



The STEM Labor Force of Today: Scientists, Engineers, and Skilled Technical Workers

Supplemental Tables

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Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
na	na	Total, all employed adults, ages 16–75, not employed in military occupations	155,423,256	98,895,016	56,528,240	36,094,305	19,853,466	16,240,839	119,328,951	79,041,550	40,287,401
na	na	Architecture and engineering occupations	3,289,722	1,007,416	2,282,306	3,289,722	1,007,416	2,282,306	na	na	na
S&E-related	1305	Architects, except landscape and naval	204,781	18,129	186,652	204,781	18,129	186,652	na	na	na
S&E-related	1306	Landscape architects	32,308	4,999	27,309	32,308	4,999	27,309	na	na	na
S&E-related	1310	Surveyors, cartographers, and photogrammetrists	38,655	10,662	27,993	38,655	10,662	27,993	na	na	na
S&E	1320	Aerospace engineers	134,130	14,746	119,384	134,130	14,746	119,384	na	na	na
S&E	1340	Biomedical and agricultural engineers	19,041	3,325	15,716	19,041	3,325	15,716	na	na	na
S&E	1350	Chemical engineers	75,494	9,397	66,097	75,494	9,397	66,097	na	na	na
S&E	1360	Civil engineers	417,287	50,802	366,485	417,287	50,802	366,485	na	na	na
S&E	1400	Computer hardware engineers	61,250	12,968	48,282	61,250	12,968	48,282	na	na	na
S&E	1410	Electrical and electronics engineers	258,884	42,004	216,880	258,884	42,004	216,880	na	na	na
S&E	1420	Environmental engineers	30,504	3,017	27,487	30,504	3,017	27,487	na	na	na
S&E	1430	Industrial engineers, including health and safety	254,929	65,381	189,548	254,929	65,381	189,548	na	na	na
S&E	1440	Marine engineers and naval architects	12,676	3,725	8,951	12,676	3,725	8,951	na	na	na
S&E	1450	Materials engineers	50,967	11,598	39,369	50,967	11,598	39,369	na	na	na
S&E	1460	Mechanical engineers	332,721	64,104	268,617	332,721	64,104	268,617	na	na	na
S&E	1520	Petroleum, mining, and geological engineers, including mining safety engineers	36,704	5,286	31,418	36,704	5,286	31,418	na	na	na
S&E	1530	Other engineers	601,601	109,624	491,977	601,601	109,624	491,977	na	na	na
S&E-related	1541	Architectural and civil drafters	53,913	35,557	18,356	53,913	35,557	18,356	na	na	na
S&E-related	1545	Other drafters	95,332	66,468	28,864	95,332	66,468	28,864	na	na	na
S&E-related	1551	Electrical and electronic engineering technologists and technicians	110,798	94,665	16,133	110,798	94,665	16,133	na	na	na
S&E-related	1555	Other engineering technologists and technicians, except drafters	396,227	316,601	79,626	396,227	316,601	79,626	na	na	na
S&E-related	1560	Surveying and mapping technicians	71,520	64,358	7,162	71,520	64,358	7,162	na	na	na
na	na	Arts, design, entertainment, sports, and media occupations	3,162,951	1,231,773	1,931,178	446,150	204,632	241,518	2,716,801	1,027,141	1,689,660
Non-STEM	2600	Artists and related workers	255,633	115,670	139,963	na	na	na	255,633	115,670	139,963
Non-STEM	2631	Commercial and industrial designers	16,162	4,140	12,022	na	na	na	16,162	4,140	12,022

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Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	2632	Fashion designers	32,734	11,291	21,443	na	na	na	32,734	11,291	21,443
Non-STEM	2633	Floral designers	62,556	50,065	12,491	na	na	na	62,556	50,065	12,491
Non-STEM	2634	Graphic designers	321,243	110,357	210,886	na	na	na	321,243	110,357	210,886
Non-STEM	2635	Interior designers	104,923	35,436	69,487	na	na	na	104,923	35,436	69,487
Non-STEM	2636	Merchandise displayers and window trimmers	20,709	14,135	6,574	na	na	na	20,709	14,135	6,574
Non-STEM	2640	Other designers	345,090	136,979	208,111	na	na	na	345,090	136,979	208,111
Non-STEM	2700	Actors	50,272	19,787	30,485	na	na	na	50,272	19,787	30,485
Non-STEM	2710	Producers and directors	172,311	43,088	129,223	na	na	na	172,311	43,088	129,223
Non-STEM	2721	Athletes and sports competitors	39,562	17,137	22,425	na	na	na	39,562	17,137	22,425
Non-STEM	2722	Coaches and scouts	243,056	112,688	130,368	na	na	na	243,056	112,688	130,368
Non-STEM	2723	Umpires, referees, and other sports officials	19,961	14,137	5,824	na	na	na	19,961	14,137	5,824
Non-STEM	2740	Dancers and choreographers	26,945	19,334	7,611	na	na	na	26,945	19,334	7,611
Non-STEM	2751	Music directors and composers	48,667	15,518	33,149	na	na	na	48,667	15,518	33,149
Non-STEM	2752	Musicians and singers	154,666	71,311	83,355	na	na	na	154,666	71,311	83,355
Non-STEM	2755	Disc jockeys, except radio	16,986	13,416	3,570	na	na	na	16,986	13,416	3,570
Non-STEM	2770	Entertainers and performers, sports and related workers, all other	48,675	29,805	18,870	na	na	na	48,675	29,805	18,870
Non-STEM	2805	Broadcast announcers and radio disc jockeys	29,332	14,347	14,985	na	na	na	29,332	14,347	14,985
Non-STEM	2810	News analysts, reporters, and journalists	80,123	14,854	65,269	na	na	na	80,123	14,854	65,269
Non-STEM	2825	Public relations specialists	122,914	21,220	101,694	na	na	na	122,914	21,220	101,694
Non-STEM	2830	Editors	139,537	24,631	114,906	na	na	na	139,537	24,631	114,906
Middle skill	2840	Technical writers	62,540	14,176	48,364	62,540	14,176	48,364	na	na	na
Non-STEM	2850	Writers and authors	215,619	38,923	176,696	na	na	na	215,619	38,923	176,696
Non-STEM	2861	Interpreters and translators	100,160	47,460	52,700	na	na	na	100,160	47,460	52,700
Non-STEM	2862	Court reporters and simultaneous captioners	28,595	25,048	3,547	na	na	na	28,595	25,048	3,547
Non-STEM	2865	Media and communication workers, all other	20,370	6,364	14,006	na	na	na	20,370	6,364	14,006
Middle skill	2905	Other media and communication equipment workers	99,424	55,729	43,695	99,424	55,729	43,695	na	na	na
Middle skill	2910	Photographers	179,656	94,785	84,871	179,656	94,785	84,871	na	na	na

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Middle skill	2920	Television, video, and film camera operators and editors	104,530	39,942	64,588	104,530	39,942	64,588	na	na	na
na	na	Building and grounds cleaning and maintenance occupations	5,712,811	5,312,939	399,872	na	na	na	5,712,811	5,312,939	399,872
Non-STEM	4200	First-line supervisors of housekeeping and janitorial workers	260,175	223,082	37,093	na	na	na	260,175	223,082	37,093
Non-STEM	4210	First-line supervisors of landscaping, lawn service, and groundskeeping workers	159,839	135,980	23,859	na	na	na	159,839	135,980	23,859
Non-STEM	4220	Janitors and building cleaners	2,445,529	2,291,491	154,038	na	na	na	2,445,529	2,291,491	154,038
Non-STEM	4230	Maids and housekeeping cleaners	1,477,041	1,395,308	81,733	na	na	na	1,477,041	1,395,308	81,733
Non-STEM	4240	Pest control workers	87,969	80,228	7,741	na	na	na	87,969	80,228	7,741
Non-STEM	4251	Landscaping and groundskeeping workers	1,166,073	1,082,886	83,187	na	na	na	1,166,073	1,082,886	83,187
Non-STEM	4252	Tree trimmers and pruners	95,624	85,520	10,104	na	na	na	95,624	85,520	10,104
Non-STEM	4255	Other grounds maintenance workers	20,561	18,444	2,117	na	na	na	20,561	18,444	2,117
na	na	Business operations specialists	5,210,091	1,898,481	3,311,610	181,055	101,849	79,206	5,029,036	1,796,632	3,232,404
Non-STEM	500	Agents and business managers of artists, performers, and athletes	46,315	15,864	30,451	na	na	na	46,315	15,864	30,451
Non-STEM	510	Buyers and purchasing agents, farm products	8,073	4,542	3,531	na	na	na	8,073	4,542	3,531
Non-STEM	520	Wholesale and retail buyers, except farm products	208,812	134,690	74,122	na	na	na	208,812	134,690	74,122
Non-STEM	530	Purchasing agents, except wholesale, retail, and farm products	282,256	142,245	140,011	na	na	na	282,256	142,245	140,011
Non-STEM	540	Claims adjusters, appraisers, examiners, and investigators	345,079	166,700	178,379	na	na	na	345,079	166,700	178,379
Non-STEM	565	Compliance officers	292,968	107,910	185,058	na	na	na	292,968	107,910	185,058
Non-STEM	600	Cost estimators	158,745	98,684	60,061	na	na	na	158,745	98,684	60,061
Non-STEM	630	Human resources workers	883,067	317,335	565,732	na	na	na	883,067	317,335	565,732
Non-STEM	640	Compensation, benefits, and job analysis specialists	73,671	34,457	39,214	na	na	na	73,671	34,457	39,214
Non-STEM	650	Training and development specialists	158,481	77,247	81,234	na	na	na	158,481	77,247	81,234
S&E	700	Logisticians	181,055	101,849	79,206	181,055	101,849	79,206	na	na	na
Non-STEM	705	Project management specialists	662,087	194,057	468,030	na	na	na	662,087	194,057	468,030
Non-STEM	710	Management analysts	927,686	206,526	721,160	na	na	na	927,686	206,526	721,160
Non-STEM	725	Meeting, convention, and event planners	155,587	59,601	95,986	na	na	na	155,587	59,601	95,986

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Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

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			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	726	Fundraisers	79,168	10,712	68,456	na	na	na	79,168	10,712	68,456
Non-STEM	735	Market research analysts and marketing specialists	359,807	86,326	273,481	na	na	na	359,807	86,326	273,481
Non-STEM	750	Business operations specialists, all other	387,234	139,736	247,498	na	na	na	387,234	139,736	247,498
na	na	Community and social services occupations	4,598,522	1,077,974	3,520,548	na	na	na	4,598,522	1,077,974	3,520,548
Non-STEM	2001	Substance abuse and behavioral disorder counselors	133,467	35,887	97,580	na	na	na	133,467	35,887	97,580
Non-STEM	2002	Educational, guidance, and career counselors and advisors	369,799	64,618	305,181	na	na	na	369,799	64,618	305,181
Non-STEM	2003	Marriage and family therapists	34,665	5,210	29,455	na	na	na	34,665	5,210	29,455
Non-STEM	2004	Mental health counselors	124,231	16,318	107,913	na	na	na	124,231	16,318	107,913
Non-STEM	2005	Rehabilitation counselors	25,933	9,217	16,716	na	na	na	25,933	9,217	16,716
Non-STEM	2006	Counselors, all other	204,647	58,531	146,116	na	na	na	204,647	58,531	146,116
Non-STEM	2011	Child, family, and school social workers	70,560	17,135	53,425	na	na	na	70,560	17,135	53,425
Non-STEM	2012	Health care social workers	82,110	31,592	50,518	na	na	na	82,110	31,592	50,518
Non-STEM	2013	Mental health and substance abuse social workers	20,650	1,445	19,205	na	na	na	20,650	1,445	19,205
Non-STEM	2014	Social workers, all other	711,071	137,937	573,134	na	na	na	711,071	137,937	573,134
Non-STEM	2015	Probation officers and correctional treatment specialists	96,493	15,346	81,147	na	na	na	96,493	15,346	81,147
Non-STEM	2016	Social and human service assistants	233,742	120,001	113,741	na	na	na	233,742	120,001	113,741
Non-STEM	2025	Other community and social service specialists	96,737	39,981	56,756	na	na	na	96,737	39,981	56,756
Non-STEM	2040	Clergy	448,162	106,305	341,857	na	na	na	448,162	106,305	341,857
Non-STEM	2050	Directors, religious activities and education	81,999	28,956	53,043	na	na	na	81,999	28,956	53,043
Non-STEM	2060	Religious workers, all other	93,564	42,412	51,152	na	na	na	93,564	42,412	51,152
Non-STEM	2100	Lawyers and judges, magistrates, and other judicial workers	1,161,154	24,411	1,136,743	na	na	na	1,161,154	24,411	1,136,743
Non-STEM	2105	Judicial law clerks	25,708	5,592	20,116	na	na	na	25,708	5,592	20,116
Non-STEM	2145	Paralegals and legal assistants	433,823	232,610	201,213	na	na	na	433,823	232,610	201,213
Non-STEM	2170	Title examiners, abstractors, and searchers	94,264	61,299	32,965	na	na	na	94,264	61,299	32,965
Non-STEM	2180	Legal support workers, all other	55,743	23,171	32,572	na	na	na	55,743	23,171	32,572

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			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
na	na	Computer and mathematical occupations	5,236,839	1,587,443	3,649,396	5,236,839	1,587,443	3,649,396	na	na	na
S&E	1005	Computer and information research scientists	35,150	3,076	32,074	35,150	3,076	32,074	na	na	na
S&E	1006	Computer systems analysts	616,467	161,132	455,335	616,467	161,132	455,335	na	na	na
S&E	1007	Information security analysts	134,584	44,167	90,417	134,584	44,167	90,417	na	na	na
S&E-related	1010	Computer programmers	335,924	96,993	238,931	335,924	96,993	238,931	na	na	na
S&E	1021	Software developers	1,649,176	230,953	1,418,223	1,649,176	230,953	1,418,223	na	na	na
S&E	1022	Software quality assurance analysts and testers	71,800	20,304	51,496	71,800	20,304	51,496	na	na	na
S&E	1031	Web developers	103,454	34,457	68,997	103,454	34,457	68,997	na	na	na
S&E	1032	Web and digital interface designers	72,954	23,356	49,598	72,954	23,356	49,598	na	na	na
S&E	1050	Computer support specialists	664,080	356,059	308,021	664,080	356,059	308,021	na	na	na
S&E	1065	Database administrators and architects	122,746	32,039	90,707	122,746	32,039	90,707	na	na	na
S&E	1105	Network and computer systems administrators	231,818	105,559	126,259	231,818	105,559	126,259	na	na	na
S&E	1106	Computer network architects	116,626	52,628	63,998	116,626	52,628	63,998	na	na	na
S&E	1108	Computer occupations, all other	702,054	352,263	349,791	702,054	352,263	349,791	na	na	na
S&E-related	1200	Actuaries	33,508	849	32,659	33,508	849	32,659	na	na	na
S&E	1220	Operations research analysts	162,923	42,043	120,880	162,923	42,043	120,880	na	na	na
S&E	1240	Other mathematical science occupations	183,575	31,565	152,010	183,575	31,565	152,010	na	na	na
na	na	Construction trades	7,883,711	7,361,963	521,748	4,353,733	4,033,941	319,792	3,529,978	3,328,022	201,956
Middle skill	6200	First-line supervisors of construction trades and extraction workers	654,944	590,587	64,357	654,944	590,587	64,357	na	na	na
Middle skill	6210	Boilermakers	18,581	18,018	563	18,581	18,018	563	na	na	na
Middle skill	6220	Brickmasons, blockmasons, stonemasons, and reinforcing iron and rebar workers	150,455	145,959	4,496	150,455	145,959	4,496	na	na	na
Middle skill	6230	Carpenters	1,292,799	1,200,692	92,107	1,292,799	1,200,692	92,107	na	na	na
Non-STEM	6240	Carpet, floor, and tile installers and finishers	147,657	140,650	7,007	na	na	na	147,657	140,650	7,007
Non-STEM	6250	Cement masons, concrete finishers, and terrazzo workers	66,156	64,730	1,426	na	na	na	66,156	64,730	1,426
Non-STEM	6260	Construction laborers	1,858,299	1,740,622	117,677	na	na	na	1,858,299	1,740,622	117,677
Non-STEM	6305	Construction equipment operators	397,241	385,495	11,746	na	na	na	397,241	385,495	11,746

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(Number)

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Middle skill	6330	Drywall installers, ceiling tile installers, and tapers	136,403	133,822	2,581	136,403	133,822	2,581	na	na	na
Middle skill	6355	Electricians	944,035	871,532	72,503	944,035	871,532	72,503	na	na	na
Middle skill	6360	Glaziers	46,564	44,649	1,915	46,564	44,649	1,915	na	na	na
Non-STEM	6400	Insulation workers	48,146	46,076	2,070	na	na	na	48,146	46,076	2,070
Non-STEM	6410	Painters and paperhangers	596,152	558,595	37,557	na	na	na	596,152	558,595	37,557
Middle skill	6441	Pipelayers	55,346	53,629	1,717	55,346	53,629	1,717	na	na	na
Middle skill	6442	Plumbers, pipefitters, and steamfitters	599,347	564,225	35,122	599,347	564,225	35,122	na	na	na
Non-STEM	6460	Plasterers and stucco masons	26,136	25,243	893	na	na	na	26,136	25,243	893
Middle skill	6515	Roofers	241,635	233,664	7,971	241,635	233,664	7,971	na	na	na
Non-STEM	6520	Sheet metal workers	142,866	134,372	8,494	na	na	na	142,866	134,372	8,494
Middle skill	6530	Structural iron and steel workers	68,610	66,697	1,913	68,610	66,697	1,913	na	na	na
Middle skill	6540	Solar photovoltaic installers	12,364	10,469	1,895	12,364	10,469	1,895	na	na	na
Non-STEM	6600	Helpers, construction trades	41,971	39,252	2,719	na	na	na	41,971	39,252	2,719
Middle skill	6660	Construction and building inspectors	103,098	73,741	29,357	103,098	73,741	29,357	na	na	na
Middle skill	6700	Elevator and escalator installers and repairers	29,552	26,257	3,295	29,552	26,257	3,295	na	na	na
Non-STEM	6710	Fence erectors	29,486	28,047	1,439	na	na	na	29,486	28,047	1,439
Non-STEM	6720	Hazardous materials removal workers	24,965	21,476	3,489	na	na	na	24,965	21,476	3,489
Non-STEM	6730	Highway maintenance workers	98,542	93,844	4,698	na	na	na	98,542	93,844	4,698
Non-STEM	6740	Rail-track laying and maintenance equipment operators	7,750	7,459	291	na	na	na	7,750	7,459	291
Non-STEM	6765	Other construction and related workers	44,611	42,161	2,450	na	na	na	44,611	42,161	2,450
na	na	Education, training, and library occupations	9,713,029	2,304,496	7,408,533	na	na	na	9,713,029	2,304,496	7,408,533
Non-STEM	2205	Postsecondary teachers	1,441,513	138,566	1,302,947	na	na	na	1,441,513	138,566	1,302,947
Non-STEM	2300	Preschool and kindergarten teachers	855,538	421,443	434,095	na	na	na	855,538	421,443	434,095
Non-STEM	2310	Elementary and middle school teachers	2,964,678	181,270	2,783,408	na	na	na	2,964,678	181,270	2,783,408
Non-STEM	2320	Secondary school teachers	1,269,726	53,399	1,216,327	na	na	na	1,269,726	53,399	1,216,327
Non-STEM	2330	Special education teachers	432,135	49,653	382,482	na	na	na	432,135	49,653	382,482
Non-STEM	2350	Tutors	200,971	104,404	96,567	na	na	na	200,971	104,404	96,567
Non-STEM	2360	Other teachers and instructors	745,727	317,882	427,845	na	na	na	745,727	317,882	427,845
Non-STEM	2400	Archivists, curators, and museum technicians	70,782	18,155	52,627	na	na	na	70,782	18,155	52,627

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	2435	Librarians and media collections specialists	191,506	28,439	163,067	na	na	na	191,506	28,439	163,067
Non-STEM	2440	Library technicians	49,099	32,835	16,264	na	na	na	49,099	32,835	16,264
Non-STEM	2545	Teaching assistants	1,356,414	933,423	422,991	na	na	na	1,356,414	933,423	422,991
Non-STEM	2555	Other educational instruction and library workers	134,940	25,027	109,913	na	na	na	134,940	25,027	109,913
na	na	Extraction workers	215,333	201,086	14,247	68,998	64,267	4,731	146,335	136,819	9,516
Middle skill	6800	Derrick, rotary drill, and service unit operators, and roustabouts, oil and gas	36,338	33,341	2,997	36,338	33,341	2,997	na	na	na
Middle skill	6825	Surface mining machine operators and earth drillers	32,660	30,926	1,734	32,660	30,926	1,734	na	na	na
Non-STEM	6835	Explosives workers, ordnance handling experts, and blasters	22,073	19,635	2,438	na	na	na	22,073	19,635	2,438
Non-STEM	6850	Underground mining machine operators	52,469	49,155	3,314	na	na	na	52,469	49,155	3,314
Non-STEM	6950	Other extraction workers	71,793	68,029	3,764	na	na	na	71,793	68,029	3,764
na	na	Farming, fishing, and forestry occupations	953,779	878,377	75,402	na	na	na	953,779	878,377	75,402
Non-STEM	6005	First-line supervisors of farming, fishing, and forestry workers	49,645	44,031	5,614	na	na	na	49,645	44,031	5,614
Non-STEM	6010	Agricultural inspectors	12,040	8,034	4,006	na	na	na	12,040	8,034	4,006
Non-STEM	6040	Graders and sorters, agricultural products	51,908	48,601	3,307	na	na	na	51,908	48,601	3,307
Non-STEM	6050	Other agricultural workers	733,739	682,703	51,036	na	na	na	733,739	682,703	51,036
Non-STEM	6115	Fishing and hunting workers	36,543	31,697	4,846	na	na	na	36,543	31,697	4,846
Non-STEM	6120	Forest and conservation workers	16,060	12,403	3,657	na	na	na	16,060	12,403	3,657
Non-STEM	6130	Logging workers	53,844	50,908	2,936	na	na	na	53,844	50,908	2,936
na	na	Financial specialists	3,334,435	737,264	2,597,171	151,646	71,061	80,585	3,182,789	666,203	2,516,586
Non-STEM	800	Accountants and auditors	1,702,872	240,973	1,461,899	na	na	na	1,702,872	240,973	1,461,899
Middle skill	810	Property appraisers and assessors	91,927	40,123	51,804	91,927	40,123	51,804	na	na	na
Non-STEM	820	Budget analysts	52,893	11,673	41,220	na	na	na	52,893	11,673	41,220
Non-STEM	830	Credit analysts	36,848	11,827	25,021	na	na	na	36,848	11,827	25,021
Non-STEM	845	Financial and investment analysts	290,036	33,866	256,170	na	na	na	290,036	33,866	256,170
Non-STEM	850	Personal financial advisors	414,707	73,704	341,003	na	na	na	414,707	73,704	341,003
Non-STEM	860	Insurance underwriters	118,201	45,226	72,975	na	na	na	118,201	45,226	72,975
Non-STEM	900	Financial examiners	20,029	3,960	16,069	na	na	na	20,029	3,960	16,069
Non-STEM	910	Credit counselors and loan officers	357,802	170,152	187,650	na	na	na	357,802	170,152	187,650

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Middle skill	930	Tax examiners and collectors, and revenue agents	59,719	30,938	28,781	59,719	30,938	28,781	na	na	na
Non-STEM	940	Tax preparers	92,561	44,586	47,975	na	na	na	92,561	44,586	47,975
Non-STEM	960	Other financial specialists	96,840	30,236	66,604	na	na	na	96,840	30,236	66,604
na	na	Food preparation and serving occupations	8,114,530	7,305,848	808,682	515,496	436,868	78,628	7,599,034	6,868,980	730,054
Middle skill	4000	Chefs and head cooks	515,496	436,868	78,628	515,496	436,868	78,628	na	na	na
Non-STEM	4010	First-line supervisors of food preparation and serving workers	549,270	480,204	69,066	na	na	na	549,270	480,204	69,066
Non-STEM	4020	Cooks	2,183,437	2,067,357	116,080	na	na	na	2,183,437	2,067,357	116,080
Non-STEM	4030	Food preparation workers	900,673	836,023	64,650	na	na	na	900,673	836,023	64,650
Non-STEM	4040	Bartenders	465,910	363,385	102,525	na	na	na	465,910	363,385	102,525
Non-STEM	4055	Fast food and counter workers	539,108	483,872	55,236	na	na	na	539,108	483,872	55,236
Non-STEM	4110	Waiters and waitresses	1,991,766	1,735,787	255,979	na	na	na	1,991,766	1,735,787	255,979
Non-STEM	4120	Food servers, nonrestaurant	171,885	155,913	15,972	na	na	na	171,885	155,913	15,972
Non-STEM	4130	Dining room and cafeteria attendants and bartender helpers	267,500	251,279	16,221	na	na	na	267,500	251,279	16,221
Non-STEM	4140	Dishwashers	286,149	274,534	11,615	na	na	na	286,149	274,534	11,615
Non-STEM	4150	Hosts and hostesses, restaurant, lounge, and coffee shop	231,935	209,823	22,112	na	na	na	231,935	209,823	22,112
Non-STEM	4160	Food preparation and serving related workers, all other	11,401	10,803	598	na	na	na	11,401	10,803	598
na	na	Health care practitioners and technical occupations	9,736,678	3,760,947	5,975,731	9,736,678	3,760,947	5,975,731	na	na	na
S&E-related	3000	Chiropractors	67,094	2,162	64,932	67,094	2,162	64,932	na	na	na
S&E-related	3010	Dentists	179,002	NA	179,002	179,002	NA	179,002	na	na	na
S&E-related	3030	Dietitians and nutritionists	102,859	21,832	81,027	102,859	21,832	81,027	na	na	na
S&E-related	3040	Optometrists	47,262	NA	47,262	47,262	NA	47,262	na	na	na
S&E-related	3050	Pharmacists	331,452	14,178	317,274	331,452	14,178	317,274	na	na	na
S&E-related	3090	Physicians	893,677	NA	893,677	893,677	NA	893,677	na	na	na
S&E-related	3100	Surgeons	53,376	NA	53,376	53,376	NA	53,376	na	na	na
S&E-related	3110	Physician assistants	144,141	14,343	129,798	144,141	14,343	129,798	na	na	na
S&E-related	3120	Podiatrists	10,685	NA	10,685	10,685	NA	10,685	na	na	na
S&E-related	3140	Audiologists	19,540	492	19,048	19,540	492	19,048	na	na	na
S&E-related	3150	Occupational therapists	135,951	9,780	126,171	135,951	9,780	126,171	na	na	na

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
S&E-related	3160	Physical therapists	273,550	16,048	257,502	273,550	16,048	257,502	na	na	na
S&E-related	3200	Radiation therapists	16,936	6,196	10,740	16,936	6,196	10,740	na	na	na
S&E-related	3210	Recreational therapists	16,155	6,033	10,122	16,155	6,033	10,122	na	na	na
S&E-related	3220	Respiratory therapists	116,339	80,028	36,311	116,339	80,028	36,311	na	na	na
S&E-related	3230	Speech-language pathologists	179,914	5,725	174,189	179,914	5,725	174,189	na	na	na
S&E-related	3245	Other therapists	194,098	27,790	166,308	194,098	27,790	166,308	na	na	na
S&E-related	3250	Veterinarians	91,320	NA	91,320	91,320	NA	91,320	na	na	na
S&E-related	3255	Registered nurses	3,358,616	1,150,003	2,208,613	3,358,616	1,150,003	2,208,613	na	na	na
S&E-related	3256	Nurse anesthetists	44,728	1,257	43,471	44,728	1,257	43,471	na	na	na
S&E-related	3258	Nurse practitioners and nurse midwives	217,930	3,078	214,852	217,930	3,078	214,852	na	na	na
S&E-related	3261	Acupuncturists	21,065	1,673	19,392	21,065	1,673	19,392	na	na	na
S&E-related	3270	Health care diagnosing or treating practitioners, all other	9,287	3,510	5,777	9,287	3,510	5,777	na	na	na
S&E-related	3300	Clinical laboratory technologists and technicians	332,828	175,104	157,724	332,828	175,104	157,724	na	na	na
S&E-related	3310	Dental hygienists	200,794	127,110	73,684	200,794	127,110	73,684	na	na	na
S&E-related	3321	Cardiovascular technologists and technicians	49,891	29,863	20,028	49,891	29,863	20,028	na	na	na
S&E-related	3322	Diagnostic medical sonographers	90,970	46,711	44,259	90,970	46,711	44,259	na	na	na
S&E-related	3323	Radiologic technologists and technicians	211,189	153,996	57,193	211,189	153,996	57,193	na	na	na
S&E-related	3324	Magnetic resonance imaging technologists	45,929	27,413	18,516	45,929	27,413	18,516	na	na	na
S&E-related	3330	Nuclear medicine technologists and medical dosimetrists	25,298	8,741	16,557	25,298	8,741	16,557	na	na	na
S&E-related	3401	Emergency medical technicians	135,214	108,900	26,314	135,214	108,900	26,314	na	na	na
S&E-related	3402	Paramedics	127,285	97,713	29,572	127,285	97,713	29,572	na	na	na
S&E-related	3421	Pharmacy technicians	380,917	306,505	74,412	380,917	306,505	74,412	na	na	na
S&E-related	3422	Psychiatric technicians	85,448	46,423	39,025	85,448	46,423	39,025	na	na	na
S&E-related	3423	Surgical technologists	107,607	92,532	15,075	107,607	92,532	15,075	na	na	na
S&E-related	3424	Veterinary technologists and technicians	148,558	112,806	35,752	148,558	112,806	35,752	na	na	na
S&E-related	3430	Dietetic technicians and ophthalmic medical technicians	61,649	53,615	8,034	61,649	53,615	8,034	na	na	na
S&E-related	3500	Licensed practical and licensed vocational nurses	703,674	671,552	32,122	703,674	671,552	32,122	na	na	na

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
S&E-related	3515	Medical records specialists	188,325	149,274	39,051	188,325	149,274	39,051	na	na	na
S&E-related	3520	Opticians, dispensing	69,090	54,343	14,747	69,090	54,343	14,747	na	na	na
S&E-related	3545	Miscellaneous health technologists and technicians	150,962	109,685	41,277	150,962	109,685	41,277	na	na	na
S&E-related	3550	Other health care practitioners and technical occupations	96,073	24,533	71,540	96,073	24,533	71,540	na	na	na
na	na	Health care support occupations	5,255,814	4,534,322	721,492	na	na	na	5,255,814	4,534,322	721,492
Non-STEM	3601	Home health aides	568,423	514,460	53,963	na	na	na	568,423	514,460	53,963
Non-STEM	3602	Personal care aides	1,431,894	1,243,445	188,449	na	na	na	1,431,894	1,243,445	188,449
Non-STEM	3603	Nursing assistants	1,413,026	1,285,885	127,141	na	na	na	1,413,026	1,285,885	127,141
Non-STEM	3605	Orderlies and psychiatric aides	76,887	63,714	13,173	na	na	na	76,887	63,714	13,173
Non-STEM	3610	Occupational therapy assistants and aides	55,002	42,876	12,126	na	na	na	55,002	42,876	12,126
Non-STEM	3620	Physical therapist assistants and aides	124,770	81,564	43,206	na	na	na	124,770	81,564	43,206
Non-STEM	3630	Massage therapists	201,515	149,440	52,075	na	na	na	201,515	149,440	52,075
Non-STEM	3640	Dental assistants	333,131	294,500	38,631	na	na	na	333,131	294,500	38,631
Non-STEM	3645	Medical assistants	593,423	504,533	88,890	na	na	na	593,423	504,533	88,890
Non-STEM	3646	Medical transcriptionists	56,189	28,060	28,129	na	na	na	56,189	28,060	28,129
Non-STEM	3647	Pharmacy aides	34,375	27,513	6,862	na	na	na	34,375	27,513	6,862
Non-STEM	3648	Veterinary assistants and laboratory animal caretakers	58,576	43,184	15,392	na	na	na	58,576	43,184	15,392
Non-STEM	3649	Phlebotomists	132,222	115,213	17,009	na	na	na	132,222	115,213	17,009
Non-STEM	3655	Other health care support workers	176,381	139,935	36,446	na	na	na	176,381	139,935	36,446
na	na	Installation, maintenance, and repair workers	4,942,336	4,564,390	377,946	4,467,794	4,115,015	352,779	474,542	449,375	25,167
Middle skill	7000	First-line supervisors of mechanics, installers, and repairers	246,417	213,240	33,177	246,417	213,240	33,177	na	na	na
Middle skill	7010	Computer, automated teller, and office machine repairers	155,615	118,947	36,668	155,615	118,947	36,668	na	na	na
Middle skill	7020	Radio and telecommunications equipment installers and repairers	165,858	142,467	23,391	165,858	142,467	23,391	na	na	na
Middle skill	7030	Avionics technicians	30,154	27,682	2,472	30,154	27,682	2,472	na	na	na
Middle skill	7040	Electric motor, power tool, and related repairers	28,468	26,100	2,368	28,468	26,100	2,368	na	na	na

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Middle skill	7100	Other electrical and electronic equipment mechanics, installers, and repairers	38,921	35,290	3,631	38,921	35,290	3,631	na	na	na
Middle skill	7120	Audiovisual equipment installers and repairers	30,332	26,536	3,796	30,332	26,536	3,796	na	na	na
Middle skill	7130	Security and fire alarm systems installers	52,810	48,087	4,723	52,810	48,087	4,723	na	na	na
Middle skill	7140	Aircraft mechanics and service technicians	193,543	175,690	17,853	193,543	175,690	17,853	na	na	na
Non-STEM	7150	Automotive body and related repairers	147,040	143,607	3,433	na	na	na	147,040	143,607	3,433
Non-STEM	7160	Automotive glass installers and repairers	22,322	21,604	718	na	na	na	22,322	21,604	718
Middle skill	7200	Automotive service technicians and mechanics	865,182	830,198	34,984	865,182	830,198	34,984	na	na	na
Middle skill	7210	Bus and truck mechanics and diesel engine specialists	306,579	296,362	10,217	306,579	296,362	10,217	na	na	na
Middle skill	7220	Heavy vehicle and mobile equipment service technicians and mechanics	230,071	220,792	9,279	230,071	220,792	9,279	na	na	na
Middle skill	7240	Small engine mechanics	49,064	46,701	2,363	49,064	46,701	2,363	na	na	na
Non-STEM	7260	Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	86,559	81,093	5,466	na	na	na	86,559	81,093	5,466
Middle skill	7300	Control and valve installers and repairers	20,636	19,359	1,277	20,636	19,359	1,277	na	na	na
Middle skill	7315	Heating, air conditioning, and refrigeration mechanics and installers	438,669	417,010	21,659	438,669	417,010	21,659	na	na	na
Non-STEM	7320	Home appliance repairers	42,306	38,122	4,184	na	na	na	42,306	38,122	4,184
Middle skill	7330	Industrial and refractory machinery mechanics	398,113	368,017	30,096	398,113	368,017	30,096	na	na	na
Middle skill	7340	Maintenance and repair workers, general	670,551	615,690	54,861	670,551	615,690	54,861	na	na	na
Middle skill	7350	Maintenance workers, machinery	30,950	28,849	2,101	30,950	28,849	2,101	na	na	na
Middle skill	7360	Millwrights	51,221	47,906	3,315	51,221	47,906	3,315	na	na	na
Non-STEM	7410	Electrical power-line installers and repairers	118,893	110,921	7,972	na	na	na	118,893	110,921	7,972
Middle skill	7420	Telecommunications line installers and repairers	143,222	129,804	13,418	143,222	129,804	13,418	na	na	na
Middle skill	7430	Precision instrument and equipment repairers	58,901	44,985	13,916	58,901	44,985	13,916	na	na	na

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	7510	Coin, vending, and amusement machine servicers and repairers	33,790	31,360	2,430	na	na	na	33,790	31,360	2,430
Middle skill	7540	Locksmiths and safe repairers	24,596	21,315	3,281	24,596	21,315	3,281	na	na	na
Middle skill	7560	Riggers	10,361	9,380	981	10,361	9,380	981	na	na	na
Non-STEM	7610	Helpers—installation, maintenance, and repair workers	23,632	22,668	964	na	na	na	23,632	22,668	964
Middle skill	7640	Other installation, maintenance, and repair workers	227,560	204,608	22,952	227,560	204,608	22,952	na	na	na
na	na	Life, physical, and social science occupations	1,654,578	286,824	1,367,754	1,654,578	286,824	1,367,754	na	na	na
S&E	1600	Agricultural and food scientists	29,309	NA	29,309	29,309	NA	29,309	na	na	na
S&E	1610	Biological scientists	93,783	NA	93,783	93,783	NA	93,783	na	na	na
S&E	1640	Conservation scientists and foresters	23,737	NA	23,737	23,737	NA	23,737	na	na	na
S&E	1650	Other life scientists	139,483	2,362	137,121	139,483	2,362	137,121	na	na	na
S&E	1700	Astronomers and physicists	13,998	NA	13,998	13,998	NA	13,998	na	na	na
S&E	1710	Atmospheric and space scientists	12,582	1,719	10,863	12,582	1,719	10,863	na	na	na
S&E	1720	Chemists and materials scientists	111,858	6,214	105,644	111,858	6,214	105,644	na	na	na
S&E	1745	Environmental scientists and specialists, including health	39,090	NA	39,090	39,090	NA	39,090	na	na	na
S&E	1750	Geoscientists and hydrologists, except geographers	45,625	NA	45,625	45,625	NA	45,625	na	na	na
S&E	1760	Physical scientists, all other	325,148	NA	325,148	325,148	NA	325,148	na	na	na
S&E	1800	Economists	31,047	NA	31,047	31,047	NA	31,047	na	na	na
S&E	1821	Clinical and counseling psychologists	24,009	NA	24,009	24,009	NA	24,009	na	na	na
S&E	1822	School psychologists	48,555	NA	48,555	48,555	NA	48,555	na	na	na
S&E	1825	Other psychologists	156,769	NA	156,769	156,769	NA	156,769	na	na	na
S&E	1840	Urban and regional planners	38,927	NA	38,927	38,927	NA	38,927	na	na	na
S&E	1860	Other social scientists	56,764	8,186	48,578	56,764	8,186	48,578	na	na	na
S&E-related	1900	Agricultural and food science technicians	44,473	32,049	12,424	44,473	32,049	12,424	na	na	na
S&E-related	1910	Biological technicians	26,564	13,563	13,001	26,564	13,563	13,001	na	na	na
S&E-related	1920	Chemical technicians	69,732	41,420	28,312	69,732	41,420	28,312	na	na	na
S&E-related	1935	Environmental science and geoscience technicians, and nuclear technicians	22,161	12,561	9,600	22,161	12,561	9,600	na	na	na

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
S&E-related	1970	Other life, physical, and social science technicians	224,353	128,797	95,556	224,353	128,797	95,556	na	na	na
S&E-related	1980	Occupational health and safety specialists and technicians	76,611	39,953	36,658	76,611	39,953	36,658	na	na	na
na	na	Management occupations	16,952,914	7,438,559	9,514,355	2,360,278	1,009,459	1,350,819	14,592,636	6,429,100	8,163,536
Non-STEM	10	Chief executives and legislators	1,406,657	399,274	1,007,383	na	na	na	1,406,657	399,274	1,007,383
Non-STEM	20	General and operations managers	1,124,397	609,723	514,674	na	na	na	1,124,397	609,723	514,674
Non-STEM	40	Advertising and promotions managers	55,104	10,355	44,749	na	na	na	55,104	10,355	44,749
Non-STEM	51	Marketing managers	553,504	112,416	441,088	na	na	na	553,504	112,416	441,088
Non-STEM	52	Sales managers	529,275	215,429	313,846	na	na	na	529,275	215,429	313,846
Non-STEM	60	Public relations and fundraising managers	100,208	13,682	86,526	na	na	na	100,208	13,682	86,526
Non-STEM	101	Administrative services managers	62,140	28,852	33,288	na	na	na	62,140	28,852	33,288
Non-STEM	102	Facilities managers	118,304	71,990	46,314	na	na	na	118,304	71,990	46,314
S&E-related	110	Computer and information systems managers	656,768	170,536	486,232	656,768	170,536	486,232	na	na	na
Non-STEM	120	Financial managers	1,319,786	487,134	832,652	na	na	na	1,319,786	487,134	832,652
Non-STEM	135	Compensation and benefits managers	18,051	5,431	12,620	na	na	na	18,051	5,431	12,620
Non-STEM	136	Human resources managers	273,318	84,866	188,452	na	na	na	273,318	84,866	188,452
Non-STEM	137	Training and development managers	60,354	20,381	39,973	na	na	na	60,354	20,381	39,973
Middle skill	140	Industrial production managers	279,577	153,687	125,890	279,577	153,687	125,890	na	na	na
Non-STEM	150	Purchasing managers	222,485	86,819	135,666	na	na	na	222,485	86,819	135,666
Non-STEM	160	Transportation, storage, and distribution managers	282,127	193,473	88,654	na	na	na	282,127	193,473	88,654
Middle skill	205	Farmers, ranchers, and other agricultural managers	557,138	414,182	142,956	557,138	414,182	142,956	na	na	na
Non-STEM	220	Construction managers	898,921	591,976	306,945	na	na	na	898,921	591,976	306,945
Non-STEM	230	Education and childcare administrators	961,549	174,034	787,515	na	na	na	961,549	174,034	787,515
S&E-related	300	Architectural and engineering managers	172,641	28,778	143,863	172,641	28,778	143,863	na	na	na
Non-STEM	310	Food service managers	1,022,605	782,840	239,765	na	na	na	1,022,605	782,840	239,765
Non-STEM	335	Entertainment and recreation managers	37,596	22,767	14,829	na	na	na	37,596	22,767	14,829
Non-STEM	340	Lodging managers	149,316	80,146	69,170	na	na	na	149,316	80,146	69,170
S&E-related	350	Medical and health services managers	676,898	240,346	436,552	676,898	240,346	436,552	na	na	na
S&E-related	360	Natural sciences managers	17,256	1,930	15,326	17,256	1,930	15,326	na	na	na

