

TABLE 4-4c

Citizenship, ethnicity, and race of doctoral students, by detailed field: 2019

(Number and percent)

Detailed field	Total		Hispanic or Latino		Not Hispanic or Latino														Unknown ethnicity and race		Temporary visa holders	
					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				
All detailed fields	281,889	100.0	17,690	100.0	750	100.0	17,543	100.0	10,450	100.0	202	100.0	108,709	100.0	6,020	100.0	7,770	100.0	112,755	100.0		
Science	193,896	68.8	13,863	78.4	624	83.2	11,953	68.1	7,454	71.3	160	79.2	82,643	76.0	4,563	75.8	5,730	73.7	66,906	59.3		
Agricultural sciences	3,889	1.4	166	0.9	10	1.3	107	0.6	102	1.0	2	1.0	1,578	1.5	52	0.9	58	0.7	1,814	1.6		
Biological and biomedical sciences	53,915	19.1	4,633	26.2	156	20.8	4,622	26.3	2,060	19.7	55	27.2	25,540	23.5	1,437	23.9	1,662	21.4	13,750	12.2		
Biochemistry	4,534	1.6	423	2.4	9	1.2	365	2.1	147	1.4	5	2.5	2,058	1.9	135	2.2	86	1.1	1,306	1.2		
Biology	7,166	2.5	603	3.4	19	2.5	440	2.5	226	2.2	1	0.5	3,499	3.2	176	2.9	187	2.4	2,015	1.8		
Biomedical sciences	4,579	1.6	404	2.3	13	1.7	419	2.4	241	2.3	7	3.5	2,122	2.0	135	2.2	124	1.6	1,114	1.0		
Biophysics	890	0.3	70	0.4	1	0.1	93	0.5	19	0.2	0	0.0	363	0.3	18	0.3	36	0.5	290	0.3		
Biostatistics and bioinformatics	3,192	1.1	117	0.7	1	0.1	376	2.1	73	0.7	3	1.5	1,029	0.9	70	1.2	117	1.5	1,406	1.2		
Biotechnology	98	*	8	*	0	0.0	12	0.1	3	*	0	0.0	50	*	2	*	1	*	22	*		
Botany and plant biology	1,295	0.5	105	0.6	4	0.5	62	0.4	29	0.3	1	0.5	579	0.5	29	0.5	38	0.5	448	0.4		
Cell, cellular biology, and anatomical sciences	4,975	1.8	516	2.9	14	1.9	481	2.7	157	1.5	5	2.5	2,289	2.1	139	2.3	151	1.9	1,223	1.1		
Ecology and population biology	2,571	0.9	221	1.2	6	0.8	92	0.5	70	0.7	4	2.0	1,550	1.4	73	1.2	98	1.3	457	0.4		
Epidemiology	1,916	0.7	118	0.7	8	1.1	218	1.2	125	1.2	5	2.5	789	0.7	54	0.9	69	0.9	530	0.5		
Genetics	2,082	0.7	177	1.0	11	1.5	181	1.0	66	0.6	2	1.0	1,069	1.0	50	0.8	50	0.6	476	0.4		
Microbiological sciences and immunology	3,937	1.4	369	2.1	13	1.7	361	2.1	160	1.5	3	1.5	2,094	1.9	113	1.9	111	1.4	713	0.6		
