

TABLE 2-4

## Graduate students in science, engineering, and health broad fields, by degree program, citizenship, ethnicity, and race: 2022

(Number and percent)

Broad 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				
All graduate students	798,534	100.0	69,621	100.0	2,082	100.0	61,426	100.0	44,016	100.0	738	100.0	279,657	100.0	19,331	100.0	23,428	100.0	298,235	100.0
Science	538,166	67.4	48,508	69.7	1,335	64.1	40,603	66.1	29,714	67.5	537	72.8	190,960	68.3	13,393	69.3	15,914	67.9	197,202	66.1
Agricultural and veterinary sciences	11,596	1.5	886	1.3	29	1.4	396	0.6	457	1.0	14	1.9	5,680	2.0	237	1.2	256	1.1	3,641	1.2
Biological and biomedical sciences	102,700	12.9	10,691	15.4	239	11.5	10,386	16.9	6,413	14.6	115	15.6	44,818	16.0	3,271	16.9	3,271	14.0	23,496	7.9
Computer and information sciences	150,555	18.9	5,615	8.1	121	5.8	13,558	22.1	5,590	12.7	93	12.6	25,030	9.0	2,028	10.5	3,359	14.3	95,161	31.9
Geosciences, atmospheric sciences, and ocean sciences	11,970	1.5	1,109	1.6	34	1.6	417	0.7	313	0.7	6	0.8	6,686	2.4	426	2.2	303	1.3	2,676	0.9
Mathematics and statistics	34,387	4.3	1,926	2.8	37	1.8	2,686	4.4	737	1.7	12	1.6	9,472	3.4	563	2.9	898	3.8	18,056	6.1
Multidisciplinary and interdisciplinary sciences	20,945	2.6	1,698	2.4	32	1.5	1,927	3.1	1,218	2.8	21	2.8	7,096	2.5	501	2.6	739	3.2	7,713	2.6
Natural resources and conservation	13,762	1.7	1,290	1.9	121	5.8	484	0.8	478	1.1	31	4.2	8,430	3.0	454	2.3	387	1.7	2,087	0.7
Physical sciences	44,092	5.5	3,288	4.7	66	3.2	2,789	4.5	1,143	2.6	18	2.4	17,289	6.2	1,062	5.5	1,034	4.4	17,403	5.8
Psychology	69,442	8.7	13,177	18.9	264	12.7	3,967	6.5	6,991	15.9	115	15.6	34,375	12.3	2,558	13.2	2,917	12.5	5,078	1.7
Social sciences	78,717	9.9	8,828	12.7	392	18.8	3,993	6.5	6,374	14.5	112	15.2	32,084	11.5	2,293	11.9	2,750	11.7	21,891	7.3
Engineering	176,000	22.0	10,629	15.3	339	16.3	13,268	21.6	4,752	10.8	80	10.8	48,988	17.5	3,430	17.7	3,788	16.2	90,726	30.4
Aerospace, aeronautical, and astronautical engineering	8,095	1.0	703	1.0	12	0.6	868	1.4	176	0.4	10	1.4	3,894	1.4	274	1.4	182	0.8	1,976	0.7
Biological, biomedical, and biosystems engineering	14,442	1.8	1,119	1.6	20	1.0	1,863	3.0	562	1.3	11	1.5	5,010	1.8	411	2.1	423	1.8	5,023	1.7
Chemical, petroleum, and chemical-related engineering	10,601	1.3	558	0.8	20	1.0	899	1.5	238	0.5	6	0.8	3,049	1.1	173	0.9	186	0.8	5,472	1.8
Civil, environmental, transportation and related engineering fields	20,375	2.6	1,471	2.1	54	2.6	1,088	1.8	562	1.3	10	1.4	5,820	2.1	345	1.8	337	1.4	10,688	3.6
Electrical, electronics, communications and computer engineering	49,901	6.2	2,141	3.1	130	6.2	3,595	5.9	1,018	2.3	12	1.6	8,815	3.2	706	3.7	873	3.7	32,611	10.9
Industrial, manufacturing, systems engineering and operations research	16,435	2.1	1,161	1.7	19	0.9	1,012	1.6	560	1.3	10	1.4	4,420	1.6	275	1.4	474	2.0	8,504	2.9
Mechanical engineering	27,552	3.5	1,891	2.7	32	1.5	2,044	3.3	587	1.3	4	0.5	8,462	3.0	609	3.2	602	2.6	13,321	4.5
Metallurgical, mining, materials and related engineering fields	7,118	0.9	463	0.7	15	0.7	522	0.8	163	0.4	1	0.1	2,449	0.9	202	1.0	119	0.5	3,184	1.1
Other engineering	21,481	2.7	1,122	1.6	37	1.8	1,377	2.2	886	2.0	16	2.2	7,069	2.5	435	2.3	592	2.5	9,947	3.3
Health	84,368	10.6	10,484	15.1	408	19.6	7,555	12.3	9,550	21.7	121	16.4	39,709	14.2	2,508	13.0	3,726	15.9	10,307	3.5
Clinical medicine <sup>a</sup>	39,217	4.9	4,991	7.2	270	13.0	4,461	7.3	5,843	13.3	75	10.2	15,660	5.6	1,367	7.1	2,051	8.8	4,499	1.5

