

TABLE 4-4a

## Citizenship, ethnicity, and race of graduate students, by detailed field: 2023

(Number and percent)

Detailed field	Total		U.S. citizens and permanent residents																	Temporary visa holders	
			Hispanic or Latino		Not Hispanic or Latino													Unknown ethnicity and race			
					American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific Islander		White		More than one race						
					Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number				
All detailed fields	818,095	100.0	70,428	100.0	1,984	100.0	62,549	100.0	46,276	100.0	754	100.0	269,477	100.0	20,004	100.0	24,336	100.0	322,287	100.0	
Science	561,489	68.6	49,494	70.3	1,412	71.2	41,873	66.9	32,482	70.2	572	75.9	185,527	68.8	13,966	69.8	16,700	68.6	219,463	68.1	
Agricultural and veterinary sciences	11,755	1.4	896	1.3	41	2.1	372	0.6	422	0.9	17	2.3	5,457	2.0	244	1.2	235	1.0	4,071	1.3	
Agricultural sciences	10,572	1.3	800	1.1	41	2.1	321	0.5	379	0.8	16	2.1	4,902	1.8	223	1.1	190	0.8	3,700	1.1	
Veterinary biomedical and clinical sciences	1,183	0.1	96	0.1	0	0.0	51	0.1	43	0.1	1	0.1	555	0.2	21	0.1	45	0.2	371	0.1	
Biological and biomedical sciences	105,566	12.9	11,037	15.7	284	14.3	10,603	17.0	6,510	14.1	112	14.9	44,088	16.4	3,444	17.2	3,242	13.3	26,246	8.1	
Biochemistry	5,763	0.7	600	0.9	24	1.2	504	0.8	227	0.5	5	0.7	2,377	0.9	184	0.9	137	0.6	1,705	0.5	
Biology	15,531	1.9	1,792	2.5	35	1.8	1,033	1.7	839	1.8	21	2.8	7,621	2.8	534	2.7	376	1.5	3,280	1.0	
Biomedical sciences	11,806	1.4	1,333	1.9	42	2.1	1,628	2.6	1,277	2.8	7	0.9	4,202	1.6	377	1.9	345	1.4	2,595	0.8	
Biophysics	952	0.1	85	0.1	1	0.1	112	0.2	23	*	0	0.0	351	0.1	40	0.2	37	0.2	303	0.1	
Biostatistics and bioinformatics	8,283	1.0	445	0.6	4	0.2	1,158	1.9	234	0.5	8	1.1	2,190	0.8	191	1.0	258	1.1	3,795	1.2	
Biotechnology	4,543	0.6	445	0.6	15	0.8	604	1.0	372	0.8	5	0.7	1,262	0.5	125	0.6	239	1.0	1,476	0.5	
Botany and plant biology	1,677	0.2	138	0.2	4	0.2	74	0.1	43	0.1	1	0.1	770	0.3	57	0.3	45	0.2	545	0.2	
