

TABLE 2-2b

Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in engineering, by sex: 2022

(Number and percent)

Citizenship, ethnicity, race, and 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 surveyed fields	798,534	48.4	501,311	49.8	297,223	46.0	62,750	42.6	32,279	42.6
U.S. citizens and permanent residents ^a	500,299	54.5	322,005	56.2	178,294	51.4	27,289	47.8	na	na
Hispanic or Latino	69,621	57.9	48,303	59.8	21,318	53.5	2,192	51.1	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	2,082	64.1	1,331	65.7	751	61.3	92	56.5	na	na
Asian	61,426	50.0	40,873	50.0	20,553	49.9	5,286	43.9	na	na
Black or African American	44,016	63.4	31,398	64.0	12,618	61.8	1,141	59.1	na	na
Native Hawaiian or Other Pacific Islander	738	56.0	541	55.6	197	56.9	34	41.2	na	na
White	279,657	53.3	172,212	55.4	107,445	50.1	15,221	47.8	na	na
More than one race	19,331	56.0	12,002	56.9	7,329	54.6	638	52.0	na	na
Unknown ethnicity and race	23,428	51.6	15,345	53.6	8,083	47.8	2,685	46.4	na	na
Temporary visa holders	298,235	38.1	179,306	38.3	118,929	37.8	35,461	38.5	na	na
Engineering	176,000	27.9	103,020	27.0	72,980	29.1	8,335	27.5	4,355	23.7
U.S. citizens and permanent residents ^a	85,274	29.0	53,603	27.0	31,671	32.3	2,839	32.5	na	na
Hispanic or Latino	10,629	28.9	7,379	27.0	3,250	33.1	183	36.6	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	339	52.2	253	58.1	86	34.9	10	30.0	na	na
Asian	13,268	33.0	8,383	31.7	4,885	35.4	774	27.1	na	na
Black or African American	4,752	33.0	2,983	29.6	1,769	38.7	85	47.1	na	na
Native Hawaiian or Other Pacific Islander	80	33.8	54	27.8	26	46.2	2	50.0	na	na
White	48,988	27.1	30,174	25.0	18,814	30.6	1,445	33.4	na	na
More than one race	3,430	32.4	2,060	29.4	1,370	36.9	67	44.8	na	na
Unknown ethnicity and race	3,788	28.2	2,317	26.8	1,471	30.5	273	32.2	na	na
Temporary visa holders	90,726	26.9	49,417	27.1	41,309	26.6	5,496	24.9	na	na
Aerospace, aeronautical, and astronautical engineering	8,095	19.3	5,263	19.2	2,832	19.4	244	16.4	153	19.6
U.S. citizens and permanent residents ^a	6,119	19.0	4,353	18.4	1,766	20.2	77	16.9	na	na
Hispanic or Latino	703	17.1	536	18.1	167	13.8	3	0.0	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	12	16.7	10	10.0	2	50.0	0	-	na	na
Asian	868	20.0	632	20.3	236	19.5	22	9.1	na	na
Black or African American	176	23.3	114	22.8	62	24.2	1	0.0	na	na
Native Hawaiian or Other Pacific Islander	10	30.0	8	25.0	2	50.0	0	-	na	na
White	3,894	18.8	2,741	17.9	1,153	20.8	44	20.5	na	na
More than one race	274	22.3	179	20.7	95	25.3	1	0.0	na	na

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(Number and percent)