Molecular biology	1,153	0.4	116	0.7	2	0.3	131	0.7	39	0.4	0	0.0	486	0.4	35	0.6	40	0.5	304	0.3		
Neurobiology and neuroscience	5,138	1.8	526	3.0	18	2.4	520	3.0	204	2.0	1	0.5	2,661	2.4	168	2.8	182	2.3	858	0.8		
Nutrition science	948	0.3	57	0.3	2	0.3	58	0.3	33	0.3	0	0.0	444	0.4	22	0.4	13	0.2	319	0.3		
Pathology and experimental pathology	843	0.3	113	0.6	3	0.4	68	0.4	32	0.3	1	0.5	345	0.3	18	0.3	58	0.7	205	0.2		
Pharmacology and toxicology	2,151	0.8	197	1.1	5	0.7	233	1.3	150	1.4	3	1.5	936	0.9	71	1.2	77	1.0	479	0.4		
Physiology	2,703	1.0	207	1.2	10	1.3	246	1.4	108	1.0	6	3.0	1,270	1.2	54	0.9	84	1.1	718	0.6		
Zoology and animal biology	1,198	0.4	72	0.4	3	0.4	32	0.2	30	0.3	1	0.5	715	0.7	32	0.5	41	0.5	272	0.2		
Biological and biomedical sciences nec	2,546	0.9	214	1.2	14	1.9	234	1.3	148	1.4	7	3.5	1,192	1.1	43	0.7	99	1.3	595	0.5		
Computer and information sciences	17,192	6.1	426	2.4	11	1.5	1,069	6.1	444	4.2	11	5.4	3,712	3.4	240	4.0	427	5.5	10,852	9.6		
Computer science	8,646	3.1	186	1.1	3	0.4	563	3.2	132	1.3	4	2.0	1,728	1.6	118	2.0	250	3.2	5,662	5.0		
Computer and information sciences, general	6,952	2.5	163	0.9	5	0.7	389	2.2	170	1.6	3	1.5	1,474	1.4	92	1.5	139	1.8	4,517	4.0		
Computer and information sciences nec	1,594	0.6	77	0.4	3	0.4	117	0.7	142	1.4	4	2.0	510	0.5	30	0.5	38	0.5	673	0.6		
Geosciences, atmospheric sciences, and ocean sciences	6,551	2.3	410	2.3	17	2.3	244	1.4	106	1.0	2	1.0	3,358	3.1	166	2.8	182	2.3	2,066	1.8		
Atmospheric sciences and meteorology	866	0.3	37	0.2	1	0.1	21	0.1	13	0.1	0	0.0	435	0.4	15	0.2	25	0.3	319	0.3		
Geological and earth sciences	4,239	1.5	279	1.6	13	1.7	160	0.9	75	0.7	1	0.5	2,077	1.9	102	1.7	111	1.4	1,421	1.3		
Ocean and marine sciences	1,446	0.5	94	0.5	3	0.4	63	0.4	18	0.2	1	0.5	846	0.8	49	0.8	46	0.6	326	0.3		
Mathematics and statistics	13,565	4.8	556	3.1	15	2.0	772	4.4	197	1.9	2	1.0	4,488	4.1	230	3.8	351	4.5	6,954	6.2		
Mathematics and applied mathematics	10,308	3.7	490	2.8	12	1.6	585	3.3	155	1.5	1	0.5	3,835	3.5	194	3.2	287	3.7	4,749	4.2		
Statistics	3,257	1.2	66	0.4	3	0.4	187	1.1	42	0.4	1	0.5	653	0.6	36	0.6	64	0.8	2,205	2.0		

