

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

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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

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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, dietitians, 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

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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

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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

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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.

Science and Engineering Indicators