

TABLE 4-4c

Citizenship, ethnicity, and race of doctoral students, by detailed field: 2021

(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	293,543	100.0	20,493	100.0	749	100.0	19,596	100.0	12,173	100.0	195	100.0	109,590	100.0	7,170	100.0	7,976	100.0	115,601	100.0	
Science	203,988	69.5	15,956	77.9	598	79.8	13,618	69.5	8,764	72.0	151	77.4	82,983	75.7	5,446	76.0	6,090	76.4	70,382	60.9	
Agricultural and veterinary sciences	4,443	1.5	226	1.1	12	1.6	127	0.6	101	0.8	1	0.5	1,794	1.6	76	1.1	67	0.8	2,039	1.8	
Agricultural sciences	3,906	1.3	195	1.0	10	1.3	109	0.6	90	0.7	1	0.5	1,547	1.4	59	0.8	52	0.7	1,843	1.6	
Veterinary biomedical and clinical sciences	537	0.2	31	0.2	2	0.3	18	0.1	11	0.1	0	0.0	247	0.2	17	0.2	15	0.2	196	0.2	
Biological and biomedical sciences	58,155	19.8	5,471	26.7	149	19.9	5,251	26.8	2,520	20.7	54	27.7	26,409	24.1	1,756	24.5	1,637	20.5	14,908	12.9	
Biochemistry	4,828	1.6	504	2.5	16	2.1	409	2.1	175	1.4	6	3.1	2,167	2.0	151	2.1	83	1.0	1,317	1.1	
Biology	7,400	2.5	666	3.2	16	2.1	489	2.5	276	2.3	5	2.6	3,494	3.2	206	2.9	189	2.4	2,059	1.8	
Biomedical sciences	4,826	1.6	442	2.2	12	1.6	515	2.6	311	2.6	4	2.1	2,052	1.9	147	2.1	158	2.0	1,185	1.0	
Biophysics	973	0.3	85	0.4	1	0.1	116	0.6	23	0.2	0	0.0	405	0.4	27	0.4	21	0.3	295	0.3	
Biostatistics and bioinformatics	3,591	1.2	152	0.7	3	0.4	446	2.3	80	0.7	3	1.5	1,084	1.0	93	1.3	121	1.5	1,609	1.4	
Biotechnology	128	*	11	0.1	0	0.0	8	*	7	0.1	1	0.5	57	0.1	3	*	3	*	38	*	
Botany and plant biology	1,269	0.4	112	0.5	2	0.3	59	0.3	33	0.3	2	1.0	586	0.5	40	0.6	35	0.4	400	0.3	
Cell, cellular biology, and anatomical sciences	5,290	1.8	602	2.9	19	2.5	538	2.7	192	1.6	6	3.1	2,365	2.2	149	2.1	136	1.7	1,283	1.1	
Ecology and population biology	2,790	1.0	260	1.3	7	0.9	126	0.6	87	0.7	4	2.1	1,562	1.4	92	1.3	94	1.2	558	0.5	
Epidemiology	2,162	0.7	151	0.7	7	0.9	239	1.2	173	1.4	3	1.5	835	0.8	65	0.9	75	0.9	614	0.5	
Genetics	2,449	0.8	227	1.1	8	1.1	224	1.1	93	0.8	1	0.5	1,208	1.1	73	1.0	49	0.6	566	0.5	
Microbiological sciences and immunology	4,371	1.5	465	2.3	11	1.5	434	2.2	200	1.6	2	1.0	2,206	2.0	138	1.9	118	1.5	797	0.7	
Molecular biology	1,265	0.4	150	0.7	3	0.4	139	0.7	40	0.3	1	0.5	534	0.5	32	0.4	35	0.4	331	0.3	
Neurobiology and neuroscience	5,758	2.0	686	3.3	13	1.7	557	2.8	277	2.3	4	2.1	2,788	2.5	233	3.2	164	2.1	1,036	0.9	
Nutrition science	993	0.3	69	0.3	1	0.1	72	0.4	56	0.5	0	0.0	435	0.4	27	0.4	16	0.2	317	0.3	
Pathology and experimental pathology	849	0.3	76	0.4	3	0.4	74	0.4	40	0.3	1	0.5	387	0.4	18	0.3	49	0.6	201	0.2	
Pharmacology and toxicology	2,374	0.8	238	1.2	5	0.7	265	1.4	158	1.3	1	0.5	1,002	0.9	79	1.1	86	1.1	540	0.5	
Physiology	3,041	1.0	245	1.2	10	1.3	287	1.5	138	1.1	4	2.1	1,406	1.3	75	1.0	83	1.0	793	0.7	
Zoology and animal biology	1,213	0.4	93	0.5	2	0.3	35	0.2	31	0.3	0	0.0	685	0.6	36	0.5	42	0.5	289	0.2	
Biological and biomedical sciences nec	2,585	0.9	237	1.2	10	1.3	219	1.1	130	1.1	6	3.1	1,151	1.1	72	1.0	80	1.0	680	0.6	
Computer and information sciences	19,531	6.7	497	2.4	21	2.8	1,409	7.2	532	4.4	11	5.6	4,060	3.7	317	4.4	522	6.5	12,162	10.5	
Artificial intelligence, informatics, and computer and information science topics	687	0.2	22	0.1	2	0.3	47	0.2	28	0.2	0	0.0	142	0.1	14	0.2	24	0.3	408	0.4	
Computer and information sciences	6,168	2.1	134	0.7	4	0.5	344	1.8	120	1.0	4	2.1	1,264	1.2	70	1.0	108	1.4	4,120	3.6	
Computer and information systems security	342	0.1	28	0.1	4	0.5	36	0.2	85	0.7	2	1.0	117	0.1	7	0.1	12	0.2	51	*	

