

TABLE 4-2

Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2021

(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	760,156	49.1	466,613	51.4	293,543	45.4	63,328	42.3	30,548	42.3
Science	509,784	51.6	305,796	53.0	203,988	49.4	37,189	41.9	18,728	41.5
Agricultural and veterinary sciences	11,244	60.2	6,801	63.1	4,443	55.7	1,595	46.3	902	48.2
Agricultural sciences	9,696	58.3	5,790	60.6	3,906	54.8	1,086	42.4	602	43.5
Veterinary biomedical and clinical sciences	1,548	71.9	1,011	77.0	537	62.4	509	54.6	300	57.7
Biological and biomedical sciences	100,883	61.2	42,728	66.2	58,155	57.5	20,245	45.9	8,187	47.2
Biochemistry	5,833	53.2	1,005	57.2	4,828	52.3	1,743	40.5	822	40.1
Biology	15,694	61.1	8,294	64.4	7,400	57.4	1,979	45.7	784	49.6
Biomedical sciences	10,620	63.8	5,794	67.2	4,826	59.7	1,906	47.3	419	44.4
Biophysics	979	39.4	6	16.7	973	39.6	156	40.4	77	40.3
Biostatistics and bioinformatics	7,110	51.9	3,519	57.5	3,591	46.4	733	40.9	338	46.2
Biotechnology	3,523	60.9	3,395	61.0	128	59.4	101	40.6	87	42.5
Botany and plant biology	1,632	54.5	363	59.0	1,269	53.2	520	46.2	230	50.4
Cell, cellular biology, and anatomical sciences	6,500	58.4	1,210	62.0	5,290	57.5	1,663	45.8	533	44.8
Ecology and population biology	3,991	60.7	1,201	64.4	2,790	59.1	430	49.8	250	38.0
Epidemiology	5,785	73.8	3,623	74.4	2,162	72.8	329	60.2	128	58.6
Genetics	3,167	63.5	718	79.4	2,449	58.9	1,384	43.9	591	47.4
Microbiological sciences and immunology	6,382	62.1	2,011	68.9	4,371	59.0	1,865	50.6	711	53.3
Molecular biology	1,670	58.7	405	66.2	1,265	56.4	634	41.8	239	38.1
Neurobiology and neuroscience	6,349	58.3	591	62.9	5,758	57.8	1,980	46.1	795	47.7
Nutrition science	3,864	85.0	2,871	87.6	993	77.7	152	69.1	137	62.0
Pathology and experimental pathology	949	62.3	100	76.0	849	60.7	1,043	43.9	382	52.9
Pharmacology and toxicology	3,300	61.7	926	66.3	2,374	59.9	884	45.9	433	46.0
Physiology	5,939	57.3	2,898	58.5	3,041	56.2	1,537	47.5	663	50.4
Zoology and animal biology	2,140	56.8	927	58.7	1,213	55.3	376	41.8	174	43.1
Biological and biomedical sciences nec	5,456	63.4	2,871	66.4	2,585	60.1	830	45.8	394	46.4
Computer and information sciences	121,730	31.8	102,199	32.6	19,531	27.6	880	25.5	457	24.7
Artificial intelligence, informatics, and computer and information science topics	5,191	36.0	4,504	35.9	687	37.1	32	53.1	39	43.6
Computer and information sciences	36,972	27.8	30,804	28.5	6,168	24.5	185	21.1	111	18.0
Computer and information systems security	8,743	27.9	8,401	28.0	342	24.0	9	44.4	18	44.4
Computer science	40,717	27.3	30,361	28.1	10,356	25.0	521	21.5	209	21.5
Information science and studies	14,449	48.0	13,098	47.6	1,351	51.8	56	57.1	19	36.8
Information technology	7,994	41.5	7,527	41.4	467	43.5	6	83.3	13	30.8

