

Appendix table 3-2

Bureau of Labor Statistics projections of occupational employment: 2010–20

(Thousands)

Occupation	BLS National Employment Matrix 2010 estimate	BLS projected 2020 employment	Job openings from growth and net replacements, 2010–20	10-year growth in total employment (%)	10-year job openings as % of 2010 employment
Total, all occupations	143,068	163,537	54,787	14.3	38.3
All S&E	5,546	6,585	2,197	18.7	39.6
Computer and mathematical scientists	3,157	3,886	1,290	23.1	40.9
Computer and information scientists, research	28	34	11	18.7	37.6
Computer software engineers	913	1,184	366	29.7	40.1
Computer support specialists	607	717	270	18.1	44.4
Computer systems analysts	544	665	223	22.1	40.9
Database administrators	111	145	53	30.6	47.6
Network and computer systems administrators	347	444	155	27.8	44.7
Information security analysts, Web developers, and computer network architects	302	368	110	21.7	36.5
All other computer specialists	210	222	52	5.9	24.6
Mathematicians	3	4	2	15.7	74.2
Operations research analysts	65	74	30	14.6	46.4
Statisticians	25	29	19	14.1	74.5
Mathematical scientists, all other	1	2	1	14.7	71.4
Engineers	1,519	1,679	526	10.6	34.6
Aerospace engineers	81	85	22	4.9	26.9
Agricultural engineers	3	3	1	9.1	29.6
Biomedical engineers	16	25	13	61.7	83.4
Chemical engineers	30	32	11	5.9	37.7
Civil engineers	263	314	104	19.4	39.7
Computer hardware engineers	70	76	23	9.0	32.7
Electrical and electronics engineers	294	312	88	6.0	30.1
Electrical engineers	154	165	48	7.0	31.0
Electronics engineers, except computer	140	147	41	4.9	29.0
Environmental engineers	51	63	23	21.9	44.0
Industrial engineers, including health and safety	228	244	66	7.1	28.9
Health and safety engineers, except mining safety engineers and inspectors	24	27	8	13.0	34.6
Industrial engineers	204	217	58	6.4	28.2
Marine engineers and naval architects	6	7	2	17.5	39.0
Materials engineers	22	24	8	8.7	36.3
Mechanical engineers	243	265	100	8.8	41.0
Mining and geological engineers, including mining safety engineers	6	7	2	9.6	31.3
Nuclear engineers	19	21	6	10.2	32.5
Petroleum engineers	30	35	12	17.0	39.1
All other engineers	157	167	45	6.6	28.6
Life scientists	286	344	106	20.4	37.1
Agricultural and food scientists	34	37	17	10.4	51.3
Animal scientists	3	4	2	12.8	54.5
Food scientists and technologists	14	15	7	8.0	48.9
Soil and plant scientists	16	18	9	12.1	52.8
Biological scientists	101	115	37	14.0	36.5
Biochemists and biophysicists	25	33	13	30.8	53.4
Microbiologists	20	23	7	13.3	35.5
Zoologists and wildlife biologists	20	21	6	7.4	29.8
Biological scientists, all other	36	38	10	6.3	28.8
Conservation scientists and foresters	35	37	6	5.0	17.2
Conservation scientists	23	25	4	5.2	17.1
Foresters	12	12	2	4.7	16.5

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Medical scientists	105	143	44	35.8	42.0
Epidemiologists	5	6	2	23.6	30.0
Medical scientists, except epidemiologists	100	137	43	36.4	42.6
All other life scientists	12	13	2	11.7	18.1
Physical scientists	282	318	122	12.7	43.2
Astronomers and physicists	21	23	9	13.8	43.2
Astronomers	2	3	1	11.0	40.9
Physicists	18	21	8	14.2	43.7
Atmospheric and space scientists	10	10	2	10.6	22.1
Chemists and materials scientists	91	95	34	4.5	37.0
Chemists	82	85	30	3.8	36.4
Materials scientists	9	10	4	10.2	42.5
Environmental scientists and geoscientists	131	156	64	19.3	48.9
Environmental scientists and specialists, including health	89	106	43	18.7	48.3
Geoscientists, except hydrologists and geographers	34	41	17	21.2	50.6
Hydrologists	8	9	4	17.8	47.4
All other physical scientists	30	33	13	8.5	43.9
Social and related scientists	302	358	152	18.5	50.4
Economists	15	16	6	6.1	37.7
Survey researchers	20	24	10	24.1	50.5
Psychologists	174	212	93	21.6	53.2
Clinical, counseling, and school psychologists	154	188	82	21.9	53.3
Industrial-organizational psychologists	2	3	2	34.9	68.2
Psychologists, all other	18	21	9	18.2	49.7
Sociologists	4	5	2	18.1	45.0
Urban and regional planners	40	47	17	16.2	41.7
Miscellaneous social scientists and related workers	49	54	26	10.7	52.4
Anthropologists and archeologists	6	7	4	20.7	62.3
Geographers	2	2	1	35.4	81.3
Political scientists	6	6	3	7.9	50.0
Social scientists and related workers, all other	35	38	18	8.1	49.7
Selected other occupations					
S&E managers	534	609	186	14.0	34.8
Computer and information systems managers	308	364	103	18.1	33.4
Architectural and engineering managers	177	192	50	8.6	28.1
Natural sciences managers	49	53	34	7.7	68.0
S&E technicians	808	873	275	8.0	34.1
Agricultural and food science technicians	21	23	9	7.0	40.8
Biological technicians	80	91	38	13.5	47.3
Chemical technicians	61	65	13	6.7	21.1
Geological and petroleum technicians	14	17	7	14.7	48.6
Nuclear technicians	7	8	3	13.5	46.5
Social science research assistants	30	34	17	15.0	57.2
Other life, physical, and social science technicians	141	157	76	11.6	54.1
Aerospace engineering and operations technicians	9	9	2	-1.6	19.5
Civil engineering technicians	79	89	25	12.0	31.1
Electrical and electronic engineering technicians	151	154	32	1.9	21.0
Electro-mechanical technicians	16	17	3	0.5	19.5
Environmental engineering technicians	19	23	8	24.3	43.6
Industrial engineering technicians	63	65	15	4.2	23.4
Mechanical engineering technicians	45	47	10	3.9	23.2
Engineering technicians, except drafters, all other	71	74	17	4.7	23.8

