

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

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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, dieticians, 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

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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

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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