

TABLE 3-1

S&E graduate students, by field, sex, citizenship, ethnicity, and race: 2016

(Number)

Sex and field	Total	U.S. citizens and permanent residents								Temporary visa holders
		Hispanic or Latino ^a	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		
All S&E graduate students	620,489	39,578	1,860	35,674	30,600	862	237,563	10,514	23,098	240,740
Science	452,046	32,616	1,615	25,772	26,890	747	191,941	8,690	18,439	145,336
Agricultural sciences	18,284	1,132	119	450	563	23	10,987	348	722	3,940
Biological sciences	79,146	5,878	268	7,081	4,261	187	39,535	1,798	3,067	17,071
Anatomy	448	48	1	29	21	2	255	11	9	72
Biochemistry	4,481	343	13	385	151	5	2,107	79	131	1,267
Biology	16,380	1,386	60	979	868	26	8,942	342	623	3,154
Biometry and epidemiology	9,007	490	22	1,083	552	21	3,464	173	343	2,859
Biophysics	941	57	2	95	13	2	466	17	39	250
Botany and plant biology	1,820	97	6	98	33	4	886	47	60	589
Cell and molecular biology	6,535	519	25	651	261	10	2,995	140	231	1,703
Ecology	1,396	46	8	45	20	1	934	21	126	195
Entomology and parasitology	1,171	57	5	42	27	2	715	29	32	262
Genetics	2,404	172	7	177	61	4	1,348	47	74	514
Microbiology, immunology, and virology	4,615	363	21	414	232	7	2,467	138	145	828
Nutrition	5,401	298	17	361	240	8	3,282	112	179	904
Pathology	998	67	1	92	51	1	470	29	57	230
Pharmacology and toxicology	2,873	186	7	300	227	5	1,345	69	65	669
Physiology	4,024	280	11	466	230	6	2,066	87	135	743
Zoology	815	33	2	19	9	1	578	26	42	105
Biosciences nec	15,837	1,436	60	1,845	1,265	82	7,215	431	776	2,727
Communication	12,347	1,064	52	402	1,314	21	6,288	308	632	2,266
Computer sciences	92,650	2,704	85	5,423	3,828	51	17,157	893	2,897	59,612
Earth, atmospheric, and ocean sciences	15,015	1,014	65	454	315	39	8,885	321	666	3,256
Atmospheric sciences	1,399	76	3	39	40	1	809	22	31	378
Geosciences	8,610	494	43	233	162	15	5,144	188	395	1,936
Ocean sciences	2,743	179	11	97	36	3	1,775	61	146	435
Earth, atmospheric, and ocean sciences nec	2,263	265	8	85	77	20	1,157	50	94	507
Family and consumer sciences and human sciences	3,750	313	26	125	529	6	2,086	109	115	441
Mathematics and statistics	28,050	1,145	42	1,842	648	24	9,313	364	966	13,706
Mathematics and applied mathematics	20,028	954	32	1,188	494	21	7,387	292	760	8,900
Statistics	8,022	191	10	654	154	3	1,926	72	206	4,806

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Multidisciplinary and interdisciplinary studies	9,251	599	41	592	587	18	4,235	192	402	2,585
Neurobiology and neuroscience	5,226	460	26	519	172	5	2,894	110	187	853
Physical sciences	40,518	2,081	95	2,130	906	35	17,576	602	1,150	15,943
Astronomy and astrophysics	1,353	81	5	77	19	1	730	24	45	371
Chemistry	22,676	1,254	63	1,312	656	24	9,874	361	612	8,520
Physics	15,764	696	26	702	196	8	6,633	208	480	6,815
Physical sciences nec	725	50	1	39	35	2	339	9	13	237
Psychology	47,609	6,844	223	2,283	3,730	91	27,355	1,355	2,628	3,100
Clinical psychology	8,356	1,502	41	459	549	12	4,650	229	593	321
Psychology, general	12,318	1,417	46	649	1,000	25	7,239	352	617	973
Psychology nec	26,935	3,925	136	1,175	2,181	54	15,466	774	1,418	1,806
Social sciences	100,200	9,382	573	4,471	10,037	247	45,630	2,290	5,007	22,563
Agricultural economics	1,756	63	2	51	46	0	670	17	44	863
Anthropology	7,309	638	91	248	232	23	4,381	241	480	975
Economics (except agricultural)	14,488	532	8	630	387	4	3,708	150	499	8,570
Geography	4,315	256	25	130	139	2	2,509	76	241	937
History and philosophy of science	379	10	0	11	6	1	252	10	12	77
Linguistics	3,149	250	31	188	66	3	1,400	76	135	1,000
Political science and government	45,213	4,657	234	2,247	5,660	144	21,700	1,021	2,501	7,049
Sociology	8,023	947	45	367	911	13	3,970	221	341	1,208
Sociology and anthropology	208	24	1	4	42	1	88	1	33	14
Social sciences nec	15,360	2,005	136	595	2,548	56	6,952	477	721	1,870
Engineering	168,443	6,962	245	9,902	3,710	115	45,622	1,824	4,659	95,404
Aerospace engineering	5,416	296	12	390	91	4	2,396	79	149	1,999
Agricultural engineering	1,626	51	5	68	36	1	549	22	24	870
Architecture	1,671	125	8	66	92	0	578	22	48	732
Biomedical engineering	10,208	576	18	1,369	294	7	3,995	209	448	3,292
Chemical engineering	10,187	341	15	731	227	3	3,017	115	246	5,492
Civil engineering	20,569	1,189	40	986	441	23	6,305	255	662	10,668
Electrical engineering	50,062	1,357	35	2,699	806	19	8,013	326	936	35,871