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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				
Multidisciplinary and interdisciplinary studies	2,978	1.1	201	1.1	15	2.0	194	1.1	169	1.6	7	3.5	1,357	1.2	61	1.0	95	1.2	879	0.8		
Natural resources and conservation	3,677	1.3	298	1.7	36	4.8	128	0.7	148	1.4	2	1.0	1,946	1.8	82	1.4	150	1.9	887	0.8		
Environmental science and studies	1,738	0.6	186	1.1	16	2.1	68	0.4	90	0.9	2	1.0	852	0.8	35	0.6	80	1.0	409	0.4		
Forestry, natural resources, and conservation	1,939	0.7	112	0.6	20	2.7	60	0.3	58	0.6	0	0.0	1,094	1.0	47	0.8	70	0.9	478	0.4		
Physical sciences	36,506	13.0	2,094	11.8	63	8.4	1,961	11.2	728	7.0	15	7.4	15,027	13.8	710	11.8	831	10.7	15,077	13.4		
Astronomy and astrophysics	1,373	0.5	107	0.6	6	0.8	96	0.5	30	0.3	0	0.0	724	0.7	46	0.8	38	0.5	326	0.3		
Chemistry	19,748	7.0	1,261	7.1	34	4.5	1,160	6.6	444	4.2	10	5.0	8,208	7.6	398	6.6	414	5.3	7,819	6.9		
Materials sciences	1,013	0.4	41	0.2	3	0.4	68	0.4	38	0.4	1	0.5	322	0.3	13	0.2	33	0.4	494	0.4		
Physics	13,951	4.9	674	3.8	20	2.7	623	3.6	190	1.8	4	2.0	5,613	5.2	250	4.2	338	4.4	6,239	5.5		
Physical sciences nec	421	0.1	11	0.1	0	0.0	14	0.1	26	0.2	0	0.0	160	0.1	3	*	8	0.1	199	0.2		
Psychology	20,231	7.2	2,570	14.5	95	12.7	1,221	7.0	1,475	14.1	24	11.9	11,362	10.5	781	13.0	686	8.8	2,017	1.8		
Clinical psychology	3,785	1.3	701	4.0	15	2.0	240	1.4	207	2.0	4	2.0	2,069	1.9	185	3.1	216	2.8	148	0.1		
Counseling and applied psychology	6,537	2.3	874	4.9	39	5.2	359	2.0	743	7.1	12	5.9	3,479	3.2	221	3.7	206	2.7	604	0.5		
Psychology, general	6,749	2.4	725	4.1	29	3.9	389	2.2	386	3.7	6	3.0	4,121	3.8	271	4.5	190	2.4	632	0.6		
Research and experimental psychology	3,160	1.1	270	1.5	12	1.6	233	1.3	139	1.3	2	1.0	1,693	1.6	104	1.7	74	1.0	633	0.6		
Social sciences	35,392	12.6	2,509	14.2	206	27.5	1,635	9.3	2,025	19.4	40	19.8	14,275	13.1	804	13.4	1,288	16.6	12,610	11.2		
Agricultural economics	806	0.3	19	0.1	0	0.0	39	0.2	19	0.2	0	0.0	157	0.1	7	0.1	16	0.2	549	0.5		
Anthropology	4,365	1.5	402	2.3	52	6.9	173	1.0	135	1.3	8	4.0	2,343	2.2	133	2.2	240	3.1	879	0.8		
Criminal justice and safety studies	900	0.3	77	0.4	1	0.1	17	0.1	104	1.0	2	1.0	506	0.5	39	0.6	75	1.0	79	0.1		
Economics (except agricultural)	8,045	2.9	202	1.1	4	0.5	379	2.2	115	1.1	2	1.0	1,795	1.7	71	1.2	179	2.3	5,298	4.7		
Geography and cartography	1,741	0.6	106	0.6	11	1.5	60	0.3	55	0.5	2	1.0	794	0.7	29	0.5	59	0.8	625	0.6		
History and philosophy of science	257	0.1	13	0.1	0	0.0	8	*	27	0.3	0	0.0	132	0.1	6	0.1	6	0.1	65	0.1		
Human development	731	0.3	61	0.3	4	0.5	29	0.2	83	0.8	1	0.5	370	0.3	29	0.5	17	0.2	137	0.1		
International relations and national security studies	413	0.1	34	0.2	1	0.1	21	0.1	20	0.2	0	0.0	167	0.2	9	0.1	8	0.1	153	0.1		
Linguistics	1,616	0.6	76	0.4	16	2.1	80	0.5	28	0.3	0	0.0	643	0.6	36	0.6	50	0.6	687	0.6		
Political science and government	5,488	1.9	325	1.8	16	2.1	214	1.2	247	2.4	7	3.5	2,643	2.4	126	2.1	230	3.0	1,680	1.5		
Public policy analysis	2,414	0.9	158	0.9	12	1.6	165	0.9	289	2.8	4	2.0	953	0.9	57	0.9	127	1.6	649	0.6		
Sociology	5,070	1.8	567	3.2	16	2.1	273	1.6	485	4.6	4	2.0	2,379	2.2	155	2.6	154	2.0	1,037	0.9		
Social sciences nec	3,546	1.3	469	2.7	73	9.7	177	1.0	418	4.0	10	5.0	1,393	1.3	107	1.8	127	1.6	772	0.7		
Engineering	72,065	25.6	2,797	15.8	74	9.9	4,381	25.0	1,512	14.5	26	12.9	18,771	17.3	1,101	18.3	1,447	18.6	41,956	37.2		
Aerospace, aeronautical, and astronautical engineering	2,554	0.9	121	0.7	3	0.4	167	1.0	39	0.4	2	1.0	1,005	0.9	63	1.0	46	0.6	1,108	1.0		
Agricultural engineering	662	0.2	23	0.1	1	0.1	30	0.2	16	0.2	1	0.5	152	0.1	12	0.2	8	0.1	419	0.4		
Bioengineering and biomedical engineering	7,715	2.7	549	3.1	12	1.6	973	5.5	224	2.1	8	4.0	3,064	2.8	225	3.7	233	3.0	2,427	2.2		
Biological and biosystems engineering	219	0.1	11	0.1	2	0.3	5	*	2	*	1	0.5	70	0.1	3	*	2	*	123	0.1		
Chemical engineering	7,057	2.5	269	1.5	8	1.1	541	3.1	122	1.2	2	1.0	2,243	2.1	123	2.0	106	1.4	3,643	3.2		