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Broad field	U.S. citizens and permanent residents																				Temporary visa holders	
	Total		Not Hispanic or Latino															Unknown ethnicity and race				
			Hispanic or Latino		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		
Other health	45,151	5.7	5,493	7.9	138	6.6	3,094	5.0	3,707	8.4	46	6.2	24,049	8.6	1,141	5.9	1,675	7.1	5,808	1.9		
Master's students	501,311	62.8	48,303	69.4	1,331	63.9	40,873	66.5	31,398	71.3	541	73.3	172,212	61.6	12,002	62.1	15,345	65.5	179,306	60.1		
Science	331,983	41.6	31,959	45.9	752	36.1	26,267	42.8	20,810	47.3	382	51.8	110,258	39.4	7,876	40.7	9,928	42.4	123,751	41.5		
Agricultural and veterinary sciences	6,949	0.9	644	0.9	19	0.9	267	0.4	364	0.8	13	1.8	3,876	1.4	173	0.9	179	0.8	1,414	0.5		
Biological and biomedical sciences	43,062	5.4	4,953	7.1	93	4.5	4,963	8.1	3,807	8.6	61	8.3	18,595	6.6	1,425	7.4	1,550	6.6	7,615	2.6		
Computer and information sciences	129,972	16.3	5,083	7.3	96	4.6	11,960	19.5	4,989	11.3	80	10.8	20,862	7.5	1,695	8.8	2,845	12.1	82,362	27.6		
Geosciences, atmospheric sciences, and ocean sciences	5,186	0.6	578	0.8	18	0.9	154	0.3	161	0.4	3	0.4	3,364	1.2	193	1.0	114	0.5	601	0.2		
Mathematics and statistics	20,798	2.6	1,272	1.8	23	1.1	1,719	2.8	514	1.2	8	1.1	5,233	1.9	312	1.6	518	2.2	11,199	3.8		
Multidisciplinary and interdisciplinary sciences	16,931	2.1	1,398	2.0	25	1.2	1,642	2.7	1,009	2.3	14	1.9	5,431	1.9	384	2.0	611	2.6	6,417	2.2		
Natural resources and conservation	9,807	1.2	1,008	1.4	74	3.6	338	0.6	306	0.7	27	3.7	6,435	2.3	349	1.8	242	1.0	1,028	0.3		
Physical sciences	6,256	0.8	737	1.1	29	1.4	446	0.7	314	0.7	5	0.7	2,719	1.0	194	1.0	189	0.8	1,623	0.5		
Psychology	48,321	6.1	10,130	14.6	164	7.9	2,496	4.1	5,173	11.8	99	13.4	23,784	8.5	1,725	8.9	2,258	9.6	2,492	0.8		
Social sciences	44,701	5.6	6,156	8.8	211	10.1	2,282	3.7	4,173	9.5	72	9.8	19,959	7.1	1,426	7.4	1,422	6.1	9,000	3.0		
Engineering	103,020	12.9	7,379	10.6	253	12.2	8,383	13.6	2,983	6.8	54	7.3	30,174	10.8	2,060	10.7	2,317	9.9	49,417	16.6		
Aerospace, aeronautical, and astronautical engineering	5,263	0.7	536	0.8	10	0.5	632	1.0	114	0.3	8	1.1	2,741	1.0	179	0.9	133	0.6	910	0.3		
Biological, biomedical, and biosystems engineering	5,177	0.6	439	0.6	7	0.3	751	1.2	217	0.5	5	0.7	1,766	0.6	153	0.8	124	0.5	1,715	0.6		
Chemical, petroleum, and chemical-related engineering	3,011	0.4	225	0.3	7	0.3	277	0.5	94	0.2	3	0.4	855	0.3	47	0.2	71	0.3	1,432	0.5		
Civil, environmental, transportation and related engineering fields	12,621	1.6	1,169	1.7	38	1.8	825	1.3	398	0.9	4	0.5	4,302	1.5	244	1.3	229	1.0	5,412	1.8		
Electrical, electronics, communications and computer engineering	32,316	4.0	1,647	2.4	122	5.9	2,564	4.2	703	1.6	10	1.4	5,765	2.1	476	2.5	567	2.4	20,462	6.9		
Industrial, manufacturing, systems engineering and operations research	12,579	1.6	1,046	1.5	15	0.7	804	1.3	415	0.9	9	1.2	3,560	1.3	220	1.1	392	1.7	6,118	2.1		
Mechanical engineering	16,029	2.0	1,332	1.9	21	1.0	1,399	2.3	362	0.8	2	0.3	5,553	2.0	399	2.1	367	1.6	6,594	2.2		
Metallurgical, mining, materials and related engineering fields	2,545	0.3	193	0.3	9	0.4	196	0.3	65	0.1	0	0.0	982	0.4	85	0.4	50	0.2	965	0.3		
Other engineering	13,479	1.7	792	1.1	24	1.2	935	1.5	615	1.4	13	1.8	4,650	1.7	257	1.3	384	1.6	5,809	1.9		
Health	66,308	8.3	8,965	12.9	326	15.7	6,223	10.1	7,605	17.3	105	14.2	31,780	11.4	2,066	10.7	3,100	13.2	6,138	2.1		