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Engineering science, mechanics, and physics	1,756	37	11	94	43	8	501	20	54	988
Industrial and manufacturing engineering	16,200	756	26	713	529	15	4,009	132	579	9,441
Mechanical engineering	27,898	1,273	36	1,430	446	13	8,369	334	938	15,059
Metallurgical and materials engineering	8,106	324	10	501	154	7	2,581	112	153	4,264
Mining engineering	378	15	2	4	7	0	159	6	5	180
Nuclear engineering	1,466	90	2	58	22	0	844	24	51	375
Petroleum engineering	1,862	51	3	84	34	0	312	10	50	1,318
Engineering nec	11,038	481	22	709	488	15	3,994	158	316	4,855
Female	261,575	20,457	1,005	15,856	17,630	450	107,640	5,451	10,426	82,660
Science	220,220	18,677	934	13,044	16,561	426	97,326	4,929	9,398	58,925
Agricultural sciences	9,560	651	62	284	326	15	5,775	197	396	1,854
Biological sciences	45,218	3,447	168	3,968	2,850	117	22,243	1,090	1,729	9,606
Anatomy	246	28	1	16	13	0	143	3	2	40
Biochemistry	2,184	170	9	205	84	2	945	33	62	674
Biology	9,330	809	38	541	551	15	5,032	227	346	1,771
Biometry and epidemiology	5,345	327	11	615	381	17	2,081	113	191	1,609
Biophysics	323	19	0	33	10	0	151	10	13	87
Botany and plant biology	906	53	2	45	19	3	416	27	31	310
Cell and molecular biology	3,577	269	19	356	170	7	1,564	86	115	991
Ecology	782	27	6	30	15	1	520	12	75	96
Entomology and parasitology	581	29	3	22	19	1	347	13	17	130
Genetics	1,418	97	5	105	44	3	804	30	40	290
Microbiology, immunology, and virology	2,644	226	14	233	156	5	1,363	81	93	473
Nutrition	4,387	241	14	296	194	8	2,720	90	149	675
Pathology	586	36	0	50	34	1	288	14	42	121
Pharmacology and toxicology	1,595	109	4	182	145	4	697	33	30	391
Physiology	2,055	134	9	234	148	3	1,015	51	65	396
Zoology	466	27	2	12	7	0	328	18	21	51
Biosciences nec	8,793	846	31	993	860	47	3,829	249	437	1,501
Communication	8,200	707	34	290	952	13	4,051	215	388	1,550
Computer sciences	26,921	646	31	1,652	1,316	16	3,595	243	867	18,555

