National Center for Science and Engineering Statistics

Survey of Doctorate Recipients, 2019

Data Tables | NSF 21-320 | April 27, 2021

Contents

General Notes

This report presents data from the 2019 Survey of Doctorate Recipients (SDR). The SDR is a biennial panel survey that collects longitudinal data on demographic and general employment characteristics of individuals who have received a research doctorate in a science, engineering, or health field from a U.S. academic institution. Starting shortly after they receive their doctorate, sampled individuals are eligible for inclusion in the survey until they reach age 76. The SDR sample is augmented each cycle with new samples of the most recent cohorts of science, engineering, and health doctorate recipients, identified by the Survey of Earned Doctorates, an annual census of research doctorates awarded in the United States.

The National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation is the primary sponsor of the SDR, with additional funding provided by the National Institutes of Health.

The published tables provide information on the number and median salaries of doctoral scientists and engineers by field of doctorate and occupation; by demographic characteristics, such as sex, race, ethnicity, citizenship, and age; and by employment-related characteristics, such as sector of employment, median annual salary, and labor-force rates.

Data Tables

Doctoral scientists and engineers

Employed doctoral scientists and engineers

Occupations of doctoral scientists and engineers

Median annual salaries of full-time employed doctoral scientists and engineers

Postdoctoral appointments of doctoral scientists and engineers

TABLE 1-1

U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2019

(Number and SE)

Field of study	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	1,008,950	1,450	857,200	1,975	763,350	2,000	93,900	1,525	14,100	650	120,000	1,400	17,650	625
Science	761,850	1,425	640,300	1,900	561,850	1,900	78,450	1,350	10,200	575	97,200	1,300	14,100	575
Biological, agricultural, and environmental life sciences	258,550	850	220,700	1,100	200,900	1,100	19,850	625	4,000	350	28,700	700	5,150	325
Agricultural and food sciences	21,700	300	17,400	350	15,800	350	1,600	175	400	125	3,550	250	350	75
Agricultural sciences	1,400	50	950	50	800	50	150	50	S	S	400	50	50	25
Animal sciences	5,300	150	4,550	175	4,200	175	350	75	50	25	650	100	50	25
Food sciences and technology	4,650	125	3,750	175	3,450	175	300	100	S	S	750	150	100	50
Plant sciences	7,550	200	5,900	250	5,400	225	500	100	250	125	1,300	150	100	50
Soil sciences	2,800	100	2,200	125	1,950	125	250	75	S	S	450	125	50	25
Biochemistry and biophysics	35,350	375	29,450	425	26,700	475	2,750	300	600	150	4,650	350	700	150
Biochemistry	29,450	325	24,350	400	21,950	450	2,400	300	550	150	4,050	325	550	150
Biophysics	5,900	150	5,100	175	4,750	175	350	100	S	S	600	125	150	50
Cell, cellular biology, and molecular biology	34,850	325	31,200	450	28,600	500	2,600	325	600	150	2,250	250	850	175
Microbiological sciences and immunology	27,600	300	23,800	400	21,950	425	1,900	250	450	125	2,850	275	500	125
Immunology	9,850	150	8,950	200	8,250	250	700	150	150	75	650	125	150	50
Microbiological sciences	17,700	250	14,900	325	13,700	350	1,200	175	300	100	2,200	250	350	100
Natural resources and conservation	10,950	200	8,800	225	7,750	225	1,050	150	200	75	1,800	200	200	50
Fish, fisheries, wildlife and wildlands science and management	2,850	100	2,200	150	1,950	125	250	75	S	S	550	150	*	*
Forestry	3,250	100	2,600	150	2,200	125	400	125	S	S	550	125	50	25
Natural resource conservation, research, management, and policy	4,900	125	4,000	150	3,600	150	400	75	50	50	650	100	150	50
Zoology	9,850	200	7,200	225	6,450	225	750	125	S	S	2,350	175	200	75
Other biological sciences	118,200	550	102,800	675	93,550	750	9,250	400	1,650	200	11,350	475	2,400	225
Biomathematics, bioinformatics, and computational biology	5,550	100	5,150	100	4,850	125	300	75	*	*	300	75	100	50
Botany and plant biology	8,150	225	6,150	225	5,550	225	600	100	150	50	1,650	150	200	75

