

TABLE 4-2

Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2023

(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	818,095	48.4	510,866	49.4	307,229	46.7	65,850	43.1	34,342	43.2
Science	561,489	50.6	348,520	50.5	212,969	50.6	37,982	42.9	20,600	42.4
Agricultural and veterinary sciences	11,755	59.6	6,901	63.0	4,854	54.9	1,993	48.9	1,238	49.5
Agricultural sciences	10,572	58.5	6,218	61.3	4,354	54.5	1,279	42.3	824	45.3
Veterinary biomedical and clinical sciences	1,183	70.2	683	78.9	500	58.2	714	60.6	414	58.0
Biological and biomedical sciences	105,566	62.6	44,703	67.4	60,863	59.1	19,520	47.5	8,589	47.4
Biochemistry	5,763	54.3	778	57.1	4,985	53.8	1,684	43.2	841	41.7
Biology	15,531	61.9	7,988	64.7	7,543	59.1	2,036	45.6	772	49.7
Biomedical sciences	11,806	66.3	6,391	69.8	5,415	62.2	1,602	50.5	571	49.6
Biophysics	952	42.0	9	44.4	943	42.0	151	45.0	79	26.6
Biostatistics and bioinformatics	8,283	53.0	4,240	58.5	4,043	47.2	739	39.5	366	47.8
Biotechnology	4,543	62.2	4,420	62.3	123	59.3	160	41.9	96	41.7
Botany and plant biology	1,677	56.5	378	60.1	1,299	55.5	490	46.7	227	45.8
Cell, cellular biology, and anatomical sciences	6,478	60.7	1,031	66.4	5,447	59.6	1,583	48.3	675	45.0
Ecology and population biology	3,833	61.7	1,035	64.4	2,798	60.7	461	49.7	236	47.0
Epidemiology	6,138	72.7	3,837	74.6	2,301	69.4	391	63.2	145	67.6
Genetics	3,187	64.4	693	79.4	2,494	60.3	1,329	45.4	557	46.7
Microbiological sciences and immunology	6,588	64.1	1,934	72.0	4,654	60.8	1,826	51.2	718	48.9
Molecular biology	1,668	59.5	388	68.3	1,280	56.8	507	48.1	222	37.8
Neurobiology and neuroscience	6,580	62.1	480	66.5	6,100	61.8	1,949	46.7	920	46.3
Nutrition science	4,068	84.0	2,959	86.7	1,109	77.0	156	66.7	100	63.0
Pathology and experimental pathology	1,106	65.1	143	74.1	963	63.8	904	46.6	329	51.4
Pharmacology and toxicology	3,304	61.4	844	65.0	2,460	60.2	886	47.7	358	45.0
Physiology	6,101	59.1	2,951	60.6	3,150	57.7	1,468	49.0	708	49.9
Zoology and animal biology	2,042	58.3	901	60.2	1,141	56.8	391	44.2	196	45.9
Biological and biomedical sciences nec	5,918	66.3	3,303	70.3	2,615	61.2	807	47.2	473	51.0
Computer and information sciences	166,014	33.1	143,530	33.9	22,484	28.4	987	27.9	631	27.4
Artificial intelligence, informatics, and computer and information science topics	7,375	37.2	6,433	37.2	942	36.9	52	38.5	52	28.8
Computer and information sciences	49,206	30.1	41,959	31.0	7,247	24.9	237	26.2	217	28.6
Computer and information systems security	11,498	27.6	10,774	27.7	724	25.1	8	50.0	16	18.8
Computer science	57,819	29.8	46,477	30.8	11,342	26.0	524	24.0	194	25.8
Information science and studies	17,660	46.3	16,138	45.7	1,522	52.0	66	47.0	44	36.4
Information technology	15,074	40.6	14,484	40.4	590	45.9	2	100.0	16	43.8
Computer and information sciences nec	7,382	36.9	7,265	37.0	117	33.3	98	30.6	92	21.7

