

TABLE 2-4

Graduate students in science, engineering, and health broad fields, by degree program, citizenship, ethnicity, and race: 2021

(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			Number		
All graduate students	760,156	100.0	69,174	100.0	2,105	100.0	60,203	100.0	45,302	100.0	792	100.0	294,198	100.0	19,471	100.0	24,352	100.0	244,559	100.0	
Science	509,784	67.1	48,343	69.9	1,443	68.6	39,413	65.5	31,021	68.5	561	70.8	201,768	68.6	13,468	69.2	17,432	71.6	156,335	63.9	
Agricultural and veterinary sciences	11,244	1.5	926	1.3	34	1.6	389	0.6	407	0.9	13	1.6	5,772	2.0	244	1.3	224	0.9	3,235	1.3	
Biological and biomedical sciences	100,883	13.3	10,508	15.2	253	12.0	10,250	17.0	6,587	14.5	140	17.7	46,065	15.7	3,109	16.0	3,205	13.2	20,766	8.5	
Computer and information sciences	121,730	16.0	5,603	8.1	142	6.7	12,837	21.3	5,922	13.1	87	11.0	26,802	9.1	2,059	10.6	3,487	14.3	64,791	26.5	
Geosciences, atmospheric sciences, and ocean sciences	12,290	1.6	1,068	1.5	32	1.5	418	0.7	303	0.7	8	1.0	7,118	2.4	403	2.1	384	1.6	2,556	1.0	
Mathematics and statistics	34,258	4.5	1,979	2.9	35	1.7	2,842	4.7	742	1.6	14	1.8	10,296	3.5	558	2.9	859	3.5	16,933	6.9	
Multidisciplinary and interdisciplinary studies	15,768	2.1	1,519	2.2	30	1.4	1,489	2.5	981	2.2	18	2.3	6,382	2.2	441	2.3	484	2.0	4,424	1.8	
Natural resources and conservation	13,922	1.8	1,304	1.9	129	6.1	472	0.8	519	1.1	33	4.2	8,619	2.9	479	2.5	433	1.8	1,934	0.8	
Physical sciences	44,141	5.8	3,287	4.8	72	3.4	2,720	4.5	1,145	2.5	20	2.5	18,104	6.2	1,036	5.3	1,049	4.3	16,708	6.8	
Psychology	73,325	9.6	13,155	19.0	295	14.0	3,827	6.4	7,639	16.9	108	13.6	37,135	12.6	2,829	14.5	4,109	16.9	4,228	1.7	
Social sciences	82,223	10.8	8,994	13.0	421	20.0	4,169	6.9	6,776	15.0	120	15.2	35,475	12.1	2,310	11.9	3,198	13.1	20,760	8.5	
Engineering	168,050	22.1	10,821	15.6	286	13.6	13,412	22.3	4,847	10.7	98	12.4	52,168	17.7	3,478	17.9	3,555	14.6	79,385	32.5	
Aerospace, aeronautical, and astronautical engineering	7,838	1.0	688	1.0	17	0.8	767	1.3	170	0.4	11	1.4	3,961	1.3	276	1.4	184	0.8	1,764	0.7	
Biological, biomedical, and biosystems engineering	14,059	1.8	1,053	1.5	15	0.7	1,878	3.1	544	1.2	14	1.8	5,239	1.8	433	2.2	379	1.6	4,504	1.8	
Chemical, petroleum, and chemical-related engineering	10,696	1.4	568	0.8	21	1.0	879	1.5	247	0.5	3	0.4	3,310	1.1	216	1.1	190	0.8	5,262	2.2	
Civil, environmental, transportation and related engineering fields	19,608	2.6	1,500	2.2	55	2.6	1,176	2.0	577	1.3	17	2.1	6,213	2.1	367	1.9	375	1.5	9,328	3.8	
Electrical, electronics, communications and computer engineering	45,265	6.0	2,192	3.2	52	2.5	3,619	6.0	990	2.2	12	1.5	9,273	3.2	652	3.3	791	3.2	27,684	11.3	
Industrial, manufacturing, systems engineering and operations research	15,870	2.1	1,182	1.7	27	1.3	1,112	1.8	642	1.4	12	1.5	4,961	1.7	285	1.5	426	1.7	7,223	3.0	
Mechanical engineering	27,258	3.6	2,055	3.0	39	1.9	2,018	3.4	603	1.3	11	1.4	9,167	3.1	612	3.1	601	2.5	12,152	5.0	
Metallurgical, mining, materials and related engineering fields	7,422	1.0	464	0.7	16	0.8	549	0.9	172	0.4	3	0.4	2,602	0.9	199	1.0	118	0.5	3,299	1.3	
Other engineering	20,034	2.6	1,119	1.6	44	2.1	1,414	2.3	902	2.0	15	1.9	7,442	2.5	438	2.2	491	2.0	8,169	3.3	
Health	82,322	10.8	10,010	14.5	376	17.9	7,378	12.3	9,434	20.8	133	16.8	40,262	13.7	2,525	13.0	3,365	13.8	8,839	3.6	