TABLE 1-1

U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2019

(Number and SE)

Field of study	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Epidemiology, ecology, and population biology	18,400	225	15,950	275	14,500	325	1,450	175	300	125	1,800	200	400	100
Genetics	9,950	125	8,750	250	8,000	250	750	150	100	50	1,000	175	150	50
Neurobiology and neuroscience	17,700	250	16,800	275	16,050	300	750	125	150	75	250	100	450	125
Nutrition sciences	5,000	100	4,150	125	3,600	150	550	100	100	50	600	100	150	50
Pharmacology and toxicology	14,850	175	12,700	300	11,500	325	1,200	175	300	100	1,550	200	300	100
Physiology, pathology, and related sciences	17,950	250	15,400	300	13,450	325	2,000	200	250	75	2,000	200	300	100
Biological and biomedical sciences, general	14,350	250	12,750	300	11,650	325	1,100	175	150	75	1,250	175	250	75
Biological and biomedical sciences, other	6,250	100	4,950	200	4,400	200	600	100	100	50	1,050	175	150	75
Computer and information sciences	33,650	375	31,100	400	29,350	450	1,750	200	300	75	1,750	200	500	125
Computer science	28,700	375	26,750	400	25,350	450	1,350	200	200	75	1,300	200	450	125
Information science, studies	3,050	75	2,600	75	2,300	100	300	50	50	25	400	50	D	D
Computer and information sciences, other	1,900	50	1,800	50	1,700	50	100	25	50	25	50	25	*	*
Mathematics and statistics	43,800	375	36,650	450	33,450	475	3,250	300	550	125	5,900	350	700	150
Applied mathematics	9,500	175	8,500	200	7,700	250	750	150	100	50	750	150	200	50
Mathematics	20,750	300	16,500	375	15,000	375	1,550	200	350	125	3,550	275	350	125
Statistics	8,700	225	7,450	225	6,850	225	600	150	100	50	1,100	175	D	D
Mathematics and statistics, other	4,800	125	4,200	125	3,850	125	350	75	D	D	500	75	100	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	161,450	825	133,750	950	121,600	1,000	12,200	500	2,450	300	22,700	650	2,500	275
Astronomy and astrophysics	6,700	150	5,850	175	5,400	175	450	100	100	50	650	100	100	50
Chemistry, except biochemistry	80,650	475	65,300	700	59,300	700	6,050	350	1,500	225	12,350	525	1,500	225
Inorganic chemistry	10,550	200	8,750	225	7,800	275	900	175	250	100	1,450	150	150	50
Organic chemistry	22,850	300	17,600	375	16,000	375	1,600	200	500	150	4,250	325	500	150
Chemistry, other, except biochemistry	47,300	350	39,000	575	35,450	550	3,500	300	800	150	6,650	400	850	150
Geosciences, atmospheric sciences, and ocean sciences	26,250	275	22,050	300	19,500	300	2,550	175	350	100	3,500	175	350	75

TABLE 1-1

U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2019

(Number and SE)