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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
Computer and information sciences nec	7,664	35.4	7,504	35.4	160	36.9	71	21.1	48	25.0
Geosciences, atmospheric sciences, and ocean sciences	12,290	50.8	5,520	52.5	6,770	49.5	1,797	41.6	2,308	32.0
Atmospheric sciences and meteorology	1,389	41.2	487	41.7	902	40.9	248	38.7	471	26.3
Geological and earth sciences	7,871	47.7	3,534	47.7	4,337	47.7	869	38.9	1,121	33.0
Ocean and marine sciences	3,030	63.5	1,499	67.3	1,531	59.7	373	51.5	360	41.7
Geosciences, atmospheric sciences, and ocean sciences nec	ne	ne	ne	ne	ne	ne	307	39.4	356	26.4
Mathematics and statistics	34,258	36.8	20,639	41.3	13,619	30.0	1,112	25.1	235	32.3
Applied mathematics	11,154	37.6	8,899	39.0	2,255	32.2	202	23.8	66	31.8
Mathematics	12,128	32.0	4,164	41.5	7,964	27.1	721	25.9	110	31.8
Statistics	10,976	41.3	7,576	43.9	3,400	35.4	189	23.3	59	33.9
Multidisciplinary and interdisciplinary studies	15,768	54.6	11,994	54.8	3,774	54.1	878	47.3	816	37.5
Biological and physical sciences	1,761	54.5	874	55.1	887	53.9	125	44.0	38	26.3
Computational science	2,435	35.2	2,088	36.0	347	30.3	28	46.4	56	25.0
Data science and data analytics	2,404	44.1	2,358	44.3	46	37.0	50	34.0	26	26.9
International and global studies	1,450	58.0	1,267	57.1	183	63.9	21	57.1	14	64.3
Multidisciplinary and interdisciplinary studies nec	7,718	63.4	5,407	66.0	2,311	57.4	654	48.6	682	39.0
Natural resources and conservation	13,922	60.7	10,012	62.4	3,910	56.2	889	46.5	620	36.1
Environmental science and studies	6,807	63.4	4,851	64.8	1,956	60.0	312	50.3	204	42.2
Forestry, natural resources, and conservation	7,115	58.0	5,161	60.1	1,954	52.4	577	44.4	416	33.2
Physical sciences	44,141	36.4	6,409	40.5	37,732	35.7	6,823	25.5	2,895	23.0
Astronomy and astrophysics	1,624	44.8	85	41.2	1,539	45.0	561	31.9	558	22.9
Chemistry	23,215	44.7	3,066	51.0	20,149	43.8	3,163	28.3	848	28.1
Materials sciences	1,441	33.4	439	31.0	1,002	34.4	213	24.4	64	18.8
Physics	16,779	23.6	2,278	23.9	14,501	23.6	2,677	20.8	1,235	19.9
Physical sciences nec	1,082	48.1	541	58.2	541	37.9	209	25.8	190	22.6
Psychology	73,325	80.3	51,878	82.3	21,447	75.3	1,325	65.8	803	66.1
Applied psychology	24,427	81.5	19,517	82.6	4,910	77.1	110	80.9	60	71.7
Clinical psychology	7,556	81.3	4,167	82.9	3,389	79.3	63	79.4	23	82.6
Counseling psychology	18,426	82.8	16,965	83.2	1,461	77.7	10	90.0	15	93.3
Human development	2,363	88.6	1,566	91.7	797	82.4	106	82.1	110	80.9
Psychology, general	13,883	75.5	7,329	77.4	6,554	73.3	705	62.3	389	59.9
Research and experimental psychology	6,670	74.7	2,334	81.8	4,336	70.8	331	59.8	206	64.6
Social sciences	82,223	54.6	47,616	56.3	34,607	52.2	1,645	53.1	1,505	54.0
Agricultural and natural resource economics	1,194	46.7	672	46.6	522	46.9	42	45.2	41	41.5

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Anthropology	6,421	67.1	2,292	69.9	4,129	65.6	149	63.1	79	53.2
Area, ethnic, cultural, gender, and group studies	5,093	66.8	2,767	67.4	2,326	66.1	230	54.8	122	65.6
Criminal justice and safety studies	6,829	62.8	5,602	64.7	1,227	54.4	16	62.5	8	50.0
Criminology	1,580	70.6	1,272	71.4	308	67.5	3	100.0	11	72.7
Economics (except agricultural and natural resource)	15,148	38.6	6,882	41.3	8,266	36.4	165	37.6	164	42.1
Geography and cartography	4,876	48.9	3,147	45.9	1,729	54.2	127	55.1	106	38.7
International relations and national security studies	8,782	50.9	8,308	50.9	474	50.8	117	47.0	76	39.5
Linguistics	2,840	61.2	1,188	64.4	1,652	59.0	50	42.0	40	57.5
Political science and government	8,602	45.3	3,270	46.5	5,332	44.6	164	46.3	74	54.1
Public policy analysis	10,030	58.5	7,290	60.7	2,740	52.7	213	59.2	358	57.3
Sociology and population studies	7,206	66.6	2,331	70.7	4,875	64.7	168	61.9	145	60.7
Urban studies and affairs	1,218	61.2	827	62.5	391	58.3	10	70.0	28	57.1
Social sciences, other	2,404	59.8	1,768	61.5	636	55.2	191	52.9	253	59.3
Engineering	168,050	27.7	95,126	27.0	72,924	28.7	8,340	26.3	3,992	24.1
Aerospace, aeronautical, and astronautical engineering	7,838	18.7	5,065	17.9	2,773	20.1	277	17.3	144	17.4
Biological, biomedical, and biosystems engineering	14,059	46.5	5,192	48.7	8,867	45.2	1,616	37.1	589	36.3
Chemical, petroleum, and chemical-related engineering	10,696	33.4	2,983	33.3	7,713	33.4	1,167	25.8	307	30.9
Chemical engineering	9,670	34.8	2,555	35.7	7,115	34.4	1,133	26.3	257	33.9
Petroleum engineering	1,026	20.6	428	18.9	598	21.7	34	8.8	50	16.0
Civil, environmental, transportation and related engineering fields	19,608	34.9	11,730	34.8	7,878	35.1	968	30.5	479	25.7
Civil engineering	16,112	32.7	9,352	32.5	6,760	33.1	879	30.1	446	24.7
Architectural, environmental, construction and surveying engineering	3,496	44.9	2,378	43.6	1,118	47.7	89	33.7	33	39.4
Electrical, electronics, communications and computer engineering	45,265	22.8	27,695	24.0	17,570	20.7	1,275	18.7	755	14.2
Electrical, electronics, and communications engineering	32,633	21.2	17,866	21.6	14,767	20.6	1,186	18.6	684	14.0
Computer engineering	12,632	26.9	9,829	28.5	2,803	21.3	89	19.1	71	15.5
Industrial, manufacturing, systems engineering and operations research	15,870	29.9	11,949	29.1	3,921	32.2	127	26.8	107	24.3
Industrial and manufacturing engineering	7,606	28.9	5,284	26.5	2,322	34.5	73	27.4	53	20.8
Systems engineering and operations research	8,264	30.7	6,665	31.2	1,599	28.7	54	25.9	54	27.8
Mechanical engineering	27,258	18.6	15,718	17.2	11,540	20.4	1,200	19.5	529	19.7