Cell, cellular biology, and anatomical sciences	6,478	0.8	801	1.1	21	1.1	675	1.1	294	0.6	11	1.5	2,655	1.0	196	1.0	224	0.9	1,601	0.5	
Ecology and population biology	3,833	0.5	348	0.5	15	0.8	184	0.3	123	0.3	5	0.7	2,264	0.8	142	0.7	76	0.3	676	0.2	
Epidemiology	6,138	0.8	565	0.8	18	0.9	803	1.3	538	1.2	7	0.9	2,110	0.8	195	1.0	187	0.8	1,715	0.5	
Genetics	3,187	0.4	323	0.5	10	0.5	325	0.5	150	0.3	1	0.1	1,509	0.6	114	0.6	80	0.3	675	0.2	
Microbiological sciences and immunology	6,588	0.8	831	1.2	20	1.0	613	1.0	352	0.8	3	0.4	3,134	1.2	226	1.1	226	0.9	1,183	0.4	
Molecular biology	1,668	0.2	211	0.3	2	0.1	195	0.3	91	0.2	2	0.3	656	0.2	65	0.3	35	0.1	411	0.1	
Neurobiology and neuroscience	6,580	0.8	817	1.2	13	0.7	721	1.2	337	0.7	5	0.7	2,935	1.1	256	1.3	190	0.8	1,306	0.4	
Nutrition science	4,068	0.5	452	0.6	7	0.4	301	0.5	198	0.4	7	0.9	2,059	0.8	118	0.6	168	0.7	758	0.2	
Pathology and experimental pathology	1,106	0.1	140	0.2	3	0.2	89	0.1	55	0.1	3	0.4	469	0.2	31	0.2	64	0.3	252	0.1	
Pharmacology and toxicology	3,304	0.4	328	0.5	13	0.7	328	0.5	204	0.4	1	0.1	1,313	0.5	100	0.5	117	0.5	900	0.3	
Physiology	6,101	0.7	548	0.8	13	0.7	606	1.0	388	0.8	10	1.3	2,671	1.0	198	1.0	198	0.8	1,469	0.5	
Zoology and animal biology	2,042	0.2	167	0.2	5	0.3	71	0.1	50	0.1	0	0.0	1,203	0.4	95	0.5	41	0.2	410	0.1	
Biological and biomedical sciences nec	5,918	0.7	668	0.9	19	1.0	579	0.9	715	1.5	10	1.3	2,337	0.9	200	1.0	199	0.8	1,191	0.4	
Computer and information sciences	166,014	20.3	6,059	8.6	168	8.5	14,432	23.1	6,351	13.7	87	11.5	24,437	9.1	2,166	10.8	3,959	16.3	108,355	33.6	
Artificial intelligence, informatics, and computer and information science topics	7,375	0.9	286	0.4	10	0.5	710	1.1	277	0.6	5	0.7	1,321	0.5	132	0.7	144	0.6	4,490	1.4	
Computer and information sciences	49,206	6.0	1,641	2.3	32	1.6	5,006	8.0	1,147	2.5	21	2.8	7,713	2.9	647	3.2	896	3.7	32,103	10.0	
Computer and information systems security	11,498	1.4	1,074	1.5	42	2.1	1,142	1.8	1,853	4.0	20	2.7	3,277	1.2	315	1.6	536	2.2	3,239	1.0	
Computer science	57,819	7.1	1,258	1.8	24	1.2	4,557	7.3	816	1.8	17	2.3	5,992	2.2	571	2.9	1,273	5.2	43,311	13.4	