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					Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent			Number		
Computer science	10,356	3.5	216	1.1	6	0.8	811	4.1	140	1.2	4	2.1	2,002	1.8	176	2.5	324	4.1	6,677	5.8	
Information science and studies	1,351	0.5	70	0.3	5	0.7	120	0.6	107	0.9	1	0.5	393	0.4	32	0.4	33	0.4	590	0.5	
Information technology	467	0.2	18	0.1	0	0.0	37	0.2	30	0.2	0	0.0	92	0.1	14	0.2	13	0.2	263	0.2	
Computer and information sciences nec	160	0.1	9	*	0	0.0	14	0.1	22	0.2	0	0.0	50	*	4	0.1	8	0.1	53	*	
Geosciences, atmospheric sciences, and ocean sciences	6,770	2.3	497	2.4	14	1.9	250	1.3	144	1.2	2	1.0	3,370	3.1	217	3.0	223	2.8	2,053	1.8	
Atmospheric sciences and meteorology	902	0.3	46	0.2	0	0.0	26	0.1	24	0.2	0	0.0	435	0.4	22	0.3	29	0.4	320	0.3	
Geological and earth sciences	4,337	1.5	336	1.6	12	1.6	173	0.9	90	0.7	0	0.0	2,105	1.9	122	1.7	116	1.5	1,383	1.2	
Ocean and marine sciences	1,531	0.5	115	0.6	2	0.3	51	0.3	30	0.2	2	1.0	830	0.8	73	1.0	78	1.0	350	0.3	
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	13,619	4.6	669	3.3	13	1.7	891	4.5	207	1.7	5	2.6	4,383	4.0	249	3.5	357	4.5	6,845	5.9	
Applied mathematics	2,255	0.8	123	0.6	1	0.1	132	0.7	50	0.4	0	0.0	777	0.7	50	0.7	55	0.7	1,067	0.9	
Mathematics	7,964	2.7	453	2.2	6	0.8	519	2.6	118	1.0	2	1.0	2,924	2.7	160	2.2	229	2.9	3,553	3.1	
Statistics	3,400	1.2	93	0.5	6	0.8	240	1.2	39	0.3	3	1.5	682	0.6	39	0.5	73	0.9	2,225	1.9	
Multidisciplinary and interdisciplinary studies	3,774	1.3	291	1.4	10	1.3	252	1.3	227	1.9	7	3.6	1,616	1.5	97	1.4	113	1.4	1,161	1.0	
Biological and physical sciences	887	0.3	58	0.3	3	0.4	71	0.4	34	0.3	5	2.6	367	0.3	16	0.2	31	0.4	302	0.3	
Computational science	347	0.1	25	0.1	1	0.1	21	0.1	15	0.1	0	0.0	105	0.1	11	0.2	10	0.1	159	0.1	
Data science and data analytics	46	*	0	0.0	0	0.0	1	*	3	*	0	0.0	5	*	1	*	1	*	35	*	
International and global studies	183	0.1	40	0.2	0	0.0	7	*	19	0.2	0	0.0	52	*	2	*	4	0.1	59	0.1	
Multidisciplinary and interdisciplinary studies nec	2,311	0.8	168	0.8	6	0.8	152	0.8	156	1.3	2	1.0	1,087	1.0	67	0.9	67	0.8	606	0.5	
Natural resources and conservation	3,910	1.3	276	1.3	48	6.4	128	0.7	184	1.5	2	1.0	2,008	1.8	93	1.3	154	1.9	1,017	0.9	
Environmental science and studies	1,956	0.7	166	0.8	19	2.5	86	0.4	110	0.9	2	1.0	933	0.9	46	0.6	93	1.2	501	0.4	
Forestry, natural resources, and conservation	1,954	0.7	110	0.5	29	3.9	42	0.2	74	0.6	0	0.0	1,075	1.0	47	0.7	61	0.8	516	0.4	
Physical sciences	37,732	12.9	2,505	12.2	48	6.4	2,257	11.5	811	6.7	13	6.7	15,140	13.8	859	12.0	862	10.8	15,237	13.2	
Astronomy and astrophysics	1,539	0.5	134	0.7	3	0.4	109	0.6	37	0.3	0	0.0	779	0.7	80	1.1	45	0.6	352	0.3	
Chemistry	20,149	6.9	1,475	7.2	28	3.7	1,297	6.6	473	3.9	12	6.2	8,148	7.4	455	6.3	457	5.7	7,804	6.8	
Materials sciences	1,002	0.3	46	0.2	1	0.1	78	0.4	33	0.3	1	0.5	328	0.3	13	0.2	27	0.3	475	0.4	
Physics	14,501	4.9	834	4.1	16	2.1	755	3.9	211	1.7	0	0.0	5,732	5.2	304	4.2	322	4.0	6,327	5.5	
Physical sciences nec	541	0.2	16	0.1	0	0.0	18	0.1	57	0.5	0	0.0	153	0.1	7	0.1	11	0.1	279	0.2	
Psychology	21,447	7.3	2,907	14.2	100	13.4	1,344	6.9	1,831	15.0	17	8.7	11,074	10.1	943	13.2	841	10.5	2,390	2.1	
Applied psychology	4,910	1.7	755	3.7	32	4.3	277	1.4	535	4.4	3	1.5	2,487	2.3	181	2.5	143	1.8	497	0.4	