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Earth, atmospheric, and ocean sciences	6,916	540	32	253	157	15	4,102	170	321	1,326
Atmospheric sciences	533	34	1	27	21	1	282	8	13	146
Geosciences	3,554	227	19	123	75	7	2,124	94	161	724
Ocean sciences	1,603	120	8	60	18	1	1,068	37	90	201
Earth, atmospheric, and ocean sciences nec	1,226	159	4	43	43	6	628	31	57	255
Family and consumer sciences and human sciences	3,120	277	21	100	441	3	1,747	91	96	344
Mathematics and statistics	10,191	364	10	716	258	9	2,931	121	283	5,499
Mathematics and applied mathematics	6,727	302	7	417	203	9	2,310	101	229	3,149
Statistics	3,464	62	3	299	55	0	621	20	54	2,350
Multidisciplinary and interdisciplinary studies	4,497	335	27	310	356	11	2,114	109	231	1,004
Neurobiology and neuroscience	2,791	264	13	290	104	2	1,535	64	93	426
Physical sciences	13,240	740	26	807	413	14	5,349	199	363	5,329
Astronomy and astrophysics	482	27	3	33	8	1	260	11	15	124
Chemistry	9,277	563	19	586	343	11	3,799	142	243	3,571
Physics	3,204	127	3	175	47	2	1,167	44	98	1,541
Physical sciences nec	277	23	1	13	15	0	123	2	7	93
Psychology	35,492	5,206	162	1,758	2,880	68	20,107	1,050	1,968	2,293
Clinical psychology	6,473	1,164	31	360	423	12	3,586	191	447	259
Psychology, general	8,633	1,037	34	472	751	18	4,957	252	422	690
Psychology nec	20,386	3,005	97	926	1,706	38	11,564	607	1,099	1,344
Social sciences	54,074	5,500	348	2,616	6,508	143	23,777	1,380	2,663	11,139
Agricultural economics	770	30	1	25	20	0	260	8	18	408
Anthropology	4,806	405	56	158	170	11	2,918	176	328	584
Economics (except agricultural)	5,313	163	3	272	141	0	1,018	59	154	3,503
Geography	1,924	137	17	71	71	1	1,053	38	104	432
History and philosophy of science	185	4	0	7	4	1	123	3	4	39

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Linguistics	1,914	163	15	135	52	1	808	45	75	620
Political science and government	24,392	2,654	139	1,331	3,660	83	10,922	588	1,316	3,699
Sociology	5,048	601	29	241	612	10	2,485	146	212	712
Sociology and anthropology	145	16	1	4	29	1	60	1	24	9
Social sciences nec	9,577	1,327	87	372	1,749	35	4,130	316	428	1,133
Engineering	41,355	1,780	71	2,812	1,069	24	10,314	522	1,028	23,735
Aerospace engineering	794	38	1	62	17	1	331	9	15	320
Agricultural engineering	649	20	4	28	23	0	199	9	11	355
Architecture	804	54	3	46	42	0	274	4	21	360
Biomedical engineering	4,207	247	7	554	134	3	1,573	91	163	1,435
Chemical engineering	3,273	110	5	281	81	0	818	36	81	1,861
Civil engineering	6,200	394	13	338	130	4	2,000	102	193	3,026
Electrical engineering	10,880	187	6	551	144	0	973	53	149	8,817
Engineering science, mechanics, and physics	407	11	4	23	13	1	132	7	9	207
Industrial and manufacturing engineering	4,125	266	10	206	176	4	917	43	134	2,369
Mechanical engineering	4,128	200	4	301	91	3	1,246	80	127	2,076
Metallurgical and materials engineering	2,479	104	3	191	54	4	752	36	38	1,297
Mining engineering	74	2	1	1	0	0	37	2	2	29
Nuclear engineering	242	17	1	10	12	0	116	6	6	74
Petroleum engineering	366	12	1	8	4	0	39	1	8	293
Engineering nec	2,727	118	8	212	148	4	907	43	71	1,216
Male	358,914	19,121	855	19,818	12,970	412	129,923	5,063	12,672	158,080
Science	231,826	13,939	681	12,728	10,329	321	94,615	3,761	9,041	86,411
Agricultural sciences	8,724	481	57	166	237	8	5,212	151	326	2,086
Biological sciences	33,928	2,431	100	3,113	1,411	70	17,292	708	1,338	7,465
Anatomy	202	20	0	13	8	2	112	8	7	32
Biochemistry	2,297	173	4	180	67	3	1,162	46	69	593
Biology	7,050	577	22	438	317	11	3,910	115	277	1,383
Biometry and epidemiology	3,662	163	11	468	171	4	1,383	60	152	1,250
Biophysics	618	38	2	62	3	2	315	7	26	163