Citizenship, ethnicity, race, and 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
Unknown ethnicity and race	182	14.8	133	15.0	49	14.3	6	33.3	na	na
Temporary visa holders	1,976	20.4	910	23.1	1,066	18.1	167	16.2	na	na
Biological, biomedical, and biosystems engineering	14,442	48.0	5,177	50.9	9,265	46.4	1,540	38.5	685	38.4
U.S. citizens and permanent residents ^a	9,419	48.6	3,462	49.8	5,957	47.9	645	40.2	na	na
Hispanic or Latino	1,119	48.2	439	48.7	680	47.8	49	36.7	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	20	55.0	7	57.1	13	53.8	1	100.0	na	na
Asian	1,863	49.5	751	52.9	1,112	47.3	171	35.7	na	na
Black or African American	562	52.7	217	48.8	345	55.1	24	37.5	na	na
Native Hawaiian or Other Pacific Islander	11	36.4	5	40.0	6	33.3	1	100.0	na	na
White	5,010	47.7	1,766	48.2	3,244	47.4	324	42.3	na	na
More than one race	411	52.6	153	55.6	258	50.8	14	85.7	na	na
Unknown ethnicity and race	423	47.3	124	52.4	299	45.2	61	32.8	na	na
Temporary visa holders	5,023	47.0	1,715	53.1	3,308	43.8	895	37.3	na	na
Chemical, petroleum, and chemical-related engineering	10,601	34.1	3,011	33.4	7,590	34.4	1,239	28.8	313	27.2
U.S. citizens and permanent residents ^a	5,129	35.1	1,579	35.6	3,550	34.9	395	30.1	na	na
Hispanic or Latino	558	36.9	225	34.7	333	38.4	26	42.3	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	20	35.0	7	14.3	13	46.2	1	0.0	na	na
Asian	899	39.8	277	43.3	622	38.3	101	22.8	na	na
Black or African American	238	37.4	94	34.0	144	39.6	7	85.7	na	na
Native Hawaiian or Other Pacific Islander	6	66.7	3	100.0	3	33.3	0	-	na	na
White	3,049	33.8	855	33.9	2,194	33.8	218	31.7	na	na
More than one race	173	28.3	47	31.9	126	27.0	13	30.8	na	na
Unknown ethnicity and race	186	30.6	71	32.4	115	29.6	29	20.7	na	na
Temporary visa holders	5,472	33.1	1,432	30.9	4,040	33.9	844	28.2	na	na
Civil, environmental, transportation and related engineering fields	20,375	34.4	12,621	34.3	7,754	34.7	1,018	31.0	569	23.9
U.S. citizens and permanent residents ^a	9,687	39.6	7,209	37.9	2,478	44.5	342	41.8	na	na
Hispanic or Latino	1,471	41.3	1,169	39.4	302	48.7	24	62.5	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	54	37.0	38	44.7	16	18.8	1	100.0	na	na
Asian	1,088	42.1	825	41.6	263	43.7	81	28.4	na	na

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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
Black or African American	562	35.2	398	32.9	164	40.9	8	37.5	na	na
Native Hawaiian or Other Pacific Islander	10	50.0	4	50.0	6	50.0	1	0.0	na	na
White	5,820	38.7	4,302	37.1	1,518	43.3	169	42.6	na	na
More than one race	345	46.4	244	41.8	101	57.4	8	62.5	na	na
Unknown ethnicity and race	337	39.2	229	34.9	108	48.1	50	48.0	na	na
Temporary visa holders	10,688	29.7	5,412	29.4	5,276	30.1	676	25.6	na	na
Electrical, electronics, communications and computer engineering	49,901	23.5	32,316	25.0	17,585	20.8	1,217	20.4	734	14.9
U.S. citizens and permanent residents ^a	17,290	18.8	11,854	18.2	5,436	20.0	377	24.7	na	na
Hispanic or Latino	2,141	15.8	1,647	15.1	494	18.2	22	18.2	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	130	76.9	122	82.0	8	0.0	1	0.0	na	na
Asian	3,595	25.6	2,564	25.9	1,031	25.0	114	22.8	na	na
Black or African American	1,018	21.4	703	19.8	315	25.1	15	53.3	na	na
Native Hawaiian or Other Pacific Islander	12	16.7	10	20.0	2	0.0	0	-	na	na
White	8,815	15.1	5,765	14.1	3,050	16.9	179	22.3	na	na
More than one race	706	22.0	476	18.3	230	29.6	12	33.3	na	na
Unknown ethnicity and race	873	21.2	567	19.6	306	24.2	34	32.4	na	na
Temporary visa holders	32,611	26.1	20,462	28.9	12,149	21.2	840	18.5	na	na
Industrial, manufacturing, systems engineering and operations research	16,435	28.3	12,579	27.0	3,856	32.8	143	23.1	197	23.9
U.S. citizens and permanent residents ^a	7,931	29.9	6,461	29.6	1,470	31.1	38	36.8	na	na
Hispanic or Latino	1,161	33.2	1,046	33.1	115	33.9	1	100.0	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	19	42.1	15	46.7	4	25.0	0	-	na	na
Asian	1,012	36.0	804	36.7	208	33.2	5	40.0	na	na
Black or African American	560	34.5	415	33.0	145	38.6	1	0.0	na	na
Native Hawaiian or Other Pacific Islander	10	30.0	9	33.3	1	0.0	0	-	na	na
White	4,420	26.8	3,560	26.3	860	28.6	21	33.3	na	na
More than one race	275	37.5	220	35.0	55	47.3	1	0.0	na	na
Unknown ethnicity and race	474	27.0	392	27.6	82	24.4	9	44.4	na	na
Temporary visa holders	8,504	26.9	6,118	24.3	2,386	33.8	105	18.1	na	na
Mechanical engineering	27,552	18.5	16,029	16.9	11,523	20.8	1,189	19.4	527	16.7

