	24.0	3,909	23.5

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Aerospace, aeronautical, and astronautical engineering	6,255	16.9	3,701	17.0	2,554	16.6	227	13.2	124	12.9
Agricultural engineering	1,156	40.5	494	42.5	662	39.0	112	33.9	55	32.7
Bioengineering and biomedical engineering	12,050	44.2	4,335	46.6	7,715	42.9	1,515	34.7	492	38.6
Biological and biosystems engineering	308	38.0	89	36.0	219	38.8	87	29.9	53	30.2
Chemical engineering	9,689	32.6	2,632	32.7	7,057	32.5	1,157	26.2	328	26.5
Civil engineering	19,625	33.4	11,873	33.7	7,752	33.0	865	29.0	492	25.6
Electrical, electronics, and communications engineering	46,754	22.1	28,177	23.9	18,577	19.3	1,305	16.0	637	14.9
Engineering mechanics, physics, and science	2,299	27.4	852	27.9	1,447	27.2	180	18.3	186	21.5
Industrial and manufacturing engineering	15,674	28.9	11,912	28.5	3,762	30.4	167	24.6	137	23.4
Mechanical engineering	26,108	17.3	14,861	15.8	11,247	19.2	1,142	17.6	531	15.4
Metallurgical and materials engineering	6,590	31.3	1,974	30.3	4,616	31.7	642	20.1	242	21.1
Mining engineering	493	26.2	292	27.1	201	24.9	23	34.8	61	32.8
Nanotechnology	195	27.7	49	26.5	146	28.1	151	23.8	76	23.7
Nuclear engineering	1,449	17.7	418	17.0	1,031	17.9	80	11.3	41	24.4
Petroleum engineering	1,249	17.5	642	18.2	607	16.8	72	12.5	82	30.5
Engineering nec	14,110	26.9	9,638	26.2	4,472	28.4	541	25.0	372	25.0
Health	72,422	76.2	56,494	78.5	15,928	68.0	19,478	49.6	7,621	51.0
Clinical medicine ^a	30,822	75.1	26,251	76.0	4,571	70.0	16,650	49.0	6,273	50.2
Anesthesiology	ne	ne	ne	ne	ne	ne	494	45.3	155	46.5
Cardiology	ne	ne	ne	ne	ne	ne	788	40.1	200	45.0
Endocrinology	ne	ne	ne	ne	ne	ne	345	47.2	107	55.1
Gastroenterology	ne	ne	ne	ne	ne	ne	287	48.4	98	46.9
Hematology	ne	ne	ne	ne	ne	ne	434	47.0	160	48.8
Neurology	ne	ne	ne	ne	ne	ne	1,466	49.3	496	53.8
Obstetrics and gynecology	ne	ne	ne	ne	ne	ne	312	63.8	104	64.4
Oncology and cancer research	ne	ne	ne	ne	ne	ne	1,830	46.2	630	41.4
Ophthalmology	ne	ne	ne	ne	ne	ne	523	48.4	261	43.3
Otorhinolaryngology	ne	ne	ne	ne	ne	ne	275	49.5	121	54.5
Pediatrics	ne	ne	ne	ne	ne	ne	1,264	60.3	597	52.9
Psychiatry	ne	ne	ne	ne	ne	ne	1,004	63.1	241	62.7
Public health	29,594	75.7	25,403	76.5	4,191	70.8	843	62.0	687	64.0
Pulmonary disease	ne	ne	ne	ne	ne	ne	275	45.5	107	46.7
Radiological sciences	ne	ne	ne	ne	ne	ne	1,152	37.3	391	35.0
Surgery	ne	ne	ne	ne	ne	ne	1,376	40.6	527	38.5
Clinical medicine nec	1,228	61.3	848	61.3	380	61.3	3,982	48.3	1,391	52.5
Other health	41,600	76.9	30,243	80.6	11,357	67.1	2,828	53.0	1,348	54.7
Communication disorders sciences	17,257	95.0	16,346	95.8	911	80.4	75	72.0	46	67.4
Dental sciences	1,523	51.9	1,315	50.8	208	58.7	316	53.5	110	45.5
Nursing science	5,300	86.8	1,861	86.9	3,439	86.7	120	87.5	97	83.5

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Pharmaceutical sciences	4,308	54.9	1,187	61.8	3,121	52.3	1,091	41.0	392	40.3
Veterinary biomedical and clinical sciences	1,573	69.8	881	73.1	692	65.6	679	60.5	290	59.3
Other health nec	11,639	58.0	8,653	58.4	2,986	57.0	547	57.0	413	59.6

ne = not eligible;

nec = not elsewhere classified.

^a 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.