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	410	Property, real estate, and community association managers	607,367	351,374	255,993	na	na	na	607,367	351,374	255,993
Non-STEM	420	Social and community service managers	413,719	114,580	299,139	na	na	na	413,719	114,580	299,139
Non-STEM	425	Emergency management directors	14,388	4,603	9,785	na	na	na	14,388	4,603	9,785
Non-STEM	440	Other managers	4,361,465	1,966,955	2,394,510	na	na	na	4,361,465	1,966,955	2,394,510
na	na	Office and administrative support occupations	16,544,019	12,580,292	3,963,727	na	na	na	16,544,019	12,580,292	3,963,727
Non-STEM	5000	First-line supervisors of office and administrative support workers	1,077,951	713,706	364,245	na	na	na	1,077,951	713,706	364,245
Non-STEM	5010	Switchboard operators, including answering service	22,531	18,605	3,926	na	na	na	22,531	18,605	3,926
Non-STEM	5020	Telephone operators	37,462	30,774	6,688	na	na	na	37,462	30,774	6,688
Non-STEM	5040	Communications equipment operators, all other	17,172	12,911	4,261	na	na	na	17,172	12,911	4,261
Non-STEM	5100	Bill and account collectors	139,425	115,087	24,338	na	na	na	139,425	115,087	24,338
Non-STEM	5110	Billing and posting clerks	470,952	372,464	98,488	na	na	na	470,952	372,464	98,488
Non-STEM	5120	Bookkeeping, accounting, and auditing clerks	1,151,743	921,337	230,406	na	na	na	1,151,743	921,337	230,406
Non-STEM	5140	Payroll and timekeeping clerks	144,983	111,009	33,974	na	na	na	144,983	111,009	33,974
Non-STEM	5150	Procurement clerks	39,532	22,497	17,035	na	na	na	39,532	22,497	17,035
Non-STEM	5160	Tellers	303,454	251,157	52,297	na	na	na	303,454	251,157	52,297
Non-STEM	5165	Other financial clerks	117,623	62,735	54,888	na	na	na	117,623	62,735	54,888
Non-STEM	5220	Court, municipal, and license clerks	81,942	57,875	24,067	na	na	na	81,942	57,875	24,067
Non-STEM	5230	Credit authorizers, checkers, and clerks	37,569	25,540	12,029	na	na	na	37,569	25,540	12,029
Non-STEM	5240	Customer service representatives	2,765,553	2,091,168	674,385	na	na	na	2,765,553	2,091,168	674,385
Non-STEM	5250	Eligibility interviewers, government programs	80,644	42,509	38,135	na	na	na	80,644	42,509	38,135
Non-STEM	5260	File clerks	151,054	117,465	33,589	na	na	na	151,054	117,465	33,589
Non-STEM	5300	Hotel, motel, and resort desk clerks	149,637	122,805	26,832	na	na	na	149,637	122,805	26,832
Non-STEM	5310	Interviewers, except eligibility and loan	180,355	131,453	48,902	na	na	na	180,355	131,453	48,902
Non-STEM	5320	Library assistants, clerical	114,531	71,893	42,638	na	na	na	114,531	71,893	42,638
Non-STEM	5330	Loan interviewers and clerks	125,796	91,399	34,397	na	na	na	125,796	91,399	34,397
Non-STEM	5340	New accounts clerks	15,066	11,108	3,958	na	na	na	15,066	11,108	3,958
Non-STEM	5350	Correspondence clerks and order clerks	103,218	82,871	20,347	na	na	na	103,218	82,871	20,347

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	5360	Human resources assistants, except payroll and timekeeping	60,285	35,300	24,985	na	na	na	60,285	35,300	24,985
Non-STEM	5400	Receptionists and information clerks	1,274,041	1,073,168	200,873	na	na	na	1,274,041	1,073,168	200,873
Non-STEM	5410	Reservation and transportation ticket agents and travel clerks	140,083	101,490	38,593	na	na	na	140,083	101,490	38,593
Non-STEM	5420	Other information and records clerks	125,468	85,761	39,707	na	na	na	125,468	85,761	39,707
Non-STEM	5500	Cargo and freight agents	26,818	20,330	6,488	na	na	na	26,818	20,330	6,488
Non-STEM	5510	Couriers and messengers	335,384	290,430	44,954	na	na	na	335,384	290,430	44,954
Non-STEM	5521	Public safety telecommunicators	93,778	75,080	18,698	na	na	na	93,778	75,080	18,698
Non-STEM	5522	Dispatchers, except police, fire, and ambulance	185,136	156,262	28,874	na	na	na	185,136	156,262	28,874
Non-STEM	5530	Meter readers, utilities	21,162	20,208	954	na	na	na	21,162	20,208	954
Non-STEM	5540	Postal service clerks	129,676	107,118	22,558	na	na	na	129,676	107,118	22,558
Non-STEM	5550	Postal service mail carriers	335,654	281,988	53,666	na	na	na	335,654	281,988	53,666
Non-STEM	5560	Postal service mail sorters, processors, and processing machine operators	60,555	49,636	10,919	na	na	na	60,555	49,636	10,919
Non-STEM	5600	Production, planning, and expediting clerks	319,267	209,302	109,965	na	na	na	319,267	209,302	109,965
Non-STEM	5610	Shipping, receiving, and inventory clerks	631,471	569,471	62,000	na	na	na	631,471	569,471	62,000
Non-STEM	5630	Weighers, measurers, checkers, and samplers, recordkeeping	83,930	69,674	14,256	na	na	na	83,930	69,674	14,256
Non-STEM	5710	Executive secretaries and executive administrative assistants	253,952	145,798	108,154	na	na	na	253,952	145,798	108,154
Non-STEM	5720	Legal secretaries and administrative assistants	60,923	47,775	13,148	na	na	na	60,923	47,775	13,148
Non-STEM	5730	Medical secretaries and administrative assistants	77,078	61,818	15,260	na	na	na	77,078	61,818	15,260
Non-STEM	5740	Secretaries and administrative assistants, except legal, medical, and executive	2,345,771	1,736,837	608,934	na	na	na	2,345,771	1,736,837	608,934
Non-STEM	5810	Data entry keyers	293,721	226,776	66,945	na	na	na	293,721	226,776	66,945
Non-STEM	5820	Word processors and typists	52,808	41,175	11,633	na	na	na	52,808	41,175	11,633
Non-STEM	5840	Insurance claims and policy processing clerks	203,569	149,081	54,488	na	na	na	203,569	149,081	54,488
Non-STEM	5850	Mail clerks and mail machine operators, except postal service	74,019	64,569	9,450	na	na	na	74,019	64,569	9,450
Non-STEM	5860	Office clerks, general	1,293,846	1,023,680	270,166	na	na	na	1,293,846	1,023,680	270,166

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	5900	Office machine operators, except computer	42,034	36,168	5,866	na	na	na	42,034	36,168	5,866
Non-STEM	5910	Proofreaders and copy markers	12,222	4,880	7,342	na	na	na	12,222	4,880	7,342
Non-STEM	5920	Statistical assistants	30,028	15,495	14,533	na	na	na	30,028	15,495	14,533
Non-STEM	5940	Other office and administrative support workers	653,147	402,654	250,493	na	na	na	653,147	402,654	250,493
na	na	Personal care and service occupations	4,170,536	3,378,003	792,533	na	na	na	4,170,536	3,378,003	792,533
Non-STEM	4330	Supervisors of personal care and service workers	122,711	93,476	29,235	na	na	na	122,711	93,476	29,235
Non-STEM	4340	Animal trainers	50,511	33,552	16,959	na	na	na	50,511	33,552	16,959
Non-STEM	4350	Animal caretakers	293,591	236,049	57,542	na	na	na	293,591	236,049	57,542
Non-STEM	4400	Gambling services workers	115,247	95,411	19,836	na	na	na	115,247	95,411	19,836
Non-STEM	4420	Ushers, lobby attendants, and ticket takers	48,799	39,166	9,633	na	na	na	48,799	39,166	9,633
Non-STEM	4435	Other entertainment attendants and related workers	211,443	167,643	43,800	na	na	na	211,443	167,643	43,800
Non-STEM	4461	Embalmers, crematory operators, and funeral attendants	14,552	10,857	3,695	na	na	na	14,552	10,857	3,695
Non-STEM	4465	Morticians, undertakers, and funeral arrangers	37,150	25,125	12,025	na	na	na	37,150	25,125	12,025
Non-STEM	4500	Barbers	117,667	108,888	8,779	na	na	na	117,667	108,888	8,779
Non-STEM	4510	Hairdressers, hairstylists, and cosmetologists	834,595	777,137	57,458	na	na	na	834,595	777,137	57,458
Non-STEM	4521	Manicurists and pedicurists	269,236	248,559	20,677	na	na	na	269,236	248,559	20,677
Non-STEM	4522	Skincare specialists	83,085	68,848	14,237	na	na	na	83,085	68,848	14,237
Non-STEM	4525	Other personal appearance workers	28,894	23,855	5,039	na	na	na	28,894	23,855	5,039
Non-STEM	4530	Baggage porters, bellhops, and concierges	101,600	81,406	20,194	na	na	na	101,600	81,406	20,194
Non-STEM	4540	Tour and travel guides	71,607	48,050	23,557	na	na	na	71,607	48,050	23,557
Non-STEM	4600	Childcare workers	1,062,436	873,982	188,454	na	na	na	1,062,436	873,982	188,454
Non-STEM	4621	Exercise trainers and group fitness instructors	284,581	124,994	159,587	na	na	na	284,581	124,994	159,587
Non-STEM	4622	Recreation workers	186,386	133,962	52,424	na	na	na	186,386	133,962	52,424
Non-STEM	4640	Residential advisors	93,319	75,848	17,471	na	na	na	93,319	75,848	17,471
Non-STEM	4655	Personal care and service workers, all other	143,126	111,195	31,931	na	na	na	143,126	111,195	31,931

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
na	na	Production occupations	8,758,383	7,974,917	783,466	3,181,611	2,859,377	322,234	5,576,772	5,115,540	461,232
Middle skill	7700	First-line supervisors of production and operating workers	776,736	658,173	118,563	776,736	658,173	118,563	na	na	na
Non-STEM	7720	Electrical, electronics, and electromechanical assemblers	130,412	120,950	9,462	na	na	na	130,412	120,950	9,462
Middle skill	7730	Engine and other machine assemblers	9,856	9,248	608	9,856	9,248	608	na	na	na
Middle skill	7740	Structural metal fabricators and fitters	26,427	24,745	1,682	26,427	24,745	1,682	na	na	na
Non-STEM	7750	Other assemblers and fabricators	1,016,353	948,543	67,810	na	na	na	1,016,353	948,543	67,810
Non-STEM	7800	Bakers	226,327	201,423	24,904	na	na	na	226,327	201,423	24,904
Middle skill	7810	Butchers and other meat, poultry, and fish processing workers	232,533	222,237	10,296	232,533	222,237	10,296	na	na	na
Non-STEM	7830	Food and tobacco roasting, baking, and drying machine operators and tenders	13,879	11,953	1,926	na	na	na	13,879	11,953	1,926
Non-STEM	7840	Food batchmakers	96,595	88,321	8,274	na	na	na	96,595	88,321	8,274
Non-STEM	7850	Food cooking machine operators and tenders	11,404	10,373	1,031	na	na	na	11,404	10,373	1,031
Non-STEM	7855	Food processing workers, all other	137,265	131,469	5,796	na	na	na	137,265	131,469	5,796
Middle skill	7905	Computer numerically controlled tool operators and programmers	113,831	104,534	9,297	113,831	104,534	9,297	na	na	na
Non-STEM	7925	Forming machine setters, operators, and tenders, metal and plastic	37,878	36,323	1,555	na	na	na	37,878	36,323	1,555
Non-STEM	7950	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	79,833	77,257	2,576	na	na	na	79,833	77,257	2,576
Non-STEM	8000	Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	46,687	44,940	1,747	na	na	na	46,687	44,940	1,747
Non-STEM	8025	Other machine tool setters, operators, and tenders, metal and plastic	14,010	13,515	495	na	na	na	14,010	13,515	495
Middle skill	8030	Machinists	357,494	340,222	17,272	357,494	340,222	17,272	na	na	na
Non-STEM	8040	Metal furnace operators, tenders, pourers, and casters	23,685	21,406	2,279	na	na	na	23,685	21,406	2,279
Non-STEM	8100	Model makers, patternmakers, and molding machine setters, metal and plastic	44,992	41,748	3,244	na	na	na	44,992	41,748	3,244

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Middle skill	8130	Tool and die makers	59,505	56,549	2,956	59,505	56,549	2,956	na	na	na
Non-STEM	8140	Welding, soldering, and brazing workers	628,319	610,513	17,806	na	na	na	628,319	610,513	17,806
Non-STEM	8225	Other metal workers and plastic workers	422,375	399,683	22,692	na	na	na	422,375	399,683	22,692
Middle skill	8250	Prepress technicians and workers	23,470	19,274	4,196	23,470	19,274	4,196	na	na	na
Non-STEM	8255	Printing press operators	166,975	153,187	13,788	na	na	na	166,975	153,187	13,788
Non-STEM	8256	Print binding and finishing workers	15,816	14,892	924	na	na	na	15,816	14,892	924
Non-STEM	8300	Laundry and dry-cleaning workers	150,444	142,512	7,932	na	na	na	150,444	142,512	7,932
Non-STEM	8310	Pressers, textile, garment, and related materials	32,346	31,118	1,228	na	na	na	32,346	31,118	1,228
Non-STEM	8320	Sewing machine operators	147,368	137,600	9,768	na	na	na	147,368	137,600	9,768
Non-STEM	8335	Shoe and leather workers	14,248	12,498	1,750	na	na	na	14,248	12,498	1,750
Non-STEM	8350	Tailors, dressmakers, and sewers	68,741	54,613	14,128	na	na	na	68,741	54,613	14,128
Non-STEM	8365	Textile machine setters, operators, and tenders	25,411	23,469	1,942	na	na	na	25,411	23,469	1,942
Non-STEM	8450	Upholsterers	31,233	30,021	1,212	na	na	na	31,233	30,021	1,212
Non-STEM	8465	Other textile, apparel, and furnishings workers	18,925	16,237	2,688	na	na	na	18,925	16,237	2,688
Non-STEM	8500	Cabinetmakers and bench carpenters	51,361	45,824	5,537	na	na	na	51,361	45,824	5,537
Non-STEM	8510	Furniture finishers	9,636	9,223	413	na	na	na	9,636	9,223	413
Non-STEM	8530	Sawing machine setters, operators, and tenders, wood	29,052	28,770	282	na	na	na	29,052	28,770	282
Non-STEM	8540	Woodworking machine setters, operators, and tenders, except sawing	18,929	18,578	351	na	na	na	18,929	18,578	351
Non-STEM	8555	Other woodworkers	26,312	21,993	4,319	na	na	na	26,312	21,993	4,319
Non-STEM	8600	Power plant operators, distributors, and dispatchers	48,122	38,488	9,634	na	na	na	48,122	38,488	9,634
Middle skill	8610	Stationary engineers and boiler operators	111,638	83,897	27,741	111,638	83,897	27,741	na	na	na
Middle skill	8620	Water and wastewater treatment plant and system operators	99,735	85,993	13,742	99,735	85,993	13,742	na	na	na
Non-STEM	8630	Miscellaneous plant and system operators	46,617	41,503	5,114	na	na	na	46,617	41,503	5,114
Middle skill	8640	Chemical processing machine setters, operators, and tenders	75,873	55,856	20,017	75,873	55,856	20,017	na	na	na
Non-STEM	8650	Crushing, grinding, polishing, mixing, and blending workers	92,913	88,930	3,983	na	na	na	92,913	88,930	3,983

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	8710	Cutting workers	69,960	66,581	3,379	na	na	na	69,960	66,581	3,379
Non-STEM	8720	Extruding, forming, pressing, and compacting machine setters, operators, and tenders	23,283	22,535	748	na	na	na	23,283	22,535	748
Non-STEM	8730	Furnace, kiln, oven, drier, and kettle operators and tenders	10,760	9,820	940	na	na	na	10,760	9,820	940
Non-STEM	8740	Inspectors, testers, sorters, samplers, and weighers	819,751	696,532	123,219	na	na	na	819,751	696,532	123,219
Non-STEM	8750	Jewelers and precious stone and metal workers	47,705	33,220	14,485	na	na	na	47,705	33,220	14,485
Non-STEM	8760	Dental and ophthalmic laboratory technicians and medical appliance technicians	90,843	76,178	14,665	na	na	na	90,843	76,178	14,665
Non-STEM	8800	Packaging and filling machine operators and tenders	267,145	253,003	14,142	na	na	na	267,145	253,003	14,142
Non-STEM	8810	Painting workers	148,700	142,063	6,637	na	na	na	148,700	142,063	6,637
Non-STEM	8830	Photographic process workers and processing machine operators	24,950	12,095	12,855	na	na	na	24,950	12,095	12,855
Non-STEM	8850	Adhesive bonding machine operators and tenders	13,494	12,826	668	na	na	na	13,494	12,826	668
Middle skill	8910	Etchers and engravers	8,382	5,952	2,430	8,382	5,952	2,430	na	na	na
Non-STEM	8920	Molders, shapers, and casters, except metal and plastic	28,055	22,308	5,747	na	na	na	28,055	22,308	5,747
Non-STEM	8930	Paper goods machine setters, operators, and tenders	26,496	25,137	1,359	na	na	na	26,496	25,137	1,359
Non-STEM	8940	Tire builders	12,122	11,623	499	na	na	na	12,122	11,623	499
Non-STEM	8950	Helpers—production workers	69,045	63,746	5,299	na	na	na	69,045	63,746	5,299
Middle skill	8990	Miscellaneous production workers, including equipment operators and tenders	1,286,131	1,192,697	93,434	1,286,131	1,192,697	93,434	na	na	na
na	na	Protective service occupations	3,371,318	2,437,379	933,939	332,088	249,569	82,519	3,039,230	2,187,810	851,420
Non-STEM	3700	First-line supervisors of correctional officers	37,382	26,408	10,974	na	na	na	37,382	26,408	10,974
Non-STEM	3710	First-line supervisors of police and detectives	111,021	63,375	47,646	na	na	na	111,021	63,375	47,646

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	3720	First-line supervisors of firefighting and prevention workers	49,970	33,528	16,442	na	na	na	49,970	33,528	16,442
Non-STEM	3725	Miscellaneous first-line supervisors, protective service workers	72,670	45,696	26,974	na	na	na	72,670	45,696	26,974
Middle skill	3740	Firefighters	332,088	249,569	82,519	332,088	249,569	82,519	na	na	na
Non-STEM	3750	Fire inspectors	25,379	17,944	7,435	na	na	na	25,379	17,944	7,435
Non-STEM	3801	Bailiffs	23,025	14,510	8,515	na	na	na	23,025	14,510	8,515
Non-STEM	3802	Correctional officers and jailers	382,473	310,446	72,027	na	na	na	382,473	310,446	72,027
Non-STEM	3820	Detectives and criminal investigators	152,656	64,994	87,662	na	na	na	152,656	64,994	87,662
Non-STEM	3840	Fish and game wardens and parking enforcement officers	18,084	11,694	6,390	na	na	na	18,084	11,694	6,390
Non-STEM	3870	Police officers	809,471	493,612	315,859	na	na	na	809,471	493,612	315,859
Non-STEM	3900	Animal control workers	9,965	8,480	1,485	na	na	na	9,965	8,480	1,485
Non-STEM	3910	Private detectives and investigators	99,708	43,628	56,080	na	na	na	99,708	43,628	56,080
Non-STEM	3930	Security guards and gambling surveillance officers	1,001,356	846,180	155,176	na	na	na	1,001,356	846,180	155,176
Non-STEM	3940	Crossing guards and flaggers	53,525	48,650	4,875	na	na	na	53,525	48,650	4,875
Non-STEM	3945	Transportation security screeners	47,341	35,265	12,076	na	na	na	47,341	35,265	12,076
Non-STEM	3946	School bus monitors	39,317	37,188	2,129	na	na	na	39,317	37,188	2,129
Non-STEM	3960	Other protective service workers	105,887	86,212	19,675	na	na	na	105,887	86,212	19,675
na	na	Sales occupations	14,767,122	10,380,585	4,386,537	50,487	10,799	39,688	14,716,635	10,369,786	4,346,849
Non-STEM	4700	First-line supervisors of retail sales workers	3,064,363	2,292,504	771,859	na	na	na	3,064,363	2,292,504	771,859
Non-STEM	4710	First-line supervisors of non-retail sales workers	1,125,354	677,467	447,887	na	na	na	1,125,354	677,467	447,887
Non-STEM	4720	Cashiers	2,780,506	2,528,475	252,031	na	na	na	2,780,506	2,528,475	252,031
Non-STEM	4740	Counter and rental clerks	84,900	68,737	16,163	na	na	na	84,900	68,737	16,163
Non-STEM	4750	Parts salespersons	124,747	115,963	8,784	na	na	na	124,747	115,963	8,784
Non-STEM	4760	Retail salespersons	3,094,863	2,427,280	667,583	na	na	na	3,094,863	2,427,280	667,583
Non-STEM	4800	Advertising sales agents	130,917	48,577	82,340	na	na	na	130,917	48,577	82,340
Non-STEM	4810	Insurance sales agents	603,137	318,443	284,694	na	na	na	603,137	318,443	284,694
Non-STEM	4820	Securities, commodities, and financial services sales agents	230,535	66,958	163,577	na	na	na	230,535	66,958	163,577
Non-STEM	4830	Travel agents	76,484	44,523	31,961	na	na	na	76,484	44,523	31,961

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	4840	Sales representatives of services, except advertising, insurance, financial services, and travel	642,148	304,146	338,002	na	na	na	642,148	304,146	338,002
Non-STEM	4850	Sales representatives, wholesale and manufacturing	1,330,876	695,938	634,938	na	na	na	1,330,876	695,938	634,938
Non-STEM	4900	Models, demonstrators, and product promoters	48,345	37,076	11,269	na	na	na	48,345	37,076	11,269
Non-STEM	4920	Real estate brokers and sales agents	919,628	456,759	462,869	na	na	na	919,628	456,759	462,869
S&E	4930	Sales engineers	50,487	10,799	39,688	50,487	10,799	39,688	na	na	na
Non-STEM	4940	Telemarketers	43,587	36,263	7,324	na	na	na	43,587	36,263	7,324
Non-STEM	4950	Door-to-door sales workers, news and street vendors, and related workers	110,914	85,546	25,368	na	na	na	110,914	85,546	25,368
Non-STEM	4965	Sales and related workers, all other	305,331	165,131	140,200	na	na	na	305,331	165,131	140,200
na	na	Transportation and material moving occupations	11,843,805	10,653,738	1,190,067	67,152	53,999	13,153	11,776,653	10,599,739	1,176,914
Non-STEM	9005	Supervisors of transportation and material moving workers	271,902	226,914	44,988	na	na	na	271,902	226,914	44,988
Non-STEM	9030	Aircraft pilots and flight engineers	209,961	54,660	155,301	na	na	na	209,961	54,660	155,301
Non-STEM	9040	Air traffic controllers and airfield operations specialists	41,154	25,701	15,453	na	na	na	41,154	25,701	15,453
Non-STEM	9050	Flight attendants	117,849	74,263	43,586	na	na	na	117,849	74,263	43,586
Non-STEM	9110	Ambulance drivers and attendants, except emergency medical technicians	8,253	7,259	994	na	na	na	8,253	7,259	994
Non-STEM	9121	Bus drivers, school	309,948	278,418	31,530	na	na	na	309,948	278,418	31,530
Non-STEM	9122	Bus drivers, transit and intercity	256,429	227,985	28,444	na	na	na	256,429	227,985	28,444
Non-STEM	9130	Driver or sales workers and truck drivers	3,695,598	3,421,516	274,082	na	na	na	3,695,598	3,421,516	274,082
Non-STEM	9141	Shuttle drivers and chauffeurs	107,060	88,798	18,262	na	na	na	107,060	88,798	18,262
Non-STEM	9142	Taxi drivers	499,522	389,448	110,074	na	na	na	499,522	389,448	110,074
Non-STEM	9150	Motor vehicle operators, all other	157,731	136,095	21,636	na	na	na	157,731	136,095	21,636
Non-STEM	9210	Locomotive engineers and operators	44,811	39,114	5,697	na	na	na	44,811	39,114	5,697
Non-STEM	9240	Railroad conductors and yardmasters	49,465	43,548	5,917	na	na	na	49,465	43,548	5,917
Non-STEM	9265	Other rail transportation workers	23,632	20,242	3,390	na	na	na	23,632	20,242	3,390
Non-STEM	9300	Sailors and marine oilers, and ship engineers	43,822	36,646	7,176	na	na	na	43,822	36,646	7,176
Non-STEM	9310	Ship and boat captains and operators	46,097	35,824	10,273	na	na	na	46,097	35,824	10,273

Table SLBR-1

Employed adults in STEM and non-STEM occupations, by broad and detailed occupation: 2019

(Number)

Broad occupational group	2019 OCC	Detailed occupations	Total, all employed adults			STEM			Non-STEM		
			Total	No bachelor's degree	Bachelor's degree or higher	STEM total	STEM, no bachelor's degree (STW)	STEM, bachelor's degree or higher	Non-STEM total	Non-STEM, no bachelor's degree	Non-STEM, bachelor's degree or higher
Non-STEM	9350	Parking attendants	82,448	73,944	8,504	na	na	na	82,448	73,944	8,504
Non-STEM	9365	Transportation service attendants	110,549	103,925	6,624	na	na	na	110,549	103,925	6,624
Middle skill	9410	Transportation inspectors	42,881	32,725	10,156	42,881	32,725	10,156	na	na	na
Non-STEM	9415	Passenger attendants	39,988	36,626	3,362	na	na	na	39,988	36,626	3,362
Non-STEM	9430	Other transportation workers	27,091	22,389	4,702	na	na	na	27,091	22,389	4,702
Non-STEM	9510	Crane and tower operators	60,199	57,068	3,131	na	na	na	60,199	57,068	3,131
Non-STEM	9570	Conveyor, dredge, and hoist and winch operators	22,705	21,869	836	na	na	na	22,705	21,869	836
Non-STEM	9600	Industrial truck and tractor operators	651,773	627,878	23,895	na	na	na	651,773	627,878	23,895
Non-STEM	9610	Cleaners of vehicles and equipment	373,758	356,571	17,187	na	na	na	373,758	356,571	17,187
Non-STEM	9620	Laborers and freight, stock, and material movers, hand	2,297,672	2,144,129	153,543	na	na	na	2,297,672	2,144,129	153,543
Non-STEM	9630	Machine feeders and offbearers	34,006	31,436	2,570	na	na	na	34,006	31,436	2,570
Non-STEM	9640	Packers and packagers, hand	526,632	494,973	31,659	na	na	na	526,632	494,973	31,659
Non-STEM	9645	Stockers and order fillers	1,498,925	1,365,083	133,842	na	na	na	1,498,925	1,365,083	133,842
Middle skill	9650	Pumping station operators	24,271	21,274	2,997	24,271	21,274	2,997	na	na	na
Non-STEM	9720	Refuse and recyclable material collectors	86,774	81,082	5,692	na	na	na	86,774	81,082	5,692
Non-STEM	9760	Other material moving workers	80,899	76,335	4,564	na	na	na	80,899	76,335	4,564

na = not applicable; NA = not available.

OCC = Occupational Classification Code; STEM = science, technology, engineering, and mathematics; STW = skilled technical workforce.

Note(s):

Data include workers ages 16–75 and exclude those in military occupations or currently enrolled in primary or secondary school.

Source(s):

U.S. Census Bureau, American Community Survey (ACS), 2019, Public Use Microdata Sample (PUMS), data as of 25 October 2020.

Science and Engineering Indicators

Table SLBR-2

Employed adults in the United States, by workforce type: 2010–19

(Number in millions)

Year	Total	STEM	STEM with a bachelor's degree or higher	STEM without a bachelor's degree (STW)	Non-STEM	Non-STEM with a bachelor's degree or higher	Non-STEM without a bachelor's degree
2010	136.6	29.3	11.5	17.9	107.3	32.4	74.9
2011	138.0	29.9	11.9	18.0	108.1	32.9	75.2
2012	140.5	30.4	12.3	18.1	110.1	34.1	76.0
2013	142.5	30.7	12.5	18.2	111.8	34.9	76.9
2014	145.1	31.7	13.0	18.7	113.5	35.7	77.8
2015	147.6	32.5	13.5	19.0	115.1	36.7	78.4
2016	149.5	33.2	14.1	19.1	116.3	37.6	78.6
2017	151.8	34.1	14.7	19.4	117.7	38.8	78.9
2018	153.6	34.8	15.3	19.5	118.7	39.8	78.9
2019	155.4	36.1	16.2	19.9	119.3	40.3	79.0

STEM = science, technology, engineering, and mathematics; STW = skilled technical workforce.

Note(s):

Data include workers 16–75 years old and exclude those in military occupations or currently enrolled in primary or secondary school.

Source(s):

U.S. Census Bureau, American Community Survey (ACS), 2010–19, Public Use Microdata Sample (PUMS), data as of 25 October 2020.

Science and Engineering Indicators

Table SLBR-3

Certification and licenses held by workers with a bachelor's degree or higher, by broad occupational group: 2019

(Thousands)

Certification or license held and primary subject of certification or license	Broad occupational group		
	S&E	S&E-related	Non-S&E
No certification or license	5,738	2,134	21,386
Certification or license	1,728	6,760	12,778
Not related to work	100	191	592
Related to work, primary subject of certification or license	1,629	6,568	12,186
Computer networking, administration, and security	228	27	63
Computer applications and design	123	18	42
Other information technologies and computers	108	17	35
Mathematics, statistics, and data analytics	3	25	10
Life sciences	29	26	52
Physical sciences	42	28	25
Social sciences	136	36	82
Engineering, engineering technician, and engineering technologist	381	114	130
Hazardous materials management, operations, and transporting	18	4	29
Water and wastewater treatment, management, and operations	10	12	21
EMT, CPR, or basic first aid	3	133	87
Health care technician and technologist	16	355	51
Health care practitioner, provider, and specialist	15	1,728	70
Nurse	20	1,773	82
Other health	26	1,001	297
Teaching/education	80	786	4,148
Architecture	3	107	22
Project management, quality control, operations, and support	175	91	633
Accounting, finance, insurance, and real estate	42	18	2,684
Social work and counseling	43	43	638
History, language, linguistics, and literature	s	s	85
Arts, music, and entertainment	s	s	33
Law or legal support	8	s	1,126
Religious ordination	s	s	149
Transportation	7	12	266
Construction, automotive, manufacturing, and other skilled trades	31	49	235
Physical fitness, sports, and recreation	s	37	112
Childcare	s	s	27
Public safety	18	18	367
Other fields	13	19	371
Missing	43	73	214

s = suppressed for reasons of confidentiality and/or reliability.

STEM = science, technology, engineering, and mathematics.

Note(s):

Workers in non-S&E occupations include those with a bachelor's degree or higher in STEM middle-skill and non-STEM occupations.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-4

Scientists and engineers, by occupation and highest degree field: 2019

(Thousands)

Occupation	All employed scientists and engineers	Highest degree in S&E						S&E-related highest degree	Non-S&E highest degree
		All S&E highest degree	Computer and mathematical sciences	Biological, agricultural, and environmental life sciences	Physical and related sciences	Social and related sciences	Engineering		
All occupations	28,627	15,362	2,837	2,437	889	5,474	3,725	7,429	5,836
S&E occupations	7,466	5,709	1,670	705	422	754	2,159	428	1,330
Computer and mathematical scientists	3,774	2,642	1,584	94	79	258	628	186	946
Computer and information scientists	3,379	2,393	1,429	80	66	218	600	153	833
Computer and information scientists, research	90	74	39	3	2	12	18	3	12
Computer network architects	40	28	16	s	s	s	7	s	10
Computer support specialists	294	168	95	s	s	22	31	15	111
Computer system analysts	362	246	155	13	5	26	47	22	93
Database administrators	129	92	55	11	s	9	15	3	33
Information security analysts	113	80	67	s	s	2	10	s	31
Network and computer systems administrators	192	125	80	2	4	17	21	4	63
Software developers—applications and systems software	683	536	345	15	16	23	137	32	115
Web developers	147	79	44	6	s	14	11	8	59
Other computer information science occupations	432	188	90	13	8	50	28	21	223
Computer engineers—software	897	776	441	3	18	39	276	40	81
Mathematical scientists	284	164	76	13	12	39	24	20	100
Mathematicians	9	8	6	s	s	s	s	s	s
Operations research analysts, including modeling	182	92	34	4	10	24	19	12	79
Statisticians	67	54	31	7	s	13	2	7	6
Other mathematical scientists	26	11	5	s	s	1	s	s	s
Postsecondary teachers—computer and mathematical sciences	111	85	78	2	s	s	3	13	13
Computer science	30	25	21	s	s	s	2	s	5
Mathematics and statistics	81	60	58	1	s	s	1	12	9
Biological, agricultural, and environmental life scientists	698	579	4	488	47	18	22	77	43
Agricultural and food scientists	58	53	s	47	s	s	1	s	4
Biological and medical scientists	500	404	4	328	42	11	19	67	29
Biochemists and biophysicists	92	84	s	59	20	s	3	6	s
Biological scientists (e.g., botanists, ecologists, zoologists)	145	128	s	118	3	3	1	6	11
Medical scientists (excluding practitioners)	160	107	s	89	8	3	6	44	9
Other biological and life scientists	104	86	1	62	11	3	9	11	7

Table SLBR-4

Scientists and engineers, by occupation and highest degree field: 2019

(Thousands)

Occupation	All employed scientists and engineers	Highest degree in S&E						S&E-related highest degree	Non-S&E highest degree
		All S&E highest degree	Computer and mathematical sciences	Biological, agricultural, and environmental life sciences	Physical and related sciences	Social and related sciences	Engineering		
Forestry and conservation scientists	39	32	s	31	s	1	s	s	6
Postsecondary teachers—life and related sciences	101	90	s	82	2	4	1	8	4
Agriculture	9	7	s	5	s	s	s	s	s
Biological sciences	85	76	s	75	s	s	s	7	2
Other natural sciences	7	6	s	2	s	s	s	s	s
Physical and related scientists	409	374	4	87	246	8	28	s	18
Chemists, except biochemists	132	117	s	31	78	s	7	s	5
Earth scientists, geologists, and oceanographers	85	80	1	7	65	2	6	s	4
Atmospheric and space scientists	21	19	s	s	16	s	1	s	1
Geologists, including earth scientists	63	61	1	5	49	2	5	s	2
Oceanographers									
Physicists and astronomers	45	45	s	s	38	s	6	1	s
Astronomers	45	45	s	s	38	s	6	1	s
Physicists, except biophysicists	67	59	s	30	17	5	6	2	6
Other physical and related scientists	67	59	s	30	17	5	6	2	6
Postsecondary teachers—physical and related sciences	80	73	s	19	49	s	3	3	4
Chemistry	25	23	s	2	21	s	s	s	s
Earth, environmental, and marine sciences	32	29	s	s	11	s	s	s	s
Physics	23	21	s	s	17	s	1	s	s
Social and related scientists	663	477	6	17	1	448	5	44	142
Economists	56	46	2	1	s	43	s	2	8
Political scientists	22	11	s	s	s	11	s	s	8
Psychologists, including clinical	228	188	s	s	s	182	s	8	32
Sociologists and anthropologists	228	188	s	s	s	182	s	8	32
Anthropologists	16	15	s	s	s	15	s	s	0
Sociologists	16	15	s	s	s	15	s	s	0
Other social and related scientists	142	78	3	7	s	63	4	28	36
Postsecondary teachers—social and related sciences	200	139	1	4	s	134	s	3	58
Economics	21	20	s	s	s	20	s	s	1
Political science	22	20	s	s	s	20	s	s	s
Psychology	48	44	s	s	s	42	s	s	4
Sociology	18	17	s	s	s	17	s	s	s

Table SLBR-4

Scientists and engineers, by occupation and highest degree field: 2019

(Thousands)

Occupation	All employed scientists and engineers	Highest degree in S&E						S&E-related highest degree	Non-S&E highest degree
		All S&E highest degree	Computer and mathematical sciences	Biological, agricultural, and environmental life sciences	Physical and related sciences	Social and related sciences	Engineering		
Other social sciences	90	37	s	s	s	35	s	2	51
Engineers	1,921	1,637	71	19	49	22	1,477	103	180
Aerospace, aeronautical, or astronautical engineers	126	112	3	s	5	s	104	4	10
Chemical engineers	84	73	s	1	2	s	69	4	7
Civil, architectural, or sanitary engineers	294	271	1	2	s	1	262	9	14
Electrical or computer hardware engineers	412	371	33	s	9	s	327	18	23
Computer engineers, hardware	85	78	27	s	1	s	49	2	5
Electrical and electronics engineers	327	293	6	s	8	s	278	16	18
Industrial engineers	95	59	5	s	2	s	46	15	21
Mechanical engineers	377	325	4	2	1	1	316	25	27
Other engineers	472	374	21	9	22	15	308	27	71
Agricultural engineers									
Bioengineers or biomedical engineers	39	38	s	3	s	s	30	s	s
Environmental engineers	58	50	s	3	5	s	38	2	6
Marine engineers and naval architects	9	7	s	s	s	s	6	s	s
Materials and metallurgical engineers	41	37	s	s	3	s	34	s	s
Mining and geological engineers									
Nuclear engineers	12	10	s	s	s	s	10	s	s
Petroleum engineers	22	20	s	s	s	s	17	s	s
Sales engineers	114	67	4	s	s	s	56	11	36
Other engineers	178	145	11	s	7	7	118	11	22
Postsecondary teachers—engineering	61	52	4	s	2	s	45	2	7
S&E-related occupations	8,893	2,131	366	660	176	367	562	5,309	1,453
Health-related occupations	5,728	696	27	389	52	211	17	4,479	553
Diagnosing or treating practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians)	1,269	98	s	60	s	11	2	1,154	16
Registered nurses, pharmacists, dieticians, therapists, physician assistants, nurse practitioners	2,875	148	s	88	2	51	s	2,584	143
Health technologists and technicians (e.g., dental hygienists, health record technicians, licensed practical nurses, laboratory or radiology technicians)	574	189	5	124	17	38	5	285	100
Other health occupations	815	227	19	92	s	104	5	308	279
Postsecondary teachers—health and related sciences	196	33	s	26	s	7	s	148	15

Table SLBR-4

Scientists and engineers, by occupation and highest degree field: 2019

(Thousands)

Occupation	All employed scientists and engineers	Highest degree in S&E						S&E-related highest degree	Non-S&E highest degree
		All S&E highest degree	Computer and mathematical sciences	Biological, agricultural, and environmental life sciences	Physical and related sciences	Social and related sciences	Engineering		
S&E managers	999	517	106	68	37	57	249	260	221
Computer and information systems managers	237	140	82	s	s	11	32	10	87
Engineering managers	364	258	23	3	12	s	213	31	74
Medical and health services managers	324	60	s	20	s	32	s	213	50
Natural sciences managers	74	59	s	34	17	s	s	5	10
S&E precollege teachers	925	237	74	72	30	48	13	240	448
Secondary—computer, mathematics, or sciences	668	197	73	71	30	11	13	206	265
Secondary—social sciences	257	39	s	s	s	37	s	35	183
S&E technicians and technologists	973	635	132	129	54	48	272	133	204
Technologists and technicians in the biological and life sciences	125	94	s	77	8	1	6	20	11
Computer programmers (business, scientific, process control)	125	88	49	2	s	10	22	8	29
Electrical, electronic, industrial, and mechanical technicians	325	200	29	19	7	15	130	40	85
Drafting occupations, including computer drafting	46	18	s	s	s	s	15	16	12
Surveying and mapping technicians	28	20	s	s	s	6	10	s	s
Other engineering technologists and technicians	255	159	43	14	14	8	79	37	59
Surveyors, cartographers, and photogrammetrists	20	16	s	s	2	6	1	s	s
Technologists and technicians in the mathematical sciences									
Technologists and technicians in the physical sciences	48	40	5	8	17	s	8	s	3
Other S&E-related occupations	270	46	27	2	3	4	10	196	27
Architects	225	22	s	2	s	s	10	181	22
Actuaries	45	24	22	s	s	s	s	15	s
Non-S&E occupations	12,267	7,522	801	1,072	291	4,352	1,004	1,692	3,053
Non-S&E managers	2,003	1,205	161	162	56	509	317	271	526
Top-level managers, executives, administrators (e.g., chief executive officer, chief operating officer, chief financial officer; president; district manager, general manager, provost)	1,125	704	115	83	42	259	205	160	260
Education administrators (e.g., registrar, dean, principal)	134	31	2	7	s	18	2	19	84