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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		
Clinical medicine <sup>a</sup>	33,251	4.2	4,339	6.2	209	10.0	3,923	6.4	5,050	11.5	66	8.9	13,323	4.8	1,185	6.1	1,845	7.9	3,311	1.1	
Other health	33,057	4.1	4,626	6.6	117	5.6	2,300	3.7	2,555	5.8	39	5.3	18,457	6.6	881	4.6	1,255	5.4	2,827	0.9	
Doctoral students	297,223	37.2	21,318	30.6	751	36.1	20,553	33.5	12,618	28.7	197	26.7	107,445	38.4	7,329	37.9	8,083	34.5	118,929	39.9	
Science	206,183	25.8	16,549	23.8	583	28.0	14,336	23.3	8,904	20.2	155	21.0	80,702	28.9	5,517	28.5	5,986	25.6	73,451	24.6	
Agricultural and veterinary sciences	4,647	0.6	242	0.3	10	0.5	129	0.2	93	0.2	1	0.1	1,804	0.6	64	0.3	77	0.3	2,227	0.7	
Biological and biomedical sciences	59,638	7.5	5,738	8.2	146	7.0	5,423	8.8	2,606	5.9	54	7.3	26,223	9.4	1,846	9.5	1,721	7.3	15,881	5.3	
Computer and information sciences	20,583	2.6	532	0.8	25	1.2	1,598	2.6	601	1.4	13	1.8	4,168	1.5	333	1.7	514	2.2	12,799	4.3	
Geosciences, atmospheric sciences, and ocean sciences	6,784	0.8	531	0.8	16	0.8	263	0.4	152	0.3	3	0.4	3,322	1.2	233	1.2	189	0.8	2,075	0.7	
Mathematics and statistics	13,589	1.7	654	0.9	14	0.7	967	1.6	223	0.5	4	0.5	4,239	1.5	251	1.3	380	1.6	6,857	2.3	
Multidisciplinary and interdisciplinary sciences	4,014	0.5	300	0.4	7	0.3	285	0.5	209	0.5	7	0.9	1,665	0.6	117	0.6	128	0.5	1,296	0.4	
Natural resources and conservation	3,955	0.5	282	0.4	47	2.3	146	0.2	172	0.4	4	0.5	1,995	0.7	105	0.5	145	0.6	1,059	0.4	
Physical sciences	37,836	4.7	2,551	3.7	37	1.8	2,343	3.8	829	1.9	13	1.8	14,570	5.2	868	4.5	845	3.6	15,780	5.3	
Psychology	21,121	2.6	3,047	4.4	100	4.8	1,471	2.4	1,818	4.1	16	2.2	10,591	3.8	833	4.3	659	2.8	2,586	0.9	
Social sciences	34,016	4.3	2,672	3.8	181	8.7	1,711	2.8	2,201	5.0	40	5.4	12,125	4.3	867	4.5	1,328	5.7	12,891	4.3	
Engineering	72,980	9.1	3,250	4.7	86	4.1	4,885	8.0	1,769	4.0	26	3.5	18,814	6.7	1,370	7.1	1,471	6.3	41,309	13.9	