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(Number and percent)

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					American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific Islander		White		More than one race						
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Information science and studies	17,660	2.2	886	1.3	21	1.1	1,547	2.5	1,429	3.1	18	2.4	3,511	1.3	274	1.4	802	3.3	9,172	2.8	
Information technology	15,074	1.8	530	0.8	32	1.6	973	1.6	541	1.2	6	0.8	1,371	0.5	131	0.7	172	0.7	11,318	3.5	
Computer and information sciences nec	7,382	0.9	384	0.5	7	0.4	497	0.8	288	0.6	0	0.0	1,252	0.5	96	0.5	136	0.6	4,722	1.5	
Geosciences, atmospheric sciences, and ocean sciences	11,594	1.4	1,132	1.6	29	1.5	415	0.7	311	0.7	5	0.7	6,201	2.3	454	2.3	304	1.2	2,743	0.9	
Atmospheric sciences and meteorology	1,431	0.2	98	0.1	0	0.0	50	0.1	52	0.1	1	0.1	768	0.3	50	0.2	29	0.1	383	0.1	
Geological and earth sciences	7,240	0.9	715	1.0	22	1.1	263	0.4	178	0.4	1	0.1	3,731	1.4	250	1.2	167	0.7	1,913	0.6	
Ocean and marine sciences	2,923	0.4	319	0.5	7	0.4	102	0.2	81	0.2	3	0.4	1,702	0.6	154	0.8	108	0.4	447	0.1	
Geosciences, atmospheric sciences, and ocean sciences nec	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Mathematics and statistics	33,893	4.1	1,958	2.8	38	1.9	2,563	4.1	768	1.7	15	2.0	9,075	3.4	595	3.0	819	3.4	18,062	5.6	
Applied mathematics	11,140	1.4	552	0.8	10	0.5	713	1.1	220	0.5	6	0.8	2,169	0.8	166	0.8	249	1.0	7,055	2.2	
Mathematics	11,801	1.4	875	1.2	18	0.9	842	1.3	288	0.6	5	0.7	4,605	1.7	260	1.3	332	1.4	4,576	1.4	
Statistics	10,952	1.3	531	0.8	10	0.5	1,008	1.6	260	0.6	4	0.5	2,301	0.9	169	0.8	238	1.0	6,431	2.0	
Multidisciplinary and interdisciplinary sciences	26,429	3.2	1,935	2.7	43	2.2	2,392	3.8	1,458	3.2	25	3.3	7,814	2.9	574	2.9	731	3.0	11,457	3.6	
Biological and physical sciences	1,896	0.2	154	0.2	4	0.2	227	0.4	96	0.2	6	0.8	748	0.3	69	0.3	56	0.2	536	0.2	
Computational science	3,228	0.4	195	0.3	4	0.2	259	0.4	77	0.2	4	0.5	935	0.3	56	0.3	53	0.2	1,645	0.5	
Data science and data analytics	10,416	1.3	613	0.9	11	0.6	1,068	1.7	509	1.1	3	0.4	2,412	0.9	161	0.8	348	1.4	5,291	1.6	
International and global studies	996	0.1	191	0.3	7	0.4	91	0.1	82	0.2	5	0.7	308	0.1	37	0.2	25	0.1	250	0.1	
Multidisciplinary and interdisciplinary sciences nec	9,893	1.2	782	1.1	17	0.9	747	1.2	694	1.5	7	0.9	3,411	1.3	251	1.3	249	1.0	3,735	1.2	
Natural resources and conservation	13,490	1.6	1,240	1.8	120	6.0	448	0.7	464	1.0	26	3.4	8,051	3.0	449	2.2	341	1.4	2,351	0.7	
Environmental science and studies	6,348	0.8	682	1.0	60	3.0	284	0.5	255	0.6	21	2.8	3,548	1.3	197	1.0	172	0.7	1,129	0.4	
Forestry, natural resources, and conservation	7,142	0.9	558	0.8	60	3.0	164	0.3	209	0.5	5	0.7	4,503	1.7	252	1.3	169	0.7	1,222	0.4	
Physical sciences	44,329	5.4	3,263	4.6	46	2.3	2,821	4.5	1,133	2.4	19	2.5	16,702	6.2	1,124	5.6	974	4.0	18,247	5.7	
Astronomy and astrophysics	1,657	0.2	169	0.2	6	0.3	121	0.2	52	0.1	3	0.4	791	0.3	79	0.4	49	0.2	387	0.1	
Chemistry	23,007	2.8	1,837	2.6	19	1.0	1,544	2.5	661	1.4	14	1.9	8,390	3.1	558	2.8	485	2.0	9,499	2.9	
Materials sciences	1,571	0.2	73	0.1	1	0.1	137	0.2	41	0.1	1	0.1	452	0.2	32	0.2	39	0.2	795	0.2	
Physics	17,119	2.1	1,137	1.6	20	1.0	981	1.6	306	0.7	1	0.1	6,609	2.5	434	2.2	385	1.6	7,246	2.2	
Physical sciences nec	975	0.1	47	0.1	0	0.0	38	0.1	73	0.2	0	0.0	460	0.2	21	0.1	16	0.1	320	0.1	
Psychology	73,828	9.0	13,803	19.6	303	15.3	4,066	6.5	8,765	18.9	153	20.3	34,623	12.8	2,696	13.5	3,579	14.7	5,840	1.8	
Applied psychology	25,198	3.1	5,381	7.6	98	4.9	1,286	2.1	2,641	5.7	59	7.8	12,330	4.6	787	3.9	1,245	5.1	1,371	0.4	
Clinical psychology	7,873	1.0	1,755	2.5	23	1.2	575	0.9	560	1.2	18	2.4	3,859	1.4	362	1.8	371	1.5	350	0.1	
Counseling psychology	16,071	2.0	3,199	4.5	87	4.4	735	1.2	2,904	6.3	33	4.4	7,142	2.7	536	2.7	959	3.9	476	0.1	