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(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				
Geosciences, atmospheric, and ocean sciences	11,594	52.4	4,793	54.5	6,801	50.9	1,919	41.6	2,455	34.7
Atmospheric sciences and meteorology	1,431	43.5	441	46.3	990	42.3	245	33.9	512	29.3
Geological and earth sciences	7,240	49.5	2,984	49.6	4,256	49.4	922	39.2	1,247	33.6
Ocean and marine sciences	2,923	63.9	1,368	67.9	1,555	60.4	444	47.5	418	44.3
Geosciences, atmospheric, and ocean sciences nec	ne	ne	ne	ne	ne	ne	308	46.8	278	34.9
Mathematics and statistics	33,893	35.3	20,105	38.9	13,788	30.0	1,220	23.4	307	30.3
Applied mathematics	11,140	35.6	8,977	36.2	2,163	33.1	203	25.1	99	23.2
Mathematics	11,801	30.9	3,623	40.2	8,178	26.8	813	22.8	142	28.2
Statistics	10,952	39.7	7,505	41.5	3,447	35.6	204	24.5	66	45.5
Multidisciplinary and interdisciplinary sciences	26,429	49.4	21,928	48.2	4,501	55.2	988	44.1	818	39.2
Biological and physical sciences	1,896	55.8	921	57.9	975	53.8	48	54.2	42	26.2
Computational science	3,228	36.7	2,939	37.4	289	30.1	26	26.9	58	29.3
Data science and data analytics	10,416	36.8	10,243	36.9	173	33.5	98	40.8	56	41.1
International and global studies	996	66.2	865	67.4	131	58.0	27	63.0	15	53.3
Multidisciplinary and interdisciplinary sciences nec	9,893	63.8	6,960	65.6	2,933	59.3	789	43.9	647	40.5
Natural resources and conservation	13,490	59.7	9,486	60.4	4,004	57.9	937	47.2	663	40.3
Environmental science and studies	6,348	61.4	4,359	61.9	1,989	60.4	357	50.4	226	43.8
Forestry, natural resources, and conservation	7,142	58.1	5,127	59.1	2,015	55.4	580	45.2	437	38.4
Physical sciences	44,329	37.6	6,000	39.9	38,329	37.2	7,220	26.9	3,095	23.4
Astronomy and astrophysics	1,657	47.6	100	49.0	1,557	47.5	725	35.7	600	25.3
Chemistry	23,007	46.0	2,891	51.3	20,116	45.2	3,288	28.7	845	29.7
Materials sciences	1,571	33.3	373	33.0	1,198	33.4	247	27.5	69	21.7
Physics	17,119	25.1	2,179	23.1	14,940	25.4	2,723	21.8	1,210	18.3
Physical sciences nec	975	47.9	457	51.4	518	44.8	237	31.2	371	22.4
Psychology	73,828	80.0	49,474	81.8	24,354	76.6	1,344	64.0	950	66.0
Applied psychology	25,198	81.4	20,430	82.4	4,768	77.3	105	76.2	118	66.1
Clinical psychology	7,873	80.3	4,603	80.3	3,270	80.3	59	81.4	20	70.0
Counseling psychology	16,071	82.4	13,161	83.0	2,910	79.8	9	77.8	8	87.5
Human development	2,080	88.9	1,321	91.4	759	84.6	130	71.5	158	72.2
Psychology, general	14,928	75.9	7,321	77.2	7,607	74.6	768	61.3	472	62.3
Research and experimental psychology	7,678	76.0	2,638	81.2	5,040	73.4	273	59.0	174	69.0
Social sciences	74,591	54.8	41,600	56.3	32,991	53.0	1,854	53.4	1,854	53.5
Agricultural and natural resource economics	740	47.0	436	47.0	304	47.0	72	37.5	51	37.3
Anthropology	5,796	68.2	1,971	71.1	3,825	66.8	152	60.5	70	60.0

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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				
Area, ethnic, cultural, gender, and group studies	4,920	66.4	2,582	67.2	2,338	65.5	273	63.7	143	59.4
Criminal justice and safety studies	6,424	61.7	4,942	63.7	1,482	55.3	19	47.4	22	63.6
Criminology	1,477	71.6	1,161	72.0	316	69.9	8	37.5	10	60.0
Economics (except agricultural and natural resource)	14,559	39.5	6,398	42.1	8,161	37.6	147	40.8	152	36.2
Geography and cartography	3,837	48.3	2,517	45.3	1,320	54.0	141	53.9	118	38.1
International relations and national security studies	7,473	48.1	7,147	48.3	326	45.1	119	42.0	139	38.1
Linguistics	2,727	62.4	1,117	68.2	1,610	58.3	51	49.0	59	54.2
Political science and government	7,684	46.3	2,649	46.7	5,035	46.1	173	49.7	93	53.8
Public policy analysis	7,370	57.7	4,645	60.5	2,725	52.9	305	59.0	475	61.7
Sociology and population studies	6,404	67.7	1,888	71.9	4,516	65.9	189	52.9	196	56.1
Urban studies and affairs	966	60.8	648	62.5	318	57.2	7	85.7	21	76.2
Social sciences, other	4,214	63.6	3,499	64.1	715	61.0	198	51.5	305	56.4
Engineering	175,559	28.2	100,567	26.9	74,992	29.9	9,051	28.0	4,575	24.3
Aerospace, aeronautical, and astronautical engineering	8,264	19.9	5,380	19.9	2,884	19.9	254	18.5	166	17.5
Biological, biomedical, and biosystems engineering	15,203	48.8	5,204	50.4	9,999	47.9	1,594	39.5	674	40.2
Chemical, petroleum, and chemical-related engineering	10,546	34.6	2,658	31.6	7,888	35.6	1,501	28.2	349	25.8
Chemical engineering	9,701	35.9	2,271	33.6	7,430	36.6	1,471	28.2	303	28.1
Petroleum engineering	845	19.6	387	20.4	458	19.0	30	26.7	46	10.9
Civil, environmental, transportation and related engineering fields	19,934	33.6	12,082	32.8	7,852	34.9	1,070	33.0	654	25.7
Civil engineering	15,851	31.3	9,149	30.3	6,702	32.7	960	33.3	571	25.7
Architectural, environmental, construction and surveying engineering	4,083	42.6	2,933	40.5	1,150	47.7	110	30.0	83	25.3
Electrical, electronics, communications and computer engineering	48,799	23.6	31,093	24.9	17,706	21.3	1,339	21.4	799	16.9
Electrical, electronics, and communications engineering	32,988	21.4	18,215	21.6	14,773	21.1	1,257	21.3	731	16.7
Computer engineering	15,811	28.0	12,878	29.4	2,933	21.9	82	23.2	68	19.1
Industrial, manufacturing, systems engineering and operations research	15,762	29.2	11,873	28.0	3,889	33.1	170	28.2	221	26.2
Industrial and manufacturing engineering	8,113	27.6	5,821	24.8	2,292	34.8	107	24.3	83	21.7
Systems engineering and operations research	7,649	31.0	6,052	31.1	1,597	30.6	63	34.9	138	29.0
Mechanical engineering	27,014	18.8	15,335	16.6	11,679	21.5	1,317	19.1	560	16.8
Metallurgical, mining, materials and related engineering fields	7,244	31.6	2,462	31.3	4,782	31.8	557	23.2	249	19.3
Other engineering	22,793	28.9	14,480	29.0	8,313	28.8	1,249	29.1	903	24.4
Agricultural engineering	1,032	39.0	377	44.0	655	36.0	154	35.1	53	32.1
Engineering mechanics, physics, and science	2,390	28.5	696	27.6	1,694	28.9	291	27.8	190	22.1
Nuclear engineering	1,606	21.5	516	18.4	1,090	23.0	103	18.4	35	22.9
Engineering, other	17,765	29.1	12,891	29.1	4,874	29.1	701	29.8	625	24.5