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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
U.S. citizens and permanent residents ^a	14,231	21.2	9,435	19.5	4,796	24.7	365	24.4	na	na
Hispanic or Latino	1,891	19.9	1,332	18.2	559	24.0	25	16.0	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	32	25.0	21	28.6	11	18.2	3	0.0	na	na
Asian	2,044	24.7	1,399	22.7	645	28.8	98	25.5	na	na
Black or African American	587	24.7	362	19.3	225	33.3	8	25.0	na	na
Native Hawaiian or Other Pacific Islander	4	25.0	2	0.0	2	50.0	0	-	na	na
White	8,462	20.0	5,553	18.5	2,909	22.9	187	25.1	na	na
More than one race	609	25.1	399	22.3	210	30.5	6	33.3	na	na
Unknown ethnicity and race	602	23.3	367	23.2	235	23.4	38	23.7	na	na
Temporary visa holders	13,321	15.6	6,594	13.1	6,727	18.1	824	17.2	na	na
Metallurgical, mining, materials and related engineering fields	7,118	31.7	2,545	32.3	4,573	31.4	542	22.1	280	20.4
U.S. citizens and permanent residents ^a	3,934	33.9	1,580	34.2	2,354	33.7	152	23.7	na	na
Hispanic or Latino	463	31.1	193	31.6	270	30.7	8	25.0	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	15	46.7	9	44.4	6	50.0	1	100.0	na	na
Asian	522	39.3	196	35.7	326	41.4	44	15.9	na	na
Black or African American	163	39.3	65	40.0	98	38.8	2	50.0	na	na
Native Hawaiian or Other Pacific Islander	1	100.0	0	-	1	100.0	0	-	na	na
White	2,449	32.2	982	32.9	1,467	31.7	83	25.3	na	na
More than one race	202	38.6	85	37.6	117	39.3	4	25.0	na	na
Unknown ethnicity and race	119	38.7	50	48.0	69	31.9	10	30.0	na	na
Temporary visa holders	3,184	29.0	965	29.2	2,219	28.9	390	21.5	na	na
Other engineering	21,481	28.8	13,479	28.8	8,002	28.8	1,203	29.1	897	24.3
U.S. citizens and permanent residents ^a	11,534	29.0	7,670	28.5	3,864	30.2	448	34.8	na	na
Hispanic or Latino	1,122	31.2	792	30.6	330	32.7	25	48.0	na	na
Not Hispanic or Latino										
American Indian or Alaska Native	37	37.8	24	29.2	13	53.8	2	0.0	na	na
Asian	1,377	34.6	935	34.4	442	35.1	138	29.7	na	na
Black or African American	886	36.3	615	35.0	271	39.5	19	57.9	na	na
Native Hawaiian or Other Pacific Islander	16	25.0	13	7.7	3	100.0	0	-	na	na
White	7,069	26.8	4,650	26.0	2,419	28.2	220	36.8	na	na
More than one race	435	31.0	257	31.5	178	30.3	8	25.0	na	na

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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
Unknown ethnicity and race	592	25.8	384	27.1	208	23.6	36	25.0	na	na
Temporary visa holders	9,947	28.5	5,809	29.3	4,138	27.5	755	25.7	na	na

- = not calculable. na = not applicable; citizenship and race and ethnicity data are not collected for doctorate-holding nonfaculty researchers.

^a Ethnicity and race data are available only for U.S. citizens and permanent residents.

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). 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, 2022.