

TABLE 21. Graduate students in science, engineering, and health in all institutions, by detailed field, citizenship, ethnicity, and race: 2011

Field	U.S. citizens and permanent residents <sup>a</sup>										
	Total	Not Hispanic or Latino								Unknown ethnicity/race	Temporary visa holders
		Hispanic or Latino	American Indian or Alaska Native	Asian <sup>b</sup>	Black or African American	Native Hawaiian or Other Pacific Islander <sup>b</sup>	White	More than one race <sup>b</sup>			
All surveyed fields	626,820	35,028	2,741	37,516	38,902	1,318	293,640	6,899	34,479	176,297	
Science and engineering	560,941	30,808	2,392	33,147	32,197	1,008	256,096	6,103	30,409	168,781	
Science	414,440	24,889	2,075	23,000	28,129	842	205,437	4,865	23,609	101,594	
Agricultural sciences	16,129	809	97	364	499	27	10,142	141	623	3,427	
Biological sciences	75,423	4,224	330	6,519	3,591	210	38,585	782	3,664	17,518	
Anatomy	762	45	2	50	28	7	447	3	26	154	
Biochemistry	5,183	270	26	450	177	26	2,238	25	207	1,764	
Biology	16,911	1,099	78	1,114	850	37	9,086	224	913	3,510	
Biometry/epidemiology	6,786	291	16	938	402	19	2,897	77	325	1,821	
Biophysics	1,016	41	6	99	24	3	483	6	35	319	
Botany	1,915	69	18	96	19	17	915	33	68	680	
Cell biology	6,905	398	30	653	242	12	3,177	61	338	1,994	
Ecology	1,713	70	9	50	18	6	1,207	18	131	204	
Entomology/parasitology	1,119	49	5	37	14	1	688	16	46	263	
Genetics	2,403	108	13	158	87	4	1,305	11	85	632	
Microbiology/immunology/virology	5,031	314	26	443	243	7	2,784	50	180	984	
Nutrition	5,345	289	19	435	273	6	3,140	44	289	850	
Pathology	1,313	77	3	106	83	2	693	7	61	281	
Pharmacology	3,053	142	8	272	225	10	1,384	17	142	853	
Physiology	3,000	138	15	298	135	9	1,603	41	119	642	
Zoology	1,060	32	6	38	13	5	762	16	61	127	
Biological sciences, nec	11,908	792	50	1,282	758	39	5,776	133	638	2,440	
Communication <sup>c</sup>	11,029	707	60	363	1,015	19	6,538	151	533	1,643	
Computer sciences	51,234	1,618	101	3,475	2,134	45	15,417	363	2,503	25,578	
Earth, atmospheric, and ocean sciences	15,820	698	109	425	321	16	10,145	174	842	3,090	
Atmospheric sciences	1,513	67	4	49	56	1	932	8	63	333	
Geosciences	8,361	337	79	183	131	5	5,356	95	402	1,773	
Oceanography	2,680	137	9	60	28	3	1,809	38	127	469	
Earth/atmospheric/ocean sciences, nec	3,266	157	17	133	106	7	2,048	33	250	515	
Family and consumer sciences/human sciences <sup>c</sup>	4,509	248	24	145	687	9	2,700	46	216	434	
Mathematical sciences	23,801	892	54	1,603	760	17	10,031	168	1,126	9,150	
Mathematics/applied mathematics	18,157	759	45	1,130	634	15	8,264	147	922	6,241	
Statistics	5,644	133	9	473	126	2	1,767	21	204	2,909	
Multidisciplinary/interdisciplinary studies <sup>c</sup>	6,537	461	43	286	476	9	3,579	85	556	1,042	
Neuroscience <sup>c</sup>	4,117	269	17	380	132	10	2,385	51	225	648	