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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				
Health	81,047	77.0	61,779	79.4	19,268	69.3	18,817	50.9	9,167	54.6
Clinical medicine	34,658	76.1	28,484	77.0	6,174	71.9	16,393	50.6	7,798	54.2
Medical clinical sciences and clinical and medical laboratory sciences	2,117	65.2	1,242	64.5	875	66.3	521	48.4	477	53.5
Public health	32,541	76.8	27,242	77.6	5,299	72.8	848	63.1	911	68.3
Anesthesiology	ne	ne	ne	ne	ne	ne	366	47.5	129	40.3
Cardiology and cardiovascular disease	ne	ne	ne	ne	ne	ne	679	48.2	228	47.4
Endocrinology, diabetes, and metabolism	ne	ne	ne	ne	ne	ne	314	51.3	122	59.8
Gastroenterology	ne	ne	ne	ne	ne	ne	296	51.4	89	43.8
Hematology	ne	ne	ne	ne	ne	ne	354	48.6	168	49.4
Neurology and neurosurgery	ne	ne	ne	ne	ne	ne	1,715	49.4	533	50.7
Obstetrics and gynecology	ne	ne	ne	ne	ne	ne	274	61.7	121	69.4
Oncology and cancer research	ne	ne	ne	ne	ne	ne	1,512	51.5	587	60.6
Ophthalmology	ne	ne	ne	ne	ne	ne	537	50.1	295	47.8
Otorhinolaryngology	ne	ne	ne	ne	ne	ne	279	49.5	148	54.7
Pediatrics	ne	ne	ne	ne	ne	ne	1,134	58.1	743	57.3
Psychiatry	ne	ne	ne	ne	ne	ne	1,031	60.9	346	60.4
Pulmonary disease	ne	ne	ne	ne	ne	ne	258	47.7	118	56.8
Radiological sciences	ne	ne	ne	ne	ne	ne	1,359	41.6	465	36.8
Surgery	ne	ne	ne	ne	ne	ne	1,275	42.6	608	43.6
Clinical medicine nec	ne	ne	ne	ne	ne	ne	3,641	49.7	1,710	54.2
Other health	46,389	77.6	33,295	81.4	13,094	68.1	2,424	52.8	1,369	56.8
Communication disorders sciences	19,109	94.7	18,183	95.4	926	80.7	94	63.8	85	71.8
Dental sciences	2,231	56.3	1,420	53.5	811	61.3	310	48.7	159	50.9
Kinesiology and exercise science	5,254	50.8	4,286	51.2	968	49.2	83	50.6	50	56.0
Nursing science	5,510	83.8	1,701	87.1	3,809	82.4	154	85.7	187	83.4
Pharmaceutical sciences	5,219	61.4	2,265	67.2	2,954	56.9	1,295	48.8	469	42.6
Other health nec	9,066	67.9	5,440	69.5	3,626	65.5	488	53.7	419	59.9

ne = not eligible.

nec = not elsewhere classified.

Note(s):

For postdoctoral appointees and doctorate-holding nonfaculty researchers, "field" refers to the field of the unit that reports information on these groups 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. Graduate student data in this table include master's students in health sciences. For more information on the comparability of these counts to other data published by the National Center for Science and Engineering Statistics, see the "Technical Notes."

Source(s):

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2023.