Table SLBR-4

Scientists and engineers, by occupation and highest degree field: 2019

(Thousands)

Occupation	All employed scientists and engineers	Highest degree in S&E						S&E-related highest degree	Non-S&E highest degree
		All S&E highest degree	Computer and mathematical sciences	Biological, agricultural, and environmental life sciences	Physical and related sciences	Social and related sciences	Engineering		
Other mid-level managers	743	470	43	72	12	233	110	92	182
Management-related occupations	2,534	1,717	265	236	64	916	236	280	537
Accountants, auditors, and other financial specialists	781	516	93	31	7	344	41	62	202
Personnel, training, and labor relations specialists	289	187	16	13	s	128	20	44	58
Other management-related occupations	1,465	1,014	155	193	47	444	175	173	277
Non-S&E precollege teachers	924	405	22	67	11	289	14	158	361
Prekindergarten and kindergarten	129	84	s	12	s	68	s	21	25
Elementary	364	169	13	18	s	127	6	46	149
Secondary—other subjects	191	69	s	16	s	43	6	39	83
Special education—primary and secondary	166	50	2	9	s	37	s	40	76
Other precollegiate area	73	33	s	13	s	16	s	12	28
Non-S&E postsecondary teachers	191	78	4	s	5	61	2	30	82
Art, drama, and music	15	s	s	s	s	s	s	s	6
Business, commerce, and marketing	23	7	2	s	s	5	s	3	12
Education	42	20	s	s	s	17	s	4	18
English	24	10	s	s	s	9	s	s	14
Foreign language	10	7	s	s	s	7	s	s	3
History	9	4	s	s	s	4	s	s	4
Physical education	s	s	s	s	s	s	s	s	s
Other postsecondary fields	60	18	s	s	s	13	2	18	24
Social services and related occupations	1,057	605	s	29	9	541	7	119	332
Clergy and other religious workers	142	61	s	s	s	32	4	4	77
Counselors (e.g., educational, vocational, mental health, substance abuse)	457	280	s	6	s	270	s	60	117
Social workers	458	264	s	16	s	239	s	55	139
Sales and marketing occupations	1,444	996	87	131	41	602	134	233	215
Insurance, securities, real estate, and business services	365	241	13	19	s	178	26	56	67
Sales—commodities, except retail (e.g., industrial/medical/dental machinery, equipment, supplies)	235	163	6	27	12	87	31	40	32
Sales—retail (e.g., furnishings, clothing, motor vehicles, cosmetics)	328	245	26	51	12	127	29	58	25
Other marketing and sales occupations	517	347	43	34	11	210	49	79	90

Table SLBR-4

Scientists and engineers, by occupation and highest degree field: 2019

(Thousands)

Occupation	All employed scientists and engineers	Highest degree in S&E						S&E-related highest degree	Non-S&E highest degree
		All S&E highest degree	Computer and mathematical sciences	Biological, agricultural, and environmental life sciences	Physical and related sciences	Social and related sciences	Engineering		
Arts, humanities, and related occupations	305	183	9	s	s	123	8	39	82
Writers, editors, public relations specialists, artists, entertainers, broadcasters	302	181	8	s	s	122	8	39	81
Historians	3	s	s	s	s	s	s	0	s
Other non-S&E occupations	3,810	2,332	234	404	99	1,309	285	560	918
Accounting clerks and bookkeepers	214	155	34	18	s	89	5	36	24
Secretaries, receptionists, typists	223	140	10	26	s	96	6	63	19
Other administrative (e.g., record clerks, telephone operators)	633	441	43	63	17	296	22	131	61
Farmers, foresters, and fishermen	116	103	s	70	s	15	11	s	s
Lawyers, judges	614	60	6	3	s	47	3	s	551
Librarians, archivists, curators	85	28	s	s	s	16	s	10	47
Food preparation and service (e.g., cooks, waitresses, bartenders)	226	164	8	43	4	99	9	s	21
Protective services (e.g., firefighters, police, guards, wardens, park rangers)	185	144	s	17	s	107	s	15	26
Other service occupations, except health (e.g., probation officer, human services work)	477	342	39	44	s	206	31	84	51
Other teachers and instructors (e.g., private tutors, dance, flying, martial arts)	239	145	15	32	15	61	22	50	43
Construction and extraction occupations	58	41	s	10	s	10	18	12	4
Installation, maintenance, and repair occupations	113	93	15	3	s	31	44	14	s
Precision or production occupations (e.g., metal or wood workers, butchers, bakers, assemblers, tailors)	157	113	11	24	5	50	24	28	16
Transportation and material moving occupations	249	195	22	26	9	73	65	33	21
Other occupations	221	168	12	22	3	114	17	31	22

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Scientists and engineers include those with one or more S&E or S&E-related degrees at the bachelor's level or higher or those who have only a non-S&E degree at the bachelor's level or higher and are employed in an S&E or S&E-related occupation. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Table SLBR-5

Relationship of highest degree to job among S&E and S&E-related highest degree holders not working in their broad degree field, by degree level: 2019

(Percent)

Broad degree field and degree level	Degree related to job		
	Closely	Somewhat	Not
All S&E degree levels	34.9	34.0	31.2
Bachelor's	28.8	35.6	35.6
Master's	53.6	28.9	17.5
Doctorate	66.9	24.2	8.9
All S&E-related degree levels	45.4	26.5	28.1
Bachelor's	32.5	30.3	37.3
Master's	62.6	22.5	14.9
Doctorate	81.2	10.2	8.6

Note(s):

All degree levels include professional degrees not broken out separately. Percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-6

Unemployment rate, by selected groups: 1990–2019

(Percent)

Year	Total (16 years or older)	Bachelor's degree or higher	S&E occupations (bachelor's degree or higher)	S&E technicians and computer programmers (any education level)
1990	5.6	2.5	1.4	3.7
1991	6.8	3.0	2.5	4.2
1992	7.5	3.2	3.0	4.1
1993	6.9	3.1	2.9	4.3
1994	6.1	2.8	2.9	3.6
1995	5.6	2.6	2.1	2.6
1996	5.4	2.4	1.7	3.0
1997	4.9	2.1	1.3	2.0
1998	4.5	2.1	1.3	2.5
1999	4.2	2.0	1.4	2.1
2000	4.0	1.8	1.5	2.6
2001	4.7	2.4	2.1	4.0
2002	5.8	3.1	3.9	5.4
2003	6.0	3.2	4.0	5.6
2004	5.5	2.9	2.5	4.6
2005	5.1	2.5	2.0	2.8
2006	4.6	2.2	1.7	2.9
2007	4.6	2.2	1.5	2.1
2008	5.8	2.8	2.1	3.9
2009	9.3	4.8	4.4	6.5
2010	9.6	5.0	3.7	6.9
2011	8.9	4.6	3.4	5.1
2012	8.1	4.2	3.0	4.7
2013	7.4	3.9	2.8	4.3
2014	6.2	3.4	2.8	4.0
2015	5.3	2.8	2.4	3.3
2016	4.9	2.6	2.0	3.5
2017	4.4	2.5	2.0	3.2
2018	3.9	2.3	1.8	2.8
2019	3.7	2.3	1.9	2.3

Note(s):

Please see the *Science and Engineering Indicators 2020* "Science and Engineering Labor Force" report, [Technical Appendix](#) tables [SA3-3](#) and [SA3-4](#) for definitions of S&E occupations and S&E technicians and computer programmers.

Table SLBR-7

Unemployment rates of scientists and engineers, by level of highest degree and broad occupational category: Selected years, 2003–19

(Percent)

Degree and occupation	2003	2006	2008	2010	2013	2015	2017	2019
All scientists and engineers	3.2	2.5	3.1	4.3	3.8	3.3	2.7	2.6
Highest degree level								
Bachelor's	3.4	2.9	3.5	4.9	4.2	4.0	3.1	3.1
Master's	3.4	2.3	2.9	4.1	3.7	2.8	2.6	2.2
Professional	1.9	1.1	1.8	2.7	2.3	1.1	1.0	1.6
Doctorate	2.3	1.6	2.0	2.6	2.3	2.6	2.4	1.6
Occupation								
Computer and mathematical scientists	3.7	2.5	3.0	3.7	3.1	2.7	2.5	2.6
Biological, agricultural, and environmental life scientists	2.4	2.2	2.4	3.7	3.3	4.1	4.2	3.9
Physical and related scientists	2.8	2.3	3.0	3.3	4.5	3.2	2.1	2.6
Social and related scientists	1.6	2.5	2.1	2.3	3.3	3.6	3.0	3.1
Engineers	3.8	2.4	2.8	4.6	2.8	2.1	2.6	2.7
S&E-related occupations	2.0	1.5	1.9	2.5	2.2	1.8	1.9	1.9
Non-S&E occupations	3.8	3.0	3.9	5.6	5.0	4.3	3.0	2.9

STEM = science, technology, engineering, and mathematics.

Note(s):

Scientists and engineers include those with one or more S&E or S&E-related degrees at the bachelor's level or higher or those who have only a non-S&E degree at the bachelor's level or higher and are employed in an S&E or S&E-related occupation. For data on unemployment rates by occupation, calculations assume that unemployed individuals are seeking further employment in their most recent occupation. Non-S&E occupations include middle-skill and non-STEM occupations.

Source(s):

National Center for Science and Engineering Statistics, Scientists and Engineers Statistical Data System (SESTAT), 2003, 2006, 2008, 2010, 2013, and National Survey of College Graduates (NSCG), 2015, 2017, 2019.

Science and Engineering Indicators

Table SLBR-8

S&E highest degree holders who are working involuntarily part time or out of field, by S&E degree field: Selected years, 2010–19

(Percent)

S&E degree field	2010	2013	2015	2017	2019
Working involuntarily out of field of highest degree					
Highest degree in S&E field	8.4	8.3	7.9	7.5	6.9
Biological, agricultural, and environmental life sciences	10.1	9.4	10.4	8.5	8.4
Computer and mathematical sciences	5.1	4.1	4.0	4.4	3.4
Physical sciences	8.2	8.3	9.3	8.7	8.2
Social sciences	11.3	11.8	11.4	11.0	10.2
Engineering	4.9	4.6	3.2	3.6	3.3
Working involuntarily part time					
Highest degree in S&E field	4.5	5.3	4.6	4.2	3.9
Biological, agricultural, and environmental life sciences	5.1	5.8	5.9	4.1	5.1
Computer and mathematical sciences	2.9	3.9	3.3	3.4	2.3
Physical sciences	3.7	5.0	5.2	3.5	3.3
Social sciences	6.3	7.7	6.2	6.2	6.1
Engineering	2.4	2.1	1.9	2.0	1.3

Note(s):

The involuntarily out-of-field rate is the proportion of all employed individuals who report that their job is not related to their field of highest degree because a job in their highest degree field was not available. The involuntarily working part-time rate is the proportion of all employed individuals who report that they are working part time because a full-time job was not available.

Source(s):

National Center for Science and Engineering Statistics, Scientists and Engineers Statistical Data System (SESTAT), 2010, 2013, and the National Survey of College Graduates (NSCG), 2015, 2017, 2019.

Science and Engineering Indicators

Table SLBR-9

Labor market indicators for recent S&E degree recipients up to 5 years after receiving degree, by level and field of highest degree: 2019

(Percent and dollars)

Indicator and highest degree level	All S&E fields	Biological, agricultural, and environmental life sciences	Computer and mathematical sciences	Physical sciences	Social sciences	Engineering
Unemployment rate (%)						
All degree levels	4.2	5.9	7.2	1.7	3.6	1.9
Bachelor's	5.6	7.9	10.1	1.4	4.5	2.5
Master's	1.3	s	1.5	s	1.2	1.0
Doctorate	1.1	s	s	s	s	s
Involuntarily out-of-field rate (%)						
All degree levels	7.1	8.7	2.8	s	10.3	2.3
Bachelor's	9.5	11.2	3.7	s	13.4	3.1
Master's	2.1	4.6	1.0	s	2.7	0.9
Doctorate	1.6	s	s	s	s	s
Median annual salary (\$)						
All degree levels	53,000	43,000	75,000	46,000	40,000	75,000
Bachelor's	45,000	38,000	65,000	39,000	36,000	71,000
Master's	70,000	48,000	91,000	46,000	49,000	87,000
Doctorate	80,000	64,000	109,000	66,000	78,000	101,000

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Median annual salaries are rounded to the nearest \$1,000. All degree levels includes professional degrees not broken out separately. Data include degrees earned from February 2012 to February 2016. The involuntarily out-of-field rate is the proportion of all employed individuals who report that their job is not related to their field of highest degree because a job in their highest degree field was not available.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-10

Employment characteristics of recent SEH doctorate recipients up to 3 years after receiving doctorate, by field of degree: 2001–19

(Number and percent)

Field of doctorate	Recent doctorates (number)									Unemployment rate (%)									Involuntarily out-of-field rate (%)								
	2001	2003	2006	2008	2010	2013	2015	2017	2019	2001	2003	2006	2008	2010	2013	2015	2017	2019	2001	2003	2006	2008	2010	2013	2015	2017	2019
All recent SEH doctorates	48,700	43,700	49,500	52,600	52,700	45,500	49,400	50,200	50,600	1.3	2.5	1.2	1.5	2.3	2.7	2.7	2.4	1.8	2.8	2.1	1.4	1.3	1.8	2.3	1.7	2.6	2.3
Biological, agricultural, and environmental life sciences	12,300	11,200	12,600	13,400	14,100	12,200	12,900	12,600	12,400	1.4	2.4	0.9	1.7	1.5	3.4	3.2	2.9	1.4	2.6	1.0	0.3	1.0	1.5	2.6	0.8	2.0	2.0
Computer and information sciences	1,600	1,400	1,500	2,400	2,500	2,000	2,400	2,600	2,600	0.3	4.1	1.9	s	s	s	s	1.0	s	s	s	2.6	1.4	s	s	s	s	s
Mathematics and statistics	2,200	1,600	2,000	2,400	2,400	2,200	2,600	2,250	2,300	0.2	3.4	s	s	s	s	s	s	s	1.4	3.4	2.2	1.1	s	s	s	4.9	s
Physical sciences	7,700	6,500	7,400	7,500	7,700	6,400	6,900	6,900	7,400	1.5	1.3	1.1	3.0	2.6	4.8	4.4	3.4	1.8	5.4	4.2	2.6	2.3	1.4	1.7	3.0	4.1	3.5
Psychology	7,200	6,300	7,000	5,800	5,400	4,700	5,000	4,650	4,600	1.5	2.7	1.2	0.8	3.8	s	2.0	1.8	s	3.0	1.5	1.4	0.8	2.0	s	2.1	1.3	3.0
Social sciences	5,800	6,000	6,200	5,900	6,000	5,400	6,100	6,400	6,000	1.6	3.1	1.4	2.1	3.4	3.8	1.7	2.2	3.7	3.3	3.0	2.3	3.4	3.5	5.9	3.4	3.3	4.0
Engineering	9,400	8,000	9,500	12,000	11,300	9,600	10,300	12,000	12,000	1.5	3.0	1.8	1.2	2.7	2.1	3.0	1.9	2.2	2.0	3.0	1.6	0.7	1.9	2.2	2.0	2.4	1.7
Health	2,400	2,700	3,200	3,300	3,400	3,000	3,200	2,750	3,300	0.4	0.7	0.9	1.2	s	s	3.1	s	1.6	s	1.1	s	s	s	s	s	1.9	s

s = suppressed for reasons of confidentiality and/or reliability.

SEH = science, engineering, and health.

Note(s):

Involuntarily out-of-field rate is the proportion of all employed individuals who report working in a job not related to their field of doctorate because a job in that field was not available. Data for 2001 and 2006 include graduates from 12 months to 36 months before the survey reference date; data for 2003, 2008, and 2010 include graduates from 15 months to 36 months before the survey reference date; data for 2013, 2015, 2017, and 2019 include graduates from 19 months to 36 months before the survey reference date. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients (SDR).

Science and Engineering Indicators

Table SLBR-11

Postgraduation plans of doctorate recipients with definite commitments, by broad field of study: Selected years, 1979–2019

(Number and percent)

Definite commitment and plan	All fields	Life sciences ^a	Physical sciences and earth sciences	Mathematics and computer sciences	Psychology and social sciences	Engineering	Education	Humanities	Other ^b
All definite commitments (number)									
1979	21,411	3,846	2,471	686	4,139	1,815	4,935	2,284	1,235
1989	22,815	4,574	2,771	948	3,928	2,675	4,329	2,182	1,408
1999	26,007	5,502	2,846	1,301	4,443	3,290	4,296	2,917	1,412
2004	26,561	5,738	2,641	1,360	4,502	3,357	4,308	3,042	1,613
2009	31,208	7,007	3,402	2,089	5,154	4,672	4,205	2,797	1,882
2014	29,605	6,563	3,289	2,325	5,250	4,966	2,727	2,693	1,792
2019	35,134	7,958	4,142	2,976	6,020	6,329	3,067	2,644	1,998
Reported type of plan (number)									
1979	21,228	3,821	2,466	680	4,094	1,809	4,880	2,258	1,220
1989	22,699	4,562	2,764	942	3,911	2,667	4,296	2,157	1,400
1999	25,776	5,462	2,834	1,294	4,411	3,274	4,226	2,875	1,400
2004	25,874	5,574	2,599	1,333	4,394	3,280	4,179	2,944	1,571
2009	30,401	6,854	3,357	2,052	5,036	4,571	4,046	2,712	1,773
2014	27,144	6,098	3,123	2,189	4,768	4,590	2,429	2,393	1,554
2019	35,090	7,942	4,138	2,973	6,015	6,319	3,065	2,642	1,996
Employment (percent) ^c									
1979	80.0	46.1	55.1	89.7	87.8	87.6	97.3	94.6	97.5
1989	74.1	41.7	42.1	81.7	84.1	80.0	96.6	95.1	97.3
1999	69.9	36.6	43.2	75.1	74.3	77.5	94.9	92.0	95.5
2004	64.8	32.9	33.6	63.8	69.9	63.9	93.8	89.1	94.9
2009	62.1	33.2	33.2	64.0	67.6	63.9	94.4	87.2	93.8
2014	60.6	35.1	37.8	65.1	63.8	66.1	91.8	81.8	92.3
2019	61.6	42.0	42.4	69.3	60.3	65.7	90.8	79.2	91.3
Postdoctoral study (percent) ^c									
1979	20.0	53.9	44.9	10.3	12.2	12.4	2.7	5.4	2.5
1989	25.9	58.3	57.9	18.3	15.9	20.0	3.4	4.9	2.7
1999	30.1	63.4	56.8	24.9	25.7	22.5	5.1	8.0	4.5
2004	35.2	67.1	66.4	36.2	30.1	36.1	6.2	10.9	5.1
2009	37.9	66.8	66.8	36.0	32.4	36.1	5.6	12.8	6.2
2014	39.4	64.9	62.2	34.9	36.2	33.9	8.2	18.2	7.7
2019	38.4	58.0	57.6	30.7	39.7	34.3	9.2	20.8	8.7

^a Life sciences include agricultural sciences and natural resources, biological and biomedical sciences, and health sciences.^b Non-S&E fields not shown separately.^c Percentages are based on the number of doctorate recipients reporting definite postgraduation commitments with response to type of plan (employment or postdoctoral study).**Source(s):**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates (SED).

Science and Engineering Indicators

Table SLBR-12

Employment sector of workers with a bachelor's degree or higher, by broad occupational category and degree field: 2019

(Percent)

Employment sector	All employed		All employed scientists and engineers			
	Scientists and engineers	Non-scientists and engineers	Highest degree in S&E	S&E occupations	S&E-related occupations	Non-S&E occupations
Total (number)	28,627,000	21,897,000	15,362,000	7,466,000	8,893,000	12,267,000
Business or industry	71.9	66.4	73.9	72.9	72.8	70.7
For-profit businesses	54.4	51.1	60.3	65.3	48.3	52.2
Nonprofit organizations	11.7	7.9	8.0	5.1	19.8	9.9
Self-employed, unincorporated businesses	5.8	7.3	5.7	2.5	4.7	8.6
Education	17.9	23.8	15.3	16.4	20.1	17.3
4-year institutions	8.0	4.6	8.6	13.6	7.3	5.1
2-year and precollege institutions	9.9	19.5	6.7	2.8	12.9	12.1
Government	10.1	9.9	10.8	10.7	7.1	12.0
Federal	4.4	3.3	4.9	5.6	3.4	4.4
State or local	5.7	6.5	6.0	5.0	3.7	7.6

Note(s):

Scientists and engineers include those with one or more S&E or S&E-related degrees at the bachelor's level or higher or those who have only a non-S&E degree at the bachelor's level or higher and are employed in an S&E or S&E-related occupation. Detail may not add to total because of rounding, and percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-13

Employment sector of S&E highest degree holders and workers in S&E occupations: 1993, 2003, and 2019

(Percent)

Employment sector	1993		2003		2019	
	Highest degree in S&E	S&E occupations	Highest degree in S&E	S&E occupations	Highest degree in S&E	S&E occupations
Total (number)	7,036,000	3,303,000	9,579,000	4,817,000	15,362,000	7,466,000
Business or industry	68.7	67.8	71.3	71.7	73.9	72.9
For-profit businesses	57.3	61.1	59.1	64.2	60.3	65.3
Nonprofit businesses	5.2	3.2	6.3	3.7	8.0	5.1
Self-employed, unincorporated businesses	6.2	3.5	5.9	3.9	5.7	2.5
Education	16.8	17.8	15.6	15.9	15.3	16.4
4-year institutions	9.1	14.3	8.5	12.9	8.6	13.6
2-year and precollege institutions	7.7	3.5	7.2	3.0	6.7	2.8
Government	14.5	14.4	13.1	12.4	10.8	1.7
Federal	6.9	8.4	5.3	5.9	4.9	5.6
State or local	7.7	5.9	7.8	6.5	6.0	5.0

Note(s):

Percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, Scientists and Engineers Statistical Data System (SESTAT), 1993, 2003, and National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-14

Self-employed scientists and engineers, by education, occupation, and type of business: 2019

(Percent)

Characteristic	Total	Unincorporated business, professional practice, or farm	Incorporated business, professional practice, or farm
All employed scientists and engineers	18.6	5.8	12.8
Highest degree in S&E field	18.6	5.7	12.9
Biological, agricultural, and environmental life sciences	16.6	7.0	9.7
Computer and mathematical sciences	16.0	3.5	12.6
Physical sciences	14.2	3.1	11.0
Social sciences	20.9	8.1	12.8
Engineering	19.4	3.5	15.9
S&E highest degree level			
Bachelor's	19.7	6.0	13.7
Master's	14.5	4.6	10.0
Doctorate	10.9	4.4	6.6
Professional	32.7	10.2	22.5
Occupation			
S&E occupation	12.8	2.5	10.2
Biological, agricultural, and environmental life scientists	6.1	2.0	4.1
Computer and mathematical scientists	12.9	1.9	11.0
Physical scientists	7.3	2.9	4.4
Social scientists	12.5	8.0	4.5
Engineers	16.1	2.0	14.1
S&E-related occupations	17.2	4.7	12.6
Non-S&E occupations	23.2	8.6	14.6

Note(s):

Scientists and engineers include those with one or more S&E or S&E-related degrees at the bachelor's level or higher or those who have only a non-S&E degree at the bachelor's level or higher and are employed in an S&E or S&E-related occupation. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-15

Employment sector of S&E highest degree holders, by level and field of highest degree: 2019

(Percent distribution)

Highest degree field and degree level	Total (number)	Education (%)		Business or industry (%)			Government (%)	
		4-year institutions	2-year and precollege institutions	For-profit businesses	Self-employed, unincorporated businesses	Nonprofit businesses	Federal government	State or local government
All S&E highest degree holders	15,362,000	8.6	6.7	60.3	5.7	8.2	4.9	6.0
Computer and mathematical sciences	2,837,000	6.0	5.9	72.1	3.5	4.7	4.1	3.7
Biological, agricultural, and environmental life sciences	2,437,000	15.6	8.6	44.6	7.0	10.8	5.4	8.1
Physical and related sciences	889,000	150.0	6.2	57.7	3.1	6.7	5.6	5.9
Social and related sciences	5,474,000	8.4	10.0	49.2	8.1	12.2	4.7	7.4
Engineering	3,725,000	4.6	1.3	78.4	3.5	2.6	5.4	4.2
Highest degree: bachelor's	10,731,000	5.0	6.2	63.7	6.1	8.1	4.3	6.5
Computer and mathematical sciences	1,896,000	3.7	6.2	72.9	4.1	4.6	4.7	3.9
Biological, agricultural, and environmental life sciences	1,688,000	9.3	7.5	49.5	8.5	11.4	4.8	9.0
Physical and related sciences	520,000	8.5	6.0	62.2	3.3	7.8	3.9	8.3
Social and related sciences	4,097,000	5.0	8.8	55.2	7.8	11.7	3.9	7.6
Engineering	2,530,000	2.6	1.2	80.4	4.1	2.5	4.6	4.5
Highest degree: master's	3,350,000	8.8	9.0	58.3	4.3	8.0	6.0	5.6
Computer and mathematical sciences	829,000	6.2	5.6	73.9	2.5	5.4	2.7	3.8
Biological, agricultural, and environmental life sciences	388,000	17.0	17.1	35.4	3.4	10.9	6.6	9.6
Physical and related sciences	170,000	15.4	9.5	56.4	3.9	s	6.9	4.3
Social and related sciences	1,001,000	10.2	15.7	35.4	8.3	15.2	7.6	7.5
Engineering	961,000	5.0	1.7	78.2	2.1	2.5	6.7	3.8
Highest degree: doctorate	1,239,000	38.1	4.3	36.9	4.9	6.9	6.6	2.2
Computer and mathematical sciences	112,000	42.4	2.7	46.9	s	3.3	3.5	s
Biological, agricultural, and environmental life sciences	360,000	43.3	4.7	31.5	3.6	8.0	6.9	2.1
Physical and related sciences	199,000	31.5	30.0	46.9	2.2	6.7	8.9	0.8
Social and related sciences	335,000	43.5	7.7	19.4	10.5	9.8	5.3	3.7
Engineering	233,000	26.0	0.9	56.9	2.9	3.2	7.6	2.4

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

All S&E highest degree holders include professional degree holders not reported separately. The 2-year and precollege institutions include 2-year colleges and community colleges or technical institutes and preschool, elementary, middle, and secondary schools. The 4-year institutions include 4-year colleges or universities, medical schools, and university-affiliated research institutes. The education sector includes public and private institutions. Percentages may not add to 100% because of rounding. Numbers are rounded to the nearest 1,000.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-16

Employment in major S&E occupational categories, by sector: 2019

(Percent)

Occupation	4-year institutions	2-year and precollege institutions	Federal government	State and local government	Self-employed, unincorporated businesses	Nonprofit organizations	For-profit businesses
All S&E occupations	13.6	2.8	4.4	5.7	2.5	5.1	65.3
Computer and mathematical scientists	6.8	2.7	3.6	3.5	1.9	5.9	75.6
Biological, agricultural, and environmental life scientists	36.2	3.3	8.4	8.9	2.0	8.0	33.3
Physical and related scientists	30.9	2.2	10.6	10.2	2.9	2.0	41.3
Social and related scientists	40.7	10.1	8.2	6.4	8.0	8.4	18.3
Engineers	5.6	0.5	6.7	5.1	2.0	1.8	78.2

Note(s):

Percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-17

Metropolitan areas with the largest number of workers in S&E occupations: 2019

(Thousands and percent)

Metropolitan area	Workers employed		Metropolitan workforce in S&E occupations as a percentage of national total in S&E occupations (%)
	All occupations	S&E occupations	
U.S. total	146,875	7,317	100.0
New York-Newark-Jersey City, NY-NJ-PA	9,655	440	6.0
Washington-Arlington-Alexandria, DC-VA-MD-WV	3,179	345	4.7
Los Angeles-Long Beach-Anaheim, CA	6,240	291	4.0
Boston-Cambridge-Nashua, MA-NH	2,798	233	3.2
San Francisco-Oakland-Hayward, CA	2,472	229	3.1
Chicago-Naperville-Elgin, IL-IN-WI	4,676	214	2.9
Dallas-Fort Worth-Arlington, TX	3,657	210	2.9
Seattle-Tacoma-Bellevue, WA	2,021	202	2.8
San Jose-Sunnyvale-Santa Clara, CA	1,141	194	2.6
Atlanta-Sandy Springs-Roswell, GA	2,744	171	2.3
Houston-The Woodlands-Sugar Land, TX	3,052	162	2.2
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	2,876	160	2.2
Detroit-Warren-Dearborn, MI	1,981	153	2.1
Minneapolis-St. Paul-Bloomington, MN-WI	1,971	130	1.8
Denver-Aurora-Lakewood, CO	1,513	119	1.6
Phoenix-Mesa-Scottsdale, AZ	2,121	111	1.5
San Diego-Carlsbad, CA	1,495	109	1.5
Baltimore-Columbia-Towson, MD	1,376	100	1.4
Austin-Round Rock, TX	1,073	95	1.3

Note(s):

The data exclude metropolitan statistical areas where S&E proportions were suppressed. Larger metropolitan areas are broken into component metropolitan divisions. Ranking is based on the estimated number of workers in S&E occupations. Differences between any two areas may not be statistically significant.

Source(s):

Bureau of Labor Statistics, special tabulations (2020) of the 2019 Occupational Employment Statistics Survey.

Science and Engineering Indicators

Table SLBR-18

Metropolitan areas with the largest number of workers in S&E occupations as a percentage of all occupations: 2019

(Thousands and percent)

Metropolitan area	Workers employed		Metropolitan workforce in S&E occupations as a percentage of total in S&E occupations (%)
	All occupations	S&E occupations	
U.S. total	146,875	7,317	5.0
California-Lexington Park, MD	48	11	23.5
San Jose-Sunnyvale-Santa Clara, CA	1,141	194	17.0
Boulder, CO	186	28	14.9
Huntsville, AL	233	31	13.2
Bloomington, IL	89	10	11.3
Washington-Arlington-Alexandria, DC-VA-MD-WV	3,179	345	10.8
Durham-Chapel Hill, NC	314	33	10.4
Corvallis, OR	37	4	10.1
Seattle-Tacoma-Bellevue, WA	2,021	202	10.0
College Station-Bryan, TX	113	11	9.3
Madison, WI	395	37	9.3
San Francisco-Oakland-Hayward, CA	2,472	229	9.3
Raleigh, NC	650	60	9.2
Austin-Round Rock, TX	1,073	95	8.8
State College, PA	68	6	8.7
Columbus, IN	51	4	8.7
Ames, IA	45	4	8.6
Ann Arbor, MI	224	19	8.6
Palm Bay-Melbourne-Titusville, FL	224	19	8.6
Ithaca, NY	50	4	8.3

Note(s):

The data exclude metropolitan statistical areas where S&E proportions were suppressed. Larger metropolitan areas are broken into component metropolitan divisions. Ranking is based on the estimated number of workers in S&E occupations. Differences between any two areas may not be statistically significant.

Source(s):

Bureau of Labor Statistics, special tabulations (2020) of the 2019 Occupational Employment Statistics Survey.

Science and Engineering Indicators

Table SLBR-19

Employment in S&E occupations, by major industry: 2019

(Number and percent)

Industry	Workers employed		Industry workforce in S&E occupations (%)
	All occupations	S&E occupations	
U.S. total	146,875,000	7,317,000	5.0
Agriculture, forestry, fishing, and hunting	431,000	2,000	0.5
Mining	684,000	48,000	7.0
Utilities	547,000	57,000	10.5
Construction	7,439,000	76,000	1.0
Manufacturing	12,708,000	1,000,000	7.9
Wholesale trade	5,849,000	247,000	4.2
Retail trade	15,822,000	51,000	0.3
Transportation and warehousing	6,282,000	58,000	0.9
Information	2,831,000	614,000	21.7
Finance and insurance	5,973,000	414,000	6.9
Real estate, rental, and leasing	2,260,000	21,020	0.9
Professional, scientific, and technical services	9,380,000	2,374,000	25.3
Management of companies and enterprises	2,464,000	360,000	14.6
Administrative and support and waste management and remediation	9,373,000	285,000	3.0
Educational services	13,275,000	713,000	5.4
Health care and social assistance	21,025,000	248,000	1.2
Arts, entertainment, and recreation	2,484,000	14,000	0.6
Accommodation and food services	14,073,000	56,000	0.0
Other services (except federal, state, and local government)	4,250,000	58,000	1.4
Federal, state, and local government (OES designation)	9,725,000	672,000	6.9

OES = Occupational Employment Statistics.

Note(s):

Industries are defined by the North American Industry Classification System (NAICS). The OES Survey does not cover employment among self-employed workers and employment in private households (NAICS 814). In the employment total for agriculture, forestry, fishing, and hunting, only the following industries are included: logging (NAICS 1133), support activities for crop production (NAICS 1151), and support activities for animal production (NAICS 1152). As a result, the data do not represent total U.S. employment. Differences between any two industry groups may not be statistically significant. Detail may not add to total because of rounding.

Source(s):

Bureau of Labor Statistics, special tabulations (2020) of the 2019 OES Survey.

Science and Engineering Indicators

Table SLBR-20

Employment of the skilled technical workforce, by major industry: 2019

(Number and percent)

Industry	Workers employed		STW as a percentage of all occupations (%)
	All occupations	STW	
U.S. total—all industries	155,423,000	19,853,000	12.8
Construction	10,898,000	4,038,000	37.1
Military	634,000	222,000	35.0
Utilities	1,258,000	363,000	28.8
Mining, quarrying, and oil and gas extraction	801,000	223,000	27.8
Agriculture, forestry, fishing, and hunting	1,864,000	487,000	26.1
Manufacturing	15,652,000	3,727,000	23.8
Medical	18,166,000	3,487,000	19.2
Information	2,894,000	479,000	16.6
Other services, except public administration	7,353,000	925,000	12.6
Public administration	7,063,000	775,000	11.0
Professional, scientific, and technical services; management of companies and enterprises; administrative and support and waste management and remediation services	18,474,000	1,650,000	8.9
Wholesale trade	3,972,000	296,000	7.5
Retail trade	16,470,000	1,116,000	6.8
Transportation and warehousing	7,567,000	491,000	6.5
Finance and insurance, real estate, and rental and leasing	10,216,000	487,000	4.8
Arts, entertainment, and recreation and accommodation and food services	13,871,000	585,000	4.2
Educational services	14,659,000	431,000	2.9
Social assistance	3,612,000	72,000	2.0

STW = skilled technical workforce.

Note(s):

Industries are defined by the North American Industry Classification System. The American Community Survey (ACS) does not cover employment among self-employed workers and employment in private households. Values do not include those employed in military occupations based on ACS Occupational Classification Codes or enrolled in primary or secondary school. The STW includes workers ages 16–75 without a bachelor's degree who work in S&E, S&E-related, or middle-skill occupations as categorized in this report.

Source(s):

U.S. Census Bureau, ACS, 2019, Public Use Microdata Sample (PUMS), data as of 25 October 2020.