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					Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent			Number		
Clinical psychology	3,389	1.2	634	3.1	10	1.3	208	1.1	206	1.7	2	1.0	1,752	1.6	247	3.4	176	2.2	154	0.1	
Counseling psychology	1,461	0.5	200	1.0	6	0.8	107	0.5	245	2.0	1	0.5	683	0.6	57	0.8	59	0.7	103	0.1	
Human development	797	0.3	66	0.3	2	0.3	36	0.2	101	0.8	1	0.5	395	0.4	41	0.6	13	0.2	142	0.1	
Psychology, general	6,554	2.2	855	4.2	36	4.8	370	1.9	518	4.3	10	5.1	3,572	3.3	262	3.7	357	4.5	574	0.5	
Research and experimental psychology	4,336	1.5	397	1.9	14	1.9	346	1.8	226	1.9	0	0.0	2,185	2.0	155	2.2	93	1.2	920	0.8	
Social sciences	34,607	11.8	2,617	12.8	183	24.4	1,709	8.7	2,207	18.1	39	20.0	13,129	12.0	839	11.7	1,314	16.5	12,570	10.9	
Agricultural and natural resource economics	522	0.2	13	0.1	0	0.0	15	0.1	15	0.1	0	0.0	95	0.1	4	0.1	6	0.1	374	0.3	
Anthropology	4,129	1.4	418	2.0	43	5.7	158	0.8	151	1.2	8	4.1	2,096	1.9	144	2.0	201	2.5	910	0.8	
Area, ethnic, cultural, gender, and group studies	2,326	0.8	391	1.9	64	8.5	132	0.7	336	2.8	5	2.6	708	0.6	79	1.1	92	1.2	519	0.4	
Criminal justice and safety studies	1,227	0.4	112	0.5	5	0.7	24	0.1	196	1.6	2	1.0	623	0.6	37	0.5	165	2.1	63	0.1	
Criminology	308	0.1	40	0.2	0	0.0	8	*	22	0.2	0	0.0	187	0.2	8	0.1	6	0.1	37	*	
Economics (except agricultural and natural resource)	8,266	2.8	234	1.1	3	0.4	470	2.4	119	1.0	3	1.5	1,807	1.6	72	1.0	164	2.1	5,394	4.7	
Geography and cartography	1,729	0.6	130	0.6	8	1.1	65	0.3	62	0.5	1	0.5	722	0.7	34	0.5	49	0.6	658	0.6	
International relations and national security studies	474	0.2	45	0.2	1	0.1	27	0.1	29	0.2	1	0.5	184	0.2	11	0.2	12	0.2	164	0.1	
Linguistics	1,652	0.6	83	0.4	16	2.1	92	0.5	28	0.2	0	0.0	618	0.6	44	0.6	45	0.6	726	0.6	
Political science and government	5,332	1.8	335	1.6	14	1.9	232	1.2	252	2.1	4	2.1	2,417	2.2	136	1.9	196	2.5	1,746	1.5	
Public policy analysis	2,740	0.9	188	0.9	13	1.7	176	0.9	391	3.2	4	2.1	1,047	1.0	86	1.2	198	2.5	637	0.6	
Sociology and population studies	4,875	1.7	574	2.8	13	1.7	268	1.4	522	4.3	5	2.6	2,134	1.9	159	2.2	144	1.8	1,056	0.9	
Urban studies and affairs	391	0.1	23	0.1	1	0.1	17	0.1	54	0.4	0	0.0	166	0.2	9	0.1	6	0.1	115	0.1	
Social sciences, other	636	0.2	31	0.2	2	0.3	25	0.1	30	0.2	6	3.1	325	0.3	16	0.2	30	0.4	171	0.1	
Engineering	72,924	24.8	3,209	15.7	81	10.8	4,727	24.1	1,706	14.0	28	14.4	19,181	17.5	1,323	18.5	1,377	17.3	41,292	35.7	
Aerospace, aeronautical, and astronautical engineering	2,773	0.9	143	0.7	5	0.7	208	1.1	56	0.5	3	1.5	1,121	1.0	87	1.2	49	0.6	1,101	1.0	
Biological, biomedical, and biosystems engineering	8,867	3.0	645	3.1	11	1.5	1,083	5.5	314	2.6	8	4.1	3,286	3.0	265	3.7	261	3.3	2,994	2.6	
Chemical, petroleum, and chemical-related engineering	7,713	2.6	324	1.6	11	1.5	596	3.0	138	1.1	3	1.5	2,322	2.1	141	2.0	120	1.5	4,058	3.5	
Chemical engineering	7,115	2.4	317	1.5	11	1.5	582	3.0	126	1.0	3	1.5	2,267	2.1	138	1.9	109	1.4	3,562	3.1	
Petroleum engineering	598	0.2	7	*	0	0.0	14	0.1	12	0.1	0	0.0	55	0.1	3	*	11	0.1	496	0.4	
Civil, environmental, transportation and related engineering fields	7,878	2.7	304	1.5	14	1.9	253	1.3	168	1.4	5	2.6	1,609	1.5	100	1.4	122	1.5	5,303	4.6	
Civil engineering	6,760	2.3	236	1.2	12	1.6	210	1.1	133	1.1	4	2.1	1,309	1.2	78	1.1	100	1.3	4,678	4.0	
Architectural, environmental, construction and surveying engineering	1,118	0.4	68	0.3	2	0.3	43	0.2	35	0.3	1	0.5	300	0.3	22	0.3	22	0.3	625	0.5	