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			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		
Clinical medicine ^a	39,633	5.2	4,957	7.2	249	11.8	4,527	7.5	6,017	13.3	81	10.2	16,667	5.7	1,404	7.2	1,867	7.7	3,864	1.6	
Other health	42,689	5.6	5,053	7.3	127	6.0	2,851	4.7	3,417	7.5	52	6.6	23,595	8.0	1,121	5.8	1,498	6.2	4,975	2.0	
Master's students	466,613	61.4	48,681	70.4	1,356	64.4	40,607	67.5	33,129	73.1	597	75.4	184,608	62.7	12,301	63.2	16,376	67.2	128,958	52.7	
Science	305,796	40.2	32,387	46.8	845	40.1	25,795	42.8	22,257	49.1	410	51.8	118,785	40.4	8,022	41.2	11,342	46.6	85,953	35.1	
Agricultural and veterinary sciences	6,801	0.9	700	1.0	22	1.0	262	0.4	306	0.7	12	1.5	3,978	1.4	168	0.9	157	0.6	1,196	0.5	
Biological and biomedical sciences	42,728	5.6	5,037	7.3	104	4.9	4,999	8.3	4,067	9.0	86	10.9	19,656	6.7	1,353	6.9	1,568	6.4	5,858	2.4	
Computer and information sciences	102,199	13.4	5,106	7.4	121	5.7	11,428	19.0	5,390	11.9	76	9.6	22,742	7.7	1,742	8.9	2,965	12.2	52,629	21.5	
Geosciences, atmospheric sciences, and ocean sciences	5,520	0.7	571	0.8	18	0.9	168	0.3	159	0.4	6	0.8	3,748	1.3	186	1.0	161	0.7	503	0.2	
Mathematics and statistics	20,639	2.7	1,310	1.9	22	1.0	1,951	3.2	535	1.2	9	1.1	5,913	2.0	309	1.6	502	2.1	10,088	4.1	
Multidisciplinary and interdisciplinary studies	11,994	1.6	1,228	1.8	20	1.0	1,237	2.1	754	1.7	11	1.4	4,766	1.6	344	1.8	371	1.5	3,263	1.3	
Natural resources and conservation	10,012	1.3	1,028	1.5	81	3.8	344	0.6	335	0.7	31	3.9	6,611	2.2	386	2.0	279	1.1	917	0.4	
Physical sciences	6,409	0.8	782	1.1	24	1.1	463	0.8	334	0.7	7	0.9	2,964	1.0	177	0.9	187	0.8	1,471	0.6	
Psychology	51,878	6.8	10,248	14.8	195	9.3	2,483	4.1	5,808	12.8	91	11.5	26,061	8.9	1,886	9.7	3,268	13.4	1,838	0.8	
Social sciences	47,616	6.3	6,377	9.2	238	11.3	2,460	4.1	4,569	10.1	81	10.2	22,346	7.6	1,471	7.6	1,884	7.7	8,190	3.3	
Engineering	95,126	12.5	7,612	11.0	205	9.7	8,685	14.4	3,141	6.9	70	8.8	32,987	11.2	2,155	11.1	2,178	8.9	38,093	15.6	
Aerospace, aeronautical, and astronautical engineering	5,065	0.7	545	0.8	12	0.6	559	0.9	114	0.3	8	1.0	2,840	1.0	189	1.0	135	0.6	663	0.3	
Biological, biomedical, and biosystems engineering	5,192	0.7	408	0.6	4	0.2	795	1.3	230	0.5	6	0.8	1,953	0.7	168	0.9	118	0.5	1,510	0.6	
Chemical, petroleum, and chemical-related engineering	2,983	0.4	244	0.4	10	0.5	283	0.5	109	0.2	0	0.0	988	0.3	75	0.4	70	0.3	1,204	0.5	
Civil, environmental, transportation and related engineering fields	11,730	1.5	1,196	1.7	41	1.9	923	1.5	409	0.9	12	1.5	4,604	1.6	267	1.4	253	1.0	4,025	1.6	
Electrical, electronics, communications and computer engineering	27,695	3.6	1,707	2.5	45	2.1	2,643	4.4	691	1.5	10	1.3	6,209	2.1	464	2.4	494	2.0	15,432	6.3	
Industrial, manufacturing, systems engineering and operations research	11,949	1.6	1,069	1.5	21	1.0	919	1.5	506	1.1	11	1.4	4,061	1.4	229	1.2	332	1.4	4,801	2.0	
Mechanical engineering	15,718	2.1	1,490	2.2	28	1.3	1,412	2.3	373	0.8	9	1.1	6,158	2.1	405	2.1	380	1.6	5,463	2.2	
Metallurgical, mining, materials and related engineering fields	2,518	0.3	163	0.2	8	0.4	198	0.3	75	0.2	2	0.3	1,063	0.4	83	0.4	49	0.2	877	0.4	