Science and Engineering Indicators

Table SLBR-21

S&E doctorate holders employed in academia, by type of position and degree field: 1973–2019

(Thousands)

Position and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
All positions																					
All fields	118.0	145.4	167.1	176.1	190.2	195.9	206.6	210.6	213.8	217.5	232.5	240.2	245.5	259.5	272.8	276.5	294.8	309.0	329.3	326.6	350.4
Physical sciences	25.5	29.2	30.0	29.9	32.2	32.8	33.6	33.7	35.0	35.7	37.5	38.7	38.6	39.9	39.6	39.9	43.7	44.9	48.4	46.9	50.5
Mathematics and statistics	9.7	11.7	12.4	12.9	13.6	13.8	14.5	15.2	15.5	14.6	15.6	15.2	14.9	16.7	17.4	18.0	18.7	19.0	20.9	20.6	21.7
Computer and information sciences	NA	NA	0.3	0.5	0.8	1.1	1.5	2.0	2.5	3.1	3.3	3.7	3.8	5.2	5.8	6.9	7.3	8.4	9.1	8.9	10.9
Life sciences	34.9	42.6	51.3	54.9	58.7	61.3	64.8	66.9	68.2	71.6	77.3	81.9	84.3	90.0	95.5	94.2	102.0	109.8	112.7	112.6	118.8
Psychology	12.2	16.2	20.1	21.0	23.1	23.7	25.0	25.2	25.0	26.1	27.3	29.0	30.4	31.8	35.0	34.5	35.4	36.3	38.7	38.0	39.9
Social sciences	23.4	31.1	36.9	38.9	42.0	42.2	44.5	44.8	44.4	42.5	44.9	46.2	46.9	48.1	50.0	52.5	54.9	55.9	59.7	59.9	64.4
Engineering	12.4	14.8	16.1	18.1	19.9	21.2	22.9	22.8	23.1	23.8	26.6	25.5	26.6	27.8	29.6	30.4	32.8	34.7	39.7	39.8	44.1
All full-time faculty																					
All fields	103.3	125.6	141.9	148.4	156.9	164.4	169.8	173.1	172.4	171.4	174.1	179.8	182.4	190.6	193.1	199.1	206.8	214.4	227.7	223.5	246.8
Physical sciences	20.8	23.6	24.3	24.2	25.4	26.4	26.2	26.2	25.8	25.6	25.6	26.7	26.4	27.6	26.9	27.6	29.3	29.5	31.2	29.7	33.5
Mathematics and statistics	9.3	10.9	11.7	12.3	12.7	12.9	13.5	14.2	14.7	13.0	13.4	12.9	12.3	14.0	14.0	14.8	15.1	15.5	16.7	16.3	17.3
Computer and information sciences	NA	NA	0.3	0.4	0.7	0.9	1.3	1.8	2.3	2.8	2.9	3.2	3.3	4.2	4.9	5.7	5.8	6.4	7.1	7.1	8.7
Life sciences	29.5	34.9	40.9	43.5	45.6	48.1	49.3	51.1	50.8	52.8	53.5	56.1	58.3	61.7	62.8	63.5	66.7	70.6	70.8	70.0	76.6
Psychology	10.8	13.9	16.4	17.3	18.5	19.2	20.2	20.7	19.5	20.1	19.6	21.0	21.7	21.4	23.2	23.1	23.3	24.1	25.9	26.3	28.0
Social sciences	21.6	28.8	33.7	34.4	36.1	37.7	39.0	39.0	39.2	37.1	37.3	38.7	38.7	39.6	39.2	42.1	43.1	43.5	46.6	46.0	50.1
Engineering	11.3	13.5	14.7	16.4	17.9	19.3	20.2	20.1	20.1	20.0	21.2	20.9	21.6	21.9	22.1	22.7	23.4	25.0	29.2	28.2	32.6
Full-time professors																					
All fields	42.6	51.0	64.4	69.9	72.8	79.1	83.1	82.5	80.0	77.7	80.9	83.1	84.8	87.7	85.3	90.5	93.6	95.3	98.9	94.7	109.1
Physical sciences	9.0	10.8	13.1	13.9	14.6	15.5	15.5	14.8	14.2	13.9	13.8	14.2	14.0	14.3	13.3	14.0	15.0	14.6	15.0	13.9	16.6
Mathematics and statistics	3.2	3.9	5.0	5.6	6.1	6.5	6.9	6.7	7.1	6.6	6.9	6.6	6.6	7.2	6.9	7.3	7.3	7.3	7.9	7.5	8.0
Computer and information sciences	NA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.7	0.8	1.2	1.6	1.9	2.2	2.6	2.6	2.7	3.3
Life sciences	12.3	13.9	17.0	19.3	19.6	21.7	22.5	22.9	21.2	22.5	22.5	23.3	24.5	25.7	25.6	26.6	28.1	29.5	28.3	27.5	31.1
Psychology	3.9	4.8	6.5	7.0	7.6	8.3	9.1	9.5	8.7	8.7	9.5	9.4	9.9	9.8	9.8	10.0	9.9	10.4	10.9	10.8	12.2
Social sciences	9.4	11.3	14.7	15.1	15.9	16.8	18.5	18.6	18.4	16.6	17.1	18.2	18.2	18.6	17.5	19.2	19.6	19.2	20.6	19.7	22.6
Engineering	4.7	6.4	8.0	9.0	9.2	10.4	10.6	9.9	10.3	9.1	10.7	10.6	10.7	10.9	10.6	11.7	11.5	11.7	13.5	12.7	15.5
Full-time associate professors																					
All fields	31.4	39.7	42.9	45.7	46.9	48.2	47.9	50.5	48.6	49.6	51.0	53.6	52.2	54.3	54.1	57.0	59.1	62.7	69.3	67.7	72.9
Physical sciences	6.2	7.2	6.6	6.3	6.3	6.1	5.8	6.3	6.4	6.1	6.5	6.6	6.7	6.9	6.9	7.0	7.4	7.6	8.3	8.6	8.9
Mathematics and statistics	2.8	3.7	4.0	4.1	4.0	4.1	4.0	5.1	4.4	4.0	3.9	4.1	3.6	4.0	3.8	4.3	4.2	4.4	5.1	5.1	5.3
Computer and information sciences	NA	0.0	0.0	0.1	0.1	0.3	0.4	0.8	0.7	1.4	1.4	1.4	1.6	1.7	1.6	1.9	2.1	2.3	2.6	2.3	2.6
Life sciences	8.6	10.7	12.5	13.4	14.1	14.1	14.0	14.6	14.6	14.7	15.8	17.3	16.7	17.7	18.1	18.2	19.1	20.3	21.4	20.6	22.8
Psychology	3.3	4.3	5.2	5.9	5.9	6.0	5.9	5.9	5.6	5.8	5.8	6.2	6.0	5.9	6.3	7.0	7.0	7.6	8.2	8.8	8.5
Social sciences	6.5	9.4	10.2	11.2	11.8	12.7	12.6	12.0	11.6	11.5	11.7	11.9	11.4	12.1	11.8	12.8	13.1	13.8	15.3	14.6	16.2

Table SLBR-21

S&E doctorate holders employed in academia, by type of position and degree field: 1973–2019

(Thousands)

Position and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Engineering	4.0	4.4	4.4	4.7	4.7	4.9	5.3	5.9	5.3	6.2	5.8	6.0	6.1	5.9	5.6	5.9	6.2	6.8	8.3	7.9	8.7
Full-time junior faculty ^a																					
All fields	29.3	34.9	34.6	32.8	37.2	37.2	38.7	40.1	43.8	44.0	42.2	43.1	45.4	48.6	53.7	51.6	54.1	56.4	59.5	61.1	64.8
Physical sciences	5.6	5.7	4.6	4.0	4.6	4.7	4.8	5.0	5.2	5.6	5.3	5.9	5.7	6.4	6.7	6.6	6.9	7.3	7.9	7.2	8.0
Mathematics and statistics	3.3	3.3	2.6	2.5	2.7	2.4	2.6	2.4	3.2	2.4	2.6	2.2	2.1	2.8	3.3	3.2	3.6	3.8	3.7	3.8	4.0
Computer and information sciences	NA	NA	0.2	0.3	0.6	0.6	0.9	1.0	1.4	1.2	1.2	1.1	0.9	1.3	1.7	1.9	1.5	1.5	1.9	2.1	2.9
Life sciences	8.5	10.3	11.3	10.8	11.9	12.3	12.8	13.7	15.0	15.6	15.2	15.5	17.1	18.3	19.1	18.7	19.5	20.8	21.1	22.0	22.8
Psychology	3.6	4.8	4.8	4.5	5.0	4.9	5.2	5.4	5.2	5.5	4.3	5.4	5.8	5.7	7.1	6.1	6.4	6.1	6.8	6.8	7.3
Social sciences	5.7	8.2	8.8	8.1	8.4	8.2	7.9	8.4	9.3	9.0	8.5	8.6	9.1	8.9	9.9	10.1	10.4	10.5	10.7	11.7	11.3
Engineering	2.6	2.7	2.3	2.7	4.0	4.0	4.3	4.3	4.5	4.8	4.7	4.3	4.8	5.1	5.9	5.1	5.7	6.5	7.4	7.6	8.5
Other full-time positions ^b																					
All fields	7.6	8.8	12.6	13.4	18.1	16.4	19.2	20.2	22.2	23.9	29.1	31.9	34.8	39.9	40.6	43.9	48.2	55.8	62.6	64.2	65.7
Physical sciences	2.2	2.4	2.9	3.0	3.7	3.4	4.0	4.1	4.8	4.9	6.6	7.3	7.7	8.4	7.2	7.4	7.9	8.8	11.1	11.3	11.2
Mathematics and statistics	0.2	0.4	0.4	0.3	0.5	0.4	0.5	0.6	0.5	0.6	1.0	0.8	1.1	1.4	1.3	1.7	1.8	2.1	2.5	2.3	2.3
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.6	0.6	0.9	1.0	1.5	1.4	1.4	1.6
Life sciences	2.5	2.8	4.0	4.6	6.2	6.0	6.7	7.2	7.7	8.4	9.8	11.2	12.3	14.2	15.5	16.2	18.4	22.2	25.0	26.3	26.3
Psychology	0.8	1.2	2.2	2.2	2.9	2.8	2.9	2.8	3.9	3.9	4.3	4.6	4.9	6.3	6.5	6.8	7.1	6.9	7.9	7.4	7.8
Social sciences	1.0	1.2	2.0	2.2	3.2	2.6	3.5	3.5	3.7	3.6	4.0	4.4	4.7	5.0	6.1	6.2	6.9	7.7	8.3	8.0	9.1
Engineering	0.8	0.8	1.1	1.1	1.5	1.1	1.5	1.8	1.5	2.1	3.2	3.0	3.6	3.9	3.3	4.7	5.1	6.3	6.5	7.5	7.5
Postdoctorates																					
All fields	4.2	7.6	8.5	8.3	8.7	9.3	11.5	9.9	13.3	16.8	18.9	18.5	17.5	15.7	23.3	17.8	22.8	20.2	19.2	18.4	18.5
Physical sciences	1.8	2.4	2.1	1.6	2.1	2.3	2.7	2.2	3.5	4.4	3.8	3.4	3.0	2.6	3.9	3.3	4.6	4.0	3.3	3.4	3.6
Mathematics and statistics	0.0	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.0	0.5	0.5	0.6	0.8	0.5	1.0	0.5	0.7	0.4	0.5	0.5	0.7
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.2
Life sciences	1.9	4.0	5.2	5.1	5.2	5.6	6.8	6.4	8.2	9.2	10.8	11.7	11.0	10.0	12.8	10.3	12.2	11.9	11.7	10.6	10.4
Psychology	0.2	0.5	0.6	0.6	0.7	0.7	0.8	0.5	0.4	1.1	1.3	1.2	1.2	0.9	1.7	1.0	1.1	1.0	0.8	0.7	0.9
Social sciences	0.1	0.3	0.3	0.6	0.3	0.1	0.4	0.3	0.2	0.4	0.7	0.5	0.6	0.5	0.9	0.3	0.8	0.4	0.4	0.6	0.5
Engineering	0.2	0.4	0.2	0.3	0.2	0.5	0.6	0.5	1.0	1.2	1.7	1.1	0.9	1.1	3.0	2.1	3.1	2.4	2.2	2.6	2.3
Part-time positions ^c																					
All fields	2.9	3.4	4.0	6.0	6.5	5.7	6.2	7.4	5.9	5.5	8.9	8.2	9.0	13.3	15.7	15.6	17.0	18.5	19.8	20.6	19.3
Physical sciences	0.7	0.7	0.7	1.1	1.1	0.8	0.7	1.2	1.0	0.9	1.2	1.0	1.0	1.1	1.5	1.6	2.0	2.5	2.8	2.6	2.3
Mathematics and statistics	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.7	0.7	0.6	0.9	1.2	1.0	1.1	1.1	1.2	1.6	1.4
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.3	0.3	0.3	0.4
Life sciences	0.9	1.0	1.2	1.7	1.7	1.6	1.9	2.3	1.6	1.2	2.9	2.6	2.4	4.0	4.4	4.3	4.6	5.2	5.2	5.7	5.6
Psychology	0.4	0.6	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.1	1.1	1.3	1.8	3.2	3.6	3.7	3.8	4.2	4.1	3.6	3.2

Table SLBR-21

S&E doctorate holders employed in academia, by type of position and degree field: 1973–2019

(Thousands)

Position and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Social sciences	0.7	0.8	1.0	1.6	2.2	1.8	1.7	2.0	1.3	1.3	2.6	2.2	2.7	3.1	3.7	4.0	4.0	4.2	4.4	5.4	4.6
Engineering	0.1	0.1	0.2	0.4	0.3	0.3	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.8	1.1	0.9	1.2	1.1	1.8	1.5	1.7

NA = not available.

^a Full-time junior faculty include assistant professors and instructors from 1973 to 1995; from 1997 to 2017, full-time junior faculty include assistant professors.

^b Other full-time positions include those such as research associates, adjunct positions, lecturers, and administrative positions from 1973 to 1995; from 1997 to 2019, other full-time positions also include instructors.

^c Part-time positions exclude those employed part time because they are students or retired.

Note(s):

Academic employment is limited to U.S. doctorate holders employed at 2- or 4-year colleges or universities, medical schools, and university research institutes. Physical sciences include earth, atmospheric, and ocean sciences; life sciences include biological, agricultural, and environmental life and health sciences. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of Doctorate Recipients (SDR).

Science and Engineering Indicators

Table SLBR-22

S&E doctorate holders employed in academia, by research priority, type of position, and degree field: 1973–2019

(Thousands)

Research priority, position, and field	1973	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
All positions	118.0	145.4	155.3	167.1	176.1	190.2	195.9	206.6	210.6	213.8	217.5	232.5	240.2	245.5	259.5	272.8	276.5	294.8	309.0	329.3	326.6	350.4
Physical sciences	25.5	29.2	28.8	29.9	29.9	32.2	32.8	33.6	33.8	35.0	35.8	37.5	38.7	38.6	39.9	39.6	39.9	43.7	44.9	48.4	46.9	50.5
Mathematics and statistics	9.7	11.7	12.2	12.4	12.9	13.6	13.8	14.5	15.2	15.5	14.6	15.6	15.2	14.9	16.7	17.4	18.0	18.7	19.0	20.9	20.6	21.7
Computer and information sciences	NA	NA	0.1	0.3	0.5	0.8	1.1	1.5	2.0	2.5	3.1	3.3	3.7	3.8	5.2	5.8	6.9	7.3	8.4	9.1	8.9	10.9
Life sciences	34.9	42.6	47.0	51.3	54.8	58.7	61.2	64.8	66.9	68.2	71.6	77.3	81.9	84.3	90.0	95.5	94.2	102.0	109.8	112.7	112.6	118.8
Psychology	12.2	16.2	17.7	20.1	21.0	23.1	23.7	25.0	25.2	25.0	26.1	27.3	29.0	30.4	31.8	35.0	34.5	35.4	36.3	38.7	38.0	39.9
Social sciences	23.4	31.1	33.6	36.9	38.8	41.9	42.1	44.5	44.8	44.4	42.5	44.9	46.2	46.9	48.1	50.0	52.5	54.9	55.9	59.7	59.9	64.4
Engineering	12.4	14.8	15.8	16.1	18.1	19.9	21.2	22.8	22.8	23.1	23.8	26.6	25.5	26.6	27.8	29.6	30.4	32.8	34.7	39.7	39.8	44.1
Full-time faculty	103.3	125.6	131.2	141.9	148.4	156.9	164.4	169.8	173.1	172.4	171.4	172.9	178.2	180.9	190.6	193.1	199.1	206.9	214.4	227.7	223.4	246.8
Physical sciences	20.8	23.6	23.5	24.3	24.2	25.4	26.4	26.2	26.2	25.8	25.6	25.5	26.3	26.1	27.7	26.9	27.5	29.3	29.5	31.1	29.7	33.5
Mathematics and statistics	9.3	10.9	11.4	11.7	12.3	12.7	12.9	13.5	14.2	14.7	13.0	13.6	12.9	12.4	14.0	14.0	14.8	15.1	15.5	16.8	16.3	17.3
Computer and information sciences	NA	NA	0.1	0.3	0.4	0.7	0.9	1.3	1.8	2.3	2.8	2.9	3.2	3.3	4.2	4.9	5.6	5.7	6.4	7.1	7.1	8.7
Life sciences	29.5	34.9	37.3	40.9	43.5	45.6	48.1	49.3	51.1	50.8	52.8	53.6	56.1	58.3	61.7	62.8	63.5	66.7	70.5	70.8	70.0	76.6
Psychology	10.8	13.9	14.3	16.4	17.3	18.5	19.2	20.2	20.7	19.5	20.1	19.4	20.6	21.2	21.5	23.2	23.0	23.4	24.1	26.0	26.3	28.0
Social sciences	21.6	28.8	30.3	33.7	34.4	36.1	37.6	39.0	39.0	39.2	37.1	36.9	38.2	38.3	39.6	39.2	42.0	43.2	43.6	46.7	46.0	50.1
Engineering	11.3	13.5	14.3	14.7	16.4	17.9	19.3	20.2	20.1	20.1	20.0	21.2	20.7	21.5	21.9	22.1	22.7	23.4	25.0	29.2	28.2	32.6
Research as primary or secondary activity																						
All positions	82.3	85.0	90.0	100.7	104.7	115.2	144.0	151.6	156.6	150.1	153.5	164.7	168.1	172.5	179.3	183.7	187.1	198.2	201.7	220.8	217.3	233.6
Physical sciences	18.8	19.2	18.2	19.5	19.3	21.4	24.9	25.7	25.9	25.0	25.8	27.4	27.2	27.3	28.2	26.9	26.8	28.9	29.5	32.8	30.7	33.3
Mathematics and statistics	6.8	6.8	6.9	6.8	7.2	7.6	9.7	10.2	10.7	9.5	9.4	10.1	9.9	9.8	10.7	11.4	11.7	12.3	11.8	13.4	13.4	14.6
Computer and information sciences	NA	NA	0.1	0.3	0.4	0.6	1.0	1.3	1.7	2.0	2.4	2.4	2.6	2.6	3.9	4.1	4.8	5.1	5.7	6.4	6.2	7.4
Life sciences	26.0	28.7	32.1	37.1	38.3	41.4	48.8	51.8	53.3	51.8	53.8	57.9	60.8	63.1	65.6	66.7	66.4	71.4	74.2	78.3	76.9	81.8
Psychology	7.3	7.7	8.3	9.9	10.5	10.7	14.3	14.3	15.7	14.9	15.6	16.1	17.2	18.2	19.1	20.5	21.3	21.2	20.2	21.1	22.0	23.0
Social sciences	14.3	13.8	14.7	17.6	17.8	20.9	28.5	30.5	31.1	29.3	28.1	29.8	30.9	31.4	31.5	32.7	33.8	35.2	34.7	38.2	38.2	40.8
Engineering	9.0	8.9	9.8	9.5	11.2	12.5	16.8	17.6	18.2	17.5	18.5	20.9	19.4	20.2	20.3	21.4	22.3	24.1	25.6	30.5	30.0	32.8
Full-time faculty	72.0	71.6	74.1	83.8	86.9	95.1	121.4	125.8	131.4	121.7	121.6	124.8	126.3	130.4	135.2	133.7	138.6	142.6	144.4	159.6	156.3	172.7
Physical sciences	15.1	14.8	13.9	15.1	15.1	16.3	19.7	19.9	20.1	18.0	17.9	18.4	18.3	18.6	19.9	18.2	18.7	19.6	19.7	21.9	20.6	23.1
Mathematics and statistics	6.6	6.4	6.4	6.5	6.9	7.3	9.1	9.8	10.2	9.1	8.4	9.0	8.4	8.2	9.2	9.6	10.1	10.4	10.0	11.4	11.5	12.1
Computer and information sciences	NA	NA	s	0.2	0.3	0.5	0.8	1.2	1.6	1.8	2.2	2.3	2.3	2.3	3.3	3.6	4.1	4.1	4.5	5.3	5.2	6.1
Life sciences	21.8	22.9	24.7	28.7	29.6	31.9	38.3	39.0	41.0	38.4	39.5	40.3	41.4	43.5	45.1	44.3	44.5	46.1	47.8	49.9	48.3	53.8
Psychology	6.6	6.7	6.6	8.0	8.8	9.0	12.1	12.2	13.9	12.5	12.9	12.9	13.4	14.1	14.4	14.9	15.9	16.1	15.3	16.4	17.2	18.2
Social sciences	13.6	12.9	13.5	16.5	16.0	18.8	26.1	27.9	28.3	26.7	25.3	25.3	26.7	27.4	27.0	27.2	29	29.6	28.9	31.9	32.2	34.5
Engineering	8.2	8.0	8.9	8.8	10.2	11.4	15.2	15.7	16.2	15.1	15.5	16.5	15.6	16.5	16.2	15.8	16.4	16.9	18.1	22.9	21.5	24.9
Research as primary activity																						
All positions	27.8	37.0	41.3	46.5	48.9	55.9	66.5	72.2	73.9	80.2	83.0	88.6	91.4	93.8	102.9	108.2	107.9	117.5	120.7	133.7	130.1	138.4

Table SLBR-22

S&E doctorate holders employed in academia, by research priority, type of position, and degree field: 1973–2019

(Thousands)

Research priority, position, and field	1973	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Physical sciences	6.6	8.9	8.5	9.4	9.2	11.0	12.3	13.3	13.1	14.7	15.2	15.6	15.1	15.0	16.2	16.3	15.7	17.5	18.2	20.8	19.4	19.7
Mathematics and statistics	1.5	1.8	2.1	1.9	2.0	2.7	3.2	3.5	3.5	3.4	3.3	3.5	2.9	3.3	3.8	5.0	5.6	5.7	5.6	6.4	6.1	7.0
Computer and information sciences	NA	NA	0.0	0.1	0.2	0.4	0.7	0.8	1.1	0.9	1.0	1.1	1.1	1.3	1.9	2.0	2.6	2.8	3.1	3.9	3.7	3.9
Life sciences	12.8	16.6	19.7	23.2	24.3	27.1	31.5	33.8	34.5	36.0	37.7	40.5	43.2	43.7	46.4	47.0	45.3	49.7	51.0	54.4	53.2	54.7
Psychology	2.0	2.8	3.4	4.1	4.4	4.6	5.2	5.9	6.2	6.7	7.4	8.0	8.6	8.7	10.0	11.2	11.1	11.4	10.9	11.3	11.2	12.8
Social sciences	2.8	4.1	4.2	4.5	4.9	5.7	7.5	8.2	8.4	10.7	9.8	9.8	11.1	11.7	13.0	13.6	14.0	15.6	15.9	17.3	16.6	19.3
Engineering	2.1	2.9	3.4	3.3	3.9	4.4	6.2	6.9	7.2	7.9	8.7	10.1	9.4	10.1	11.6	13.1	13.6	15.0	16.0	19.6	20.1	20.9
Full-time faculty	19.8	25.8	28.1	31.8	33.6	39.5	48.6	51.6	53.8	56.8	56.6	56.9	58.9	61.2	70.4	70.2	71.7	75.0	77.4	88.7	84.5	94.6
Physical sciences	3.5	5.0	5.0	5.4	5.4	6.5	7.8	8.0	8.2	8.7	8.4	8.1	8.0	8.0	9.7	9.3	9.4	9.8	10.4	12.1	11.5	11.9
Mathematics and statistics	1.4	1.6	1.8	1.8	1.8	2.5	2.7	3.2	3.2	3.1	2.7	2.9	2.3	2.3	3.4	3.9	4.6	4.6	4.5	5.4	5.1	5.7
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.3	0.5	0.7	1.0	0.7	0.9	0.9	0.9	1.1	1.6	1.7	2.1	2.1	2.4	3.1	2.9	3.2
Life sciences	9.3	11.4	13.1	15.5	16.5	18.6	22.3	22.6	23.8	24.1	24.7	25.1	26.1	26.9	29.4	27.8	27.1	28.2	29.1	31.0	29.2	32.4
Psychology	1.6	2.0	2.2	2.5	2.9	3.3	3.9	4.5	5.0	5.3	5.4	5.7	5.9	6.1	7.0	7.8	7.8	8.0	7.9	8.6	8.6	9.9
Social sciences	2.5	3.6	3.4	3.8	3.8	4.6	6.3	7.1	7.1	8.9	8.3	7.4	9.0	9.5	10.7	11.3	11.8	12.9	13.0	14.7	14.0	16.4
Engineering	1.5	2.3	2.6	2.7	3.0	3.7	5.0	5.4	5.5	6.0	6.3	6.6	6.6	7.4	8.6	8.5	8.9	9.4	10.1	13.8	13.4	15.1
Teaching as primary activity																						
All positions	73.3	82.2	83.8	95.9	97.7	101.0	99.3	100.9	103.4	98.3	100.2	105.4	108.6	109.0	105.9	109.4	114.0	120.6	124.8	133.7	132.8	140.3
Physical sciences	16.3	16.5	15.9	17.5	16.8	17.4	16.9	16.7	16.8	15.7	15.9	16.7	17.8	17.9	17.0	16.9	17.5	18.8	18.7	19.7	19.6	21.4
Mathematics and statistics	7.4	8.5	8.6	9.1	9.4	9.3	9.2	9.5	10.1	10.3	9.8	10.2	10.5	10.2	9.4	9.9	10.3	10.7	11.3	12.2	12.1	12.7
Computer and information sciences	NA	NA	0.1	0.2	0.3	0.3	0.3	0.6	0.7	1.4	1.8	1.8	2.1	1.9	2.5	3.0	3.2	3.8	4.0	3.6	3.7	4.9
Life sciences	16.6	18.1	18.1	20.5	21.1	20.9	20.1	20.3	20.9	20.2	21.8	23.4	25.1	25.7	25.2	27.6	28.2	30.6	33.9	35.0	34.7	36.5
Psychology	7.7	9.4	9.5	11.7	11.6	12.3	13.0	12.8	12.8	11.6	11.9	12.4	13.0	13.3	13.3	14.3	14.4	15.0	14.9	16.3	17.0	15.5
Social sciences	16.9	21.0	22.6	26.8	27.7	29.1	28.5	28.8	29.8	27.6	26.9	28.3	28.0	28.0	27.3	27.5	29.6	29.8	30.0	33.4	33.4	33.9
Engineering	8.4	8.7	9.1	10.1	10.8	11.7	11.3	12.2	12.2	11.6	12.1	12.6	12.1	11.9	11.2	10.2	10.8	11.9	11.9	13.5	12.5	15.5
Full-time faculty	69.9	78.4	79.7	92.1	91.9	94.9	93.6	93.9	96.7	91.4	91.9	92.1	95.0	93.8	89.9	88.4	93.5	96.7	98.2	101.9	100.3	109.2
Physical sciences	15.5	15.7	15.1	16.9	15.8	16.5	16.2	15.6	15.6	14.3	14.4	14.4	15.4	15.1	14.3	13.8	14.2	15.1	14.5	14.6	13.8	16.0
Mathematics and statistics	7.2	8.1	8.3	8.8	9.0	8.9	9.0	9.0	9.6	10.0	9.0	9.1	9.2	8.9	8.5	8.2	8.6	8.8	9.3	9.5	9.2	10.2
Computer and information sciences	NA	NA	0.1	0.2	0.3	0.3	0.3	0.5	0.7	1.3	1.7	1.6	2.0	1.7	2.2	2.5	2.8	3.2	3.4	3.0	3.0	4.1
Life sciences	15.7	17.1	17.1	19.6	19.6	19.5	18.7	18.7	19.1	18.4	19.8	20.0	21.6	21.8	21.0	21.8	23.1	24.4	26.1	26.3	26.3	27.9
Psychology	7.3	8.9	8.9	11.0	10.9	11.6	12.1	11.9	12.2	10.5	10.9	10.6	11.3	11.1	10.8	11.1	11.1	11.3	11.0	11.8	12.4	11.9
Social sciences	16.1	20.1	21.4	25.7	25.9	26.8	26.5	26.4	27.6	25.9	24.6	24.6	24.2	24.1	23.1	21.9	24.3	23.9	23.8	25.7	25.5	26.6
Engineering	8.1	8.5	8.9	10.0	10.4	11.2	11.0	11.7	11.8	11.0	11.5	11.7	11.4	10.8	9.9	8.9	9.4	10.0	10.1	11.1	10.2	12.6
Other primary activity																						
All positions	16.9	26.2	30.2	24.7	29.6	33.3	30.1	33.5	33.2	35.2	34.3	38.6	40.2	42.8	49.5	55.2	54.6	56.6	63.5	61.9	63.6	71.7
Physical sciences	2.6	3.8	4.4	3.0	3.8	3.8	3.5	3.6	3.8	4.6	4.6	5.2	5.8	5.8	7.2	6.5	6.7	7.4	8.0	7.9	8.0	9.5

Table SLBR-22

S&E doctorate holders employed in academia, by research priority, type of position, and degree field: 1973–2019

(Thousands)

Research priority, position, and field	1973	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Mathematics and statistics	0.8	1.4	1.6	1.3	1.6	1.6	1.4	1.5	1.6	1.8	1.5	1.8	1.7	1.4	2.2	2.5	2.1	2.3	2.1	2.3	2.5	2.0
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.5	0.5	0.8	0.8	1.1	0.8	1.4	1.5	1.6	2.1
Life sciences	5.5	8.0	9.3	7.6	9.4	10.6	9.7	10.7	11.5	12.0	12.2	13.4	13.6	14.8	17.6	20.9	20.8	21.6	24.9	23.3	24.7	27.7
Psychology	2.5	4.0	4.8	4.4	5.0	6.2	5.6	6.3	6.2	6.7	6.9	7.0	7.3	8.4	8.1	9.5	9.0	9.1	10.4	11.1	9.8	11.6
Social sciences	3.7	6.0	6.8	5.6	6.1	7.1	6.1	7.6	6.6	6.1	5.8	6.8	7.2	7.2	8.2	8.8	8.9	9.5	9.9	9.1	9.9	11.2
Engineering	1.9	3.1	3.3	2.7	3.5	3.8	3.7	3.7	3.4	3.7	3.0	3.8	4.0	4.7	5.5	6.2	5.9	6.0	6.8	6.7	7.2	7.6
Full-time faculty	13.6	21.3	23.4	18.0	22.9	22.5	22.2	24.2	22.6	24.1	22.9	23.9	24.2	26.0	30.3	34.6	33.9	35.1	38.8	37.1	38.6	43.1
Physical sciences	1.8	2.9	3.3	2.0	3.0	2.4	2.4	2.5	2.3	2.7	2.7	2.9	2.8	3.0	3.6	3.8	3.9	4.4	4.6	4.4	4.5	5.6
Mathematics and statistics	0.7	1.2	1.3	1.1	1.4	1.3	1.2	1.3	1.4	1.6	1.3	1.5	1.4	1.0	1.9	1.9	1.6	1.7	1.6	1.9	2.0	1.4
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.3	0.5	0.7	0.4	0.6	1.1	1.2	1.5
Life sciences	4.5	6.4	7.1	5.8	7.4	7.4	7.2	7.9	8.2	8.3	8.3	8.5	8.5	9.6	11.3	13.2	13.3	14.0	15.3	13.5	14.5	16.3
Psychology	2.0	3.0	3.2	2.9	3.5	3.6	3.3	3.8	3.6	3.7	3.8	3.0	3.4	3.9	3.7	4.4	4.1	4.1	5.1	5.6	5.4	6.2
Social sciences	3.0	5.2	5.5	4.2	4.7	4.7	4.8	5.4	4.3	4.5	4.2	4.8	5.0	4.7	5.8	6.0	5.9	6.5	6.8	6.3	6.6	7.1
Engineering	1.6	2.7	2.8	2.0	2.9	2.9	3.3	3.1	2.7	3.1	2.2	2.8	2.7	3.3	3.5	4.7	4.4	3.9	4.7	4.3	4.7	5.0

NA = not available; s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Detail may not add to total because of rounding. Academic employment is limited to U.S. doctorate holders employed at 2- or 4-year colleges or universities, medical schools, and university research institutes, excluding those employed part time because they are students or retired. Full-time faculty include full professors, associate professors, assistant professors, and instructors from 1973 to 1995; from 1997 to 2019, full-time faculty include full professors, associate professors, and assistant professors. Research includes basic or applied research, development, or design. Physical sciences include earth, atmospheric, and ocean sciences; life sciences include biological, agricultural, and environmental life and health sciences.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients (SDR).

Science and Engineering Indicators

Table SLBR-23

S&E doctorate holders employed in academia with federal support, by degree field, research activity, and type of position: 1973–2019

(Percent)

Field, research activity, and position	1973	1975	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
All fields	44.5	40.5	39.7	38.2	35.5	39.8	31.4	46.5	47.9	48.5	36.1	39.4	38.6	45.7	45.1	45.9	46.9	44.5	45.1	44.2	41.0	40.3	39.1
Research as primary or secondary activity	51.9	48.9	52.3	51.8	50.8	55.9	44.5	56.1	58.1	57.8	46.4	50.0	48.2	56.6	56.4	56.7	58.1	55.5	56.2	56.5	52.0	50.3	49.8
Full-time faculty	42.0	39.6	38.2	36.2	38.8	41.7	34.3	45.6	46.6	48.0	32.9	35.7	34.9	43.2	43.6	44.9	46.5	43.7	44.7	43.5	40.3	40.2	39.2
Other full-time positions	60.2	58.8	68.1	58.3	58.5	59.4	49.8	60.6	60.9	58.8	42.5	43.1	46.7	48.9	47.2	46.3	43.6	43.5	41.9	42.8	41.9	39.8	36.4
Postdoctorates	87.7	86.3	86.0	82.1	86.3	82.2	78.5	82.1	83.5	84.5	83.1	80.1	74.1	80.3	74.3	78.1	70.7	71.9	73.2	77.7	70.3	71.1	69.5
Physical sciences	47.3	44.0	43.8	42.8	42.1	46.5	38.2	54.1	57.9	57.0	45.7	49.3	48.6	57.0	55.3	56.5	56.4	53.6	53.9	53.0	51.9	50.1	47.3
Research as primary or secondary activity	56.2	54.1	56.2	57.0	59.0	63.3	52.5	66.2	69.6	68.9	58.6	62.3	59.6	70.1	68.3	69.2	70.0	67.2	67.0	68.8	65.9	63.5	61.0
Full-time faculty	42.2	38.7	38.3	37.4	37.1	42.6	33.2	49.5	53.7	53.5	38.7	42.9	42.1	53.2	51.7	55.0	55.1	54.2	52.8	52.2	51.7	51.3	49.4
Other full-time positions	67.0	61.4	62.8	68.3	59.1	64.8	58.1	71.2	70.1	69.1	60.6	57.0	63.6	65.8	59.7	58.8	58.2	51.4	50.7	51.8	53.8	49.3	39.7
Postdoctorates	90.3	87.4	86.3	81.9	82.5	81.9	75.4	87.9	84.6	81.2	82.0	85.3	81.2	81.3	83.0	78.8	75.7	66.7	78.3	80.0	72.7	69.1	68.9
Mathematics and statistics	26.9	19.1	19.0	21.7	21.3	30.1	21.5	31.1	33.5	34.5	18.8	22.3	20.9	29.1	31.9	31.1	34.8	31.7	34.1	30.5	26.8	29.1	24.7
Research as primary or secondary activity	32.4	23.6	25.0	27.0	27.0	41.3	26.4	36.9	40.8	40.6	24.8	27.0	26.9	35.3	41.7	38.6	43.4	38.5	42.2	40.7	36.6	36.7	32.0
Full-time faculty	26.8	18.8	18.0	20.4	21.0	29.9	21.4	30.4	32.8	34.0	18.3	21.1	19.3	27.7	30.1	31.9	34.8	31.8	35.3	30.8	28.1	30.7	25.6
Other full-time positions	33.6	33.5	46.9	54.6	30.1	43.4	29.1	47.8	52.8	67.2	40.6	34.6	40.0	37.5	54.5	23.1	25.0	29.4	25.0	25.0	23.8	21.4	20.4
Postdoctorates	48.8	35.8	55.1	43.2	56.3	66.3	48.5	34.4	53.4	80.4	s	45.3	35.6	54.7	61.9	65.9	64.2	60.0	57.1	75.0	60.0	60.0	41.6
Computer and information sciences	NA	NA	NA	34.8	29.7	44.6	45.0	61.7	52.4	49.4	39.9	43.2	41.1	55.6	47.2	48.9	44.0	43.5	50.7	51.2	45.1	45.5	41.8
Research as primary or secondary activity	NA	NA	NA	34.8	26.9	44.9	36.1	55.6	52.8	54.3	41.1	46.0	46.3	59.3	57.9	54.9	53.8	54.2	61.4	59.6	54.7	55.6	51.9
Full-time faculty	NA	NA	NA	25.0	26.6	38.1	38.0	58.1	52.8	48.2	37.7	40.7	37.9	54.5	48.5	50.0	44.9	44.6	51.7	51.5	46.6	48.6	42.5
Other full-time positions	NA	NA	NA	s	25.0	67.9	80.6	79.7	47.1	67.7	59.1	62.9	50.0	66.7	33.3	50.0	42.9	44.4	50.0	42.9	36.4	36.0	37.2
Postdoctorates	NA	NA	NA	57.1	100.0	100.0	s	88.2	100.0	s	100.0	78.0	97.2	100.0	100.0	95.8	97.9	50.0	66.7	50.0	66.7	66.7	94.3
Life sciences	59.3	58.9	58.1	55.3	59.6	60.0	53.5	65.3	65.1	65.5	52.2	52.5	51.0	57.9	56.6	57.2	58.0	56.6	56.6	54.9	51.1	50.3	49.6
Research as primary or secondary activity	65.8	64.2	66.8	65.2	63.3	68.3	57.8	72.3	73.1	72.0	62.7	63.6	61.6	69.5	67.9	68.0	69.4	69.3	68.7	68.7	63.6	62.1	61.9
Full-time faculty	57.1	56.4	54.9	51.4	55.6	57.8	50.5	63.4	62.1	63.7	48.6	49.0	47.8	55.2	56.3	57.0	58.4	56.1	56.1	54.5	50.5	50.0	50.5
Other full-time positions	68.1	70.9	72.1	64.8	68.5	68.5	58.4	71.0	74.1	67.2	45.8	46.3	47.4	50.0	46.3	46.9	50.0	51.2	50.3	49.5	47.1	45.9	43.2
Postdoctorates	88.8	87.7	88.4	84.6	86.0	82.6	78.3	82.1	86.8	84.4	84.1	81.9	77.7	82.6	77.6	81.3	71.5	77.7	78.7	80.7	75.2	76.8	73.8
Psychology	37.5	36.1	33.2	32.6	32.7	30.1	25.9	31.2	35.5	34.7	25.7	27.6	27.4	32.9	34.3	34.7	36.5	31.9	33.3	31.7	27.1	28.2	28.0
Research as primary or secondary activity	45.4	41.7	41.9	42.7	41.9	42.6	36.6	39.8	46.6	43.5	37.0	39.5	40.5	46.5	48.1	48.2	52.2	43.2	46.6	44.6	39.3	39.0	41.4
Full-time faculty	36.4	34.1	30.6	28.3	27.5	27.3	23.6	28.3	34.0	32.9	25.2	25.1	25.3	31.6	33.6	34.5	37.5	33.9	36.5	34.8	27.8	30.3	30.2
Other full-time positions	48.1	41.6	65.4	46.3	52.3	40.3	32.7	37.1	39.6	36.3	23.8	30.7	30.2	32.6	38.8	35.2	29.8	25.0	23.0	22.2	25.0	20.5	20.4
Postdoctorates	84.9	86.4	82.5	86.8	92.0	84.2	70.8	88.1	66.3	95.8	71.7	71.4	71.8	71.8	59.2	69.0	69.4	60.0	81.8	80.0	62.5	84.6	78.8
Social sciences	25.5	23.7	23.3	20.4	21.8	23.7	17.2	27.2	27.7	28.4	14.2	16.1	15.2	22.9	21.5	21.8	23.1	20.6	19.7	19.7	17.3	17.4	16.5
Research as primary or secondary activity	29.5	26.8	30.6	29.4	25.5	31.4	20.4	30.0	31.1	31.2	17.3	20.9	17.7	27.2	26.5	27.1	28.9	25.7	24.4	24.2	20.9	20.3	20.2
Full-time faculty	25.2	23.7	22.6	19.0	21.2	22.5	16.2	27.1	27.4	27.8	13.4	15.4	14.6	22.5	21.1	22.1	23.9	20.0	20.6	20.0	17.2	17.9	16.6
Other full-time positions	36.3	31.6	35.3	37.3	32.7	34.0	26.6	36.2	33.8	32.7	22.1	22.6	22.5	27.3	26.1	25.6	24.5	22.6	20.3	21.9	20.5	19.4	18.4
Postdoctorates	57.6	54.6	54.7	84.9	47.9	64.6	54.7	27.4	57.6	52.5	88.1	68.5	33.9	65.0	35.8	42.9	22.9	33.3	25.0	50.0	50.0	45.5	40.6

Table SLBR-23

S&E doctorate holders employed in academia with federal support, by degree field, research activity, and type of position: 1973–2019

(Percent)

Field, research activity, and position	1973	1975	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Engineering	53.5	50.6	51.1	49.1	51.0	54.7	43.0	57.1	56.3	63.2	42.6	49.9	49.7	56.9	56.8	57.4	58.7	58.6	58.2	57.6	54.7	51.3	50.6
Research as primary or secondary activity	58.4	57.3	60.5	57.5	59.2	61.5	45.0	63.1	63.8	68.3	49.5	57.9	55.4	62.5	64.1	64.7	67.3	67.3	66.7	66.8	62.0	57.8	58.5
Full-time faculty	52.5	49.9	49.3	49.5	49.8	54.7	42.2	56.0	55.2	62.9	40.9	48.4	47.2	55.1	56.7	56.8	58.6	57.7	59.5	57.3	56.5	52.2	51.2
Other full-time positions	65.5	67.3	86.6	53.0	60.7	63.1	44.3	76.4	71.2	66.8	59.5	56.7	65.6	63.3	58.3	62.2	51.9	61.7	55.8	59.6	54.2	50.8	50.5
Postdoctorates	84.7	84.3	74.7	51.1	98.9	82.7	91.4	74.8	76.0	90.0	65.7	72.7	62.1	80.4	56.8	73.8	76.8	71.4	61.3	66.7	54.5	56.9	59.8

NA = not available; s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Data for 1985 and 1993–97 are not comparable with data for other years and understate the degree of federal support. In 1985 and 1993–97, the federal support question asked whether work performed during the week of 15 April was supported by the government; in other years, the question pertained to work conducted over the course of an entire year. Academic employment is limited to U.S. doctorate holders employed at 2- or 4-year colleges or universities, medical schools, or university research institutes. Full-time faculty include full professors, associate professors, assistant professors, and instructors from 1973 to 1995; from 1997 to 2019, full-time faculty includes full professors, associate professors, and assistant professors. Research includes basic or applied research, development, and design. Total includes part-time employment not shown separately but excludes those employed part time because they are students or retired. Physical sciences include earth, atmospheric, and ocean sciences; life sciences include biological, agricultural, and environmental life and health sciences.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients (SDR).