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Physical sciences	39,694	1,405	104	1,974	1,003	46	17,656	326	1,624	15,556	
Astronomy	1,345	37	9	64	6	1	742	14	66	406	
Chemistry	22,802	878	61	1,312	757	24	9,982	190	853	8,745	
Physics	14,829	463	29	565	217	15	6,569	117	681	6,173	
Physical sciences, nec	718	27	5	33	23	6	363	5	24	232	
Psychology <sup>d</sup>	54,486	5,396	356	2,430	5,806	119	32,350	808	4,133	3,088	
Clinical psychology	10,468	1,501	82	566	675	40	6,113	135	1,019	337	
Psychology, general	17,326	1,383	105	803	2,312	37	10,031	292	1,279	1,084	
Psychology, nec	26,692	2,512	169	1,061	2,819	42	16,206	381	1,835	1,667	
Social sciences	111,661	8,162	780	5,036	11,705	315	55,909	1,770	7,564	20,420	
Agricultural economics	2,095	52	4	61	59	6	849	28	73	963	
Anthropology (cultural/social)	8,406	549	126	278	241	23	5,391	174	642	982	
Economics (except agricultural)	14,920	503	36	730	452	7	4,864	120	658	7,550	
Geography	5,188	213	33	151	143	11	3,386	71	336	844	
History and philosophy of science	597	20	4	11	20	2	414	10	30	86	
Linguistics	3,219	171	27	203	60	6	1,492	47	226	987	
Political science	49,660	3,878	271	2,366	6,852	137	25,368	767	3,922	6,099	
Sociology	9,671	947	69	464	1,188	11	5,126	169	501	1,196	
Sociology/anthropology	288	25	3	5	53	0	158	2	30	12	
Social sciences, nec	17,617	1,804	207	767	2,637	112	8,861	382	1,146	1,701	
Engineering	146,501	5,919	317	10,147	4,068	166	50,659	1,238	6,800	67,187	
Aerospace engineering	5,691	290	15	432	92	5	2,820	59	332	1,646	
Agricultural engineering	1,656	34	3	53	50	2	587	10	30	887	
Architecture <sup>c</sup>	3,111	249	17	163	131	3	1,536	54	191	767	
Biomedical engineering	9,175	363	18	1,442	271	13	3,741	109	402	2,816	
Chemical engineering	8,828	284	17	627	169	22	2,955	60	268	4,426	
Civil engineering <sup>c</sup>	19,596	1,136	63	1,193	545	40	8,118	314	812	7,375	
Electrical engineering	41,580	1,196	51	2,878	951	21	8,974	222	1,692	25,595	
Engineering science	2,101	66	2	128	49	1	765	31	121	938	
Industrial engineering	14,494	716	39	792	666	12	4,893	87	1,347	5,942	
Mechanical engineering	21,883	948	44	1,361	463	24	8,779	159	857	9,248	
Metallurgical/materials engineering	6,649	213	10	424	127	6	2,290	40	205	3,334	
Mining engineering	500	8	0	7	10	1	175	1	16	282	
Nuclear engineering	1,499	54	4	68	21	2	949	23	77	301	
Petroleum engineering	1,301	27	1	41	35	0	192	1	16	988	
Engineering, nec	8,437	335	33	538	488	14	3,885	68	434	2,642	
Health	65,879	4,220	349	4,369	6,705	310	37,544	796	4,070	7,516	
Clinical medicine	26,634	1,895	168	2,421	4,308	75	12,635	361	1,821	2,950	
Anesthesiology	8	0	0	5	1	0	2	0	0	0	
Cardiology	61	0	0	3	7	0	26	0	1	24	

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Endocrinology	56	2	0	4	8	1	24	0	3	14	
Gastroenterology	7	0	0	0	0	1	4	0	1	1	
Hematology	1	0	0	0	0	0	0	0	0	1	
Neurology <sup>c</sup>	219	10	0	23	12	2	128	2	4	38	
Obstetrics/gynecology	100	6	0	13	2	0	56	0	3	20	
Oncology/cancer research	255	8	1	21	13	0	138	4	6	64	
Ophthalmology	2	0	0	0	0	0	0	0	0	2	
Otorhinolaryngology	2	0	0	0	1	0	1	0	0	0	
Pediatrics	132	4	1	9	3	0	76	3	2	34	
Preventive medicine/community health	23,001	1,721	148	2,032	4,024	67	10,734	335	1,654	2,286	
Psychiatry	88	0	0	4	32	0	43	0	1	8	
Pulmonary disease	14	1	0	2	1	0	9	0	0	1	
Radiology	339	14	1	21	8	0	195	3	15	82	
Surgery	30	0	0	1	3	0	22	0	1	3	
Clinical medicine, nec	2,319	129	17	283	193	4	1,177	14	130	372	
Other health <sup>d</sup>	39,245	2,325	181	1,948	2,397	235	24,909	435	2,249	4,566	
Dental sciences	1,764	81	4	178	40	13	871	10	77	490	
Nursing	7,269	457	64	419	737	71	4,432	112	677	300	
Pharmaceutical sciences	4,056	130	12	341	210	5	1,375	19	112	1,852	
Speech pathology/audiology	14,203	920	48	435	592	108	10,829	146	743	382	
Veterinary sciences	1,894	60	6	64	64	2	1,028	11	85	574	
Other health, nec	10,059	677	47	511	754	36	6,374	137	555	968	

nec = not elsewhere classified.

<sup>a</sup> Ethnicity and race data available only for U.S. citizens and permanent residents.

<sup>b</sup> Reporting of ethnicity and race in 2008–11 has been affected by changes in reporting of ethnicity and race in Integrated Postsecondary Education Data System (IPEDS). Starting in 2008 IPEDS respondents were asked to use new classification that included a category for two or more races (see <http://nces.ed.gov/ipeds/reic/resource.asp>) and separate reporting of Native Hawaiians and Other Pacific Islanders from Asians. New classification was optional in 2008 and 2009 IPEDS but mandatory beginning in 2010 and may have contributed to a significant increase in reporting of "Not Hispanic or Latino, More than one race."

<sup>c</sup> In 2007, eligible fields were reclassified, newly eligible fields were added, and survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. Science fields "communication" and "family and consumer sciences/human sciences" are newly eligible; data for these two fields are only in 2007new. Science field "multidisciplinary/interdisciplinary studies" is also newly eligible; data may have been reported under other fields before 2007. "Neuroscience" is reported as a separate field of science in 2007new; data were reported under health field "neurology" in 2007old and previous years. "Architecture" is reported as a separate field of engineering in 2007new; data were reported under "civil engineering" in 2007old and previous years. See appendix A in <http://www.nsf.gov/statistics/nsf10307/> for more detail.

<sup>d</sup> Beginning with 2008, more rigorous follow-up was done with institutions regarding exclusion of practitioner-oriented graduate degree programs in psychology and in other health (a subfield of health). This change may affect interpretation of trends in these fields.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering, 2011.