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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	Percent	Number	Percent	Number	Percent	Number	Percent
Other engineering	12,276	1.6	790	1.1	36	1.7	953	1.6	634	1.4	12	1.5	5,111	1.7	275	1.4	347	1.4	4,118	1.7	
Health	65,691	8.6	8,682	12.6	306	14.5	6,127	10.2	7,731	17.1	117	14.8	32,836	11.2	2,124	10.9	2,856	11.7	4,912	2.0	
Clinical medicine ^a	34,021	4.5	4,362	6.3	199	9.5	4,021	6.7	5,275	11.6	70	8.8	14,392	4.9	1,232	6.3	1,692	6.9	2,778	1.1	
Other health	31,670	4.2	4,320	6.2	107	5.1	2,106	3.5	2,456	5.4	47	5.9	18,444	6.3	892	4.6	1,164	4.8	2,134	0.9	
Doctoral students	293,543	38.6	20,493	29.6	749	35.6	19,596	32.5	12,173	26.9	195	24.6	109,590	37.3	7,170	36.8	7,976	32.8	115,601	47.3	
Science	203,988	26.8	15,956	23.1	598	28.4	13,618	22.6	8,764	19.3	151	19.1	82,983	28.2	5,446	28.0	6,090	25.0	70,382	28.8	
Agricultural and veterinary sciences	4,443	0.6	226	0.3	12	0.6	127	0.2	101	0.2	1	0.1	1,794	0.6	76	0.4	67	0.3	2,039	0.8	
Biological and biomedical sciences	58,155	7.7	5,471	7.9	149	7.1	5,251	8.7	2,520	5.6	54	6.8	26,409	9.0	1,756	9.0	1,637	6.7	14,908	6.1	
Computer and information sciences	19,531	2.6	497	0.7	21	1.0	1,409	2.3	532	1.2	11	1.4	4,060	1.4	317	1.6	522	2.1	12,162	5.0	
Geosciences, atmospheric sciences, and ocean sciences	6,770	0.9	497	0.7	14	0.7	250	0.4	144	0.3	2	0.3	3,370	1.1	217	1.1	223	0.9	2,053	0.8	
Mathematics and statistics	13,619	1.8	669	1.0	13	0.6	891	1.5	207	0.5	5	0.6	4,383	1.5	249	1.3	357	1.5	6,845	2.8	
Multidisciplinary and interdisciplinary studies	3,774	0.5	291	0.4	10	0.5	252	0.4	227	0.5	7	0.9	1,616	0.5	97	0.5	113	0.5	1,161	0.5	
Natural resources and conservation	3,910	0.5	276	0.4	48	2.3	128	0.2	184	0.4	2	0.3	2,008	0.7	93	0.5	154	0.6	1,017	0.4	
Physical sciences	37,732	5.0	2,505	3.6	48	2.3	2,257	3.7	811	1.8	13	1.6	15,140	5.1	859	4.4	862	3.5	15,237	6.2	
Psychology	21,447	2.8	2,907	4.2	100	4.8	1,344	2.2	1,831	4.0	17	2.1	11,074	3.8	943	4.8	841	3.5	2,390	1.0	