Science and Engineering Indicators

Table SLBR-24

Employed scientists and engineers, by sex and occupation: 2019

(Thousands and percent)

Occupation	Total	Female		Male	
		Number	Percent	Number	Percent
All occupations	28,627	13,720	47.9	14,907	52.1
S&E occupations	7,466	2,193	29.4	5,274	70.6
Computer and mathematical scientists	3,774	975	25.8	2,799	74.2
Computer and information scientists	3,379	810	24.0	2,569	76.0
Computer and information scientists, research	90	26	29.0	64	71.0
Computer network architects	40	3	8.2	37	91.8
Computer support specialists	294	94	32.1	199	67.9
Computer system analysts	362	149	41.1	213	58.9
Database administrators	129	43	33.6	85	66.4
Information security analysts	113	23	20.7	90	79.3
Network and computer systems administrators	192	19	9.7	174	90.3
Software developers—applications and systems software	683	124	18.1	559	81.9
Web developers	147	29	19.8	118	80.2
Other computer information science occupations	432	139	32.2	293	67.8
Computer engineers—software	897	160	17.8	737	82.2
Mathematical scientists	284	118	41.6	166	58.4
Mathematicians	9	3	32.1	6	67.9
Operations research analysts, including modeling	182	67	36.5	116	63.5
Statisticians	67	28	41.7	39	58.3
Other mathematical scientists	26	21	79.4	5	20.6
Postsecondary teachers—computer and mathematical sciences	111	47	42.5	64	57.5
Computer sciences	30	10	33.9	20	66.1
Mathematics and statistics	81	37	45.7	44	54.3
Biological, agricultural, and environmental life scientists	698	337	48.3	361	51.7
Agricultural and food scientists	58	20	34.7	38	65.3
Biological and medical scientists	500	249	49.9	251	50.1
Biochemists and biophysicists	92	41	44.0	52	56.0
Biological scientists (e.g., botanists, ecologists, zoologists)	145	63	43.8	81	56.2
Medical scientists (excluding practitioners)	160	87	54.5	73	45.5
Other biological and life scientists	104	59	56.5	45	43.5
Forestry and conservation scientists	39	13	32.4	27	67.6
Postsecondary teachers—life and related sciences	101	55	54.7	46	45.3
Agriculture	9	3	34.9	6	65.1
Biological sciences	85	51	59.8	34	40.2
Other natural sciences	7	1	s	6	80.0
Physical and related scientists	409	142	34.8	267	65.2
Chemists, except biochemists	132	47	35.4	86	64.6
Earth, atmospheric, and ocean scientists	85	25	29.9	59	70.1
Atmospheric and space scientists	21	8	35.3	14	64.7
Geologists, including earth scientists and oceanographers	64	18	28.0	46	72.0
Physicists, except biophysicists	45	9	19.5	36	80.5
Other physical and related scientists, including astronomers	67	30	45.1	37	54.9
Postsecondary teachers—physical and related sciences	80	31	38.8	49	61.2
Chemistry	25	9	37.1	16	62.9
Earth, environmental, and marine sciences	32	17	53.5	15	46.5
Physics	23	4	20	18	80.2
Social and related scientists	663	428	64.5	235	35.5
Economists	56	14	24.1	43	75.9
Political scientists	22	8	34.6	15	65.4

Table SLBR-24

Employed scientists and engineers, by sex and occupation: 2019

(Thousands and percent)

Occupation	Total	Female		Male	
		Number	Percent	Number	Percent
Psychologists, including clinical	228	184	80.8	44	19.2
Anthropologists	16	10	63.9	6	36.1
Other social and related scientists	142	97	68.4	45	31.6
Postsecondary teachers—social and related sciences	200	116	58.0	84	42.0
Economics	21	7	35.1	14	64.9
Political science	22	9	40.9	13	59.1
Psychology	48	36	75.1	12	24.9
Sociology	18	11	61.7	7	38.3
Other social sciences	90	52	57.7	38	42.3
Engineers	1,921	310	16.1	1,612	83.9
Aerospace, aeronautical, or astronautical engineers	126	22	17.3	104	82.7
Chemical engineers	84	18	21.6	66	78.4
Civil, architectural, or sanitary engineers	294	56	19.1	238	80.9
Electrical or computer hardware engineers	412	43	10.4	369	89.6
Computer engineers—hardware	85	5	5.8	80	94.2
Electrical and electronics engineers	327	38	11.5	289	88.5
Industrial engineers	95	19	20.3	76	79.7
Mechanical engineers	377	31	8.3	345	91.7
Other engineers	472	106	22.5	366	77.5
Bioengineers or biomedical engineers	39	16	40.5	23	59.5
Environmental engineers	58	24	41.7	34	58.3
Marine engineers and naval architects	9	s	s	8	89.8
Materials and metallurgical engineers	41	10	24.6	31	75.4
Nuclear engineers	12	1	7.6	11	92.4
Petroleum engineers	22	5	24.1	16	75.9
Sales engineers	114	12	10.5	102	89.5
Other engineers, including agricultural, mining and geological	178	37	20.9	141	79.1
Postsecondary teachers—engineering	61	14	22.8	47	77.2
S&E-related occupations	8,893	5,109	57.4	3,785	42.6
Health-related occupations	5,728	3,992	69.7	1,736	30.3
Diagnosing or treating practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians)	1,269	546	43.1	722	56.9
Registered nurses, pharmacists, dietitians, therapists, physician assistants, nurse practitioners	2,875	2,360	82.1	515	17.9
Health technologists and technicians (e.g., dental hygienists, health record technicians, licensed practical nurses, laboratory or radiology technicians)	574	379	66.1	195	33.9
Other health occupations	815	570	70.0	245	30.0
Postsecondary teachers—health and related sciences	196	137	69.6	60	30.4
S&E managers	999	296	29.6	703	70.4
Computer and information systems managers	237	51	21.4	186	78.6
Engineering managers	364	34	9.3	330	90.7
Medical and health services managers	324	186	57.3	139	42.7
Natural sciences managers	74	26	34.8	48	65.2
S&E precollege teachers	925	521	56.3	404	43.7
Secondary—computer, mathematics, or sciences	668	394	58.9	274	41.1
Secondary—social sciences	257	127	49.5	130	50.5
S&E technicians and technologists	973	196	20.2	777	79.8
Technologists and technicians in the biological and life sciences	125	69	55.2	56	44.8
Computer programmers (business, scientific, process control)	125	38	30.3	87	69.7
Electrical, electronic, industrial, and mechanical technicians	325	14	4.4	311	95.6

Table SLBR-24

Employed scientists and engineers, by sex and occupation: 2019

(Thousands and percent)

Occupation	Total	Female		Male	
		Number	Percent	Number	Percent
Drafting occupations, including computer drafting	46	7	15.8	39	84.2
Surveying and mapping technicians	28	s	s	27	94.7
Other engineering technologists and technicians	255	54	21.3	201	78.7
Surveyors, cartographers, photogrammetrists	20	1	6.4	19	93.6
Technologists and technicians in the mathematical or physical sciences	48	11	22.0	38	78.0
Other S&E-related occupations	270	104	38.6	166	61.4
Architects	225	90	39.9	135	60.1
Actuaries	45	14	32.2	30	67.8
Non-S&E occupations	12,267	6,419	52.3	5,848	47.7
Non-S&E managers	2,003	623	31.1	1,380	68.9
Top-level managers, executives, administrators (e.g., chief executive officer, chief operating officer, chief financial officer; president; district, general manager, provost)	1,125	307	27.3	818	72.7
Education administrators (e.g., registrar, dean, principal)	134	84	62.5	50	37.5
Other mid-level managers	743	232	31.2	512	68.8
Management-related occupations	2,534	1,262	49.8	1,272	50.2
Accountants, auditors, and other financial specialists	781	369	47.2	412	52.8
Personnel, training, and labor relations specialists	289	200	69.0	90	31.0
Other management-related occupations	1,465	694	47.4	771	52.6
Non-S&E precollege teachers	924	773	83.7	150	16.3
Prekindergarten and kindergarten	129	128	99.2	1	s
Elementary	364	296	81.1	69	18.9
Secondary—other subjects	191	139	72.9	52	27.1
Special education—primary and secondary	166	146	87.8	20	12.2
Other precollegiate area	73	65	88.5	8	11.5
Non-S&E postsecondary teachers	191	107	55.9	84	44.1
Art, drama, and music	15	10	67.7	5	32.3
Business, commerce, and marketing	23	7	31.1	16	68.9
Education	42	33	77.9	9	22.1
English	24	15	61.6	9	38.4
Foreign language	10	5	49.3	5	50.7
History	9	2	25.6	7	74.4
Physical education	s	s	s	s	s
Other postsecondary fields	60	32	53.1	28	46.9
Social services and related occupations	1,057	767	72.5	290	27.5
Clergy and other religious workers	142	52	36.9	89	63.1
Counselors (e.g., educational, vocational, mental health, substance abuse)	457	352	77.0	105	23.0
Social workers	458	363	79.2	95	20.8
Sales and marketing occupations	1,444	664	46.0	780	54.0
Insurance, securities, real estate, and business services	365	171	46.8	194	53.2
Sales—commodities, except retail (e.g., industrial, medical, dental machinery, equipment, supplies)	235	74	31.6	161	68.4
Sales—retail (e.g., furnishings, clothing, motor vehicles, cosmetics)	328	150	45.8	178	54.2
Other marketing and sales occupations	517	269	52.1	247	47.9
Arts, humanities, and related occupations	305	181	59.3	124	40.7
Writers, editors, public relations specialists, artists, entertainers, broadcasters	302	179	59.2	123	40.8
Historians	3	s	s	s	s
Other non-S&E occupations	3,810	2,042	53.6	1,767	46.4
Accounting clerks and bookkeepers	214	176	81.9	39	18.1
Secretaries, receptionists, typists	223	207	92.9	16	7.1

Table SLBR-24

Employed scientists and engineers, by sex and occupation: 2019

(Thousands and percent)

Occupation	Total	Female		Male	
		Number	Percent	Number	Percent
Other administrative (e.g., record clerks, telephone operators)	633	451	71.3	182	28.7
Farmers, foresters, and fishermen	116	32	27.9	83	72.1
Lawyers, judges	614	261	42.6	353	57.4
Librarians, archivists, curators	85	66	78.0	19	22.0
Food preparation and service (e.g., cooks, waitresses, bartenders)	226	119	52.5	107	47.5
Protective services (e.g., firefighters, police, guards, wardens, park rangers)	185	45	24.5	140	75.5
Other service occupations, except health (e.g., probation officers, human services work)	477	277	58.1	200	41.9
Other teachers and instructors (e.g., private tutors, dance, flying, martial arts)	239	150	62.9	89	37.1
Construction and extraction occupations	58	7	12.4	51	87.6
Installation, maintenance, and repair occupations	113	17	15.5	95	84.5
Precision or production occupations (e.g., metal or wood workers, butchers, bakers, assemblers, tailors)	157	69	43.8	88	56.2
Transportation and material moving occupations	249	24	9.0	227	91.0
Other occupations	221	141	64.1	79	35.9

s = suppressed for reasons of confidentiality and/or reliability.

STEM = science, technology, engineering, and mathematics.

Note(s):

Scientists and engineers include those with one or more S&E or S&E-related degrees at the bachelor's level or higher and those who have only a non-S&E degree at the bachelor's level or higher and are employed in an S&E or S&E-related occupation. Non-S&E occupations include middle-skill and non-STEM occupations. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-25

Employed S&E highest degree holders, by sex and field of degree: 2019

(Thousands and percent)

Field of S&E highest degree	Total	Female		Male	
		Number	Percent	Number	Percent
All S&E highest degree	15,362	6,132	39.9	9,230	60.1
Computer and mathematical sciences	2,837	809	28.5	2,028	71.5
Computer and information sciences	2,203	540	24.5	1,663	75.5
Computer and information sciences, general	350	88	25.3	262	74.7
Computer sciences	1,218	266	21.9	952	78.1
Computer systems analysis	46	9	19.5	37	80.5
Information services and systems	437	133	30.4	304	69.6
Other computer and information sciences	152	43	28.5	109	71.5
Mathematics and statistics	634	269	42.4	365	57.6
Applied mathematics	76	28	36.8	48	63.2
Mathematics, general	397	179	45.1	218	54.9
Operations research	42	7	17.2	35	82.8
Statistics	98	50	51.3	48	48.7
Other mathematics	21	s	s	16	79.4
Biological, agricultural, and environmental life sciences	2,437	1,218	50.0	1,219	50.0
Agricultural and food sciences	266	129	48.4	137	51.6
Animal sciences	115	63	54.6	52	45.4
Food sciences and technology	37	21	55.7	17	44.3
Plant sciences	79	28	35.5	51	64.5
Other agricultural sciences	36	18	49.3	18	50.7
Biological sciences	1,867	984	52.7	883	47.3
Biochemistry and biophysics	169	77	45.6	92	54.4
Biology, general	870	462	53.1	408	46.9
Botany	16	7	46.7	9	53.3
Cell and molecular biology	119	58	48.7	61	51.3
Ecology	102	46	44.9	56	55.1
Genetics, animal and plant	25	11	43.8	14	56.2
Microbiological sciences and immunology	127	74	58.3	53	41.7
Nutritional sciences	89	81	91.8	7	8.2
Pharmacology, human and animal	20	13	64.2	7	35.8
Physiology and pathology, human and animal	78	44	55.9	35	44.1
Zoology, general	81	29	35.8	52	64.2
Other biological sciences	172	82	47.7	90	52.3
Environmental life sciences	303	105	34.6	198	65.4

Table SLBR-25

Employed S&E highest degree holders, by sex and field of degree: 2019

(Thousands and percent)

Field of S&E highest degree	Total	Female		Male	
		Number	Percent	Number	Percent
Environmental science or studies	243	93	38.3	150	61.7
Forestry sciences	60	12	19.6	48	80.4
Physical and related sciences	889	271	30.5	618	69.5
Chemistry, except biochemistry	400	137	34.2	263	65.8
Earth, atmospheric, and ocean sciences	249	90	36.3	159	63.7
Atmospheric sciences and meteorology	21	5	24.1	16	75.9
Earth sciences	61	27	43.9	34	56.1
Geology	111	33	29.9	78	70.1
Geological sciences, other	56	25	45.1	31	54.9
Physics and astronomy	220	37	16.6	184	83.4
Astronomy and astrophysics	18	4	22.0	14	78.0
Physics	202	33	16.1	170	83.9
Other physical sciences	20	8	38.1	12	61.9
Social and related sciences	5,474	3,213	58.7	2,261	41.3
Economics	856	234	27.3	622	72.7
Agricultural economics	50	8	16.9	41	83.1
Economics	806	225	27.9	581	72.1
Political and related sciences	971	437	45.0	534	55.0
Public policy studies	75	43	57.2	32	42.8
International relations	173	106	61.3	67	38.7
Political science and government	722	288	39.9	434	60.1
Psychology	2,221	1,658	74.6	564	25.4
Educational psychology	142	125	88.4	17	11.6
Clinical psychology	261	188	72.0	73	28.0
Counseling psychology	358	279	77.8	80	22.2
Experimental psychology	43	25	59.0	18	41.0
General psychology	993	735	74.0	259	26.0
Industrial/ organizational psychology	91	53	58.7	38	41.3
Social psychology	99	72	72.7	27	27.3
Other psychology	234	181	77.3	53	22.7
Sociology and anthropology	829	508	61.4	320	38.6
Anthropology and archaeology	177	100	56.4	77	43.6
Criminology	71	36	50.4	35	49.6
Sociology	581	373	64.2	208	35.8

Table SLBR-25

Employed S&E highest degree holders, by sex and field of degree: 2019

(Thousands and percent)

Field of S&E highest degree	Total	Female		Male	
		Number	Percent	Number	Percent
Other social sciences	598	376	62.9	222	37.1
Area and ethnic studies	125	88	70.5	37	29.5
Linguistics	84	61	73.0	23	27.0
Philosophy of science	51	s	s	s	s
Geography	128	41	32.2	87	67.8
Other social sciences	210	139	66.2	71	33.8
Engineering	3,725	621	16.7	3,103	83.3
Aerospace, aeronautical, and astronautical engineering	142	17	11.9	125	88.1
Chemical engineering	246	62	25.3	183	74.7
Civil and architectural engineering	544	92	16.8	452	83.2
Architectural engineering	20	6	30.5	14	69.5
Civil engineering	524	86	16.3	438	83.7
Electrical and computer engineering	1,289	187	14.5	1,102	85.5
Computer and systems engineering	390	76	19.6	314	80.4
Electrical, electronics, and communications engineering	899	111	12.3	788	87.7
Industrial and manufacturing engineering	214	44	20.5	170	79.5
Mechanical engineering	739	77	10.4	662	89.6
Other engineering	552	143	25.9	409	74.1
Agricultural engineering	25	s	s	20	81.2
Bioengineering and biomedical engineering	83	36	43.4	47	56.6
Engineering sciences, mechanics, and physics	33	4	11.0	29	89.0
Environmental engineering	71	29	41.3	42	58.7
Engineering, general	43	8	19.4	35	80.6
Materials engineering, including ceramics and textiles	70	16	23.1	54	76.9
Metallurgical engineering	16	s	s	12	76.3
Nuclear engineering	21	4	17.4	17	82.6
Other engineering	191	38	19.7	153	80.3

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-26

Science, engineering, and health doctorate holders employed in academia, by type of position, sex, and degree field: 1973–2019

(Thousands)

Position, sex, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
All positions																					
Both genders, all fields	118.0	145.5	167.1	176.1	190.2	195.9	206.6	210.6	213.8	217.5	232.5	240.2	245.5	259.5	272.8	276.5	294.8	309.0	329.3	326.6	350.4
Physical sciences	25.5	29.2	30.0	29.9	32.2	32.8	33.6	33.7	35.0	35.7	37.5	38.7	38.6	39.9	39.6	39.9	43.7	44.9	48.4	46.9	49.8
Mathematics and statistics	9.7	11.7	12.4	12.9	13.6	13.8	14.5	15.2	15.5	14.6	15.6	15.2	14.9	16.7	17.4	18.0	18.7	19.0	20.9	20.6	20.6
Computer and information sciences	NA	NA	0.3	0.5	0.8	1.1	1.5	2.0	2.5	3.1	3.3	3.7	3.8	5.2	5.8	6.9	7.3	8.4	9.1	8.9	10.8
Life sciences	34.9	42.6	51.3	54.9	58.7	61.3	64.8	66.9	68.2	71.6	77.3	81.9	84.3	90.0	95.5	94.2	102.0	109.8	112.7	112.6	119.8
Psychology	12.2	16.2	20.1	21.0	23.1	23.7	25.0	25.2	25.0	26.1	27.3	29.0	30.4	31.8	35.0	34.5	35.4	36.3	38.7	38.0	39.8
Social sciences	23.4	31.1	36.9	38.9	42.0	42.2	44.5	44.8	44.4	42.5	44.9	46.2	46.9	48.1	50.0	52.5	54.9	55.9	59.7	59.9	64.8
Engineering	12.4	14.8	16.1	18.1	19.9	21.2	22.9	22.8	23.1	23.8	26.6	25.5	26.6	27.8	29.6	30.4	32.8	34.7	39.7	39.8	45.0
Male, all fields	107.2	129.0	144.0	149.8	159.2	162.0	168.0	168.7	166.9	165.1	173.3	175.8	175.0	180.7	182.7	182.3	189.6	195.0	206.0	201.1	213.2
Physical sciences	24.0	27.4	27.8	27.7	29.8	30.0	30.5	30.8	31.4	31.4	32.4	33.4	32.8	33.7	32.3	32.1	34.4	34.5	36.9	35.2	36.8
Mathematics and statistics	9.0	10.8	11.3	11.8	12.3	12.5	13.0	13.9	13.7	12.8	13.5	12.9	12.6	13.8	14.1	14.1	14.4	14.6	15.7	15.5	15.3
Computer and information sciences	NA	NA	0.3	0.4	0.7	0.9	1.3	1.6	2.1	2.5	2.6	2.9	2.9	4.3	4.5	5.5	5.8	6.7	7.2	6.9	8.3
Life sciences	30.8	36.6	42.9	44.5	46.7	47.9	49.5	50.1	49.4	50.1	52.6	55.1	54.9	56.6	57.9	55.5	58.7	61.8	60.7	60.1	63.1
Psychology	10.0	12.6	14.9	15.1	16.0	16.2	16.5	16.0	14.7	14.7	15.4	15.6	15.7	15.6	16.0	15.6	15.6	15.2	16.4	16.0	15.8
Social sciences	21.0	26.9	30.9	32.3	34.3	33.9	35.1	34.6	33.4	31.3	31.9	32.4	31.7	32.0	31.9	33.1	33.4	33.3	36.4	35.3	37.7
Engineering	12.3	14.7	15.9	17.8	19.5	20.6	22.2	21.8	22.1	22.3	24.8	23.4	24.3	24.8	26.0	26.3	27.3	28.9	32.8	32.3	36.3
Female, all fields	10.7	16.5	23.1	26.5	31.1	34.0	38.7	41.9	46.9	52.4	59.2	64.4	70.5	78.7	90.1	94.2	105.2	114.0	123.3	125.5	137.3
Physical sciences	1.4	1.7	2.1	2.2	2.5	2.8	3.1	3.0	3.6	4.4	5.1	5.3	5.8	6.1	7.3	7.8	9.3	10.4	11.5	11.7	13.0
Mathematics and statistics	0.6	0.9	1.1	1.1	1.3	1.4	1.5	1.4	1.7	1.8	2.1	2.2	2.3	2.9	3.3	3.9	4.3	4.5	5.2	5.2	5.4
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.6	0.7	0.8	0.8	1.0	1.2	1.4	1.5	1.8	1.9	2.0	2.5
Life sciences	4.0	6.0	8.4	10.3	12.1	13.3	15.3	16.8	18.8	21.5	24.7	26.7	29.4	33.4	37.6	38.7	43.3	48.0	52.0	52.5	56.7
Psychology	2.2	3.6	5.2	5.9	7.1	7.6	8.5	9.2	10.3	11.5	11.9	13.4	14.7	16.2	19.0	18.9	19.8	21.1	22.3	22.0	24.0
Social sciences	2.4	4.2	6.0	6.5	7.7	8.3	9.4	10.2	10.9	11.2	13.0	13.8	15.2	16.2	18.2	19.5	21.5	22.6	23.4	24.6	27.2
Engineering	0.1	0.1	0.2	0.3	0.4	0.6	0.7	1.0	1.1	1.5	1.7	2.1	2.3	3.0	3.6	4.1	5.5	5.7	7.0	7.5	8.7
Full-time senior faculty ^a																					
Both genders, all fields	74.0	90.7	107.3	115.6	119.7	127.3	131.0	133.0	128.6	127.3	131.9	136.7	136.9	142.0	139.4	147.5	152.8	158.0	168.2	162.4	182.1
Physical sciences	15.2	18.0	19.7	20.2	20.8	21.5	21.4	21.2	20.6	20.0	20.5	20.7	20.7	21.3	20.2	20.9	22.4	22.2	23.2	22.5	25.1
Mathematics and statistics	5.9	7.6	9.1	9.7	10.0	10.5	10.9	11.8	11.5	10.6	10.8	10.8	10.2	11.2	10.7	11.6	11.5	11.7	13.1	12.5	12.6
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.3	0.4	0.9	0.9	1.7	1.7	2.1	2.4	2.9	3.2	3.8	4.2	4.9	5.3	5.0	5.9
Life sciences	21.0	24.6	29.6	32.6	33.7	35.8	36.4	37.4	35.8	37.2	38.3	40.6	41.2	43.4	43.7	44.8	47.2	49.8	49.7	48.1	54.2
Psychology	7.3	9.1	11.7	12.8	13.5	14.3	15.0	15.3	14.3	14.5	15.3	15.6	15.9	15.8	16.1	17.0	17.0	18.0	19.1	19.5	20.7
Social sciences	15.9	20.7	24.9	26.3	27.7	29.5	31.1	30.6	29.9	28.1	28.8	30.1	29.6	30.7	29.3	32.0	32.8	33.0	35.9	34.3	39.1
Engineering	8.7	10.7	12.4	13.7	13.9	15.3	15.9	15.8	15.7	15.3	16.6	16.6	16.8	16.8	16.2	17.6	17.7	18.5	21.8	20.6	24.6
Male, all fields	69.7	84.7	98.7	104.9	107.4	113.2	115.2	115.5	110.3	107.0	109.4	110.6	108.3	109.7	104.6	108.1	109.9	111.4	116.1	109.7	122.2

Table SLBR-26

Science, engineering, and health doctorate holders employed in academia, by type of position, sex, and degree field: 1973–2019

(Thousands)

Position, sex, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Physical sciences	14.7	17.4	19.0	19.4	20.0	20.6	20.3	20.3	19.5	18.8	18.9	19.0	18.6	18.9	17.6	17.9	18.9	18.2	18.6	17.9	19.7
Mathematics and statistics	5.6	7.2	8.6	9.1	9.3	9.8	10.0	10.8	10.5	9.8	10.0	9.7	9.1	9.9	9.2	9.6	9.4	9.9	10.4	10.0	9.8
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.3	0.4	0.8	0.8	1.4	1.3	1.6	2.0	2.4	2.6	3.1	3.5	3.9	4.3	4.0	4.8
Life sciences	19.5	22.7	26.9	29.1	29.4	31.0	31.0	31.4	29.3	29.3	30.0	31.1	30.4	30.9	30.4	30.2	31.0	32.2	30.4	29.2	32.6
Psychology	6.4	7.8	9.7	10.5	10.8	11.2	11.5	11.3	10.2	10.1	10.7	10.3	10.3	9.5	9.1	9.3	9.3	9.2	9.9	9.7	9.8
Social sciences	14.7	18.8	22.3	23.2	24.1	25.3	26.4	25.5	24.7	22.8	22.4	23.2	21.9	22.4	20.7	21.7	21.9	21.5	23.8	21.6	24.8
Engineering	8.7	10.7	12.2	13.6	13.7	15.1	15.7	15.4	15.3	14.8	16.1	15.8	15.9	15.7	15.0	16.3	16.0	16.5	18.8	17.5	21.0
Female, all fields	4.3	6.0	8.6	10.7	12.4	14.0	15.8	17.6	18.3	20.3	22.5	26.1	28.6	32.3	34.8	39.4	42.8	46.6	52.0	52.7	59.8
Physical sciences	0.5	0.6	0.7	0.8	0.9	1.0	1.1	0.9	1.1	1.2	1.5	1.9	2.1	2.4	2.7	3.1	3.6	4.0	4.6	4.6	5.5
Mathematics and statistics	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.0	0.8	0.8	1.1	1.1	1.3	1.4	1.9	2.1	1.8	2.7	2.6	2.8
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.5	0.4	0.5	0.6	0.6	0.7	0.9	1.0	1.0	1.1
Life sciences	1.5	1.9	2.7	3.5	4.3	4.8	5.4	6.1	6.5	7.8	8.3	9.5	10.8	12.5	13.3	14.6	16.2	17.5	19.3	18.9	21.6
Psychology	0.8	1.2	2.0	2.4	2.7	3.1	3.5	4.0	4.1	4.4	4.6	5.4	5.6	6.3	7.0	7.7	7.6	8.7	9.2	9.8	11.0
Social sciences	1.1	1.8	2.6	3.1	3.6	4.1	4.7	5.1	5.2	5.3	6.4	7.0	7.7	8.3	8.7	10.2	10.9	11.6	12.2	12.8	14.3
Engineering	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.4	0.3	0.5	0.5	0.8	0.9	1.1	1.2	1.3	1.7	2.0	3.0	3.1	3.7
Full-time junior faculty ^b																					
Both genders, all fields	29.3	34.9	34.6	32.8	37.2	37.2	38.7	40.1	43.8	44.0	42.2	43.1	45.4	48.6	53.7	51.6	54.1	56.4	59.5	61.1	64.8
Physical sciences	5.6	5.7	4.6	4.0	4.6	4.7	4.8	5.0	5.2	5.6	5.3	5.9	5.7	6.4	6.7	6.6	6.9	7.3	7.9	7.2	7.9
Mathematics and statistics	3.3	3.3	2.6	2.5	2.7	2.4	2.6	2.4	3.2	2.4	2.6	2.2	2.1	2.8	3.3	3.2	3.6	3.8	3.7	3.8	3.8
Computer and information sciences	NA	NA	0.2	0.3	0.6	0.6	0.9	1.0	1.4	1.2	1.2	1.1	0.9	1.3	1.7	1.9	1.5	1.5	1.9	2.1	2.8
Life sciences	8.5	10.3	11.3	10.8	11.9	12.3	12.8	13.7	15.0	15.6	15.2	15.5	17.1	18.3	19.1	18.7	19.5	20.8	21.1	22.0	23.0
Psychology	3.6	4.8	4.8	4.5	5.0	4.9	5.2	5.4	5.2	5.5	4.7	5.4	5.8	5.7	7.1	6.1	6.4	6.1	6.8	6.8	7.2
Social sciences	5.7	8.2	8.8	8.1	8.4	8.2	7.9	8.4	9.3	9.0	8.5	8.6	9.1	8.9	9.9	10.1	10.4	10.5	10.7	11.7	11.4
Engineering	2.6	2.7	2.3	2.7	4.0	4.0	4.3	4.3	4.5	4.8	4.7	4.3	4.8	5.1	5.9	5.1	5.7	6.5	7.4	7.6	8.8
Male, all fields	26.0	28.9	27.1	25.2	27.8	27.2	27.6	28.1	29.7	28.5	27.0	27.5	28.2	29.2	31.1	30.1	30.1	31.1	34.2	35.0	35.9
Physical sciences	5.2	5.2	4.1	3.5	3.9	4.1	4.1	4.1	4.2	4.1	3.9	4.5	4.2	4.9	4.9	4.8	4.9	5.3	5.6	5.1	5.7
Mathematics and statistics	3.1	2.9	2.2	2.2	2.3	2.0	2.2	2.2	2.7	2.0	2.0	1.6	1.5	2.0	2.3	2.3	2.5	2.4	2.3	2.6	2.6
Computer and information sciences	NA	NA	0.2	0.3	0.5	0.5	0.8	0.8	1.1	1.0	1.0	0.9	0.7	1.0	1.2	1.4	1.1	1.1	1.4	1.6	2.2
Life sciences	7.5	8.4	8.9	8.1	8.5	8.5	8.4	8.8	9.5	9.5	8.9	9.3	10.2	10.3	10.4	9.8	9.7	10.2	10.6	10.9	10.7
Psychology	2.7	3.3	3.0	2.6	2.7	2.7	2.9	3.0	2.3	2.4	1.8	2.4	2.3	2.3	2.6	2.4	2.2	2.0	2.5	2.4	2.4
Social sciences	5.0	6.5	6.5	5.9	6.0	5.6	5.2	5.3	5.9	5.5	5.3	5.1	5.2	4.5	5.0	5.6	5.7	5.4	5.9	6.5	5.8
Engineering	2.6	2.7	2.2	2.6	3.8	3.8	4.0	3.9	4.0	4.1	4.2	3.8	4.1	4.3	4.6	3.8	3.9	4.8	5.8	6.0	6.8
Female, all fields	3.3	6.0	7.5	7.7	9.4	10.0	11.2	12.0	14.1	15.6	15.2	15.6	17.2	19.3	22.6	21.5	23.9	25.3	25.3	26.1	28.9
Physical sciences	0.3	0.5	0.5	0.5	0.6	0.7	0.7	0.9	1.1	1.5	1.4	1.4	1.5	1.5	1.8	1.8	2.0	2.1	2.3	2.1	2.3
Mathematics and statistics	0.2	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.5	0.5	0.6	0.7	0.5	0.8	1.0	1.0	1.1	1.4	1.3	1.2	1.2

Table SLBR-26

Science, engineering, and health doctorate holders employed in academia, by type of position, sex, and degree field: 1973–2019

(Thousands)

Position, sex, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Computer and information sciences	NA	NA	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.4	0.5	0.4	0.3	0.5	0.5	0.7
Life sciences	1.1	1.9	2.4	2.7	3.4	3.8	4.5	4.9	5.5	6.1	6.3	6.2	6.9	8.0	8.7	8.9	9.8	10.6	10.5	11.1	12.3
Psychology	0.9	1.5	1.8	1.9	2.3	2.2	2.3	2.4	2.9	3.1	2.9	3.0	3.5	3.4	4.5	3.7	4.2	4.1	4.4	4.5	4.9
Social sciences	0.8	1.7	2.3	2.1	2.4	2.6	2.7	3.0	3.4	3.5	3.2	3.5	3.9	4.4	4.9	4.4	4.7	5.2	4.8	5.3	5.7
Engineering	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.7	0.6	0.5	0.7	0.8	1.3	1.3	1.8	1.6	1.6	1.6	2.0
Other full-time positions ^c																					
Both genders, all fields	7.6	8.8	12.6	13.4	18.1	16.4	19.2	20.2	22.2	23.9	29.1	31.9	34.8	39.9	40.6	43.9	48.2	55.8	62.6	64.2	65.8
Physical sciences	2.2	2.4	2.9	3.0	3.7	3.4	4.0	4.1	4.8	4.9	6.6	7.3	7.7	8.4	7.2	7.4	7.9	8.8	11.2	11.3	11.0
Mathematics and statistics	0.2	0.4	0.4	0.3	0.5	0.4	0.5	0.7	0.5	0.6	1.0	0.8	1.1	1.4	1.3	1.7	1.8	2.1	2.4	2.3	2.2
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.7	0.6	0.9	1.0	1.5	1.3	1.4	1.6
Life sciences	2.5	2.8	4.0	4.6	6.2	6.0	6.7	7.2	7.7	8.4	9.8	11.2	12.3	14.2	15.5	16.2	18.4	22.2	25.0	26.3	26.5
Psychology	0.8	1.2	2.2	2.2	2.9	2.8	2.9	2.8	3.9	3.9	4.3	4.6	4.9	6.3	6.5	6.8	7.1	6.9	7.9	7.4	7.8
Social sciences	1.0	1.2	2.0	2.2	3.2	2.6	3.5	3.5	3.7	3.6	4.0	4.4	4.7	5.0	6.1	6.2	6.9	7.7	8.3	8.0	9.2
Engineering	0.8	0.8	1.1	1.1	1.5	1.1	1.5	1.8	1.5	2.1	3.2	3.0	3.6	3.9	3.3	4.7	5.1	6.3	6.5	7.5	7.6
Male, all fields	6.5	7.4	10.0	10.3	14.3	12.0	13.9	14.4	15.4	16.1	19.5	22.4	23.1	26.0	25.6	26.2	28.1	32.3	35.2	35.9	35.5
Physical sciences	2.1	2.2	2.6	2.7	3.4	2.9	3.5	3.6	4.2	4.1	5.6	6.4	6.6	7.1	5.9	5.6	5.9	6.5	8.5	8.0	7.9
Mathematics and statistics	0.1	0.4	0.3	0.2	0.4	0.5	0.4	0.5	0.4	0.4	0.8	0.7	0.9	1.0	0.9	1.2	1.1	1.3	1.8	1.7	1.3
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.6	0.6	0.7	0.9	1.1	1.0	1.0	1.1
Life sciences	2.0	2.2	3.0	3.2	4.6	4.1	4.6	4.9	5.1	5.6	6.0	7.2	7.3	8.3	9.0	8.6	9.5	11.1	12.3	12.9	12.6
Psychology	0.7	0.9	1.4	1.4	1.8	1.6	1.5	1.2	1.9	1.7	1.9	2.2	2.1	2.6	2.8	2.6	2.7	2.5	2.4	2.6	2.5
Social sciences	0.8	0.9	1.6	1.7	2.5	1.8	2.4	2.4	2.2	2.1	2.2	2.7	2.7	3.1	3.5	3.3	3.7	4.3	4.1	3.9	4.6
Engineering	0.8	0.8	1.1	1.0	1.5	1.0	1.4	1.7	1.5	2.0	2.9	2.7	3.2	3.3	2.8	3.9	4.3	5.2	5.2	5.8	5.7
Female, all fields	1.1	1.4	2.6	3.1	3.8	4.5	5.3	5.8	6.7	7.7	9.4	9.6	11.6	13.9	15.0	17.7	20.1	23.5	27.5	28.3	30.3
Physical sciences	0.1	0.2	0.3	0.3	0.3	0.5	0.5	0.5	0.6	0.8	1.0	0.8	1.1	1.3	1.4	1.6	2.0	2.3	2.6	3.2	3.2
Mathematics and statistics	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.3	0.3	0.5	0.7	0.7	0.7	0.7	0.9
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.5
Life sciences	0.6	0.6	1.0	1.3	1.6	1.8	2.1	2.4	2.6	2.8	3.7	4.1	5.0	5.9	6.5	7.6	8.9	11.0	12.9	13.5	13.9
Psychology	0.2	0.3	0.8	0.8	1.1	1.3	1.4	1.6	2.0	2.2	2.4	2.5	2.8	3.5	3.7	4.2	4.4	4.4	5.4	4.9	5.4
Social sciences	0.2	0.2	0.4	0.5	0.7	0.8	1.1	1.1	1.5	1.5	1.8	1.7	1.9	1.9	2.6	2.9	3.2	3.3	4.2	3.9	4.6
Engineering	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.4	0.6	0.5	0.8	0.7	0.9	1.5	1.7	2.0
Postdoctorates																					
Both genders, all fields	4.2	7.6	8.5	8.3	8.7	9.3	11.5	9.9	13.3	16.8	18.9	18.5	17.5	15.7	23.3	17.8	22.8	20.2	19.2	18.4	18.6
Physical sciences	1.8	2.4	2.1	1.6	2.1	2.3	2.7	2.2	3.5	4.4	3.8	3.4	3.0	2.6	3.9	3.3	4.6	4.0	3.3	3.4	3.6
Mathematics and statistics	0.0	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.0	0.5	0.5	0.6	0.8	0.5	1.0	0.5	0.7	0.4	0.5	0.5	0.7
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.2

Table SLBR-26

Science, engineering, and health doctorate holders employed in academia, by type of position, sex, and degree field: 1973–2019

(Thousands)

Position, sex, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Life sciences	1.9	3.9	5.2	5.1	5.3	5.4	6.8	6.3	8.2	9.1	10.8	11.6	11.0	10.0	12.8	10.3	12.2	11.9	11.7	10.6	10.5
Psychology	0.2	0.5	0.6	0.6	0.7	0.7	0.8	0.5	0.4	1.1	1.3	1.2	1.2	0.9	1.7	1.0	1.1	1.0	0.8	0.7	0.8
Social sciences	0.1	0.3	0.3	0.6	0.3	0.1	0.4	0.3	0.2	0.4	0.7	0.5	0.6	0.5	0.9	0.3	0.8	0.4	0.4	0.6	0.5
Engineering	0.2	0.4	0.2	0.3	0.2	0.5	0.6	0.5	1.0	1.2	1.7	1.1	0.9	1.1	3.0	2.1	3.1	2.4	2.2	2.6	2.3
Male, all fields	3.5	6.1	6.3	5.8	6.0	6.8	8.2	6.8	9.2	11.1	12.1	11.2	10.5	9.8	13.8	10.8	13.8	12.0	11.0	10.9	10.7
Physical sciences	1.6	2.1	1.8	1.4	1.7	1.9	2.2	1.8	2.9	3.7	3.0	2.7	2.3	2.1	2.9	2.5	3.4	2.8	2.3	2.5	2.6
Mathematics and statistics	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.3	0.3	0.5	0.6	0.3	0.8	0.4	0.6	0.3	0.4	0.5	0.6
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.2
Life sciences	1.5	2.9	3.6	3.3	3.4	3.8	4.7	4.1	5.2	5.5	6.2	6.6	6.2	5.7	6.7	5.5	6.6	6.6	5.8	5.5	5.3
Psychology	0.1	0.4	0.5	0.3	0.4	0.3	0.4	0.3	0.1	0.3	0.6	0.2	0.4	0.4	0.5	0.4	0.4	0.2	0.3	0.3	0.3
Social sciences	0.1	0.2	0.1	0.4	0.2	0.1	0.2	0.2	0.1	0.2	0.5	0.3	0.3	0.3	0.4	0.1	0.4	0.2	0.2	0.2	0.2
Engineering	0.2	0.4	0.2	0.3	0.2	0.5	0.5	0.4	0.9	1.0	1.4	0.9	0.7	0.9	2.4	1.7	2.2	1.8	1.7	1.9	1.7
Female, all fields	0.6	1.6	2.2	2.5	2.6	2.6	3.3	3.0	4.1	5.7	6.8	7.3	6.9	6.0	9.5	7.0	8.9	8.2	8.2	7.5	7.8
Physical sciences	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.7	0.7	0.7	0.8	0.7	0.5	1.0	0.8	1.2	1.2	1.0	0.9	1.1
Mathematics and statistics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	s	0.1
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	s	0.1	s	0.1	0.1	s
Life sciences	0.4	1.1	1.6	1.8	1.8	1.8	2.2	2.3	3.0	3.7	4.6	5.1	4.7	4.3	6.1	4.8	5.6	5.2	5.8	5.0	5.2
Psychology	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.3	0.3	0.7	0.8	0.9	0.8	0.5	1.1	0.6	0.7	0.8	0.5	0.4	0.5
Social sciences	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.5	0.2	0.5	0.2	0.2	0.4	0.4
Engineering	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.6	0.4	0.8	0.6	0.5	0.8	0.6
Part-time positions ^d																					
Both genders, all fields	2.9	3.4	4.0	6.0	6.5	5.7	6.2	7.4	5.9	5.5	8.9	8.2	9.0	13.3	15.7	15.6	17.0	18.5	19.8	20.6	19.3
Physical sciences	0.7	0.7	0.7	1.1	1.1	0.8	0.7	1.2	1.0	0.9	1.2	1.0	1.0	1.1	1.5	1.6	2.0	2.5	2.8	2.6	2.3
Mathematics and statistics	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.7	0.7	0.6	0.9	1.2	1.0	1.1	1.1	1.2	1.6	1.4
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.3	0.3	0.3	0.4
Life sciences	0.9	1.0	1.2	1.7	1.7	1.6	1.9	2.3	1.6	1.2	2.9	2.6	2.4	4.0	4.4	4.3	4.6	5.2	5.2	5.7	5.7
Psychology	0.4	0.6	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.1	1.1	1.3	1.8	3.2	3.6	3.7	3.8	4.2	4.1	3.6	3.3
Social sciences	0.7	0.8	1.0	1.6	2.2	1.8	1.7	2.0	1.3	1.3	2.6	2.2	2.7	3.1	3.7	4.0	4.0	4.2	4.4	5.4	4.7
Engineering	0.1	0.1	0.2	0.4	0.3	0.3	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.8	1.1	0.9	1.2	1.1	1.8	1.5	1.7
Male, all fields	1.5	1.8	1.9	3.5	3.6	2.7	3.1	3.8	2.3	2.4	4.4	3.4	3.8	6.1	7.6	7.0	7.6	8.0	9.5	9.7	8.8
Physical sciences	0.4	0.5	0.4	0.9	0.7	0.5	0.4	0.8	0.7	0.7	0.8	0.7	0.6	0.7	1.1	1.1	1.3	1.7	1.9	1.8	1.2
Mathematics and statistics	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.3	0.3	0.4	0.3	0.6	0.9	0.6	0.7	0.7	0.8	0.8	1.0
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	s	0.2	s	0.2	0.3	0.2
Life sciences	0.4	0.4	0.4	0.7	0.7	0.5	0.8	1.0	0.4	0.3	1.3	0.8	0.7	1.3	1.5	1.4	1.8	1.6	1.6	1.6	1.9
Psychology	0.1	0.2	0.3	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.3	0.3	0.3	0.8	0.9	1.0	1.0	1.2	1.3	1.1	1.0

Table SLBR-26

Science, engineering, and health doctorate holders employed in academia, by type of position, sex, and degree field: 1973–2019

(Thousands)

Position, sex, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Social sciences	0.4	0.4	0.5	1.1	1.4	1.0	0.8	1.2	0.5	0.7	1.4	1.0	1.4	1.7	2.2	2.3	1.8	2.0	2.4	3.2	2.4
Engineering	0.1	0.1	0.2	0.3	0.3	0.3	0.5	0.5	0.4	0.3	0.2	0.2	0.4	0.7	1.0	0.6	0.8	0.6	1.3	1.1	1.3
Female, all fields	1.4	1.6	2.1	2.5	2.9	3.0	3.1	3.5	3.6	3.1	4.5	4.9	5.1	7.3	8.1	8.6	9.4	10.5	10.3	10.9	10.5
Physical sciences	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.2	0.4	0.4	0.3	0.4	0.5	0.5	0.7	0.8	1.0	0.9	1.1
Mathematics and statistics	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.7	0.5
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	s	0.1	0.1	0.1	0.1	0.2
Life sciences	0.5	0.6	0.7	0.9	1.0	1.1	1.1	1.3	1.2	0.9	1.6	1.8	1.7	2.7	3.0	2.9	2.9	3.6	3.5	4.0	3.8
Psychology	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.9	1.1	1.0	0.8	1.0	1.5	2.4	2.8	2.7	2.8	3.0	2.8	2.5	2.3
Social sciences	0.3	0.3	0.5	0.5	0.9	0.8	0.8	0.8	0.8	0.7	1.2	1.2	1.3	1.4	1.5	1.7	2.2	2.2	2.0	2.3	2.3
Engineering	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.5	0.4	0.4	0.5

NA = not available; s = suppressed for reasons of confidentiality and/or reliability.