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Metallurgical, mining, materials and related engineering fields	7,422	31.7	2,518	32.8	4,904	31.2	562	23.0	259	23.6
Other engineering	20,034	28.4	12,276	28.4	7,758	28.3	1,148	27.6	823	25.2
Agricultural engineering	1,187	41.4	519	43.0	668	40.1	112	42.0	55	36.4
Engineering mechanics, physics, and science	2,239	27.7	782	30.3	1,457	26.3	253	24.1	193	15.5
Nuclear engineering	1,516	20.1	484	18.4	1,032	20.8	99	25.3	40	25.0
Engineering, other	15,092	28.3	10,491	28.0	4,601	28.8	684	26.9	535	27.5
Health	82,322	77.1	65,691	79.0	16,631	69.4	17,799	50.7	7,828	53.6
Clinical medicine ^a	39,633	76.4	34,021	77.2	5,612	71.7	15,561	50.3	6,751	53.1
Medical clinical sciences and clinical and medical laboratory sciences	1,964	63.5	1,287	61.9	677	66.6	345	47.5	134	57.5
Public health	37,669	77.1	32,734	77.8	4,935	72.4	880	62.8	656	64.0
Anesthesiology	ne	ne	ne	ne	ne	ne	414	48.1	108	43.5
Cardiology and cardiovascular disease	ne	ne	ne	ne	ne	ne	660	43.9	215	45.6
Endocrinology, diabetes, and metabolism	ne	ne	ne	ne	ne	ne	319	53.6	103	54.4
Gastroenterology	ne	ne	ne	ne	ne	ne	315	43.8	112	50.9
Hematology	ne	ne	ne	ne	ne	ne	362	47.2	180	52.2
Neurology and neurosurgery	ne	ne	ne	ne	ne	ne	1,522	50.6	527	52.0
Obstetrics and gynecology	ne	ne	ne	ne	ne	ne	230	66.5	106	68.9
Oncology and cancer research	ne	ne	ne	ne	ne	ne	1,504	50.7	549	53.0
Ophthalmology	ne	ne	ne	ne	ne	ne	464	49.8	259	48.6
Otorhinolaryngology	ne	ne	ne	ne	ne	ne	279	49.1	119	47.9
Pediatrics	ne	ne	ne	ne	ne	ne	1,143	60.2	632	54.4
Psychiatry	ne	ne	ne	ne	ne	ne	1,109	58.3	279	61.6
Pulmonary disease	ne	ne	ne	ne	ne	ne	232	51.3	100	57.0
Radiological sciences	ne	ne	ne	ne	ne	ne	1,100	38.9	381	34.9
Surgery	ne	ne	ne	ne	ne	ne	1,197	42.0	561	43.0
Clinical medicine nec	ne	ne	ne	ne	ne	ne	3,486	49.0	1,730	55.8
Other health	42,689	77.7	31,670	80.9	11,019	68.2	2,238	53.0	1,077	56.6
Communication disorders sciences	18,198	95.0	17,406	95.6	792	81.8	88	64.8	83	61.4
Dental sciences	1,719	54.2	1,500	53.6	219	58.4	304	54.6	123	51.2
Kinesiology and exercise science	5,993	51.4	4,962	51.7	1,031	49.9	67	58.2	31	38.7
Nursing science	5,174	87.0	1,662	88.3	3,512	86.4	122	82.0	117	79.5
Pharmaceutical sciences	4,875	59.3	1,939	66.3	2,936	54.7	1,101	45.6	372	46.5
Other health nec	6,730	66.1	4,201	68.2	2,529	62.6	556	57.9	351	62.1

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, 2021.