

Table 3-2

Black or African American U.S. citizen and permanent resident S&E graduate students in all institutions and in HBCUs, by field, degree, and sex: 2018

(Number and percent)

Field and degree	All institutions (number)			HBCUs (number)			HBCUs (%)		
	All S&E graduate students	Female	Male	All S&E graduate students	Female	Male	All S&E graduate students	Female	Male
All S&E graduate students	28,879	16,253	12,626	3,311	2,016	1,295	11.47	12.40	10.26
Science	24,844	15,052	9,792	2,917	1,886	1,031	11.74	12.53	10.53
Agricultural sciences	354	213	141	152	102	50	42.94	47.89	35.46
Biological and biomedical sciences	4,923	3,294	1,629	657	444	213	13.35	13.48	13.08
Computer and information sciences	4,946	1,793	3,153	396	153	243	8.01	8.53	7.71
Geosciences, atmospheric sciences, and ocean sciences	240	120	120	34	18	16	14.17	15.00	13.33
Mathematics and statistics	676	271	405	97	49	48	14.35	18.08	11.85
Multidisciplinary and interdisciplinary studies	709	430	279	10	4	6	1.41	0.93	2.15
Natural resources and conservation	364	212	152	104	58	46	28.57	27.36	30.26
Physical sciences	1,007	468	539	156	91	65	15.49	19.44	12.06
Psychology	5,431	4,309	1,122	609	478	131	11.21	11.09	11.68
Social sciences	6,194	3,942	2,252	702	489	213	11.33	12.40	9.46
Engineering	4,035	1,201	2,834	394	130	264	9.76	10.82	9.32
Aerospace, aeronautical, and astronautical engineering	96	22	74	0	0	0	0.00	0.00	0.00
Agricultural engineering	25	14	11	0	0	0	0.00	0.00	0.00
Bioengineering and biomedical engineering	375	178	197	18	10	8	4.80	5.62	4.06
Biological and biosystems engineering	3	3	0	0	0	0	0.00	0.00	0.00
Chemical engineering	203	79	124	13	6	7	6.40	7.59	5.65
Civil engineering	470	151	319	16	9	7	3.40	5.96	2.19
Electrical, electronics, and communications engineering	880	154	726	125	29	96	14.20	18.83	13.22
Engineering mechanics, physics, and science	49	13	36	0	0	0	0.00	0.00	0.00
Industrial and manufacturing engineering	558	195	363	40	21	19	7.17	10.77	5.23
Mechanical engineering	482	119	363	27	8	19	5.60	6.72	5.23
Metallurgical and materials engineering	143	56	87	0	0	0	0.00	0.00	0.00
Mining engineering	17	2	15	0	0	0	0.00	0.00	0.00
Nanotechnology	4	3	1	0	0	0	0.00	0.00	0.00
Nuclear engineering	22	9	13	0	0	0	0.00	0.00	0.00
Petroleum engineering	26	5	21	0	0	0	0.00	0.00	0.00
Engineering nec	682	198	484	155	47	108	22.73	23.74	22.31
All S&E master's students	20,178	11,290	8,888	2,312	1,415	897	11.46	12.53	10.09
Science	17,560	10,606	6,954	2,046	1,332	714	11.65	12.56	10.27
Agricultural sciences	248	155	93	128	86	42	51.61	55.48	45.16
Biological and biomedical sciences	2,827	1,937	890	393	275	118	13.90	14.20	13.26
Computer and information sciences	4,558	1,660	2,898	361	145	216	7.92	8.73	7.45
Geosciences, atmospheric sciences, and ocean sciences	140	67	73	25	11	14	17.86	16.42	19.18
Mathematics and statistics	461	205	256	77	41	36	16.70	20.00	14.06
Multidisciplinary and interdisciplinary studies	554	335	219	5	1	4	0.90	0.30	1.83

Table 3-2

Black or African American U.S. citizen and permanent resident S&E graduate students in all institutions and in HBCUs, by field, degree, and sex: 2018

(Number and percent)