^a Full-time senior faculty include full professors and associate professors.^b Full-time junior faculty include assistant professors and instructors from 1973 to 1995; from 1997 to 2019, full-time junior faculty include assistant professors.^c Other full-time positions include those such as research associates, adjunct positions, lecturers, and administrative positions from 1973 to 1995; from 1997 to 2019, other full-time positions also include instructors.^d Part-time positions exclude those employed part time because they are students or retired.**Note(s):**

Detail may not add to total because of rounding. Academic employment is limited to U.S. doctorate holders employed at 2- or 4-year colleges or universities, medical schools, and university research institutes. Physical sciences include earth, atmospheric, and ocean sciences; life sciences include biological, agricultural, and environmental life and health sciences.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients (SDR).

Science and Engineering Indicators

Table SLBR-27

Employed scientists and engineers, by race or ethnicity and occupation: 2019

(Thousands and percent)

Occupation	Total	Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All occupations	28,627	3,869	13.5	89	0.3	2,065	7.2	2,646	9.2	19,225	67.2	82	0.3	650	2.3
S&E occupations	7,466	1,543	20.7	s	s	379	5.1	564	7.6	4,784	64.1	17	0.2	158	2.1
Computer and mathematical scientists	3,774	955	25.3	s	s	214	5.7	238	6.3	2,259	59.9	6	0.2	88	2.3
Computer and information scientists	3,379	877	26.0	s	s	188	5.6	210	6.2	2,000	59.2	6	0.2	83	2.5
Computer and information scientists, research	90	27	30.7	s	s	3	3.4	6	6.7	52	57.9	s	s	s	s
Computer network architects	40	10	25.8	s	s	5	12.6	1	3.6	23	58.0	s	s	s	s
Computer support specialists	294	31	10.7	s	s	29	9.9	25	8.7	200	68.0	s	s	s	s
Computer system analysts	362	106	29.2	s	s	24	6.6	28	7.8	196	54.3	s	s	7	2.0
Database administrators	129	25	19.3	s	s	6	4.5	10	8.0	82	64.0	s	s	s	s
Information security analysts	113	12	10.4	s	s	19	16.8	12	10.7	57	50.3	s	s	13	11.7
Network and computer systems administrators	192	14	7.2	s	s	21	10.8	14	7.1	138	71.7	s	s	6	2.9
Software developers—applications and systems software	683	216	31.7	s	s	20	2.9	33	4.9	396	58.0	1	0.1	16	2.4
Web developers	147	25	17.1	s	s	5	3.2	13	8.9	101	68.3	s	s	4	2.5
Other computer information science occupations	432	64	14.8	s	s	24	5.7	22	5.1	297	68.7	s	s	13	3.1
Computer engineers—software	897	346	38.6	s	s	33	3.6	44	4.9	459	51.1	s	s	13	1.5
Mathematical scientists	284	55	19.4	s	s	s	s	20	7.2	183	64.3	s	s	3	0.9
Mathematicians	9	2	21.4	s	s	s	s	s	s	5	53.0	s	s	s	s
Operations research analysts, including modeling	182	31	17.1	s	s	s	s	14	7.9	117	64.4	s	s	2	1.2
Statisticians	67	18	26.3	s	s	s	s	5	7.6	40	60.5	s	s	s	s
Other mathematical scientists	26	4	s	s	s	1	s	s	s	20	77.8	s	s	s	s
Postsecondary teachers—computer and mathematical sciences	111	23	20.6	s	s	3	3.0	7	6.2	76	68.3	s	s	2	1.8
Computer sciences	30	8	27.5	s	s	1	3.4	4	12.2	17	55.1	s	s	1	1.8
Mathematics and statistics	81	15	18.0	s	s	2	2.8	3	4.0	59	73.3	s	s	1	1.8
Biological, agricultural, and environmental life scientists	698	157	22.5	1	0.1	23	3.3	64	9.1	439	62.9	s	s	14	1.9
Agricultural and food scientists	58	9	15.7	s	s	2	3.5	10	17.1	36	62.5	s	s	s	s
Biological and medical scientists	500	130	26.0	s	s	18	3.6	40	7.9	300	60.0	s	s	12	2.4
Biochemists and biophysicists	92	28	30.1	s	s	1	1.5	7	7.1	55	59.4	s	s	2	1.9
Biological scientists (e.g., botanists, ecologists, zoologists)	145	28	19.1	s	s	1	0.9	15	10.1	98	68.1	s	s	2	1.5
Medical scientists (excluding practitioners)	160	45	28.0	s	s	7	4.5	12	7.4	92	57.5	s	s	4	2.4
Other biological and life scientists	104	30	28.8	s	s	8	7.7	7	6.4	55	52.8	s	s	4	4.2
Forestry and conservation scientists	39	s	s	s	s	s	s	s	s	29	74.3	s	s	s	s
Postsecondary teachers—life and related sciences	101	18	17.4	s	s	2	2.4	7	6.6	74	73.1	s	s	s	s
Agriculture	9	s	s	s	s	s	s	s	s	6	66.8	s	s	s	s

Table SLBR-27

Employed scientists and engineers, by race or ethnicity and occupation: 2019

(Thousands and percent)

Occupation	Total	Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Biological sciences	85	15	18.0	s	s	2	2.3	5	6.0	62	73.5	s	s	s	s
Other natural sciences	7	s	s	s	s	s	s	s	s	6	75.9	s	s	s	s
Physical and related scientists	409	55	13.5	1	0.2	18	4.4	27	6.7	300	73.3	s	s	7	1.7
Chemists, except biochemists	132	19	14.4	s	s	7	4.9	9	6.9	95	71.8	s	s	s	s
Earth scientists, geologists, and oceanographers	85	5	6.2	s	s	s	s	3	3.8	74	87.7	s	s	1	1.5
Atmospheric and space scientists	21	3	12.6	s	s	s	s	1	2.4	17	80.8	s	s	s	s
Geologists, including earth scientists and oceanographers	63	3	4.0	s	s	s	s	3	4.3	57	90.1	s	s	1	1.1
Physicists and astronomers	45	11	23.4	s	s	s	s	2	4.5	29	65.1	s	s	s	s
Other physical and related scientists	67	5	6.8	s	s	6	9.6	7	10.7	47	70.1	s	s	s	s
Postsecondary teachers—physical and related sciences	80	16	19.7	s	s	3	3.6	6	7.4	54	67.8	s	s	s	s
Chemistry	25	8	33.7	s	s	1	4.0	2	9.1	12	50.2	s	s	s	s
Earth, environmental, and marine sciences	32	1	s	s	s	s	s	2	s	28	86.2	s	s	s	s
Physics	23	7	30.2	s	s	s	s	1	5.6	14	60.8	s	s	s	s
Social and related scientists	663	44	6.7	s	s	47	7.1	77	11.6	480	72.4	2	0.3	12	1.8
Economists	56	8	14.2	s	s	2	3.4	5	8.7	40	72.0	s	s	s	s
Political scientists	22	s	s	s	s	s	s	1	5.7	18	81.3	s	s	s	s
Psychologists, including clinical	228	7	3.2	s	s	13	5.5	21	9.2	183	80.3	s	s	3	1.4
Sociologists and anthropologists	16	s	s	s	s	s	s	1	7.4	12	79.3	s	s	s	s
Other social and related scientists	142	11	7.7	s	s	12	8.7	33	23.2	81	57.4	s	s	4	2.5
Postsecondary teachers—social and related sciences	200	17	8.4	s	s	17	8.7	15	7.7	145	72.7	s	s	4	2.2
Economics	21	3	13.8	s	s	s	s	1	4.9	16	74.0	s	s	s	s
Political science	22	1	6.6	s	s	3	12.1	1	4.8	16	73.1	s	s	s	s
Psychology	48	3	6.5	s	s	1	2.3	3	6.7	39	80.3	s	s	2	4.2
Sociology	18	2	12.0	s	s	2	10.1	1	s	13	70.2	s	s	s	s
Other social sciences	90	s	s	s	s	10	11.3	9	9.9	62	68.8	s	s	1	1.4
Engineers	1,921	331	17.2	5	0.2	77	4.0	159	8.3	1,305	67.9	s	s	37	1.9
Aerospace, aeronautical, or astronautical engineers	126	17	13.6	s	s	3	2.5	13	10.3	88	70.0	s	s	2	1.8
Chemical engineers	84	14	16.4	s	s	5	5.4	4	4.6	60	72.2	s	s	s	s
Civil, architectural, or sanitary engineers	294	40	13.6	s	s	12	4.1	30	10.2	208	70.8	s	s	3	1.1
Electrical or computer hardware engineers	412	110	26.8	s	s	22	5.4	30	7.3	237	57.5	s	s	7	1.6
Computer engineers—hardware	85	27	31.4	s	s	8	9.6	5	6.2	44	51.6	s	s	s	s
Electrical and electronics engineers	327	84	25.6	s	s	14	4.3	25	7.6	193	59.1	s	s	6	1.9
Industrial engineers	95	11	11.9	s	s	5	5.1	13	14.0	64	67.3	s	s	1	1.4

Table SLBR-27

Employed scientists and engineers, by race or ethnicity and occupation: 2019

(Thousands and percent)

Occupation	Total	Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Mechanical engineers	377	60	15.9	s	s	8	2.2	28	7.5	273	72.4	s	s	6	1.6
Other engineers	472	60	12.8	s	s	17	3.6	37	7.9	340	72.0	s	s	15	3.2
Bioengineers or biomedical engineers	39	8	20.1	s	s	2	4.8	2	5.8	27	67.5	s	s	1	1.6
Environmental engineers	58	6	9.6	s	s	1	1.7	3	5.1	47	81.3	s	s	s	s
Marine engineers and naval architects	9	s	s	s	s	s	s	s	s	8	85.5	s	s	s	s
Materials and metallurgical engineers	41	4	10.0	s	s	2	3.9	s	s	31	75.9	s	s	s	s
Nuclear engineers	12	1	4.9	s	s	s	s	s	s	8	65.9	s	s	s	s
Petroleum engineers	22	1	6.2	s	s	s	s	1	6.6	18	83.9	s	s	s	s
Sales engineers	114	9	8.2	s	s	5	4.0	10	9.1	83	73.0	s	s	5	4.5
Other engineers, including agricultural, mining, and geological	178	31	17.4	s	s	6	3.6	14	7.9	118	66.6	s	s	8	4.2
Postsecondary teachers—engineering	61	18	30.3	s	s	s	s	3	4.5	34	55.6	s	s	1	2.0
S&E-related occupations	8,893	1,151	12.9	29	0.3	613	6.9	821	9.2	6,053	68.1	30	0.3	198	2.2
Health-related occupations	5,728	754	13.2	23	0.4	399	7.0	491	8.6	3,895	68.0	25	0.4	139	2.4
Diagnosing or treating practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians)	1,269	227	17.9	s	s	50	4.0	130	10.2	823	64.9	s	s	30	2.4
Registered nurses, pharmacists, dietitians, therapists, physician assistants, nurse practitioners	2,875	342	11.9	s	s	169	5.9	236	8.2	2,035	70.8	s	s	60	2.1
Health technologists and technicians (e.g., dental hygienists, health record technicians, licensed practical nurses, laboratory or radiology technicians)	574	69	12.0	s	s	63	10.9	31	5.4	388	67.7	s	s	22	3.8
Other health occupations	815	87	10.7	2	0.2	110	13.5	83	10.2	505	62.0	s	s	27	3.3
Postsecondary teachers—health and related sciences	196	28	14.2	s	s	8	3.9	13	6.5	144	73.5	s	s	s	s
S&E managers	999	135	13.5	s	s	70	7.0	99	9.9	679	68.0	s	s	14	1.4
Computer and information systems managers	237	62	26.3	s	s	12	4.9	21	8.9	139	58.7	s	s	3	1.1
Engineering managers	364	38	10.4	s	s	13	3.7	40	11.0	267	73.3	s	s	4	1.0
Medical and health services managers	324	28	8.7	s	s	43	13.2	33	10.0	215	66.3	s	s	5	1.7
Natural sciences managers	74	7	9.6	s	s	2	2.9	s	s	58	78.8	s	s	2	2.3
S&E precollege teachers	925	34	3.7	1	0.1	54	5.8	95	10.2	719	77.8	1	0.1	21	2.3
Secondary—computer, mathematics, or sciences	668	30	4.5	1	0.1	39	5.9	74	11.1	510	76.3	s	s	s	s
Secondary—social sciences	257	s	s	s	s	14	5.6	21	8.1	209	81.5	s	s	s	s
S&E technicians and technologists	973	189	19.4	3	0.3	84	8.6	115	11.8	560	57.6	s	s	20	2.0
Technologists and technicians in the biological and life sciences	125	30	23.7	s	s	7	5.9	25	19.7	62	49.3	s	s	2	1.3
Computer programmers (business, scientific, process control)	125	30	24.4	s	s	8	6.5	s	s	80	64.3	s	s	s	s
Electrical, electronic, industrial, and mechanical technicians	325	60	18.4	s	s	36	11.0	33	10.0	191	58.8	s	s	3	1.0

Table SLBR-27

Employed scientists and engineers, by race or ethnicity and occupation: 2019

(Thousands and percent)

Occupation	Total	Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Other postsecondary fields	60	s	s	s	s	4	6.3	4	6.3	47	78.1	s	s	1	1.5
Social services and related occupations	1,057	54	5.1	8	0.7	159	15.1	134	12.7	666	63.0	s	s	35	3.3
Clergy and other religious workers	142	13	8.9	s	s	5	3.6	12	8.4	111	78.2	s	s	s	s
Counselors (e.g., educational, vocational, mental health, substance abuse)	457	19	4.3	6	1.3	68	14.9	55	12.0	286	62.6	s	s	22	4.9
Social workers	458	22	4.8	s	s	86	18.8	67	14.6	269	58.8	s	s	13	2.8
Sales and marketing occupations	1,444	144	10.0	2	0.1	81	5.6	146	10.1	1,032	71.5	s	s	32	2.2
Insurance, securities, real estate, and business services	365	31	8.6	s	s	23	6.4	35	9.7	260	71.4	s	s	9	2.5
Sales—commodities except retail (e.g., industrial, medical, dental machinery, equipment, supplies)	235	10	4.4	s	s	3	1.2	16	6.7	197	84.0	s	s	s	s
Sales—retail (e.g., furnishings, clothing, motor vehicles, cosmetics)	328	34	10.3	s	s	25	7.6	41	12.6	221	67.3	s	s	7	2.1
Other marketing and sales occupations	517	68	13.2	s	s	30	5.8	54	10.4	354	68.4	s	s	10	2.0
Arts, humanities, and related occupations	305	24	7.9	s	s	11	3.5	21	7.0	236	77.5	s	s	11	3.8
Writers, editors, public relations specialists, artists, entertainers, broadcasters	302	24	7.9	s	s	11	3.6	21	7.1	234	77.4	s	s	11	3.8
Historians	3	s	s	s	s	s	s	s	s	s	s	s	s	s	s
Other non-S&E occupations	3,810	347	9.1	9	0.2	389	10.2	453	11.9	2,493	65.4	8	0.2	110	2.9
Accounting clerks and bookkeepers	214	28	13.2	s	s	8	3.8	24	11.4	152	70.7	s	s	1	0.6
Secretaries, receptionists, typists	223	22	9.7	s	s	25	11.0	26	11.5	146	65.4	s	s	5	2.2
Other administrative (e.g., record clerks, telephone operators)	633	70	11.1	s	s	96	15.2	107	16.9	322	50.8	s	s	32	5.1
Farmers, foresters, and fishermen	116	1	0.9	s	s	2	1.7	5	4.1	104	89.4	s	s	4	s
Lawyers, judges	614	38	6.2	s	s	38	6.2	50	8.2	471	76.8	s	s	14	2.3
Librarians, archivists, curators	85	10	11.7	s	s	7	7.7	4	5.2	59	69.4	s	s	s	s
Food preparation and service (e.g., cooks, waitresses, bartenders)	226	s	s	s	s	16	7.3	27	12.2	133	59.0	s	s	4	1.9
Protective services (e.g., firefighters, police, guards, wardens, park rangers)	185	13	6.9	s	s	24	13.1	21	11.6	121	65.1	s	s	5	2.9
Other service occupations, except health (e.g., probation officer, human services work)	477	33	7.0	s	s	65	13.6	70	14.6	299	62.6	s	s	8	1.6
Other teachers and instructors (e.g., private tutors, dance, flying, martial arts)	239	31	12.9	s	s	30	12.7	29	12.0	141	59.0	s	s	7	3.1
Construction and extraction occupations	58	s	s	s	s	6	11.1	9	16.0	37	63.5	s	s	1	s
Installation, maintenance, and repair occupations	113	6	5.7	s	s	8	6.8	21	18.5	77	68.3	s	s	s	s
Precision or production occupations (e.g., metal or wood workers, butchers, bakers, assemblers, tailors)	157	16	10.3	s	s	17	10.9	13	8.2	110	69.7	s	s	s	s
Transportation and material moving occupations	249	19	7.5	s	s	28	11.3	21	8.3	174	69.8	s	s	7	2.6
Other occupations	221	12	5.3	s	s	18	8.4	26	11.6	150	67.9	s	s	15	6.6

s = suppressed for reasons of confidentiality and/or reliability.

STEM = science, technology, engineering, and mathematics.

Note(s):

Scientists and engineers include those with one or more S&E or S&E-related degrees at the bachelor's level or higher or those who have only a non-S&E degree at the bachelor's level or higher and are employed in an S&E or S&E-related occupation. Hispanic or Latino may be any race; race categories exclude Hispanic or Latino origin. Detail may not add to total because of rounding. Non-S&E occupations include middle-skill and non-STEM occupations.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-28

Employed S&E highest degree holders, by race or ethnicity and field of degree: 2019

(Thousands and percent)

Highest degree field	Total	Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All S&E degrees	15,362	2,457	16.0	35	0.2	1,035	6.7	1,453	9.5	10,004	65.1	42	0.3	336	2.2
Computer and mathematical sciences	2,837	699	24.6	s	s	217	7.6	187	6.6	1,657	58.4	11	0.4	64	2.3
Computer and information sciences	2,203	580	26.3	s	s	185	8.4	145	6.6	1,235	56.0	s	s	55	2.5
Computer and information sciences, general	350	100	28.7	s	s	45	12.7	37	10.6	157	44.9	s	s	10	3.0
Computer sciences	1,218	378	31.1	s	s	79	6.5	59	4.9	674	55.3	s	s	24	2.0
Computer systems analysis	46	9	19.2	s	s	s	s	4	7.8	31	66.9	s	s	s	s
Information services and systems	437	79	18.1	s	s	36	8.2	35	8.0	272	62.2	s	s	15	3.5
Other computer and information sciences	152	13	8.6	s	s	22	14.5	10	6.5	102	66.7	s	s	5	3.6
Mathematics and statistics	634	119	18.8	s	s	32	5.1	42	6.6	422	66.6	9	1.4	10	1.5
Applied mathematics	76	17	22.7	s	s	s	s	11	13.9	43	56.3	s	s	s	s
Mathematics, general	397	55	13.9	s	s	22	5.5	22	5.7	291	73.4	s	s	5	1.4
Operations research	42	7	16.7	s	s	s	s	1	3.0	33	77.5	s	s	s	s
Statistics	98	38	38.3	s	s	s	s	4	3.6	50	50.8	s	s	s	s
Other mathematics	21	2	9.6	s	s	s	s	s	s	5	26.2	s	s	s	s
Biological, agricultural, and environmental life sciences	2,437	347	14.2	3	0.1	133	5.5	216	8.9	1,683	69.1	3	0.1	51	2.1
Agricultural and food sciences	266	23	8.7	s	s	8	2.9	19	7.2	212	79.7	s	s	s	s
Animal sciences	115	s	s	s	s	4	3.4	5	4.2	97	84.8	s	s	s	s
Food sciences and technology	37	6	15.1	s	s	1	3.5	s	s	26	70.6	s	s	s	s
Plant sciences	79	9	11.3	s	s	2	2.2	7	8.6	61	77.6	s	s	s	s
Other agricultural sciences	36	3	8.6	s	s	s	s	s	s	28	77.3	s	s	s	s
Biological sciences	1,867	315	16.9	2	0.1	114	6.1	166	8.9	1,224	65.6	s	s	42	2.3
Biochemistry and biophysics	169	46	27.2	s	s	8	5.0	13	7.9	98	57.9	s	s	3	2.0
Biology, general	870	109	12.6	1	0.1	65	7.4	85	9.7	586	67.4	s	s	22	2.6
Botany	16	3	19.3	s	s	s	s	s	s	10	63.6	s	s	s	s
Cell and molecular biology	119	41	34.6	s	s	2	1.8	11	9.4	60	50.6	s	s	4	3.4
Ecology	102	3	2.5	s	s	12	12.1	3	3.1	80	78.0	s	s	4	4.3
Genetics, animal and plant	25	4	15.0	s	s	s	s	2	7.8	18	71.7	s	s	s	s
Microbiological sciences and immunology	127	23	17.7	s	s	5	3.6	17	13.5	81	64.0	s	s	s	s
Nutritional sciences	89	9	9.7	s	s	s	s	5	5.1	68	76.6	s	s	s	s
Pharmacology, human and animal	20	5	25.1	s	s	s	s	1	3.5	11	55.3	s	s	s	s
Physiology and pathology, human and animal	78	23	28.9	s	s	3	3.6	7	9.3	44	55.8	s	s	s	s
Zoology, general	81	14	17.6	s	s	3	3.2	2	2.6	61	75.7	s	s	s	s
Other biological sciences	172	36	21.2	s	s	8	4.6	18	10.4	107	62.6	s	s	s	s
Environmental life sciences	303	8	2.7	s	s	11	3.7	31	10.1	246	81.2	s	s	6	1.9

Table SLBR-28

Employed S&E highest degree holders, by race or ethnicity and field of degree: 2019

(Thousands and percent)

Highest degree field	Total	Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Environmental science or studies	243	8	3.2	s	s	11	4.4	30	12.3	189	77.9	s	s	4	1.8
Forestry sciences	60	1	1.0	s	s	s	s	s	s	57	94.3	s	s	s	s
Physical and related sciences	889	135	15.2	3	0.3	35	4.0	53	5.9	642	72.2	s	s	20	2.3
Chemistry, except biochemistry	400	78	19.4	1	0.2	25	6.3	28	6.9	260	64.9	s	s	9	2.2
Earth, atmospheric, and ocean sciences	249	8	3.2	s	s	s	s	10	4.1	219	87.9	s	s	6	2.4
Atmospheric sciences and meteorology	21	2	10.1	s	s	s	s	s	s	18	85.2	s	s	1	3.1
Earth sciences	61	2	2.7	s	s	s	s	s	s	54	88.3	s	s	s	s
Geology	111	2	1.6	s	s	s	s	4	3.5	99	89.6	s	s	5	4.2
Geological sciences, other	56	3	4.6	s	s	s	s	s	s	48	85.1	s	s	s	s
Physics and astronomy	220	47	21.2	s	s	5	2.2	14	6.5	149	67.7	s	s	5	2.1
Astronomy and astrophysics	18	2	13.2	s	s	s	s	1	s	13	71.5	s	s	s	s
Physics	202	44	21.9	s	s	5	2.3	13	6.6	136	67.4	s	s	3	1.5
Other physical sciences	20	s	s	s	s	s	s	s	s	14	70.5	s	s	s	s
Social and related sciences	5,474	383	7.0	20	0.4	494	9.0	636	11.6	3,782	69.1	16	0.3	143	2.6
Economics	856	108	12.6	s	s	52	6.1	56	6.5	620	72.5	s	s	16	1.8
Agricultural economics	50	1	2.2	s	s	s	s	4	8.0	43	87.6	s	s	s	s
Economics	806	107	13.2	s	s	51	6.4	52	6.4	577	71.6	s	s	16	1.9
Political and related sciences	971	62	6.4	3	0.3	71	7.4	123	12.7	675	69.5	s	s	33	3.4
Public policy studies	75	5	6.6	s	s	4	5.6	7	9.6	56	75.0	s	s	2	2.0
International relations	173	18	10.4	s	s	12	7.0	22	13.0	110	63.3	s	s	10	5.5
Political science and government	722	39	5.4	s	s	55	7.6	93	12.9	509	70.4	s	s	22	3.0
Psychology	2,221	111	5.0	7	0.3	225	10.1	296	13.3	1,514	68.2	5	0.2	63	2.9
Educational psychology	142	12	8.7	s	s	10	7.1	22	15.2	96	67.7	s	s	1	0.9
Clinical psychology	261	9	3.5	s	s	26	9.9	34	12.9	182	69.8	s	s	9	3.6
Counseling psychology	358	10	2.9	s	s	48	13.3	38	10.7	249	69.5	s	s	11	3.1
Experimental psychology	43	s	s	s	s	s	s	3	6.4	33	75.7	s	s	s	s
General psychology	993	47	4.7	5	0.5	77	7.8	149	15.0	686	69.1	s	s	26	2.6
Industrial and organizational psychology	91	4	4.0	s	s	12	12.9	8	8.9	62	68.7	s	s	s	s
Social psychology	99	7	7.2	s	s	8	7.7	15	15.0	65	65.9	s	s	4	3.9
Other psychology	234	17	7.4	s	s	43	18.3	27	11.7	140	59.9	s	s	6	2.4
Sociology and anthropology	829	45	5.4	s	s	95	11.4	98	11.9	560	67.6	s	s	22	2.7
Anthropology and archaeology	177	6	3.6	s	s	11	6.5	14	7.9	138	77.9	s	s	7	4.0
Criminology	71	2	3.2	s	s	2	3.3	21	29.8	42	59.7	s	s	s	s
Sociology	581	36	6.2	s	s	81	13.9	63	10.9	381	65.5	s	s	12	2.1

Table SLBR-28

Employed S&E highest degree holders, by race or ethnicity and field of degree: 2019

(Thousands and percent)

Highest degree field	Total	Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Other social sciences	598	58	9.7	3	0.5	51	8.5	64	10.6	412	68.9	s	s	9	1.5
Area and ethnic studies	125	14	11.4	s	s	15	12.3	22	17.9	68	54.8	s	s	3	2.3
Linguistics	84	10	12.1	s	s	s	s	9	11.0	56	66.7	s	s	s	s
Philosophy of science	51	s	s	s	s	s	s	s	s	s	s	s	s	s	s
Geography	128	13	10.3	s	s	3	2.7	8	6.1	102	79.6	s	s	2	1.2
Other social sciences	210	14	6.9	s	s	15	7.3	24	11.5	150	71.5	s	s	4	1.7
Engineering	3,725	893	24.0	7	0.2	155	4.2	362	9.7	2,240	60.1	11	0.3	57	1.5
Aerospace, aeronautical, and astronautical engineering	142	21	14.7	s	s	5	3.9	8	5.4	107	75.3	s	s	1	0.7
Chemical engineering	246	47	19.0	s	s	7	3.0	22	9.1	164	66.9	s	s	5	1.9
Civil and architectural engineering	544	91	16.8	s	s	21	3.8	64	11.8	361	66.4	1	0.1	5	0.9
Architectural engineering	20	3	15.6	s	s	s	s	2	11.8	13	65.0	s	s	s	s
Civil engineering	524	88	16.9	s	s	20	3.8	62	11.8	348	66.4	1	0.1	4	0.8
Electrical and computer engineering	1,289	463	35.9	s	s	64	5.0	123	9.5	613	47.6	7	0.5	15	1.2
Computer and systems engineering	390	150	38.5	s	s	21	5.5	39	9.9	175	44.7	s	s	4	1.0
Electrical, electronics, and communications engineering	899	313	34.9	s	s	43	4.8	84	9.3	439	48.8	6	0.7	11	1.3
Industrial and manufacturing engineering	214	42	19.5	s	s	11	5.3	41	19.0	116	54.1	s	s	s	s
Mechanical engineering	739	138	18.7	s	s	22	2.9	63	8.5	498	67.5	1	0.1	15	2.0
Other engineering	552	91	16.4	s	s	24	4.4	42	7.5	381	69.0	s	s	12	2.2
Agricultural engineering	25	1	5.9	s	s	s	s	s	s	21	84.1	s	s	s	s
Bioengineering and biomedical engineering	83	21	25.7	s	s	4	4.8	9	10.3	48	57.3	s	s	1	1.7
Engineering sciences, mechanics, and physics	33	6	19.8	s	s	s	s	1	3.4	23	69.5	s	s	s	s
Environmental engineering	71	9	12.8	s	s	s	s	5	7.2	53	75.0	s	s	2	2.3
Engineering, general	43	5	12.4	s	s	s	s	2	4.5	32	73.8	s	s	1	1.7
Materials engineering, including ceramics and textiles	70	17	23.7	s	s	s	s	2	3.1	49	70.3	s	s	s	s
Metallurgical engineering	16	1	4.9	s	s	s	s	s	s	13	84.6	s	s	s	s
Nuclear engineering	21	1	4.7	s	s	s	s	2	8.3	13	61.1	s	s	s	s
Other engineering	191	29	15.0	s	s	9	4.8	18	9.3	129	67.9	s	s	s	s

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Hispanic or Latino may be any race; race categories exclude Hispanic or Latino origin. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Table SLBR-29

S&E doctorate holders employed in academia, by type of position, race or ethnicity, and degree field: 1973–2019

(Thousands)

Position, race or ethnicity, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
All positions																					
All races or ethnicities, all fields	118.0	145.4	167.1	176.1	190.2	195.9	206.6	210.6	213.8	217.5	232.5	240.2	245.5	259.5	272.8	276.5	294.8	309.0	329.3	326.6	350.4
Physical sciences	25.5	29.2	29.9	29.9	32.2	32.8	33.6	33.8	35.0	35.8	37.5	38.7	38.6	39.9	39.6	39.9	43.7	44.9	48.4	46.9	49.8
Mathematics and statistics	9.7	11.7	12.4	12.9	13.6	13.8	14.5	15.2	15.5	14.6	15.6	15.2	14.9	16.7	17.3	18.0	18.7	19.0	20.9	20.6	20.6
Computer and information sciences	NA	NA	0.3	0.5	0.8	1.1	1.5	2.0	2.5	3.1	3.3	3.7	3.8	5.2	5.8	6.9	7.3	8.4	9.1	8.9	10.8
Life sciences	34.9	42.6	51.3	54.8	58.7	61.2	64.8	66.9	68.2	71.6	77.3	81.9	84.3	90.0	95.5	94.2	102.0	109.8	112.7	112.6	119.8
Psychology	12.2	16.2	20.1	21.0	23.1	23.7	25.0	25.2	25.0	26.1	27.3	29.0	30.4	31.8	35.0	34.5	35.4	36.3	38.7	38.0	39.8
Social sciences	23.4	31.1	36.9	38.8	41.9	42.1	44.5	44.8	44.4	42.5	44.9	46.2	46.9	48.1	50.1	52.5	54.9	55.9	59.7	59.9	64.8
Engineering	12.4	14.8	16.1	18.1	19.9	21.2	22.8	22.8	23.1	23.8	26.6	25.5	26.6	27.8	29.6	30.4	32.8	34.7	39.7	39.8	45.0
White, all fields	107.7	131.4	149.9	157.2	168.4	172.8	181.0	183.5	181.8	182.6	193.2	198.2	201.0	204.3	212.2	211.8	219.7	225.8	237.0	229.9	243.5
Physical sciences	23.0	26.1	26.6	26.4	28.3	28.5	29.2	29.5	29.3	29.5	31.0	32.3	32.0	32.1	31.4	31.5	33.5	33.8	35.6	33.6	36.2
Mathematics and statistics	8.8	10.6	11.0	11.5	11.9	12.2	12.6	13.0	12.9	12.0	12.6	12.3	12.1	13.0	13.1	13.6	13.7	13.6	15.1	14.3	13.8
Computer and information sciences	NA	NA	0.2	0.4	0.6	0.9	1.1	1.4	1.6	2.1	2.2	2.7	2.7	3.4	3.7	4.0	4.1	4.8	5.4	5.4	6.2
Life sciences	32.1	38.8	46.1	49.3	52.7	54.6	57.6	59.2	59.1	61.3	64.9	67.2	68.4	70.4	74.2	72.5	76.9	81.1	81.6	80.1	83.6
Psychology	11.6	15.2	18.8	19.6	21.3	22.0	23.2	23.2	22.9	23.6	24.4	25.5	26.6	27.1	29.5	28.7	28.6	28.9	30.6	29.2	30.9
Social sciences	21.4	28.2	33.1	34.7	37.2	37.5	39.4	39.1	38.6	36.5	38.0	38.9	39.0	39.1	40.7	41.7	43.0	42.6	45.8	44.5	47.8
Engineering	10.8	12.6	14.0	15.2	16.4	17.2	18.1	18.2	17.5	17.6	20.2	19.4	20.2	19.2	19.5	19.7	20.0	21.1	22.9	22.9	25.1
Asian or Pacific Islander, all fields	5.0	6.7	10.8	11.8	14.0	15.0	16.3	16.8	20.9	22.4	25.4	26.3	27.6	34.7	37.4	39.7	46.9	52.1	59.0	61.7	70.0
Physical sciences	1.2	1.5	2.1	2.4	2.9	3.1	3.1	2.8	4.2	4.6	4.6	4.6	4.5	5.5	5.6	5.7	7.0	7.6	9.3	9.5	9.9
Mathematics and statistics	0.4	0.5	0.9	1.0	1.1	1.1	1.3	1.6	1.9	1.8	2.2	2.1	2.0	2.8	3.0	3.2	3.7	4.0	4.4	4.7	5.1
Computer and information sciences	NA	NA	0.1	0.1	0.1	0.1	0.3	0.5	0.7	0.9	0.9	0.9	0.9	1.5	1.7	2.5	2.7	3.0	3.0	2.8	3.8
Life sciences	1.3	2.0	3.6	3.6	4.0	4.4	4.7	5.1	6.3	6.8	8.5	9.9	11.0	13.3	14.0	13.9	16.2	18.4	20.6	21.4	24.0
Psychology	0.1	0.2	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.9	1.1	1.4	1.6	2.0	2.2	2.8	3.4	3.4
Social sciences	1.0	1.2	2.0	2.0	2.5	2.2	2.4	2.6	2.7	2.8	3.2	3.5	3.6	4.1	3.9	4.5	5.2	6.1	6.1	6.7	7.6
Engineering	1.1	1.3	1.8	2.4	3.0	3.5	4.1	3.7	4.7	4.9	5.2	4.6	4.8	6.4	7.8	8.2	10.1	10.7	12.9	13.4	16.1
Underrepresented minority, all fields ^a	2.4	3.7	5.8	6.5	7.2	7.8	9.0	9.9	10.7	12.4	13.7	15.6	16.8	20.4	20.4	21.8	24.4	27.2	29.4	30.4	32.4
Physical sciences	0.5	0.6	1.0	1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.9	1.8	2.0	2.3	2.2	2.3	2.7	3.0	2.9	3.3	3.3
Mathematics and statistics	0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.5	0.7	0.8	0.7	0.8	0.8	1.0	1.0	1.1	1.2	1.4	1.4	1.5	1.5
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.6
Life sciences	0.8	1.2	1.5	1.7	1.8	2.1	2.4	2.6	2.7	3.5	3.9	4.7	4.9	6.2	6.4	6.6	7.6	8.7	9.4	9.8	10.5
Psychology	0.3	0.6	0.8	1.0	1.2	1.2	1.3	1.5	1.6	2.0	2.3	2.7	2.9	3.6	3.6	3.7	4.3	4.5	4.6	4.6	4.7
Social sciences	0.5	0.8	1.8	2.0	2.1	2.3	2.8	3.0	3.1	3.2	3.6	3.9	4.3	4.9	4.9	5.6	5.8	6.5	7.0	7.5	8.4
Engineering	0.2	0.3	0.3	0.5	0.5	0.5	0.7	0.9	0.9	1.2	1.2	1.5	1.6	2.1	2.0	2.1	2.4	2.6	3.6	3.2	3.5
Full-time faculty ^b																					
All races or ethnicities, all fields	103.3	125.6	141.9	148.4	156.9	164.4	169.8	173.1	172.4	171.4	172.9	178.2	180.9	190.6	193.1	199.1	206.9	214.4	227.7	223.4	246.9

Table SLBR-29

S&E doctorate holders employed in academia, by type of position, race or ethnicity, and degree field: 1973–2019

(Thousands)