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Botany and plant biology	914	44	4	53	14	1	470	20	29	279
Cell and molecular biology	2,958	250	6	295	91	3	1,431	54	116	712
Ecology	614	19	2	15	5	0	414	9	51	99
Entomology and parasitology	590	28	2	20	8	1	368	16	15	132
Genetics	986	75	2	72	17	1	544	17	34	224
Microbiology, immunology, and virology	1,971	137	7	181	76	2	1,104	57	52	355
Nutrition	1,014	57	3	65	46	0	562	22	30	229
Pathology	412	31	1	42	17	0	182	15	15	109
Pharmacology and toxicology	1,278	77	3	118	82	1	648	36	35	278
Physiology	1,969	146	2	232	82	3	1,051	36	70	347
Zoology	349	6	0	7	2	1	250	8	21	54
Biosciences nec	7,044	590	29	852	405	35	3,386	182	339	1,226
Communication	4,147	357	18	112	362	8	2,237	93	244	716
Computer sciences	65,729	2,058	54	3,771	2,512	35	13,562	650	2,030	41,057
Earth, atmospheric, and ocean sciences	8,099	474	33	201	158	24	4,783	151	345	1,930
Atmospheric sciences	866	42	2	12	19	0	527	14	18	232
Geosciences	5,056	267	24	110	87	8	3,020	94	234	1,212
Ocean sciences	1,140	59	3	37	18	2	707	24	56	234
Earth, atmospheric, and ocean sciences nec	1,037	106	4	42	34	14	529	19	37	252
Family and consumer sciences and human sciences	630	36	5	25	88	3	339	18	19	97
Mathematics and statistics	17,859	781	32	1,126	390	15	6,382	243	683	8,207
Mathematics and applied mathematics	13,301	652	25	771	291	12	5,077	191	531	5,751
Statistics	4,558	129	7	355	99	3	1,305	52	152	2,456
Multidisciplinary and interdisciplinary studies	4,754	264	14	282	231	7	2,121	83	171	1,581
Neurobiology and neuroscience	2,435	196	13	229	68	3	1,359	46	94	427
Physical sciences	27,278	1,341	69	1,323	493	21	12,227	403	787	10,614
Astronomy and astrophysics	871	54	2	44	11	0	470	13	30	247

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Chemistry	13,399	691	44	726	313	13	6,075	219	369	4,949
Physics	12,560	569	23	527	149	6	5,466	164	382	5,274
Physical sciences nec	448	27	0	26	20	2	216	7	6	144
Psychology	12,117	1,638	61	525	850	23	7,248	305	660	807
Clinical psychology	1,883	338	10	99	126	0	1,064	38	146	62
Psychology, general	3,685	380	12	177	249	7	2,282	100	195	283
Psychology nec	6,549	920	39	249	475	16	3,902	167	319	462
Social sciences	46,126	3,882	225	1,855	3,529	104	21,853	910	2,344	11,424
Agricultural economics	986	33	1	26	26	0	410	9	26	455
Anthropology	2,503	233	35	90	62	12	1,463	65	152	391
Economics (except agricultural)	9,175	369	5	358	246	4	2,690	91	345	5,067
Geography	2,391	119	8	59	68	1	1,456	38	137	505
History and philosophy of science	194	6	0	4	2	0	129	7	8	38
Linguistics	1,235	87	16	53	14	2	592	31	60	380
Political science and government	20,821	2,003	95	916	2,000	61	10,778	433	1,185	3,350
Sociology	2,975	346	16	126	299	3	1,485	75	129	496
Sociology and anthropology	63	8	0	0	13	0	28	0	9	5
Social sciences nec	5,783	678	49	223	799	21	2,822	161	293	737
Engineering	127,088	5,182	174	7,090	2,641	91	35,308	1,302	3,631	71,669
Aerospace engineering	4,622	258	11	328	74	3	2,065	70	134	1,679
Agricultural engineering	977	31	1	40	13	1	350	13	13	515
Architecture	867	71	5	20	50	0	304	18	27	372
Biomedical engineering	6,001	329	11	815	160	4	2,422	118	285	1,857
Chemical engineering	6,914	231	10	450	146	3	2,199	79	165	3,631
Civil engineering	14,369	795	27	648	311	19	4,305	153	469	7,642
Electrical engineering	39,182	1,170	29	2,148	662	19	7,040	273	787	27,054
Engineering science, mechanics, and physics	1,349	26	7	71	30	7	369	13	45	781
Industrial and manufacturing engineering	12,075	490	16	507	353	11	3,092	89	445	7,072

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Mechanical engineering	23,770	1,073	32	1,129	355	10	7,123	254	811	12,983
Metallurgical and materials engineering	5,627	220	7	310	100	3	1,829	76	115	2,967
Mining engineering	304	13	1	3	7	0	122	4	3	151
Nuclear engineering	1,224	73	1	48	10	0	728	18	45	301
Petroleum engineering	1,496	39	2	76	30	0	273	9	42	1,025
Engineering nec	8,311	363	14	497	340	11	3,087	115	245	3,639

nec = not elsewhere classified; S&E = science and engineering.

^a Hispanic or Latino may be any race.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2016.