Field of study	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Atmospheric sciences and meteorology	4,450	75	3,900	75	3,600	100	300	50	50	25	450	50	50	25
Geological and earth sciences, geosciences	16,450	250	13,550	275	11,850	275	1,750	175	200	50	2,450	150	250	75
Ocean sciences and marine sciences	2,400	75	2,150	75	1,900	75	200	50	50	25	200	50	*	*
Oceanography, chemical and physical	2,950	125	2,450	125	2,150	100	300	75	D	D	400	75	50	25
Physics	47,850	550	40,550	575	37,400	600	3,150	275	500	125	6,250	425	500	125
Psychology	139,450	575	115,350	825	87,050	975	28,250	800	1,100	175	19,850	650	3,150	275
Clinical psychology	47,500	325	41,100	525	28,650	700	12,450	650	200	100	4,950	425	1,200	225
Counseling and applied psychology	17,200	175	14,850	275	10,950	325	3,950	325	100	50	1,900	250	350	100
Educational and school psychology	18,350	225	14,100	275	10,450	350	3,650	275	150	50	3,800	250	300	100
Industrial and organizational psychology	5,800	150	4,850	150	4,100	150	750	125	200	75	600	125	150	50
Research and experimental psychology	34,950	275	27,800	400	23,100	425	4,650	275	300	75	6,150	300	700	100
Psychology, general	9,650	150	7,900	250	6,100	275	1,750	225	150	75	1,400	200	250	75
Psychology, other	6,050	100	4,750	175	3,700	175	1,050	150	50	25	1,050	150	200	75
Social sciences	124,950	800	102,700	900	89,550	800	13,200	575	1,800	200	18,300	525	2,200	200
Economics	32,450	525	26,900	550	23,750	525	3,150	300	300	100	4,850	350	450	125
Political science and government	25,800	350	22,450	425	20,150	450	2,300	300	300	100	2,650	250	400	100
Political science and government	21,200	300	18,350	400	16,550	400	1,800	300	200	100	2,300	250	300	100
Public policy analysis	4,600	150	4,100	175	3,600	175	500	75	100	50	350	75	100	50
Sociology, demography, and population studies	19,850	300	15,200	325	13,150	350	2,100	225	500	125	3,900	300	300	100
Other social sciences	46,800	450	38,150	500	32,500	450	5,700	325	700	100	6,900	325	1,050	125
Anthropology	13,950	225	11,400	300	9,900	275	1,500	200	200	75	2,100	225	300	75
Area, ethnic, cultural, gender, and group studies	4,650	125	3,900	125	3,300	125	600	75	150	50	450	75	150	50
Geography and cartography	5,750	175	4,750	175	4,200	175	550	100	100	50	750	100	150	50
International relations and national security studies	2,800	150	2,350	150	2,000	125	350	75	50	25	350	75	50	25
Linguistics	6,200	250	4,950	250	4,200	225	750	125	100	50	950	150	200	75

TABLE 1-1

U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2019

(Number and SE)

Field of study	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Urban studies, affairs	2,150	75	1,600	100	1,300	75	300	50	50	25	500	75	50	25
Social sciences, other	11,300	225	9,250	250	7,650	250	1,600	175	100	50	1,800	175	200	50
Engineering	199,500	975	176,700	1,175	166,300	1,250	10,400	575	3,350	325	16,750	725	2,750	275
Aerospace, aeronautical, and astronautical engineering	7,900	200	7,050	225	6,750	225	300	75	150	50	650	100	50	25
Chemical engineering	24,450	400	20,800	500	19,650	500	1,150	250	550	200	2,650	300	500	125
Civil engineering	21,400	400	19,250	400	17,850	425	1,400	225	350	125	1,550	225	250	100
Electrical and computer engineering	53,950	525	48,550	650	46,300	675	2,250	275	950	175	3,850	425	600	175
Computer engineering	7,600	175	7,000	175	6,750	200	250	75	D	D	450	100	150	50
Electrical, electronics, and communications engineering	46,350	525	41,550	625	39,550	625	2,000	250	900	175	3,450	400	450	150
Mechanical engineering	29,300	400	26,550	425	25,350	425	1,200	200	350	125	2,100	275	350	125
Metallurgical and materials engineering	19,100	300	16,450	350	15,550	350	900	150	200	75	2,000	200	450	125
Other engineering	43,400	450	38,050	450	34,850	525	3,200	275	850	150	3,950	275	600	100
Agricultural engineering	2,300	75	1,900	75	1,750	75	200	50	50	25	300	75	D	D
Bioengineering and biomedical engineering	14,200	225	13,200	250	12,200	325	1,000	225	250	100	500	125	250	75
Engineering mechanics, physics, and science	5,200	150	4,400	150	3,900	150	450	75	S	S	700	125	50	25
Industrial and manufacturing engineering	10,300	250	8,800	275	8,000	250	800	125	150	50	1,200	150	150	50
Nuclear engineering	3,650	125	3,100	125	2,850	125	300	75	50	25	500	75	D	D
Engineering, other	7,800	175	6,600	200	6,150	200	450	75	350	100	700	125	150	50
Health	47,600	400	40,200	475	35,150	525	5,050	325	550	125	6,050	300	750	100
Communication disorders sciences and services	4,150	100	3,100	125	2,650	125	500	75	50	25	900	100	100	50
Hospital and medical administration services	2,000	75	1,550	100	1,350	75	200	50	S	S	400	75	*	*
Pharmacy, pharmaceutical sciences, and administration	8,950	150	8,050	175	7,100	200	950	150	100	50	750	125	50	50
Public health	9,350	200	8,400	225	7,400	250	950	150	50	50	750	125	150	50
Registered nursing, nursing administration, nursing research	11,350	200	9,000	250	7,700	250	1,300	175	100	75	2,100	200	150	50