Position, race or ethnicity, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Physical sciences	20.8	23.6	24.3	24.2	25.4	26.4	26.2	26.2	25.8	25.6	25.5	26.3	26.1	27.7	26.9	27.5	29.3	29.5	31.1	29.7	33.0
Mathematics and statistics	9.3	10.9	11.7	12.3	12.7	12.9	13.5	14.2	14.7	13.0	13.6	12.9	12.4	14.0	14.0	14.8	15.1	15.5	16.8	16.3	16.3
Computer and information sciences	NA	NA	0.3	0.4	0.7	0.9	1.3	1.8	2.3	2.8	2.9	3.2	3.3	4.2	4.9	5.6	5.7	6.4	7.1	7.1	8.6
Life sciences	29.5	34.9	40.9	43.5	45.6	48.1	49.3	51.1	50.8	52.8	53.6	56.1	58.3	61.7	62.8	63.5	66.7	70.6	70.8	70.0	77.2
Psychology	10.8	13.9	16.4	17.3	18.5	19.2	20.2	20.7	19.5	20.1	19.4	20.6	21.2	21.5	23.2	23.0	23.4	24.1	26.0	26.3	28.0
Social sciences	21.6	28.8	33.7	34.4	36.1	37.6	39.0	39.0	39.2	37.1	36.9	38.2	38.3	39.6	39.2	42.0	43.2	43.5	46.7	46.0	50.5
Engineering	11.3	13.5	14.7	16.4	17.9	19.3	20.2	20.1	20.1	20.0	21.2	20.7	21.5	21.9	22.1	22.7	23.4	25.0	29.2	28.2	33.4
White, all fields	94.9	114.3	128.1	133.4	139.7	146.2	149.8	151.8	148.7	147.1	146.8	150.8	151.1	153.5	155.3	156.5	158.7	161.5	168.9	163.0	177.5
Physical sciences	19.0	21.5	22.1	21.6	22.8	23.4	23.3	23.2	22.2	22.1	21.8	22.5	22.0	23.2	22.6	22.4	23.4	23.1	24.2	22.5	25.3
Mathematics and statistics	8.5	9.9	10.3	10.9	11.1	11.4	11.7	12.2	12.3	10.7	11.0	10.6	10.0	10.9	10.8	11.3	11.4	11.3	12.2	11.6	11.1
Computer and information sciences	NA	NA	0.2	0.3	0.5	0.7	1.0	1.3	1.5	1.9	2.0	2.3	2.2	2.6	2.9	3.2	3.2	3.5	4.3	4.3	5.1
Life sciences	27.5	32.1	37.2	39.7	41.3	43.3	44.4	46.0	45.1	46.7	47.1	48.8	49.9	50.5	51.5	51.0	52.6	54.7	54.5	53.3	57.2
Psychology	10.3	13.0	15.4	16.2	17.1	17.9	18.8	19.2	18.0	18.4	17.6	18.4	18.8	18.6	19.9	19.5	19.2	19.7	20.8	20.5	22.2
Social sciences	19.7	26.1	30.1	30.7	32.2	33.5	34.4	33.8	34.1	31.9	31.1	32.2	32.0	32.3	32.3	33.5	33.8	33.4	36.2	34.4	37.6
Engineering	10.0	11.6	12.7	14.0	14.8	15.9	16.2	16.2	15.6	15.3	16.4	15.8	16.2	15.2	15.3	15.4	15.0	15.8	16.7	16.5	19.0
Asian or Pacific Islander, all fields	4.0	5.0	8.4	9.1	10.9	11.7	12.3	12.6	14.8	14.5	15.8	16.3	17.7	21.4	21.8	25.0	28.5	32.4	36.8	37.6	44.8
Physical sciences	0.7	1.0	1.3	1.6	1.7	2.0	1.9	1.8	2.4	2.3	2.2	2.4	2.5	2.7	2.7	3.1	3.8	4.1	4.6	4.7	5.3
Mathematics and statistics	0.4	0.5	0.9	1.0	1.1	1.1	1.3	1.5	1.7	1.6	1.9	1.7	1.7	2.2	2.3	2.5	2.6	2.9	3.5	3.6	3.9
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.1	0.3	0.5	0.7	0.8	0.8	0.7	0.8	1.3	1.5	2.0	2.2	2.3	2.4	2.3	3.0
Life sciences	0.9	1.2	2.3	2.4	2.8	3.1	3.0	3.0	3.7	3.5	3.7	4.4	5.3	6.5	6.5	7.3	8.4	9.6	10.0	10.3	12.7
Psychology	0.1	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.7	0.8	1.0	1.2	1.4	1.9	2.3	2.3
Social sciences	0.9	1.1	1.9	1.9	2.1	2.1	2.1	2.4	2.3	2.4	2.8	2.8	3.0	3.1	2.9	3.6	4.0	4.8	4.8	5.2	6.1
Engineering	0.9	1.1	1.7	1.9	2.7	3.0	3.4	3.1	3.7	3.6	3.8	3.7	3.9	4.9	5.0	5.5	6.4	7.2	9.5	9.2	11.6
Underrepresented minority, all fields ^a	2.0	3.2	5.0	5.4	5.8	6.3	7.4	8.4	8.6	9.8	10.3	11.1	12.0	13.4	13.9	15.3	17.2	17.9	19.6	20.0	21.9
Physical sciences	0.4	0.4	0.9	0.9	0.8	0.9	0.9	1.1	1.2	1.1	1.4	1.4	1.6	1.5	1.5	1.7	2.0	2.0	1.9	2.2	2.1
Mathematics and statistics	0.2	0.2	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.7	0.7	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.2
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5
Life sciences	0.7	1.0	1.3	1.3	1.4	1.6	1.8	2.0	2.0	2.6	2.8	2.9	3.2	3.9	4.0	4.3	5.0	5.2	5.6	5.8	6.4
Psychology	0.2	0.5	0.6	0.7	0.9	0.9	1.0	1.1	1.1	1.3	1.3	1.7	1.8	1.8	2.1	2.2	2.5	2.6	2.8	2.9	3.1
Social sciences	0.4	0.8	1.6	1.7	1.8	2.0	2.5	2.8	2.8	2.8	3.0	3.1	3.2	3.6	3.6	4.3	4.7	4.9	5.1	5.5	6.1
Engineering	0.1	0.3	0.3	0.4	0.4	0.5	0.6	0.8	0.8	1.1	1.1	1.2	1.4	1.6	1.6	1.5	1.7	1.7	2.8	2.3	2.6
Postdoctorates																					
All races or ethnicities, all fields	4.2	7.6	8.5	8.3	8.7	9.3	11.5	9.9	13.3	16.8	18.9	18.5	17.5	15.7	23.3	17.8	22.8	20.2	19.2	18.4	18.6
Physical sciences	1.8	2.4	2.1	1.6	2.1	2.3	2.7	2.2	3.5	4.4	3.8	3.4	3.0	2.6	3.9	3.3	4.6	4.0	3.3	3.4	3.6
Mathematics and statistics	0.0	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.0	0.5	0.5	0.6	0.8	0.5	1.0	0.5	0.7	0.4	0.5	0.5	0.7

Table SLBR-29

S&E doctorate holders employed in academia, by type of position, race or ethnicity, and degree field: 1973–2019

(Thousands)

Position, race or ethnicity, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.2
Life sciences	1.9	4.0	5.2	5.1	5.2	5.6	6.8	6.4	8.2	9.2	10.8	11.7	11.0	10.0	12.8	10.3	12.2	11.9	11.7	10.6	10.5
Psychology	0.2	0.5	0.6	0.6	0.7	0.7	0.8	0.5	0.4	1.1	1.3	1.2	1.2	0.9	1.7	1.0	1.1	1.0	0.8	0.7	0.8
Social sciences	0.1	0.3	0.3	0.6	0.3	0.1	0.4	0.3	0.2	0.4	0.7	0.5	0.6	0.5	0.9	0.3	0.8	0.4	0.4	0.6	0.5
Engineering	0.2	0.4	0.2	0.3	0.2	0.5	0.6	0.5	1.0	1.2	1.7	1.1	0.9	1.1	3.0	2.1	3.1	2.4	2.2	2.6	2.3
White, all fields	3.6	6.2	6.9	6.8	7.1	7.4	9.0	7.1	9.1	11.2	12.5	11.9	11.4	9.9	13.4	10.3	12.5	10.6	10.1	9.3	8.5
Physical sciences	1.5	1.8	1.5	1.4	1.4	1.5	1.8	1.4	2.4	2.6	2.5	2.3	2.2	1.5	2.4	1.9	2.7	2.2	1.7	1.6	1.6
Mathematics and statistics	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.3	0.3	0.5	0.7	0.4	0.6	0.4	0.3	0.2	0.3	0.4	0.3
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	s	s	0.1	s	0.1	0.1	0.1
Life sciences	1.7	3.3	4.4	4.3	4.5	4.7	5.6	4.8	5.9	6.5	7.0	7.2	6.7	6.4	7.3	6.3	7.0	6.4	6.2	5.5	5.1
Psychology	0.1	0.4	0.6	0.5	0.7	0.6	0.8	0.4	0.3	0.9	1.1	0.9	1.0	0.7	1.3	0.8	0.7	0.7	0.5	0.5	0.5
Social sciences	0.1	0.3	0.3	0.5	0.3	0.1	0.3	0.2	0.1	0.3	0.6	0.3	0.4	0.3	0.6	0.2	0.6	0.2	0.2	0.3	0.4
Engineering	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.5	0.9	0.7	0.6	0.5	1.1	0.7	1.0	0.6	1.1	1.1	0.7
Asian or Pacific Islander, all fields	0.5	1.1	1.4	1.1	1.1	1.6	1.9	2.3	3.6	4.7	5.3	5.2	4.9	4.8	8.1	6.1	8.3	7.4	7.0	7.2	8.1
Physical sciences	0.2	0.4	0.6	0.2	0.5	0.6	0.7	0.7	1.0	1.5	1.2	1.1	0.8	0.9	1.3	1.2	1.7	1.4	1.3	1.6	1.8
Mathematics and statistics	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.3	0.1	0.2	0.2	0.4
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	s	0.2	0.2	s	0.2	s	s
Life sciences	0.2	0.5	0.8	0.6	0.6	0.6	0.9	1.3	1.9	2.2	3.2	3.6	3.6	3.0	4.4	3.0	4.0	4.0	4.1	3.8	4.2
Psychology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2
Social sciences	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	s
Engineering	0.0	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.7	0.7	0.7	0.2	0.3	0.5	1.7	1.3	1.8	1.5	1.0	1.4	1.5
Underrepresented minority, all fields ^a	0.1	0.2	0.2	0.4	0.4	0.4	0.6	0.4	0.6	0.9	1.1	1.5	1.1	1.1	1.7	1.3	1.6	2.1	1.7	1.5	1.6
Physical sciences	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3
Mathematics and statistics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	s	s	0.1	s	s	s
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	s	s	s	s	s	s	s
Life sciences	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.4	0.5	0.6	0.8	0.6	0.6	1.0	0.8	0.9	1.3	1.2	1.0	1.0
Psychology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Social sciences	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	s	s	0.2	0.1
Engineering	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
Other positions ^c																					
All races or ethnicities, all fields	10.5	12.2	16.6	19.4	24.6	22.1	25.4	27.6	28.1	29.4	41.1	43.5	47.3	53.2	56.4	59.5	65.1	74.4	82.4	84.8	85.0
Physical sciences	2.9	3.1	3.6	4.2	4.8	4.2	4.7	5.4	5.8	5.8	8.0	8.6	9.0	9.5	8.8	9.1	9.8	11.4	14.0	13.8	13.3
Mathematics and statistics	0.4	0.7	0.6	0.5	0.7	0.6	0.8	0.9	0.8	1.1	1.7	1.8	1.8	2.2	2.4	2.7	2.9	3.1	3.6	3.9	3.6
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.4	0.5	1.0	0.8	1.0	1.3	1.8	1.7	1.7	1.9
Life sciences	3.4	3.7	5.2	6.3	7.8	7.6	8.7	9.5	9.2	9.6	13.2	14.5	15.5	18.3	19.9	20.5	23.1	27.3	30.2	32.1	32.2

Table SLBR-29

S&E doctorate holders employed in academia, by type of position, race or ethnicity, and degree field: 1973–2019

(Thousands)

Position, race or ethnicity, and field	1973	1977	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017	2019
Psychology	1.2	1.8	3.0	3.1	3.9	3.8	4.0	4.0	5.1	5.0	6.7	7.2	8.0	9.4	10.1	10.5	10.9	11.2	11.9	11.0	11.0
Social sciences	1.6	1.9	2.9	3.8	5.5	4.3	5.1	5.5	5.0	5.0	7.3	7.4	8.0	8.0	9.9	10.2	10.9	12.0	12.6	13.4	13.9
Engineering	0.9	0.9	1.3	1.4	1.8	1.4	2.0	2.2	2.0	2.5	3.7	3.7	4.3	4.8	4.5	5.6	6.3	7.3	8.3	9.1	9.3
White, all fields	9.3	10.9	15.0	17.0	21.6	19.3	22.2	24.6	24.0	24.3	34.2	35.6	38.5	41.3	43.5	45.0	48.5	53.7	58.0	57.7	57.5
Physical sciences	2.5	2.8	3.2	3.6	4.1	3.6	4.0	4.8	4.8	4.8	6.4	7.1	7.5	7.5	6.4	7.2	7.4	8.5	9.7	9.5	9.3
Mathematics and statistics	0.3	0.6	0.6	0.5	0.7	0.6	0.7	0.8	0.6	0.9	1.4	1.3	1.5	1.7	1.8	1.9	2.0	2.1	2.6	2.4	2.4
Computer and information sciences	NA	NA	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.4	0.5	0.8	0.8	0.8	0.8	1.3	1.0	1.0	1.0
Life sciences	3.0	3.3	4.5	5.3	6.9	6.6	7.5	8.4	8.1	8.1	11.1	11.6	12.1	13.6	15.4	15.2	17.3	20.0	20.9	21.3	21.4
Psychology	1.1	1.7	2.8	2.9	3.5	3.5	3.6	3.6	4.5	4.3	5.7	6.2	6.8	7.9	8.3	8.4	8.7	8.5	9.3	8.3	8.1
Social sciences	1.5	1.7	2.7	3.5	4.7	3.9	4.7	5.1	4.4	4.3	6.3	6.3	6.6	6.5	7.8	8.0	8.6	9.0	9.4	9.9	9.9
Engineering	0.7	0.8	1.2	1.1	1.6	1.1	1.6	1.8	1.6	1.8	2.9	2.9	3.4	3.4	3.0	3.6	4.0	4.7	5.1	5.4	5.4
Asian or Pacific Islander, all fields	0.6	0.6	1.0	1.6	2.0	1.8	2.0	1.9	2.5	3.2	4.4	4.9	5.0	7.2	7.5	8.6	10.1	12.3	15.2	16.8	17.1
Physical sciences	0.2	0.1	0.2	0.5	0.6	0.6	0.5	0.4	0.8	0.8	1.3	1.1	1.1	1.4	1.6	1.4	1.5	2.1	3.4	3.1	2.9
Mathematics and statistics	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.3	0.3	0.5	0.5	0.7	0.8	1.0	0.7	1.0	0.8
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.7	0.4	0.5	0.7
Life sciences	0.2	0.3	0.6	0.7	0.7	0.7	0.9	0.8	0.8	1.1	1.6	1.9	2.1	3.4	3.1	3.5	3.8	4.8	6.5	7.3	7.2
Psychology	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.8	0.9	1.0
Social sciences	0.0	0.1	0.1	0.1	0.4	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.5	0.8	0.8	0.8	1.0	1.2	1.2	1.4	1.5
Engineering	0.1	0.1	0.0	0.2	0.2	0.3	0.4	0.3	0.3	0.6	0.7	0.7	0.6	0.9	1.1	1.5	1.9	2.0	2.4	2.8	3.0
Underrepresented minority, all fields ^a	0.3	0.3	0.5	0.8	1.0	1.1	1.1	1.1	1.5	1.8	2.5	2.9	3.7	3.9	4.8	5.3	5.6	7.2	8.1	8.9	9.0
Physical sciences	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.4	0.4	0.3	0.5	0.5	0.4	0.5	0.7	0.8	1.0	1.0
Mathematics and statistics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.3
Computer and information sciences	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	s	0.1	0.1	0.2	0.2	0.2
Life sciences	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.9	1.1	1.1	1.4	1.5	1.7	2.2	2.6	3.0	3.1
Psychology	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.6	0.8	0.7	1.0	1.3	1.4	1.4	1.6	1.8	1.7	1.6	1.6
Social sciences	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.6	0.9	0.8	1.2	1.3	1.0	1.6	1.9	1.9	2.2
Engineering	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.7	0.7	0.8	0.8

NA = not available; s = suppressed for reasons of confidentiality and/or reliability.

^a Underrepresented minority includes Blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives. Total includes individuals reporting more than one race, who are not shown separately. Because of changes in the survey questionnaire, data on underrepresented minorities from 2003 to 2019 are not directly comparable with earlier years' data.^b Full-time faculty include full professors, associate professors, assistant professors, and instructors from 1973 to 1995; from 1997 to 2019, full-time faculty include full professors, associate professors, and assistant professors.^c Other positions include full-time positions such as research associates, adjunct positions, lecturers, and administrative positions as well as part-time positions of all kinds. From 1997 to 2019, other positions also include instructors. Part-time positions exclude those employed part time because they are students or retired.

Note(s):

Academic employment is limited to U.S. doctorate holders employed at 2- or 4-year colleges or universities, medical schools, and university research institutes. Physical sciences include earth, atmospheric, and ocean sciences; life sciences include biological, agricultural, and environmental life and health sciences. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, special tabulations (2018) of the 1973–2019 Survey of Doctorate Recipients (SDR).

Science and Engineering Indicators

Table SLBR-30

Number and median salary of full-time workers with highest degree in S&E field, by sex and occupation: 2019

(Thousands and dollars)

Occupation	Total		Female		Male	
	Thousands	Median salary (\$)	Thousands	Median salary (\$)	Thousands	Median salary (\$)
All occupations	13,130	80,000	4,822	63,000	8,308	94,000
S&E occupations	5,211	96,000	1,357	82,000	3,854	100,000
Computer and mathematical scientists	2,465	105,000	557	94,000	1,908	108,000
Computer and information scientists	2,251	105,000	470	95,000	1,781	109,000
Computer and information scientists, research	67	125,000	19	122,000	48	125,000
Computer network architect	27	101,000	s	s	24	112,000
Computer support specialists	144	61,000	41	60,000	103	70,000
Computer system analysts	232	90,000	91	84,000	141	90,000
Database administrators	88	104,000	23	100,000	65	104,000
Information security analysts	79	100,000	14	95,000	65	120,000
Network and computer systems administrators	121	84,000	8	86,000	113	80,000
Software developers—applications and systems software	512	109,000	82	97,000	431	110,000
Web developers	69	94,000	11	89,000	59	95,000
Other computer information science occupations	175	105,000	61	86,000	115	112,000
Computer engineers—software	737	119,000	118	110,000	619	120,000
Mathematical scientists	153	102,000	58	89,000	94	109,000
Mathematicians	5	91,000	2	56,000	4	104,000
Operations research analysts, including modeling	87	105,000	31	88,000	56	110,000
Statisticians	51	103,000	20	99,000	31	108,000
Other mathematical scientists	9	96,000	6	96,000	3	s
Postsecondary teachers—computer and mathematical sciences	61	71,000	28	62,000	33	82,000
Computer sciences	18	83,000	7	75,000	11	89,000
Mathematics and statistics	44	67,000	22	60,000	22	75,000
Biological, agricultural, and environmental life scientists	510	64,000	234	65,000	277	64,000
Agricultural and food scientists	50	57,000	18	60,000	32	55,000
Biological and medical scientists	367	62,000	177	63,000	189	60,000
Biochemists and biophysicists	80	55,000	34	64,000	45	50,000
Biological scientists (e.g., botanists, ecologists, zoologists)	114	62,000	51	62,000	63	63,000
Medical scientists (excluding practitioners)	97	69,000	51	62,000	46	84,000
Other biological and life scientists	76	64,000	41	69,000	34	53,000
Forestry and conservation scientists	28	57,000	5	59,000	23	56,000
Postsecondary teachers—life and related sciences	66	81,000	34	70,000	32	94,000
Agriculture	4	87,000	s	s	3	87,000
Biological sciences	59	78,000	32	70,000	26	95,000
Other natural sciences	2	99,000	s	s	2	100,000
Physical and related scientists	330	72,000	110	59,000	220	80,000
Chemists, except biochemists	113	65,000	43	59,000	70	68,000
Earth scientists, geologists, and oceanographers	71	79,000	22	56,000	49	90,000
Atmospheric and space scientists	18	97,000	6	61,000	12	99,000
Geologists, including earth scientists	53	75,000	16	56,000	36	79,000
Physicists and astronomers	39	70,000	7	42,000	32	78,000
Astronomers	54	60,000	23	58,000	31	69,000
Physicists, except biophysicists	39	70,000	7	42,000	32	78,000
Other physical and related scientists	54	60,000	23	58,000	31	69,000
Postsecondary teachers—physical and related sciences	53	80,000	14	68,000	39	93,000
Chemistry	19	71,000	6	67,000	14	73,000
Earth, environmental, and marine sciences	18	79,000	7	66,000	11	95,000

Table SLBR-30

Number and median salary of full-time workers with highest degree in S&E field, by sex and occupation: 2019

(Thousands and dollars)

Occupation	Total		Female		Male	
	Thousands	Median salary (\$)	Thousands	Median salary (\$)	Thousands	Median salary (\$)
Physics	16	95,000	2	59,000	14	97,000
Social and related scientists	356	75,000	223	70,000	133	84,000
Economists	41	84,000	8	84,000	33	84,000
Political scientists	9	82,000	4	s	5	83,000
Psychologists, including clinical	128	74,000	103	68,000	25	98,000
Anthropologists	11	64,000	7	s	5	57,000
Sociologists	66	69,000	45	60,000	21	75,000
Other social and related scientists	66	69,000	45	60,000	21	75,000
Postsecondary teachers—social and related sciences	101	80,000	56	74,000	45	85,000
Economics	13	88,000	3	85,000	10	90,000
Political science	15	83,000	8	81,000	7	92,000
Psychology	30	74,000	18	63,000	12	92,000
Sociology	14	80,000	9	94,000	5	78,000
Other social sciences	30	74,000	18	65,000	12	84,000
Engineers	1,550	100,000	234	90,000	1,316	100,000
Aerospace, aeronautical, or astronautical engineers	109	112,000	18	105,000	90	115,000
Chemical engineers	67	110,000	12	108,000	55	110,000
Civil, architectural, or sanitary engineers	256	88,000	45	77,000	212	90,000
Electrical or computer hardware engineers	355	112,000	35	100,000	321	115,000
Computer engineer—hardware	74	121,000	4	104,000	70	124,000
Electrical and electronics engineers	281	110,000	30	100,000	251	111,000
Industrial engineers	56	82,000	14	77,000	42	86,000
Mechanical engineers	307	93,000	24	89,000	284	93,000
Other engineers	360	98,000	78	90,000	282	100,000
Bioengineers or biomedical engineers	37	80,000	16	82,000	22	76,000
Environmental engineers	45	85,000	18	72,000	28	89,000
Marine engineers and naval architects	6	99,000	1.0	s	6	99,000
Materials and metallurgical engineers	37	100,000	9	100,000	27	100,000
Nuclear engineers	10	95,000	1	s	9	95,000
Petroleum engineers	19	155,000	5	179,000	14	152,000
Sales engineers	66	110,000	4	91,000	62	110,000
Other engineers	139	94,000	25	92,000	114	95,000
Postsecondary teachers—engineering	39	99,000	8	88,000	31	110,000
S&E-related occupations	1,864	76,000	648	62,000	1,216	89,000
Health-related occupations	537	52,000	328	55,000	210	48,000
Diagnosing or treating practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians)	82	59,000	25	69,000	56	s
Registered nurses, pharmacists, dieticians, therapists, physician assistants, nurse practitioners	103	68,000	81	64,000	22	75,000
Health technologists and technicians (e.g., dental hygienists, health record technicians, licensed practical nurses, laboratory or radiology technicians)	154	44,000	93	55,000	61	42,000
Other health occupations	171	47,000	113	43,000	58	48,000
Postsecondary teachers—health and related sciences	27	84,000	15	49,000	12	118,000
S&E managers	509	130,000	106	100,000	403	135,000
Computer and information systems managers	139	145,000	21	114,000	117	150,000
Engineering managers	255	130,000	26	125,000	229	132,000
Medical and health services managers	58	81,000	38	71,000	21	111,000

Table SLBR-30

Number and median salary of full-time workers with highest degree in S&E field, by sex and occupation: 2019

(Thousands and dollars)

Occupation	Total		Female		Male	
	Thousands	Median salary (\$)	Thousands	Median salary (\$)	Thousands	Median salary (\$)
Natural sciences managers	57	119,000	21	105,000	35	120,000
S&E precollege teachers	195	55,000	93	52,000	102	58,000
Secondary—computer, mathematics, or sciences	166	55,000	84	52,000	82	59,000
Secondary—social sciences	29	56,000	9	56,000	20	56,000
S&E technicians and technologists	579	76,000	108	65,000	471	79,000
Technologists and technicians in the biological and life sciences	88	51,000	44	50,000	43	55,000
Computer programmers (business, scientific, process control)	80	100,000	17	99,000	63	100,000
Electrical, electronic, industrial, and mechanical technicians	181	75,000	9	75,000	172	75,000
Drafting occupations, including computer drafting	16	59,000	s	s	13	62,000
Surveying and mapping technicians	19	55,000	s	s	18	54,000
Other engineering technologists and technicians	143	89,000	24	68,000	119	90,000
Surveyors, cartographers, photogrammetrists	16	52,000	1.0	61,000.0	15	52,000
Technologists and technicians in the mathematical sciences	36	64,000	7.0	60,000.0	29	64,000
Other S&E-related occupations	44	108,000	14	91,000	31	109,000
Architects	20	95,000	7	85,000	13	102,000
Actuaries	24	109,000	7	106,000	17	109,000
Non-S&E occupations	6,055	67,000	2,817	55,000	3,238	80,000
Non-S&E managers	1,119	119,000	272	100,000	847	122,000
Top-level managers, executives, administrators (e.g., chief executive officer, chief operating officer, chief financial officer; president; district manager, general manager, provost)	626	134,000	122	112,000	503	140,000
Education administrators (e.g., registrar, dean, principal)	31	94,000	21	92,000	10	105,000
Other mid-level managers	462	101,000	128	93,000	334	105,000
Management-related occupations	1,524	81,000	737	70,000	787	94,000
Accountants, auditors, and other financial specialists	450	79,000	207	68,000	243	87,000
Personnel, training, and labor relations specialists	169	65,000	109	61,000	60	71,000
Other management-related occupations	905	90,000	422	76,000	483	99,000
Non-S&E precollege teachers	304	45,000	249	46,000	54	45,000
Prekindergarten and kindergarten	61	28,000	60	28,000	s	s
Elementary	129	46,000	104	46,000	25	52,000
Secondary—other subjects	53	45,000	30	47,000	22	43,000
Teachers: Special education—primary and secondary	34	64,000	31	66,000	3	s
Other precollegiate area	27	49,000	23	51,000	s	s
Non-S&E postsecondary teachers	49	76,000	20	73,000	29	76,000
Arts, drama, and music	s	s	s	s	s	s
Business, commerce, and marketing	6	115,000	3	113,000	3	131,000
Education	10	71,000	7	72,000	3	70,000
English	5	86,000	s	s	s	s
Foreign language	3	69,000	2	s	2	s
History	3	64,000	s	s	3	s
Physical education	s	s	s	s	s	s
Other postsecondary fields	10	85,000	2	87,000	8	79,000
Social services and related occupations	475	45,000	333	45,000	141	45,000
Clergy and other religious workers	46	31,000	9	s	37	32,000
Counselors (e.g., educational, vocational, mental health, substance abuse)	194	49,000	142	49,000	52	51,000

Table SLBR-30

Number and median salary of full-time workers with highest degree in S&E field, by sex and occupation: 2019

(Thousands and dollars)

Occupation	Total		Female		Male	
	Thousands	Median salary (\$)	Thousands	Median salary (\$)	Thousands	Median salary (\$)
Social workers	235	42,000	183	42,000	52	42,000
Sales and marketing occupations	806	70,000	319	60,000	486	77,000
Insurance, securities, real estate, and business services	182	69,000	75	60,000	106	78,000
Sales—commodities except retail (e.g., industrial, medical, dental machinery, equipment, supplies)	146	99,000	36	84,000	110	103,000
Sales—retail (e.g., furnishings, clothing, motor vehicles, cosmetics)	173	44,000	56	33,000	118	48,000
Other marketing and sales occupations	304	75,000	152	66,000	152	80,000
Art, humanities, and related occupations	106	57,000	48	63,000	57	s
Writers, editors, public relations specialists, artists, entertainers, broadcasters	105	58,000	48	63,000	57	s
Historians	s	s	s	s	s	s
Other non-S&E occupations	1,674	47,000	838	42,000	836	55,000
Accounting clerks and bookkeepers	111	41,000	84	40,000	27	54,000
Secretaries, receptionists, typists	102	37,000	91	38,000	s	s
Other administrative (e.g., record clerks, telephone operators)	352	46,000	249	44,000	103	50,000
Farmers, foresters, and fishermen	81	45,000	14	40,000	67	45,000
Lawyers, judges	53	84,000	28	61,000	25	112,000
Librarians, archivists, curators	18	33,000	14	33,000	4	59,000
Food preparation and service (e.g., cooks, waitresses, bartenders)	89	30,000	40	28,000	49	38,000
Protective services (e.g., firefighters, police, guards, wardens, park rangers)	125	65,000	31	76,000	94	65,000
Other service occupations, except health (e.g., probation officer, human services work)	212	44,000	116	40,000	97	50,000
Other teachers and instructors (e.g., private tutors, dance, flying, martial arts)	67	54,000	34	42,000	33	74,000
Construction and extraction occupations	36	75,000	3	67,000	33	75,000
Installation, maintenance, and repair occupations	71	68,000	s	s	62	72,000
Precision or production occupations (e.g., metal or wood workers, butchers, bakers, assemblers, tailors)	99	35,000	s	s	59	51,000
Transportation and material moving occupations	135	56,000	13	50,000	122	59,000
Other occupations	122	52,000	73	54,000	49	51,000

s = suppressed for reasons of confidentiality and/or reliability.

STEM = science, technology, engineering, and mathematics.

Note(s):

Non-S&E occupations include middle-skill and non-STEM occupations. Detail may not add to total because of rounding. Numbers are rounded to the nearest 1,000.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-31

Number and median salary of full-time workers with highest degree in S&E field, by race or ethnicity and occupation: 2019

(Thousands and dollars)

Occupation	Total		Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)
All occupations	13,130	80,000	2,138	100,000	30	65,000	889	60,000	1,224	65,000	8,523	82,000	40	100,000	286	73,000
S&E occupations	5,211	96,000	1,201	104,000	8	86,000	239	83,000	408	80,000	3,236	97,000	12	90,000	106	90,000
Computer and mathematical scientists	2,465	105,000	742	111,000	s	s	137	85,000	167	85,000	1,355	105,000	s	s	60	93,000
Computer and information scientists	2,251	105,000	692	112,000	s	s	127	87,000	148	83,000	1,224	105,000	s	s	58	94,000
Computer and information scientists, research	67	125,000	23	127,000	s	s	s	s	3	s	37	125,000	s	s	s	s
Computer network architects	27	101,000	8	112,000	s	s	4	s	1	s	14	100,000	s	s	s	s
Computer support specialists	144	61,000	19	84,000	s	s	19	59,000	14	69,000	87	62,000	s	s	s	s
Computer system analysts	232	90,000	79	97,000	s	s	15	80,000	18	96,000	115	82,000	s	s	4	s
Database administrators	88	104,000	23	122,000	s	s	4	72,000	7	95,000	50	91,000	s	s	s	s
Information security analysts	79	100,000	12	118,000	s	s	14	95,000	9	72,000	37	126,000	s	s	7	141,000
Network and computer systems administrators	121	84,000	12	83,000	s	s	16	58,000	9	71,000	79	90,000	s	s	s	s
Software developers, applications and systems software	512	109,000	179	110,000	s	s	17	109,000	27	84,000	274	110,000	s	s	14	85,000
Web developers	69	94,000	15	87,000	s	s	s	s	9	77,000	43	116,000	s	s	2	s
Other computer information science occupations	175	105,000	39	106,000	s	s	9	76,000	8	82,000	113	111,000	s	s	6	79,000
Computer engineers—software	737	119,000	282	123,000	s	s	24	112,000	42	99,000	375	119,000	s	s	12	119,000
Mathematical scientists	153	102,000	37	102,000	s	s	8	68,000	16	90,000	91	107,000	s	s	1	85,000
Mathematicians	5	91,000	2	66,000	s	s	s	s	s	s	3	92,000	s	s	s	s
Operations research analysts, including modeling	87	105,000	19	117,000	s	s	4	78,000	12	100,000	51	101,000	s	s	1	85,000
Statisticians	51	103,000	14	96,000	s	s	s	s	3	83,000	30	109,000	s	s	s	s
Other mathematical scientists	9	96,000	s	s	s	s	s	s	s	s	6	s	s	s	s	s
Postsecondary teachers—computer and mathematical sciences	61	71,000	13	83,000	s	s	3	82,000	3	61,000	41	67,000	s	s	1	s
Computer sciences	18	83,000	5	96,000	s	s	1	s	s	s	9	87,000	s	s	s	s
Mathematics and statistics	44	67,000	8	78,000	s	s	s	s	2	65,000	32	61,000	s	s	s	s
Biological, agricultural, and environmental life scientists	510	64,000	113	67,000	1	59,000	13	52,000	46	45,000	327	68,000	s	s	9	53,000
Agricultural and food scientists	50	57,000	s	s	s	s	s	s	10	42,000	32	55,000	s	s	s	s
Biological and medical scientists	367	62,000	93	61,000	s	s	10	50,000	25	48,000	230	65,000	s	s	9	53,000
Biochemists and biophysicists	80	55,000	23	49,000	s	s	1	s	5	36,000	49	59,000	s	s	2	s

Table SLBR-31

Number and median salary of full-time workers with highest degree in S&E field, by race or ethnicity and occupation: 2019

(Thousands and dollars)

Occupation	Total		Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)
Biological scientists (e.g., botanists, ecologists, zoologists)	114	62,000	22	80,000	s	s	1	76,000	8	48,000	80	62,000	s	s	2	55,000
Medical scientists (excluding practitioners)	97	69,000	27	61,000	s	s	s	s	6	s	61	78,000	s	s	s	s
Other biological and life scientists	76	64,000	21	71,000	s	s	5	50,000	6	60,000	39	70,000	s	s	4	51,000
Forestry and conservation scientists	28	57,000	s	s	s	s	s	s	s	s	19	65,000	s	s	s	s
Postsecondary teachers—life and related sciences	66	81,000	14	83,000	s	s	1	59,000	4	67,000	46	84,000	s	s	s	s
Agriculture	4	87,000	s	s	s	s	s	s	s	s	3	s	s	s	s	s
Biological sciences	59	78,000	13	84,000	s	s	1	s	4	67,000	41	80,000	s	s	s	s
Other natural sciences	2	99,000	s	s	s	s	s	s	s	s	2	s	s	s	s	s
Physical and related scientists	330	72,000	45	62,000	1	s	17	59,000	22	55,000	238	78,000	s	s	5	56,000
Chemists, except biochemists	113	65,000	17	60,000	s	s	6	58,000	8	44,000	79	68,000	s	s	s	s
Earth scientists, geologists, and oceanographers	71	79,000	4	77,000	s	s	s	s	3	s	62	78,000	s	s	1	109,000
Atmospheric and space scientists	18	97,000	2	79,000	s	s	s	s	1	s	15	97,000	s	s	s	s
Geologists, including earth scientists	53	75,000	2	61,000	s	s	s	s	3	s	47	75,000	s	s	1	s
Oceanographers																
Physicists and astronomers	39	70,000	10	38,000	s	s	s	s	1	s	24	91,000	s	s	s	s
Astronomers	54	60,000	3	98,000	s	s	6	s	s	s	38	60,000	s	s	s	s
Physicists, except biophysicists	39	70,000	10	38,000	s	s	s	s	1	s	24	91,000	s	s	s	s
Other physical and related scientists	54	60,000	3	98,000	s	s	6	s	s	s	38	60,000	s	s	s	s
Postsecondary teachers—physical and related sciences	53	80,000	10	77,000	s	s	s	s	4	57,000	35	95,000	s	s	s	s
Chemistry	19	71,000	5	47,000	s	s	1	48,000	2	s	11	92,000	s	s	s	s
Earth, environmental, and marine sciences	18	79,000	1	s	s	s	s	s	s	s	14	82,000	s	s	s	s
Physics	16	95,000	4	84,000	s	s	s	s	1	s	10	106,000	s	s	s	s
Social and related scientists	356	75,000	24	68,000	s	s	18	79,000	45	64,000	263	80,000	1	s	5	67,000
Economists	41	84,000	5	85,000	s	s	2	66,000	4	106,000	30	84,000	s	s	s	s
Political scientists	9	82,000	s	s	s	s	s	s	1	s	8	84,000	s	s	s	s
Psychologists, including clinical	128	74,000	5	85,000	s	s	6	74,000	16	76,000	99	70,000	s	s	1	64,000
Anthropologists	11	64,000	s	s	s	s	s	s	s	s	10	68,000	s	s	s	s
Sociologists	66	69,000	4	68,000	s	s	4	134,000	s	s	41	77,000	s	s	s	s
Other social and related scientists	66	69,000	4	68,000	s	s	4	134,000	s	s	41	77,000	s	s	s	s

Table SLBR-31

Number and median salary of full-time workers with highest degree in S&E field, by race or ethnicity and occupation: 2019

(Thousands and dollars)

Occupation	Total		Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)
Postsecondary teachers—social and related sciences	101	80,000	9	s	s	s	6	79,000	8	69,000	76	85,000	s	s	2	46,000
Economics	13	88,000	1	105,000	s	s	s	s	1	s	9	88,000	s	s	s	s
Political science	15	83,000	s	s	s	s	s	s	1	57,000	12	85,000	s	s	s	s
Psychology	30	74,000	s	s	s	s	1	s	1	66,000	24	84,000	s	s	1	s
Sociology	14	80,000	s	s	s	s	1	s	1	79,000	11	80,000	s	s	s	s
Other social sciences	30	74,000	s	s	s	s	s	s	s	s	20	85,000	s	s	s	s
Engineers	1,550	100,000	278	100,000	4	108,000	53	86,000	128	91,000	1,052	100,000	7	85,000	27	98,000
Aerospace, aeronautical, or astronautical engineers	109	112,000	15	126,000	s	s	s	s	12	101,000	76	112,000	s	s	2	119,000
Chemical engineers	67	110,000	13	103,000	s	s	1	67,000	3	93,000	48	110,000	s	s	s	s
Civil, architectural, or sanitary engineers	256	88,000	35	87,000	s	s	9	80,000	24	75,000	184	90,000	s	s	3	86,000
Electrical or computer hardware engineers	355	112,000	93	117,000	s	s	19	91,000	25	108,000	208	116,000	s	s	5	97,000
Computer engineers—hardware	74	121,000	23	135,000	s	s	s	s	5	100,000	38	130,000	s	s	s	s
Electrical and electronics engineers	281	110,000	70	111,000	s	s	12	101,000	20	108,000	169	115,000	s	s	5	97,000
Industrial engineers	56	82,000	8	75,000	s	s	3	66,000	7	95,000	36	80,000	s	s	1	s
Mechanical engineers	307	93,000	51	80,000	s	s	7	99,000	24	81,000	220	95,000	s	s	5	88,000
Other engineers	360	98,000	50	95,000	s	s	12	84,000	31	80,000	256	100,000	s	s	9	109,000
Bioengineers or biomedical engineers	37	80,000	8	88,000	s	s	2	87,000	2	s	25	77,000	s	s	1	s
Environmental engineers	45	85,000	4	79,000	s	s	1	s	3	65,000	36	88,000	s	s	s	s
Marine engineers and naval architects	6	99,000	s	s	s	s	s	s	s	s	6	99,000	s	s	s	s
Materials and metallurgical engineers	37	100,000	4	88,000	s	s	s	s	s	s	27	101,000	s	s	s	s
Nuclear engineers	10	95,000	s	s	s	s	s	s	s	s	7	112,000	s	s	s	s
Petroleum engineers	19	155,000	1	s	s	s	s	s	1	110,000	16	172,000	s	s	s	s
Sales engineers	66	110,000	6	98,000	s	s	s	s	7	85,000	47	119,000	s	s	3	s
Other engineers	139	94,000	26	97,000	s	s	4	68,000	12	84,000	92	95,000	s	s	4	s
Postsecondary teachers—engineering	39	99,000	12	99,000	s	s	1	s	2	97,000	24	104,000	s	s	s	s
S&E-related occupations	1,864	76,000	313	94,000	4	84,000	132	57,000	177	72,000	1,205	78,000	2	91,000	31	65,000
Health-related occupations	537	52,000	74	59,000	s	s	49	46,000	42	51,000	358	52,000	s	s	12	56,000
Diagnosing or treating practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians)	82	59,000	16	66,000	s	s	s	s	9	s	52	s	s	s	s	s

Table SLBR-31

Number and median salary of full-time workers with highest degree in S&E field, by race or ethnicity and occupation: 2019

(Thousands and dollars)

Occupation	Total		Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)
Registered nurses, pharmacists, dieticians, therapists, physician assistants, nurse practitioners	103	68,000	17	58,000	s	s	s	s	11	s	65	69,000	s	s	s	s
Health technologists and technicians (e.g., dental hygienists, health record technicians, licensed practical nurses, laboratory or radiology technicians)	154	44,000	16	56,000	s	s	16	42,000	8	48,000	112	44,000	s	s	2	s
Other health occupations	171	47,000	20	35,000	s	s	25	47,000	12	48,000	109	46,000	s	s	5	47,000
Postsecondary teachers—health and related sciences	27	84,000	5	102,000	s	s	s	s	2	59,000	20	77,000	s	s	s	s
S&E managers	509	130,000	84	139,000	s	s	24	103,000	46	104,000	348	130,000	s	s	7	104,000
Computer and information systems managers	139	145,000	45	140,000	s	s	9	s	8	141,000	76	148,000	s	s	2	144,000
Engineering managers	255	130,000	29	137,000	s	s	11	98,000	22	137,000	191	130,000	s	s	1	109,000
Medical and health services managers	58	81,000	5	145,000	s	s	s	s	12	78,000	37	82,000	s	s	s	s
Natural sciences managers	57	119,000	6	98,000	s	s	2	s	s	s	43	123,000	s	s	2	134,000
S&E precollege teachers	195	55,000	9	62,000	s	s	16	53,000	19	59,000	147	55,000	s	s	3	44,000
Secondary—computer, mathematics, or sciences	166	55,000	8	62,000	s	s	11	57,000	17	55,000	127	54,000	s	s	3	44,000
Secondary—social sciences	29	56,000	s	s	s	s	4	40,000	3	85,000	20	57,000	s	s	s	s
S&E technicians and technologists	579	76,000	131	86,000	s	s	43	60,000	68	62,000	323	78,000	s	s	10	75,000
Technologists and technicians in the biological and life sciences	88	51,000	20	68,000	s	s	s	s	16	40,000	46	51,000	s	s	1	39,000
Computer programmers (business, scientific, process control)	80	100,000	22	100,000	s	s	s	s	1	59,000	53	101,000	s	s	s	s
Electrical, electronic, industrial, and mechanical technicians	181	75,000	46	71,000	s	s	17	61,000	20	65,000	95	80,000	s	s	2	68,000
Drafting occupations, including computer drafting	16	59,000	5	70,000	s	s	s	s	s	s	9	56,000	s	s	s	s
Surveying and mapping technicians	19	55,000	s	s	s	s	s	s	s	s	9	58,000	s	s	s	s
Other engineering technologists and technicians	143	89,000	32	98,000	s	s	12	73,000	21	70,000	75	90,000	s	s	s	s
Surveyors, cartographers, photogrammetrists	16	52,000	s	s	s	s	s	s	s	s	11	45,000	s	s	s	s
Technologists and technicians in the mathematical sciences	36	64,000	5	101,000	s	s	2	s	s	s	25	64,000	s	s	s	s
Other S&E-related occupations	44	108,000	14	101,000	s	s	s	s	2	s	28	108,000	s	s	s	s
Architects	20	95,000	7	90,000	s	s	s	s	1	s	11	93,000	s	s	s	s
Actuaries	24	109,000	6	162,000	s	s	s	s	s	s	18	108,000	s	s	s	s