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Civil engineering	7,752	2.8	270	1.5	7	0.9	239	1.4	166	1.6	2	1.0	1,598	1.5	80	1.3	140	1.8	5,250	4.7
Electrical, electronics, and communications engineering	18,577	6.6	439	2.5	6	0.8	1,007	5.7	287	2.7	1	0.5	3,159	2.9	159	2.6	348	4.5	13,171	11.7
Engineering mechanics, physics, and science	1,447	0.5	55	0.3	3	0.4	92	0.5	25	0.2	1	0.5	407	0.4	28	0.5	30	0.4	806	0.7
Industrial and manufacturing engineering	3,762	1.3	100	0.6	2	0.3	190	1.1	134	1.3	1	0.5	801	0.7	41	0.7	96	1.2	2,397	2.1
Mechanical engineering	11,247	4.0	475	2.7	15	2.0	536	3.1	198	1.9	3	1.5	2,894	2.7	172	2.9	234	3.0	6,720	6.0
Metallurgical and materials engineering	4,616	1.6	237	1.3	7	0.9	325	1.9	75	0.7	2	1.0	1,454	1.3	92	1.5	76	1.0	2,348	2.1
Mining engineering	201	0.1	9	0.1	1	0.1	2	*	4	*	0	0.0	76	0.1	2	*	4	0.1	103	0.1
Nanotechnology	146	0.1	5	*	0	0.0	13	0.1	2	*	0	0.0	48	*	4	0.1	5	0.1	69	0.1
Nuclear engineering	1,031	0.4	63	0.4	1	0.1	36	0.2	19	0.2	0	0.0	515	0.5	27	0.4	28	0.4	342	0.3
Petroleum engineering	607	0.2	6	*	0	0.0	16	0.1	10	0.1	0	0.0	56	0.1	5	0.1	15	0.2	499	0.4
Engineering nec	4,472	1.6	165	0.9	6	0.8	209	1.2	189	1.8	2	1.0	1,229	1.1	65	1.1	76	1.0	2,531	2.2
Health	15,928	5.7	1,030	5.8	52	6.9	1,209	6.9	1,484	14.2	16	7.9	7,295	6.7	356	5.9	593	7.6	3,893	3.5
Clinical medicine ^a	4,571	1.6	429	2.4	21	2.8	376	2.1	594	5.7	10	5.0	1,911	1.8	129	2.1	154	2.0	947	0.8
Public health	4,191	1.5	393	2.2	19	2.5	345	2.0	575	5.5	9	4.5	1,715	1.6	117	1.9	146	1.9	872	0.8
Clinical medicine nec	380	0.1	36	0.2	2	0.3	31	0.2	19	0.2	1	0.5	196	0.2	12	0.2	8	0.1	75	0.1
Other health	11,357	4.0	601	3.4	31	4.1	833	4.7	890	8.5	6	3.0	5,384	5.0	227	3.8	439	5.6	2,946	2.6
Communication disorders sciences	911	0.3	64	0.4	1	0.1	44	0.3	49	0.5	0	0.0	549	0.5	20	0.3	32	0.4	152	0.1
Dental sciences	208	0.1	4	*	0	0.0	15	0.1	4	*	0	0.0	41	*	4	0.1	6	0.1	134	0.1
Nursing science	3,439	1.2	190	1.1	17	2.3	195	1.1	499	4.8	3	1.5	1,942	1.8	59	1.0	147	1.9	387	0.3
Pharmaceutical sciences	3,121	1.1	151	0.9	5	0.7	363	2.1	123	1.2	1	0.5	851	0.8	63	1.0	68	0.9	1,496	1.3
Veterinary biomedical and clinical sciences	692	0.2	27	0.2	0	0.0	27	0.2	15	0.1	0	0.0	329	0.3	20	0.3	79	1.0	195	0.2
Other health nec	2,986	1.1	165	0.9	8	1.1	189	1.1	200	1.9	2	1.0	1,672	1.5	61	1.0	107	1.4	582	0.5

* = value < 0.05%.

nec = not elsewhere classified.

^a Clinical medicine includes graduate students in public health and clinical medicine nec.**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.

Source(s):

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.