Aerospace, aeronautical, and astronautical engineering	2,832	0.4	167	0.2	2	0.1	236	0.4	62	0.1	2	0.3	1,153	0.4	95	0.5	49	0.2	1,066	0.4	
Biological, biomedical, and biosystems engineering	9,265	1.2	680	1.0	13	0.6	1,112	1.8	345	0.8	6	0.8	3,244	1.2	258	1.3	299	1.3	3,308	1.1	
Chemical, petroleum, and chemical-related engineering	7,590	1.0	333	0.5	13	0.6	622	1.0	144	0.3	3	0.4	2,194	0.8	126	0.7	115	0.5	4,040	1.4	
Civil, environmental, transportation and related engineering fields	7,754	1.0	302	0.4	16	0.8	263	0.4	164	0.4	6	0.8	1,518	0.5	101	0.5	108	0.5	5,276	1.8	
Electrical, electronics, communications and computer engineering	17,585	2.2	494	0.7	8	0.4	1,031	1.7	315	0.7	2	0.3	3,050	1.1	230	1.2	306	1.3	12,149	4.1	
Industrial, manufacturing, systems engineering and operations research	3,856	0.5	115	0.2	4	0.2	208	0.3	145	0.3	1	0.1	860	0.3	55	0.3	82	0.4	2,386	0.8	
Mechanical engineering	11,523	1.4	559	0.8	11	0.5	645	1.1	225	0.5	2	0.3	2,909	1.0	210	1.1	235	1.0	6,727	2.3	
Metallurgical, mining, materials and related engineering fields	4,573	0.6	270	0.4	6	0.3	326	0.5	98	0.2	1	0.1	1,467	0.5	117	0.6	69	0.3	2,219	0.7	
Other engineering	8,002	1.0	330	0.5	13	0.6	442	0.7	271	0.6	3	0.4	2,419	0.9	178	0.9	208	0.9	4,138	1.4	

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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
Health	18,060	2.3	1,519	2.2	82	3.9	1,332	2.2	1,945	4.4	16	2.2	7,929	2.8	442	2.3	626	2.7	4,169	1.4		
Clinical medicine <sup>a</sup>	5,966	0.7	652	0.9	61	2.9	538	0.9	793	1.8	9	1.2	2,337	0.8	182	0.9	206	0.9	1,188	0.4		
Other health	12,094	1.5	867	1.2	21	1.0	794	1.3	1,152	2.6	7	0.9	5,592	2.0	260	1.3	420	1.8	2,981	1.0		

<sup>a</sup> Clinical medicine includes graduate students in public health and in medical clinical sciences and clinical and medical laboratory sciences.

**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, 2022.