Social sciences	34,607	4.6	2,617	3.8	183	8.7	1,709	2.8	2,207	4.9	39	4.9	13,129	4.5	839	4.3	1,314	5.4	12,570	5.1	
Engineering	72,924	9.6	3,209	4.6	81	3.8	4,727	7.9	1,706	3.8	28	3.5	19,181	6.5	1,323	6.8	1,377	5.7	41,292	16.9	
Aerospace, aeronautical, and astronautical engineering	2,773	0.4	143	0.2	5	0.2	208	0.3	56	0.1	3	0.4	1,121	0.4	87	0.4	49	0.2	1,101	0.5	
Biological, biomedical, and biosystems engineering	8,867	1.2	645	0.9	11	0.5	1,083	1.8	314	0.7	8	1.0	3,286	1.1	265	1.4	261	1.1	2,994	1.2	
Chemical, petroleum, and chemical-related engineering	7,713	1.0	324	0.5	11	0.5	596	1.0	138	0.3	3	0.4	2,322	0.8	141	0.7	120	0.5	4,058	1.7	
Civil, environmental, transportation and related engineering fields	7,878	1.0	304	0.4	14	0.7	253	0.4	168	0.4	5	0.6	1,609	0.5	100	0.5	122	0.5	5,303	2.2	
Electrical, electronics, communications and computer engineering	17,570	2.3	485	0.7	7	0.3	976	1.6	299	0.7	2	0.3	3,064	1.0	188	1.0	297	1.2	12,252	5.0	
Industrial, manufacturing, systems engineering and operations research	3,921	0.5	113	0.2	6	0.3	193	0.3	136	0.3	1	0.1	900	0.3	56	0.3	94	0.4	2,422	1.0	
Mechanical engineering	11,540	1.5	565	0.8	11	0.5	606	1.0	230	0.5	2	0.3	3,009	1.0	207	1.1	221	0.9	6,689	2.7	

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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				
Metallurgical, mining, materials and related engineering fields	4,904	0.6	301	0.4	8	0.4	351	0.6	97	0.2	1	0.1	1,539	0.5	116	0.6	69	0.3	2,422	1.0
Other engineering	7,758	1.0	329	0.5	8	0.4	461	0.8	268	0.6	3	0.4	2,331	0.8	163	0.8	144	0.6	4,051	1.7
Health	16,631	2.2	1,328	1.9	70	3.3	1,251	2.1	1,703	3.8	16	2.0	7,426	2.5	401	2.1	509	2.1	3,927	1.6
Clinical medicine ^a	5,612	0.7	595	0.9	50	2.4	506	0.8	742	1.6	11	1.4	2,275	0.8	172	0.9	175	0.7	1,086	0.4
Other health	11,019	1.4	733	1.1	20	1.0	745	1.2	961	2.1	5	0.6	5,151	1.8	229	1.2	334	1.4	2,841	1.2

^a 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.

Source(s):

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2021.