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Mathematical technicians	1	1	1	6.2	63.6
Health care practitioners and technical occupations	7,799	9,819	3,591	25.9	46.0
Health diagnosing and treating practitioners	4,852	6,128	2,219	26.3	45.7
Chiropractors	53	67	25	28.3	48.1
Dentists	156	188	78	20.7	50.4
Dentists, general	131	158	66	21.1	50.8
Oral and maxillofacial surgeons	8	10	4	21.3	51.3
Orthodontists	8	10	4	21.1	50.6
Prosthodontists	1	1	1	21.4	50.0
Dentists, all other specialists	8	9	3	11.7	41.0
Dietitians and nutritionists	64	77	35	19.7	55.0
Optometrists	34	46	23	33.1	68.4
Pharmacists	275	345	140	25.4	50.8
Physicians and surgeons	691	859	305	24.4	44.2
Physician assistants	84	108	41	29.5	48.6
Podiatrists	13	16	5	20.0	39.5
Registered nurses	2,737	3,449	1,207	26.0	44.1
Therapists	616	806	298	30.9	48.3
Occupational therapists	109	145	57	33.5	52.5
Physical therapists	199	276	101	39.0	50.7
Radiation therapists	17	20	7	20.3	39.6
Recreational therapists	22	26	12	17.1	53.1
Respiratory therapists	113	144	53	27.7	46.8
Speech-language pathologists	123	152	52	23.4	42.5
Therapists, all other	33	42	16	27.9	49.2
Audiologists	13	18	6	36.8	43.1
Veterinarians	61	83	34	35.9	55.7
Health diagnosing and treating practitioners, all other	56	66	21	19.0	38.1
Health technologists and technicians	2,799	3,519	1,297	25.7	46.3
Clinical laboratory technologists and technicians	331	374	107	13.0	32.5
Medical and clinical laboratory technologists	169	189	52	11.3	30.8
Medical and clinical laboratory technicians	161	185	55	14.7	34.2
Dental hygienists	182	250	105	37.7	57.7
Diagnostic-related technologists and technicians	345	448	157	29.9	45.4
Cardiovascular technologists and technicians	49	64	22	29.3	44.7
Diagnostic medical sonographers	54	77	32	43.5	59.0
Nuclear medicine technologists	22	26	8	18.9	34.2
Radiologic technologists and technicians	220	281	95	27.8	43.2
Emergency medical technicians and paramedics	227	302	121	33.3	53.3
Health diagnosing and treating practitioner support technicians	621	805	292	29.6	47.0
Dietetic technicians	24	28	8	16.0	33.5
Pharmacy technicians	334	443	166	32.4	49.7
Psychiatric technicians	75	86	25	15.5	32.8
Respiratory therapy technicians	14	14	3	4.1	21.7
Surgical technologists	94	111	34	18.9	36.2
Veterinary technologists and technicians	80	122	56	52.0	69.5
Licensed practical and licensed vocational nurses	752	921	369	22.4	49.1
Medical records and health information technicians	180	217	74	21.0	41.1
Opticians, dispensing	63	81	31	28.9	48.9
Orthotists and prosthetists	6	7	2	12.1	31.7
Health care technologists and technicians, all other	94	115	40	23.2	43.2
Other health care practitioners and technical occupations	148	171	75	15.8	51.0

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Occupational health and safety specialists	59	64	26	8.5	43.8
Occupational health and safety technicians	11	12	5	12.9	48.1
Athletic trainers	18	24	12	30.0	65.4
Health care practitioners and technical workers, all other	60	72	33	19.0	54.3
Lawyers	728	802	212	10.1	29.1
Postsecondary teachers	1,756	2,062	586	17.4	33.4
Computer programmers	363	407	128	12.0	35.3

BLS = Bureau of Labor Statistics.

NOTES: Estimates of current and projected employment for 2010–20 period are from BLS's National Employment Matrix. Data in the matrix are from the Occupational Employment Statistics (OES) survey and the Current Population Survey (CPS). Together, these sources cover paid workers, self-employed workers, and unpaid family workers in all industries, agriculture, and private households. Because the numbers are derived from multiple sources, data can often differ from employment data provided by OES, CPS, or other employment surveys alone. BLS does not make projections for S&E occupations as a group; numbers in the table are based on the sum of BLS projections in occupations that the National Science Foundation considers S&E.

SOURCE: BLS, Employment Projections program, 2010–2020, special tabulations (2013) of 2010–20 Employment Projections.

Science and Engineering Indicators 2014