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					American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific Islander		White		More than one race						
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Human development	2,080	0.3	266	0.4	13	0.7	94	0.2	205	0.4	1	0.1	1,073	0.4	98	0.5	72	0.3	258	0.1	
Psychology, general	14,928	1.8	2,242	3.2	64	3.2	740	1.2	1,927	4.2	39	5.2	6,821	2.5	636	3.2	772	3.2	1,687	0.5	
Research and experimental psychology	7,678	0.9	960	1.4	18	0.9	636	1.0	528	1.1	3	0.4	3,398	1.3	277	1.4	160	0.7	1,698	0.5	
Social sciences	74,591	9.1	8,171	11.6	340	17.1	3,761	6.0	6,300	13.6	113	15.0	29,079	10.8	2,220	11.1	2,516	10.3	22,091	6.9	
Agricultural and natural resource economics	740	0.1	48	0.1	2	0.1	16	*	27	0.1	0	0.0	247	0.1	13	0.1	10	*	377	0.1	
Anthropology	5,796	0.7	713	1.0	57	2.9	202	0.3	247	0.5	8	1.1	3,034	1.1	241	1.2	186	0.8	1,108	0.3	
Area, ethnic, cultural, gender, and group studies	4,920	0.6	893	1.3	113	5.7	270	0.4	582	1.3	29	3.8	1,516	0.6	225	1.1	148	0.6	1,144	0.4	
Criminal justice and safety studies	6,424	0.8	1,097	1.6	24	1.2	151	0.2	1,333	2.9	15	2.0	2,952	1.1	228	1.1	434	1.8	190	0.1	
Criminology	1,477	0.2	296	0.4	8	0.4	48	0.1	168	0.4	1	0.1	714	0.3	56	0.3	30	0.1	156	*	
Economics (except agricultural and natural resource)	14,559	1.8	584	0.8	9	0.5	755	1.2	314	0.7	7	0.9	3,205	1.2	192	1.0	265	1.1	9,228	2.9	
Geography and cartography	3,837	0.5	332	0.5	17	0.9	141	0.2	140	0.3	3	0.4	1,987	0.7	113	0.6	149	0.6	955	0.3	
International relations and national security studies	7,473	0.9	990	1.4	12	0.6	450	0.7	577	1.2	16	2.1	3,591	1.3	246	1.2	268	1.1	1,323	0.4	
Linguistics	2,727	0.3	228	0.3	24	1.2	175	0.3	81	0.2	3	0.4	1,070	0.4	72	0.4	80	0.3	994	0.3	
Political science and government	7,684	0.9	782	1.1	12	0.6	342	0.5	477	1.0	6	0.8	3,335	1.2	246	1.2	222	0.9	2,262	0.7	
Public policy analysis	7,370	0.9	829	1.2	27	1.4	497	0.8	920	2.0	9	1.2	3,149	1.2	226	1.1	387	1.6	1,326	0.4	
Sociology and population studies	6,404	0.8	948	1.3	21	1.1	327	0.5	844	1.8	9	1.2	2,473	0.9	242	1.2	180	0.7	1,360	0.4	
Urban studies and affairs	966	0.1	85	0.1	3	0.2	56	0.1	176	0.4	1	0.1	440	0.2	23	0.1	28	0.1	154	*	
Social sciences, other	4,214	0.5	346	0.5	11	0.6	331	0.5	414	0.9	6	0.8	1,366	0.5	97	0.5	129	0.5	1,514	0.5	
Engineering	175,559	21.5	10,604	15.1	221	11.1	13,441	21.5	4,730	10.2	80	10.6	46,915	17.4	3,628	18.1	3,850	15.8	92,090	28.6	
Aerospace, aeronautical, and astronautical engineering	8,264	1.0	778	1.1	13	0.7	907	1.5	181	0.4	8	1.1	3,873	1.4	289	1.4	178	0.7	2,037	0.6	
Biological, biomedical, and biosystems engineering	15,203	1.9	1,220	1.7	20	1.0	1,972	3.2	587	1.3	9	1.2	4,942	1.8	440	2.2	434	1.8	5,579	1.7	
Chemical, petroleum, and chemical-related engineering	10,546	1.3	520	0.7	11	0.6	920	1.5	222	0.5	5	0.7	2,846	1.1	192	1.0	183	0.8	5,647	1.8	
Chemical engineering	9,701	1.2	497	0.7	9	0.5	895	1.4	204	0.4	5	0.7	2,739	1.0	188	0.9	169	0.7	4,995	1.5	
Petroleum engineering	845	0.1	23	*	2	0.1	25	*	18	*	0	0.0	107	*	4	*	14	0.1	652	0.2	
Civil, environmental, transportation and related engineering fields	19,934	2.4	1,353	1.9	54	2.7	1,063	1.7	500	1.1	14	1.9	5,331	2.0	360	1.8	318	1.3	10,941	3.4	
Civil engineering	15,851	1.9	1,065	1.5	39	2.0	880	1.4	371	0.8	11	1.5	4,132	1.5	255	1.3	242	1.0	8,856	2.7	
Architectural, environmental, construction and surveying engineering	4,083	0.5	288	0.4	15	0.8	183	0.3	129	0.3	3	0.4	1,199	0.4	105	0.5	76	0.3	2,085	0.6	
Electrical, electronics, communications and computer engineering	48,799	6.0	2,124	3.0	31	1.6	3,692	5.9	1,067	2.3	18	2.4	8,610	3.2	752	3.8	969	4.0	31,536	9.8	
Electrical, electronics, and communications engineering	32,988	4.0	1,609	2.3	25	1.3	2,702	4.3	811	1.8	13	1.7	6,760	2.5	598	3.0	634	2.6	19,836	6.2	
Computer engineering	15,811	1.9	515	0.7	6	0.3	990	1.6	256	0.6	5	0.7	1,850	0.7	154	0.8	335	1.4	11,700	3.6	
Industrial, manufacturing, systems engineering and operations research	15,762	1.9	1,121	1.6	13	0.7	970	1.6	542	1.2	4	0.5	4,084	1.5	280	1.4	484	2.0	8,264	2.6	