Table SLBR-31

Number and median salary of full-time workers with highest degree in S&E field, by race or ethnicity and occupation: 2019

(Thousands and dollars)

Occupation	Total		Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)
Non-S&E occupations	6,055	67,000	624	77,000	18	61,000	518	52,000	639	52,000	4,083	70,000	26	107,000	148	60,000
Non-S&E managers	1,119	119,000	143	130,000	5	131,000	53	92,000	88	100,000	805	119,000	s	s	24	86,000
Top-level managers, executives, administrators (e.g., chief executive officer, chief operating officer, chief financial officer; president; district manager, general manager, provost)	626	134,000	90	149,000	s	s	18	121,000	32	119,000	473	132,000	s	s	10	176,000
Education administrators (e.g., registrar, dean, principal)	31	94,000	6	113,000	s	s	s	s	2	76,000	20	84,000	s	s	1	s
Other mid-level managers	462	101,000	47	102,000	s	s	33	87,000	53	90,000	313	110,000	s	s	13	69,000
Management-related occupations	1,524	81,000	193	92,000	s	s	125	68,000	142	72,000	1,011	85,000	14	108,000	33	80,000
Accountants, auditors, and other financial specialists	450	79,000	70	74,000	s	s	28	68,000	34	70,000	302	84,000	s	s	7	80,000
Personnel, training, and labor relations specialists	169	65,000	15	82,000	s	s	28	54,000	19	54,000	102	67,000	s	s	s	s
Other management-related occupations	905	90,000	108	108,000	s	s	68	71,000	90	81,000	607	90,000	10	96,000	21	87,000
Non-S&E precollege teachers	304	45,000	24	26,000	s	s	42	45,000	33	47,000	201	47,000	s	s	3	44,000
Prekindergarten and kindergarten	61	28,000	s	s	s	s	4	34,000	9	27,000	41	31,000	s	s	s	s
Elementary	129	46,000	9	s	s	s	22	32,000	6	54,000	91	47,000	s	s	s	s
Secondary—other subjects	53	45,000	s	s	s	s	s	s	s	s	42	42,000	s	s	s	s
Special education—primary and secondary	34	64,000	3	s	s	s	5	45,000	8	72,000	18	65,000	s	s	s	s
Other precollegiate area	27	49,000	s	s	s	s	s	s	s	s	s	s	s	s	s	s
Non-S&E postsecondary teachers	49	76,000	4	82,000	s	s	3	81,000	3	83,000	39	73,000	s	s	s	s
Art, drama, and music	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
Business, commerce, and marketing	6	115,000	1	83,000	s	s	s	s	s	s	4	123,000	s	s	s	s
Education	10	71,000	2	s	s	s	s	s	s	s	7	69,000	s	s	s	s
English	5	86,000	s	s	s	s	s	s	s	s	5	s	s	s	s	s
Foreign language	3	69,000	s	s	s	s	s	s	s	s	2	68,000	s	s	s	s
History	3	64,000	s	s	s	s	s	s	s	s	3	68,000	s	s	s	s
Physical education	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
Other postsecondary fields	10	85,000	s	s	s	s	s	s	s	s	9	86,000	s	s	s	s
Social services and related occupations	475	45,000	16	53,000	s	s	73	45,000	82	44,000	286	45,000	s	s	14	49,000
Clergy and other religious workers	46	31,000	s	s	s	s	s	s	s	s	30	32,000	s	s	s	s
Counselors (e.g., educational, vocational, mental health, substance abuse)	194	49,000	4	53,000	s	s	37	48,000	26	56,000	113	48,000	s	s	11	53,000

Table SLBR-31

Number and median salary of full-time workers with highest degree in S&E field, by race or ethnicity and occupation: 2019

(Thousands and dollars)

Occupation	Total		Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)
Social workers	235	42,000	7	46,000	s	s	36	38,000	46	44,000	142	41,000	s	s	3	45,000
Sales and marketing occupations	806	70,000	83	60,000	1	s	43	60,000	87	47,000	562	79,000	s	s	22	59,000
Insurance, securities, real estate, and business services	182	69,000	16	76,000	s	s	12	64,000	21	45,000	121	80,000	s	s	s	s
Sales, commodities except retail (e.g., industrial, medical, dental machinery, equipment, supplies)	146	99,000	5	66,000	s	s	s	s	8	62,000	124	99,000	s	s	s	s
Sales, retail (e.g., furnishings, clothing, motor vehicles, cosmetics)	173	44,000	20	39,000	s	s	10	40,000	24	33,000	115	45,000	s	s	3	s
Other marketing and sales occupations	304	75,000	42	80,000	s	s	20	55,000	34	64,000	200	79,000	s	s	7	s
Arts, humanities, and related occupations	106	57,000	11	58,000	s	s	7	s	4	53,000	81	60,000	s	s	3	74,000
Writers, editors, public relations specialists, artists, entertainers, broadcasters	105	58,000	10	60,000	s	s	7	s	4	53,000	80	59,000	s	s	3	74,000
Historians	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
Other non-S&E occupations	1,674	47,000	151	50,000	1	36,000	171	44,000	201	40,000	1,098	50,000	4	62,000	49	41,000
Accounting clerks and bookkeepers	111	41,000	18	44,000	s	s	2	36,000	14	37,000	77	42,000	s	s	s	s
Secretaries, receptionists, typists	102	37,000	14	67,000	s	s	11	36,000	14	32,000	59	36,000	s	s	4	41,000
Other administrative (e.g., record clerks, telephone operators)	352	46,000	36	43,000	s	s	57	44,000	46	48,000	191	48,000	s	s	21	31,000
Farmers, foresters, and fishermen	81	45,000	1	s	s	s	2	s	s	s	72	45,000	s	s	s	s
Lawyers, judges	53	84,000	4	131,000	s	s	s	s	6	50,000	31	98,000	s	s	s	s
Librarians, archivists, curators	18	33,000	s	s	s	s	2	47,000	1	s	14	33,000	s	s	s	s
Food preparation and service (e.g., cooks, waitresses, bartenders)	89	30,000	9	33,000	s	s	4	s	7	s	68	30,000	s	s	s	s
Protective services (e.g., firefighters, police, guards, wardens, park rangers)	125	65,000	8	78,000	s	s	15	51,000	15	66,000	83	65,000	s	s	5	s
Other service occupations, except health (e.g., probation officer, human services work)	212	44,000	13	41,000	s	s	26	37,000	29	38,000	141	45,000	s	s	3	46,000
Other teachers and instructors (e.g., private tutors, dance, flying, martial arts)	67	54,000	10	92,000	s	s	6	34,000	10	46,000	39	70,000	s	s	s	s
Construction and extraction occupations	36	75,000	s	s	s	s	s	s	6	s	24	74,000	s	s	s	s
Installation, maintenance, and repair occupations	71	68,000	4	46,000	s	s	7	51,000	17	34,000	42	74,000	s	s	s	s
Precision or production occupations (metal or wood workers, butchers, bakers, assemblers, tailors)	99	35,000	13	34,000	s	s	7	35,000	4	41,000	74	34,000	s	s	s	s

Table SLBR-31

Number and median salary of full-time workers with highest degree in S&E field, by race or ethnicity and occupation: 2019

(Thousands and dollars)

Occupation	Total		Asian		American Indian or Alaska Native		Black or African American		Hispanic or Latino		White		Native Hawaiian or Other Pacific Islander		More than one race	
	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)	Number	Median salary (\$)
Transportation and material moving occupations	135	56,000	9	47,000	s	s	11	40,000	13	s	99	59,000	s	s	4	s
Other occupations	122	52,000	8	109,000	s	s	12	s	15	s	86	51,000	s	s	s	s

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):
Hispanic or Latino may be any race; race categories exclude Hispanic or Latino origin. Detail may not add to total because of rounding. Numbers are rounded to the nearest 1,000.

Source(s):
National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-32

Employed S&E highest degree holders, by sex, race or ethnicity, field of highest degree, and broad occupational category: 2019

(Percent)

Sex, race or ethnicity, and field of highest degree	S&E occupations			S&E-related occupations	Non-S&E occupations
	All S&E	In field	Out of field		
All employed S&E highest degree holders	37.2	27.6	9.5	13.9	49.0
Female					
All S&E fields	26.0	19.6	6.4	13.3	60.7
Computer and mathematical sciences	48.9	46.7	2.2	14.7	36.4
Biological, agricultural, and environmental life sciences	27.2	19.0	8.2	29.5	43.3
Physical and related sciences	41.5	24.8	16.8	19.1	39.4
Social and related sciences	12.3	9.4	2.9	6.8	80.9
Engineering	57.9	36.4	21.6	10.9	31.2
Male					
All S&E fields	44.6	32.9	11.6	14.2	41.2
Computer and mathematical sciences	62.8	59.4	3.4	12.2	25.0
Biological, agricultural, and environmental life sciences	30.6	21.0	9.6	24.7	44.7
Physical and related sciences	50.0	29.0	21.1	20.1	29.9
Social and related sciences	15.9	6.5	9.4	6.5	77.6
Engineering	58.0	40.3	17.7	15.9	26.1
Asian					
All S&E fields	54.0	36.8	17.2	14.6	31.4
Computer and mathematical sciences	68.2	65.6	2.6	11.8	20.1
Biological, agricultural, and environmental life sciences	37.8	28.9	8.9	30.2	32.1
Physical and related sciences	65.0	30.2	34.9	13.6	21.4
Social and related sciences	14.4	7.8	6.6	5.7	79.9
Engineering	64.4	30.8	33.6	14.8	20.8
American Indian or Alaska Native					
All S&E fields	24.5	16.0	8.4	10.1	65.5
Computer and mathematical sciences	s	s	s	s	s
Biological, agricultural, and environmental life sciences	26.2	21.0	s	12.7	61.1
Physical and related sciences	s	s	s	s	s
Social and related sciences	s	s	s	s	88.5
Engineering	66.9	47.4	s	s	s
Black or African American					
All S&E fields	25.0	18.2	6.9	14.4	60.6
Computer and mathematical sciences	49.4	45.3	4.1	11.6	39.0
Biological, agricultural, and environmental life sciences	17.8	8.1	9.7	40.5	41.7
Physical and related sciences	34.4	22.6	11.9	7.0	58.6

Table SLBR-32

Employed S&E highest degree holders, by sex, race or ethnicity, field of highest degree, and broad occupational category: 2019

(Percent)

Sex, race or ethnicity, and field of highest degree	S&E occupations			S&E-related occupations	Non-S&E occupations
	All S&E	In field	Out of field		
Social and related sciences	7.9	5.2	2.7	7.7	84.4
Engineering	49.8	29.2	20.6	18.7	31.5
Hispanic or Latino					
All S&E fields	31.1	23.6	7.5	14.5	54.4
Computer and mathematical sciences	53.2	51.5	1.7	13.7	33.1
Biological, agricultural, and environmental life sciences	31.6	22.9	8.6	31.2	37.2
Physical and related sciences	44.3	30.9	13.4	16.6	39.1
Social and related sciences	13.5	8.3	5.2	6.4	80.1
Engineering	48.7	35.5	13.1	18.8	32.6
White					
All S&E fields	35.4	27.0	8.3	13.7	51.0
Computer and mathematical sciences	56.9	53.6	3.3	13.8	29.2
Biological, agricultural, and environmental life sciences	27.7	18.8	8.9	25.1	47.2
Physical and related sciences	45.1	27.3	17.8	21.9	33.0
Social and related sciences	14.7	8.7	6.0	6.7	78.6
Engineering	57.2	44.2	12.9	14.5	28.3
Native Hawaiian or Other Pacific Islander					
All S&E fields	28.7	27.2	1.6	6.7	64.6
Computer and mathematical sciences	s	s	s	s	78.4
Biological, agricultural, and environmental life sciences	s	s	s	s	78.9
Physical and related sciences	s	s	s	s	s
Social and related sciences	s	s	s	s	90.3
Engineering	70.3	67.1	s	s	14.0
More than one race					
All S&E fields	34.0	26.1	7.9	10.6	55.4
Computer and mathematical sciences	62.8	62.1	s	5.0	32.2
Biological, agricultural, and environmental life sciences	26.0	16.9	9.1	23.1	50.9
Physical and related sciences	35.7	21.6	14.1	22.9	41.4
Social and related sciences	11.3	5.7	5.6	7.9	80.8
Engineering	65.1	46.2	18.9	8.3	26.6

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Hispanic or Latino may be any race; race categories exclude Hispanic or Latino origin. For each broad S&E highest degree field, S&E occupations in field include individuals who report being in an occupation in the same broad category as their highest degree, and S&E occupations out of field include those who report being in an occupation not in the same broad category as their highest degree. For example, for highest degree holders in computer and mathematical sciences, S&E occupations in field include those who report computer and mathematical sciences as their occupation, and S&E occupations out of field include those who report an S&E occupation other than computer and mathematical sciences occupations, that is, who report biological, agricultural, and environmental life sciences; physical sciences; social sciences; or engineering as their occupation. Percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-33

Employed women with their highest degree in an S&E field, by race or ethnicity and field of degree: 2019

(Percent)

Race or ethnicity and degree field	S&E occupations	S&E-related occupations	Non-S&E occupations
Asian	44.9	13.5	41.6
Computer and mathematical sciences	65.3	10.7	24.0
Biological, agricultural and environmental life sciences	35.4	32.3	32.3
Physical and related sciences	55.1	19.5	25.5
Social and related sciences	14.6	4.7	80.7
Engineering	64.0	10.2	25.9
Black or African American	15.2	11.8	73.1
Computer and mathematical sciences	41.1	11.2	47.7
Biological, agricultural and environmental life sciences	17.2	34.8	48.0
Physical and related sciences	22.3	8.2	69.4
Social and related sciences	6.4	6.0	87.6
Engineering	38.1	15.5	46.4
Hispanic or Latino	22.0	11.7	66.3
Computer and mathematical sciences	31.0	16.5	52.5
Biological, agricultural and environmental life sciences	28.4	31.3	40.3
Physical and related sciences	49.8	18.0	32.2
Social and related sciences	12.9	5.5	81.6
Engineering	47.2	10.5	42.3
White	23.9	13.8	62.3
Computer and mathematical sciences	41.8	17.7	40.5
Biological, agricultural and environmental life sciences	26.5	28.4	45.2
Physical and related sciences	40.0	19.7	40.3
Social and related sciences	12.9	7.4	79.7
Engineering	58.8	11.1	30.1
Other race or ethnicity	20.5	12.4	67.1
Computer and mathematical sciences	56.6	10.2	33.2
Biological, agricultural and environmental life sciences	20.7	24.4	54.8
Physical and related sciences	33.1	25.5	41.3
Social and related sciences	9.4	8.6	82.0
Engineering	62.8	6.0	31.2

Note(s):

Hispanic may be any race; race categories exclude Hispanic origin. Other race or ethnicity includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and more than one race. Percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-34

Employed S&E highest degree holders, by race or ethnicity, sex, and field of degree: 2019

(Number and percent)

Occupation	Asian		Black or African American		Hispanic or Latino		White		Other race or ethnicity	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Female S&E highest degree holders	922,000	100	506,000	100	670,000	100	3,845,000	100	188,000	100
Computer and mathematical scientists	266,000	29	35,000	7	36,000	5	275,000	7	13,000	7
Computer and information scientists	237,000	26	34,000	7	28,000	4	217,000	6	12,000	6
Mathematical scientists	20,000	2	1,000	0	6,000	1	34,000	1	1,000	1
Postsecondary teachers—computer and mathematical sciences	8,000	1	1,000	0	2,000	0	23,000	1	s	s
Biological, agricultural, and other life scientists	57,000	6	8,000	2	29,000	4	170,000	4	6,000	3
Agricultural and food scientists	2,000	0	s	s	s	s	10,000	0	s	s
Biological and medical scientists	46,000	5	6,000	1	19,000	3	119,000	3	5,000	3
Environmental life scientists	s	s	s	s	s	s	7,000	0	s	s
Postsecondary teachers—life and related sciences	9,000	1	1,000	0	4,000	1	34,000	1	s	s
Physical and related scientists	13,000	1	7,000	1	10,000	2	96,000	3	3,000	2
Chemists, except biochemists	4,000	1	4,000	1	4,000	1	29,000	1	s	s
Earth, atmospheric, and ocean scientists	2,000	0	s	s	1,000	0	21,000	1	s	s
Physicists	s	s	s	s	s	s	6,000	0	s	s
Other physical and related scientists, including astronomers	1,000	0	3,000	1	2,000	0	19,000	1	s	s
Postsecondary teachers—physical and related sciences	3,000	0	s	s	3,000	0	22,000	1	s	s
Social and related scientists	23,000	3	17,000	4	43,000	6	222,000	6	8,000	4
Economists	3,000	0	s	s	1,000	0	5,000	0	s	s
Political scientists	s	s	s	s	s	s	3,000	0	s	s
Psychologists	6,000	1	7,000	1	19,000	3	116,000	3	3,000	1
Anthropologists	s	s	s	s	1,000	0	7,000	0	s	s
Other social and related scientists	4,000	0	5,000	1	s	s	31,000	1	1,000	0
Postsecondary teachers—social and related sciences	10,000	1	3,000	1	s	s	60,000	2	3,000	2
Engineers	55,000	6	9,000	2	29,000	4	155,000	4	8,000	4
Aerospace, aeronautical, or astronautical engineers	3,000	0	s	s	2,000	0	12,000	0	s	s
Chemical engineers	3,000	0	s	s	1,000	0	10,000	0	s	s
Civil, architectural, or sanitary engineers	10,000	1	2,000	1	7,000	1	29,000	1	1,000	1
Electrical or computer hardware engineers	16,000	2	1,000	0	3,000	1	16,000	0	s	s
Industrial engineers	2,000	0	s	s	3,000	0	9,000	0	s	s
Mechanical engineers	6,000	1	s	s	3,000	0	17,000	0	s	s
Other engineers	11,000	1	3,000	1	11,000	2	56,000	2	3,000	2
Postsecondary teachers—engineering	5,000	1	s	s	s	s	6,000	0	s	s
S&E related occupations	125,000	14	59,000	12	79,000	12	531,000	14	23,000	12
Health-related occupations	58,000	6	31,000	6	33,000	5	307,000	8	13,000	7

Table SLBR-34

Employed S&E highest degree holders, by race or ethnicity, sex, and field of degree: 2019

(Number and percent)

Occupation	Asian		Black or African American		Hispanic or Latino		White		Other race or ethnicity	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
S&E managers	19,000	2	9,000	2	16,000	3	61,000	2	s	s
S&E precollege teachers	7,000	1	9,000	2	16,000	2	86,000	2	2,000	1
S&E technicians and technologists	37,000	4	9,000	2	12,000	2	67,000	2	5,000	2
Other S&E-related occupations	3,000	0	s	s	s	s	10,000	0	s	s
Non-S&E occupations	384,000	42	370,000	73	444,000	66	2,397,000	62	126,000	67
Non-S&E managers	40,000	4	21,000	4	25,000	4	189,000	5	12,000	7
Management-related occupations	101,000	11	80,000	16	94,000	14	549,000	14	23,000	12
Non-S&E precollege teachers	41,000	5	39,000	8	43,000	6	203,000	5	7,000	4
Non-S&E postsecondary teachers	5,000	1	s	s	5,000	1	26,000	1	s	s
Social services and related occupations	10,000	1	54,000	11	64,000	10	284,000	7	13,000	7
Sales and marketing occupations	46,000	5	29,000	6	57,000	8	286,000	7	14,000	8
Art, humanities, and related occupations	11,000	1	3,000	1	6,000	1	73,000	2	3,000	2
Other non-S&E occupations	129,000	14	140,000	28	150,000	22	787,000	21	53,000	28
Male S&E highest degree holders	1,535,000	100	529,000	100	783,000	100	6,158,000	100	225,000	100
Computer and mathematical scientists	549,000	36	111,000	21	142,000	18	1,164,000	19	51,000	23
Computer and information scientists	514,000	34	99,000	19	128,000	16	1,075,000	18	49,000	22
Mathematical scientists	21,000	1	9,000	2	11,000	1	61,000	1	1,000	0
Postsecondary teachers—computer and mathematical sciences	14,000	1	2,000	1	3,000	0	29,000	1	s	s
Biological, agricultural, and other life scientists	71,000	5	7,000	1	28,000	4	197,000	3	6,000	3
Agricultural and food scientists	s	s	1,000	0	s	s	23,000	0	s	s
Biological and medical scientists	58,000	4	s	s	14,000	2	127,000	2	5,000	2
Environmental life scientists	s	s	s	s	s	s	16,000	0	s	s
Postsecondary teachers—life and related sciences	8,000	1	s	s	3,000	0	31,000	1	s	s
Physical and related scientists	38,000	3	10,000	2	16,000	2	175,000	3	4,000	2
Chemists, except biochemists	13,000	1	2,000	0	5,000	1	54,000	1	s	s
Earth, atmospheric, and ocean scientists	3,000	0	s	s	2,000	0	49,000	1	1,000	1
Physicists	8,000	1	s	s	2,000	0	23,000	0	s	s
Other physical and related scientists, including astronomers	3,000	0	s	s	s	s	21,000	0	s	s
Postsecondary teachers—physical and related sciences	11,000	1	s	s	3,000	0	27,000	0	s	s
Social and related scientists	9,000	1	9,000	2	14,000	2	129,000	2	3,000	1
Economists	3,000	0	s	s	4,000	1	27,000	0	s	s
Political scientists	s	s	s	s	s	s	5,000	0	s	s
Psychologists	1,000	0	2,000	0	2,000	0	32,000	1	s	s
Anthropologists	s	s	s	s	s	s	5,000	0	s	s

Table SLBR-34

Employed S&E highest degree holders, by race or ethnicity, sex, and field of degree: 2019

(Number and percent)

Occupation	Asian		Black or African American		Hispanic or Latino		White		Other race or ethnicity	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Other social and related scientists	1,000	0	s	s	s	s	17,000	0	s	s
Postsecondary teachers—social and related sciences	4,000	0	6,000	1	5,000	1	42,000	1	1,000	0
Engineers	244,000	16	45,000	9	106,000	14	954,000	16	32,000	14
Aerospace, aeronautical, or astronautical engineers	12,000	1	s	s	9,000	1	67,000	1	3,000	1
Chemical engineers	10,000	1	s	s	3,000	0	43,000	1	s	s
Civil, architectural, or sanitary engineers	27,000	2	6,000	1	21,000	3	165,000	3	3,000	1
Electrical or computer hardware engineers	84,000	5	17,000	3	23,000	3	200,000	3	10,000	4
Industrial engineers	7,000	1	s	s	5,000	1	30,000	1	1,000	0
Mechanical engineers	49,000	3	6,000	1	22,000	3	215,000	4	5,000	2
Other engineers	42,000	3	9,000	2	21,000	3	211,000	3	8,000	4
Postsecondary teachers—engineering	13,000	1	1,000	0	2,000	0	23,000	0	s	s
S&E-related occupations	235,000	15	89,000	17	132,000	17	839,000	14	19,000	8
Health-related occupations	36,000	2	30,000	6	28,000	4	154,000	3	5,000	2
S&E managers	68,000	4	16,000	3	31,000	4	290,000	5	4,000	2
S&E precollege teachers	4,000	0	9,000	2	13,000	2	90,000	2	1,000	1
S&E technicians and technologists	115,000	8	35,000	7	60,000	8	287,000	5	9,000	4
Other S&E-related occupations	11,000	1	s	s	s	s	19,000	0	s	s
Non-S&E occupations	388,000	25	257,000	49	346,000	44	2,700,000	44	110,000	49
Non-S&E managers	114,000	7	35,000	7	67,000	9	685,000	11	17,000	8
Management-related occupations	105,000	7	55,000	10	70,000	9	609,000	10	33,000	15
Non-S&E precollege teachers	4,000	0	7,000	1	7,000	1	53,000	1	s	s
Non-S&E postsecondary teachers	2,000	0	4,000	1	2,000	0	30,000	1	s	s
Social services and related occupations	13,000	1	30,000	6	32,000	4	91,000	2	12,000	5
Sales and marketing occupations	58,000	4	27,000	5	49,000	6	409,000	7	22,000	10
Art, humanities, and related occupations	4,000	0	s	s	2,000	0	73,000	1	s	s
Other non-S&E occupations	88,000	6	95,000	18	116,000	15	751,000	12	24,000	11

s = suppressed for reasons of confidentiality and/or reliability.

Note(s):

Hispanic or Latino may be any race; race categories exclude Hispanic or Latino origin. Detail may not add to total because of rounding, and percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-35

Race or ethnicity distribution of workers with a bachelor's degree or higher in broad occupational groups, by nativity: 2019

(Thousands and percent distribution)

Broad occupation and race or ethnicity	All	Foreign born	U.S. native born
Total S&E (thousands)	7,466	2,192	5,275
American Indian or Alaska Native	s	s	s
Asian	20.7	60.7	4.0
Black or African American	5.1	5.3	5.0
Hispanic or Latino	7.6	9.0	6.9
Native Hawaiian or Other Pacific Islander	0.2	0.4	0.1
White	64.1	23.2	81.1
More than one race	2.1	1.4	2.4
Total S&E-related (thousands)	8,893	1,802	7,092
American Indian or Alaska Native	0.30	s	0.40
Asian	12.90	47.90	4.10
Black or African American	6.90	10.80	5.90
Hispanic or Latino	9.20	15.90	7.50
Native Hawaiian or Other Pacific Islander	0.30	0.70	s
White	68.10	22.90	79.50
More than one race	2.20	1.80	2.30
Total non-S&E (thousands)	34,165	4,609	29,556
American Indian or Alaska Native	0.4	s	0.4
Asian	6.9	37.4	2.2
Black or African American	8.5	8.8	8.4
Hispanic or Latino	10	22.6	8
Native Hawaiian or Other Pacific Islander	0.2	0.6	0.2
White	71.5	27.9	78.3
More than one race	2.4	2.6	2.4

s = suppressed for reasons of confidentiality and/or reliability.

STEM = science, technology, engineering, and mathematics.

Note(s):

Hispanic may be any race; race categories exclude Hispanic origin. Workers in non-S&E occupations include middle-skill and non-STEM occupations. Detail may not add to total because of rounding, and percentages may not add to 100% because of rounding.

Source(s):

National Center for Science and Engineering Statistics, National Survey of College Graduates (NSCG), 2019.

Science and Engineering Indicators

Table SLBR-36

S&E doctorate holders employed in academia, by type of position, degree field, and citizenship: 2019

(Thousands)

Position and degree field	All S&E doctorate holders	Native-born U.S. citizens	Foreign born	
			Naturalized U.S. citizens	Noncitizens
All positions	350.4	234.9	67.2	48.4
Physical sciences	49.8	32.9	9.2	7.8
Mathematics and statistics	20.6	11.1	5.7	3.9
Computer and information sciences	10.8	4.8	3.3	2.7
Life sciences	119.8	85.2	19.4	15.2
Psychology	39.8	33.6	4.5	1.7
Social sciences	64.8	47.4	10.8	6.7
Engineering	45.0	20.0	14.5	10.6
Full-time faculty ^a	246.8	168.1	51.0	27.8
Physical sciences	33.0	22.7	6.7	3.6
Mathematics and statistics	16.3	8.9	4.5	2.9
Computer and information sciences	8.6	3.8	2.9	1.9
Life sciences	77.1	57.6	13.2	6.3
Psychology	27.9	23.7	3.2	1.1
Social sciences	50.4	36.6	8.7	5.1
Engineering	33.4	14.7	11.9	6.8
Postdoctorates	18.6	8.7	1.3	8.7
Physical sciences	3.6	1.5	0.2	2.0
Mathematics and statistics	0.7	0.3	s	0.4
Computer and information sciences	0.2	s	s	0.1
Life sciences	10.5	5.5	0.7	4.3
Psychology	0.8	0.6	s	0.2
Social sciences	0.5	0.4	0.1	0.1
Engineering	2.3	0.5	0.2	1.6
Other positions ^b	85.0	58.1	15.0	11.9
Physical sciences	13.3	8.7	2.4	2.2
Mathematics and statistics	3.6	1.9	1.1	0.6
Computer and information sciences	1.9	0.9	0.4	0.7
Life sciences	32.2	22.1	5.5	4.6
Psychology	11.0	9.4	1.2	0.4
Social sciences	13.9	10.4	2.1	1.4
Engineering	9.3	4.8	2.5	2.1

s = suppressed for reasons of confidentiality and/or reliability.

^a Full-time faculty include assistant professors, associate professors, and full professors.

^b Other positions include full-time positions such as instructors, research associates, adjunct positions, lecturers, and administrative positions as well as part-time positions of all kinds. Part-time positions exclude those employed part time because they are students or retired.

Note(s):

Academic employment is limited to U.S. doctorate holders employed at 2- or 4-year colleges or universities, medical centers, and university research institutes. Physical sciences include earth, atmospheric, and ocean sciences; life sciences include biological, agricultural, and environmental life and health sciences. Detail may not add to total because of rounding.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients (SDR), 2019.

Science and Engineering Indicators

Table SLBR-37

Plans of noncitizen recipients of U.S. doctorates to stay in the United States, by field of doctorate and place of citizenship: 2008–19

(Number and percent)

Field and place of citizenship	Noncitizen S&E doctorate recipients			Plans to stay (%)			Definite plans to stay (%)		
	2008–11	2012–15	2016–19	2008–11	2012–15	2016–19	2008–11	2012–15	2016–19
All S&E fields	55,505	59,889	65,835	75.5	75.4	76.8	49.6	45.2	50.1
China	16,120	19,068	22,866	85.6	83.4	82.4	54.9	49.4	54.4
India	8,936	9,111	8,321	86.6	86.5	88.4	57.8	50.9	57.3
Iran	773	2,096	3,916	90.3	89.8	93.3	59.1	53.0	57.9
South Korea	4,836	4,300	3,707	68.1	65.8	70.4	44.7	40.5	47.8
Taiwan	2,275	2,429	1,996	69.9	74.6	81.4	41.8	42.3	50.8
Turkey	1,920	1,631	1,590	67.1	65.9	67.5	46.3	41.4	45.7
Canada	1,749	1,546	1,420	66.2	66.3	70.3	47.1	44.5	52.0
Saudi Arabia	304	494	1,024	80.3	86.0	89.4	50.7	45.3	56.4
Bangladesh	319	635	978	87.8	88.0	91.4	55.8	49.0	51.3
Nepal	739	744	754	56.0	63.0	69.9	39.9	37.2	45.0
Mexico	599	710	747	64.3	65.8	63.2	42.2	41.1	41.4
Colombia	580	586	726	52.2	55.3	66.0	37.2	35.8	50.3
Brazil	959	876	630	31.6	27.3	31.1	14.2	14.6	19.8
Thailand	441	392	1,276	49.7	39.5	50.6	29.3	20.4	34.6
Unknown foreign country	143	275	1,157	17.5	17.5	13.8	9.8	6.9	4.7
Other	14,812	14,996	14,727	68.7	67.3	68.6	46.4	41.4	44.3
Life sciences ^a	14,290	14,741	15,356	78.3	77.1	77.7	51.0	44.8	49.1
China	4,039	4,160	4,565	87.1	83.5	84.3	55.7	48.8	54.6
India	2,508	2,825	2,544	89.4	88.2	91.2	56.5	48.1	55.2
South Korea	1,018	790	779	81.7	80.9	79.5	56.0	48.9	53.3
Taiwan	758	775	602	73.7	79.5	87.4	48.8	46.6	56.6
Canada	605	464	406	70.9	71.3	75.9	50.4	42.7	48.3
Nepal	94	203	361	86.2	88.2	92.5	48.9	49.8	54.3
Saudi Arabia	34	77	353	17.6	23.4	13.9	s	11.7	4.5
Brazil	231	247	335	53.2	60.7	69.9	37.2	36.0	49.9
Iran	188	191	245	69.1	68.1	62.9	48.9	41.4	42.9
Colombia	200	211	229	76.5	75.4	73.8	55.0	49.8	50.2
Turkey	268	294	219	24.3	24.5	26.5	11.9	13.9	17.8
Thailand	220	212	210	51.8	63.7	71.0	35.9	37.3	44.8
Mexico	79	112	196	89.9	88.4	86.2	43.0	43.8	44.4
Nigeria	107	93	315	s	43.0	55.6	s	17.2	35.6
Unknown foreign country	61	128	259	s	84.4	90.7	55.7	51.6	52.1
Other	3,880	3,959	3,738	70.7	68.6	68.9	46.9	41.2	43.6

Table SLBR-37

Plans of noncitizen recipients of U.S. doctorates to stay in the United States, by field of doctorate and place of citizenship: 2008–19

(Number and percent)

Field and place of citizenship	Noncitizen S&E doctorate recipients			Plans to stay (%)			Definite plans to stay (%)		
	2008–11	2012–15	2016–19	2008–11	2012–15	2016–19	2008–11	2012–15	2016–19
Physical and earth sciences	8,673	9,026	10,102	78.1	76.9	77.9	53.8	46.8	50.1
China	3,064	3,390	4,154	85.8	84.0	81.4	57.3	49.4	51.7
India	1,109	1,234	1,104	83.3	83.4	84.7	58.7	49.9	56.9
Iran	47	136	441	83.0	81.6	90.5	48.9	50.0	57.6
South Korea	549	450	338	74.5	64.4	77.5	57.6	42.0	55.0
Taiwan	241	332	319	73.4	73.8	79.6	51.0	49.7	50.8
Sri Lanka	159	251	317	83.6	80.1	83.0	54.1	41.8	43.2
Nepal	110	200	274	87.3	88.5	90.5	60.9	52.5	51.1
Canada	246	177	204	63.8	65.5	70.1	48.8	51.4	56.4
Turkey	251	168	162	77.7	63.1	72.2	52.2	39.9	50.0
Russia	209	159	148	82.3	83.6	75.0	58.9	52.8	51.4
Germany	143	153	110	58.0	57.5	70.9	46.2	42.5	50.9
Mexico	106	102	108	58.5	65.7	71.3	46.2	42.2	46.3
Thailand	89	95	107	33.7	26.3	29.9	19.1	13.7	22.4
Bangladesh	44	39	104	70.5	s	87.5	43.2	48.7	48.1
Unknown foreign country	52	50	162	51.9	s	51.9	34.6	34.0	34.0
Other	2,254	2,090	2,050	71.5	69.3	67.8	48.9	43.1	43.6
Mathematics and computer sciences	6,700	7,842	9,093	76.9	79.4	80.2	53.3	52.9	58.9
China	2,443	3,297	3,846	86.0	87.0	86.3	58.6	56.9	64.5
India	976	969	1,017	84.4	84.6	86.6	60.5	58.7	65.2
Iran	57	195	456	77.2	89.2	92.5	47.4	62.1	62.1
South Korea	475	470	412	71.4	70.9	75.5	43.4	46.8	56.6
Turkey	237	206	244	62.4	74.3	66.8	46.4	49.0	49.6
Taiwan	177	228	219	70.1	72.8	84.0	42.4	46.9	59.4
Saudi Arabia	23	39	214	26.1	s	12.6	s	s	5.6
Bangladesh	45	104	174	88.9	94.2	92.5	60.0	52.9	64.9
Canada	141	144	145	59.6	68.8	74.5	48.9	59.0	57.9
Vietnam	62	139	129	71.0	79.1	87.6	53.2	51.8	72.9
Greece	70	88	106	65.7	78.4	84.9	50.0	59.1	64.2
Sri Lanka	33	77	98	72.7	80.5	85.7	51.5	50.6	54.1
Russia	101	72	80	76.2	79.2	83.8	48.5	55.6	58.8
Italy	64	81	79	62.5	64.2	78.5	45.3	42.0	64.6
Unknown foreign country	64	43	182	43.8	s	50.0	s	s	39.6
Other	1,732	1,690	1,692	68.2	67.4	71.3	49.4	45.1	50.4

Table SLBR-37

Plans of noncitizen recipients of U.S. doctorates to stay in the United States, by field of doctorate and place of citizenship: 2008–19

(Number and percent)

Field and place of citizenship	Noncitizen S&E doctorate recipients			Plans to stay (%)			Definite plans to stay (%)		
	2008–11	2012–15	2016–19	2008–11	2012–15	2016–19	2008–11	2012–15	2016–19
Psychology and social sciences	7,589	7,575	8,229	57.6	56.1	59.5	39.4	35.8	40.7
China	1,104	1,320	1,829	69.6	62.7	63.3	47.5	40.5	44.7
South Korea	780	805	884	46.9	48.8	55.9	29.9	30.1	37.0
India	539	505	473	75.5	73.1	69.8	53.2	45.9	49.0
Canada	454	470	405	55.5	55.1	60.7	39.4	37.0	47.9
Turkey	464	340	345	46.1	41.8	53.0	32.1	27.1	31.0
Taiwan	281	296	236	44.8	45.3	53.8	23.8	23.6	29.7
Japan	373	285	191	50.4	47.7	44.5	33.8	30.2	30.4
Mexico	160	158	178	50.6	53.2	64.0	36.3	26.6	44.9
Germany	239	213	173	65.7	59.6	66.5	54.0	48.4	45.7
Iran	32	59	154	s	78.0	88.3	62.5	44.1	61.0
Colombia	96	111	144	45.8	45.0	43.1	32.3	33.3	32.6
Italy	130	133	140	54.6	55.6	66.4	43.8	43.6	56.4
Brazil	130	134	128	43.1	42.5	60.9	30.8	25.4	46.9
United Kingdom	116	133	120	71.6	66.9	67.5	54.3	43.6	50.8
Unknown foreign country	86	87	225	s	31.0	46.7	24.4	12.6	30.7
Other	2,605	2,526	2,604	57.3	56.8	57.1	38.6	36.2	37.6
Engineering	18,253	20,705	23,055	79.1	79.2	80.6	49.5	45.2	50.6
China	5,470	6,901	8,472	87.5	85.1	84.3	52.9	48.0	53.1
India	3,804	3,578	3,183	87.8	88.6	90.7	58.3	52.0	58.0
Iran	576	1,578	2,606	91.1	91.5	94.4	61.3	52.5	57.6
South Korea	2,014	1,785	1,294	66.8	65.8	71.5	41.6	39.5	47.3
Taiwan	818	798	620	73.8	81.6	86.1	38.5	40.7	50.0
Turkey	768	706	610	75.4	72.9	72.3	50.7	44.1	49.5
Bangladesh	144	259	539	83.3	86.5	91.8	50.0	42.1	56.4
Saudi Arabia	50	109	401	14.0	19.3	15.2	s	6.4	4.5
Egypt	177	273	310	74.6	70.0	75.8	43.5	36.6	47.4
Canada	303	291	260	77.6	75.6	74.2	49.8	48.1	57.7
Iraq	s	38	238	s	57.9	26.5	s	15.8	12.6
Colombia	192	260	218	71.4	71.9	72.0	41.1	41.9	42.7
Nepal	59	105	194	s	94.3	94.3	54.2	46.7	49.0
Mexico	176	191	190	59.7	69.1	72.1	41.5	42.4	39.5
Unknown foreign country	s	119	392	50.0	39.5	48.7	30.3	19.3	33.9
Other	3,566	3,714	3,528	67.2	65.5	70.3	42.1	37.8	43.8

s = suppressed for reasons of confidentiality and/or reliability.

^a Life sciences include agricultural sciences and natural resources, biological and biomedical sciences, and health sciences.

Note(s):

For each broad field of doctorate, data are presented for the countries with the largest numbers of U.S. doctorate recipients in that field in 2016–19. Data include noncitizen doctorate recipients who are on permanent or temporary visas and also those whose visa status is unknown. The information on a plan to stay or a definite plan to stay reflects intentions within the year after graduation as reported by the doctoral recipient around the graduation date. Recipients who plan to stay think they will locate in the United States; those with definite plans have a postdoctoral research appointment or a definite employment plan in the United States. Percentages are based on the total number of foreign S&E doctorate recipients, including those who did not report their postgraduate location plans or employment plans. The percentage of foreign S&E doctorate recipients who did not report postgraduate location plans ranged from 2.1% to 4.7% over the 2008–19 period, and the percentage who either did not report postgraduate location plans or did not report employment plans ranged from 3.3% to 7.0% over that period.

Source(s):

National Center for Science and Engineering Statistics, Survey of Earned Doctorates (SED).

Science and Engineering Indicators