Field and degree	All institutions (number)			HBCUs (number)			HBCUs (%)		
	All S&E graduate students	Female	Male	All S&E graduate students	Female	Male	All S&E graduate students	Female	Male
Natural resources and conservation	219	122	97	30	15	15	13.70	12.30	15.46
Physical sciences	327	185	142	93	61	32	28.44	32.97	22.54
Psychology	3,989	3,236	753	461	365	96	11.56	11.28	12.75
Social sciences	4,237	2,704	1,533	473	332	141	11.16	12.28	9.20
Engineering	2,618	684	1,934	266	83	183	10.16	12.13	9.46
Aerospace, aeronautical, and astronautical engineering	61	13	48	0	0	0	0.00	0.00	0.00
Agricultural engineering	7	5	2	0	0	0	0.00	0.00	0.00
Bioengineering and biomedical engineering	149	70	79	16	9	7	10.74	12.86	8.86
Biological and biosystems engineering	0	0	0	0	0	0	0.00	0.00	0.00
Chemical engineering	76	32	44	10	5	5	13.16	15.63	11.36
Civil engineering	332	94	238	8	4	4	2.41	4.26	1.68
Electrical, electronics, and communications engineering	585	92	493	66	14	52	11.28	15.22	10.55
Engineering mechanics, physics, and science	22	5	17	0	0	0	0.00	0.00	0.00
Industrial and manufacturing engineering	438	142	296	18	10	8	4.11	7.04	2.70
Mechanical engineering	296	63	233	13	4	9	4.39	6.35	3.86
Metallurgical and materials engineering	56	21	35	0	0	0	0.00	0.00	0.00
Mining engineering	14	1	13	0	0	0	0.00	0.00	0.00
Nanotechnology	4	3	1	0	0	0	0.00	0.00	0.00
Nuclear engineering	7	1	6	0	0	0	0.00	0.00	0.00
Petroleum engineering	13	1	12	0	0	0	0.00	0.00	0.00
Engineering nec	558	141	417	135	37	98	24.19	26.24	23.50
All S&E doctoral students	8,701	4,963	3,738	999	601	398	11.48	12.11	10.65
Science	7,284	4,446	2,838	871	554	317	11.96	12.46	11.17
Agricultural sciences	106	58	48	24	16	8	22.64	27.59	16.67
Biological and biomedical sciences	2,096	1,357	739	264	169	95	12.60	12.45	12.86
Computer and information sciences	388	133	255	35	8	27	9.02	6.02	10.59
Geosciences, atmospheric sciences, and ocean sciences	100	53	47	9	7	2	9.00	13.21	4.26
Mathematics and statistics	215	66	149	20	8	12	9.30	12.12	8.05
Multidisciplinary and interdisciplinary studies	155	95	60	5	3	2	3.23	3.16	3.33
Natural resources and conservation	145	90	55	74	43	31	51.03	47.78	56.36
Physical sciences	680	283	397	63	30	33	9.26	10.60	8.31
Psychology	1,442	1,073	369	148	113	35	10.26	10.53	9.49
Social sciences	1,957	1,238	719	229	157	72	11.70	12.68	10.01
Engineering	1,417	517	900	128	47	81	9.03	9.09	9.00
Aerospace, aeronautical, and astronautical engineering	35	9	26	0	0	0	0.00	0.00	0.00
Agricultural engineering	18	9	9	0	0	0	0.00	0.00	0.00

Table 3-2**Black or African American U.S. citizen and permanent resident S&E graduate students in all institutions and in HBCUs, by field, degree, and sex: 2018**

(Number and percent)

Field and degree	All institutions (number)			HBCUs (number)			HBCUs (%)		
	All S&E graduate students	Female	Male	All S&E graduate students	Female	Male	All S&E graduate students	Female	Male
Bioengineering and biomedical engineering	226	108	118	2	1	1	0.88	0.93	0.85
Biological and biosystems engineering	3	3	0	0	0	0	0.00	0.00	0.00
Chemical engineering	127	47	80	3	1	2	2.36	2.13	2.50
Civil engineering	138	57	81	8	5	3	5.80	8.77	3.70
Electrical, electronics, and communications engineering	295	62	233	59	15	44	20.00	24.19	18.88
Engineering mechanics, physics, and science	27	8	19	0	0	0	0.00	0.00	0.00
Industrial and manufacturing engineering	120	53	67	22	11	11	18.33	20.75	16.42
Mechanical engineering	186	56	130	14	4	10	7.53	7.14	7.69
Metallurgical and materials engineering	87	35	52	0	0	0	0.00	0.00	0.00
Mining engineering	3	1	2	0	0	0	0.00	0.00	0.00
Nanotechnology	0	0	0	0	0	0	0.00	0.00	0.00
Nuclear engineering	15	8	7	0	0	0	0.00	0.00	0.00
Petroleum engineering	13	4	9	0	0	0	0.00	0.00	0.00
Engineering nec	124	57	67	20	10	10	16.13	17.54	14.93

HBCUs = historically Black colleges and universities; nec = not elsewhere classified; S&E = science and engineering.

Source(s):

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2018.