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					American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific Islander		White		More than one race							
					Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent			Number	Percent		
Industrial and manufacturing engineering	8,113	1.0	485	0.7	5	0.3	310	0.5	211	0.5	1	0.1	1,437	0.5	91	0.5	97	0.4	5,476	1.7		
Systems engineering and operations research	7,649	0.9	636	0.9	8	0.4	660	1.1	331	0.7	3	0.4	2,647	1.0	189	0.9	387	1.6	2,788	0.9		
Mechanical engineering	27,014	3.3	1,839	2.6	33	1.7	2,045	3.3	586	1.3	11	1.5	8,051	3.0	673	3.4	506	2.1	13,270	4.1		
Metallurgical, mining, materials and related engineering fields	7,244	0.9	521	0.7	12	0.6	545	0.9	181	0.4	3	0.4	2,338	0.9	186	0.9	142	0.6	3,316	1.0		
Other engineering	22,793	2.8	1,128	1.6	34	1.7	1,327	2.1	864	1.9	8	1.1	6,840	2.5	456	2.3	636	2.6	11,500	3.6		
Agricultural engineering	1,032	0.1	40	0.1	2	0.1	38	0.1	20	*	1	0.1	308	0.1	29	0.1	14	0.1	580	0.2		
Engineering mechanics, physics, and science	2,390	0.3	124	0.2	3	0.2	186	0.3	71	0.2	1	0.1	690	0.3	62	0.3	38	0.2	1,215	0.4		
Nuclear engineering	1,606	0.2	130	0.2	3	0.2	77	0.1	34	0.1	0	0.0	886	0.3	68	0.3	37	0.2	371	0.1		
Engineering, other	17,765	2.2	834	1.2	26	1.3	1,026	1.6	739	1.6	6	0.8	4,956	1.8	297	1.5	547	2.2	9,334	2.9		
Health	81,047	9.9	10,330	14.7	351	17.7	7,235	11.6	9,064	19.6	102	13.5	37,035	13.7	2,410	12.0	3,786	15.6	10,734	3.3		
Clinical medicine	34,658	4.2	4,538	6.4	226	11.4	3,953	6.3	5,120	11.1	57	7.6	13,548	5.0	1,207	6.0	1,981	8.1	4,028	1.2		
Medical clinical sciences and clinical and medical laboratory sciences	2,117	0.3	199	0.3	10	0.5	273	0.4	250	0.5	2	0.3	991	0.4	53	0.3	90	0.4	249	0.1		
Public health	32,541	4.0	4,339	6.2	216	10.9	3,680	5.9	4,870	10.5	55	7.3	12,557	4.7	1,154	5.8	1,891	7.8	3,779	1.2		
Other health	46,389	5.7	5,792	8.2	125	6.3	3,282	5.2	3,944	8.5	45	6.0	23,487	8.7	1,203	6.0	1,805	7.4	6,706	2.1		
Communication disorders sciences	19,109	2.3	3,026	4.3	52	2.6	967	1.5	1,024	2.2	14	1.9	12,196	4.5	513	2.6	837	3.4	480	0.1		
Dental sciences	2,231	0.3	284	0.4	2	0.1	367	0.6	78	0.2	2	0.3	892	0.3	47	0.2	126	0.5	433	0.1		
Kinesiology and exercise science	5,254	0.6	774	1.1	28	1.4	154	0.2	622	1.3	8	1.1	2,647	1.0	200	1.0	136	0.6	685	0.2		
Nursing science	5,510	0.7	540	0.8	17	0.9	417	0.7	765	1.7	7	0.9	2,950	1.1	117	0.6	192	0.8	505	0.2		
Pharmaceutical sciences	5,219	0.6	283	0.4	6	0.3	457	0.7	400	0.9	2	0.3	1,379	0.5	127	0.6	135	0.6	2,430	0.8		
Other health nec	9,066	1.1	885	1.3	20	1.0	920	1.5	1,055	2.3	12	1.6	3,423	1.3	199	1.0	379	1.6	2,173	0.7		

\* = value < 0.05%; ne = not eligible.

nec = not elsewhere classified.

**Note(s):**

Percentages may not add to total because of rounding. Ethnicity and race data are available only for U.S. citizens and permanent residents. For more information on the mapping of Survey of Graduate Students and Postdoctorates in Science and Engineering 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.