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Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Pediatrics	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Psychiatry	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Pulmonary disease	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Radiological sciences	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Surgery	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Clinical medicine nec	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Other health	11,019	3.8	733	3.6	20	2.7	745	3.8	961	7.9	5	2.6	5,151	4.7	229	3.2	334	4.2	2,841	2.5	
Communication disorders sciences	792	0.3	88	0.4	0	0.0	47	0.2	33	0.3	1	0.5	445	0.4	13	0.2	23	0.3	142	0.1	
Dental sciences	219	0.1	8	*	0	0.0	22	0.1	9	0.1	0	0.0	51	*	5	0.1	4	0.1	120	0.1	
Kinesiology and exercise science	1,031	0.4	67	0.3	2	0.3	34	0.2	56	0.5	0	0.0	621	0.6	24	0.3	18	0.2	209	0.2	
Nursing science	3,512	1.2	226	1.1	11	1.5	216	1.1	478	3.9	3	1.5	1,970	1.8	76	1.1	108	1.4	424	0.4	
Pharmaceutical sciences	2,936	1.0	148	0.7	2	0.3	218	1.1	125	1.0	0	0.0	795	0.7	56	0.8	55	0.7	1,537	1.3	
Other health nec	2,529	0.9	196	1.0	5	0.7	208	1.1	260	2.1	1	0.5	1,269	1.2	55	0.8	126	1.6	409	0.4	

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

nec = not elsewhere classified.

^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.