TABLE 1-1

U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2019

(Number and SE)

Field of study	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Health sciences, other	11,850	200	10,150	225	9,000	250	1,150	175	200	75	1,250	175	250	75

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job.

[b] Not employed or not seeking work includes individuals who were not working during the survey reference week and had not been seeking work in the prior 4 weeks because of family responsibilities, chronic illness, or other reasons.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Designation of full-time and part-time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his or her principal job but full time in the labor force. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 1-2

Non-U.S. residing doctoral scientists and engineers, by field of doctorate and employment status: 2019

(Number and SE)

Field of study	Total		Employed		Unemployed[a]		Not in the labor force[b]	
	Number	SE	Number	SE	Number	SE	Number	SE
All fields	139,850	1,350	126,050	1,450	1,950	300	11,900	625
Science	100,200	1,250	89,250	1,275	1,450	250	9,500	500
Biological, agricultural, and environmental life sciences	29,350	775	25,950	725	700	175	2,700	300
Agricultural and food sciences	5,750	300	5,000	300	50	50	700	125
Biochemistry and biophysics	2,700	325	2,250	275	D	D	400	175
Cell, cellular biology, and molecular biology	2,750	300	2,450	275	D	D	100	50
Microbiological sciences and immunology	2,400	275	2,250	275	D	D	100	75
Natural resources and conservation	2,400	200	2,100	200	50	25	250	75
Zoology	1,350	200	1,050	175	D	D	200	100
Other biological sciences	12,050	550	10,800	550	300	125	950	175
Computer and information sciences	4,850	350	4,700	350	D	D	150	75
Mathematics and statistics	7,650	325	6,800	350	D	D	800	175
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	22,750	800	20,300	800	300	125	2,100	275
Astronomy and astrophysics	1,000	125	900	125	D	D	100	50
Chemistry, except biochemistry	7,400	450	6,650	450	D	D	700	175
Geosciences, atmospheric sciences, and ocean sciences	4,650	250	4,000	225	150	75	500	100
Physics	9,700	525	8,700	525	S	S	900	225
Psychology	6,250	375	5,400	350	S	S	800	150
Social sciences	29,350	750	26,050	775	350	125	2,900	325
Economics	13,400	500	12,200	500	D	D	1,200	225
Political science and government	3,450	325	3,250	325	D	D	D	D
Sociology, demography, and population studies	2,900	275	2,250	250	D	D	650	175
Other social sciences	9,650	450	8,400	425	250	100	950	175
Engineering	35,050	950	32,450	900	450	150	2,150	350
Aerospace, aeronautical, and astronautical engineering	1,150	200	1,100	200	D	D	D	D
Chemical engineering	3,950	400	3,700	375	D	D	D	D
Civil engineering	5,700	425	5,400	400	D	D	250	125
Electrical and computer engineering	9,000	525	8,200	500	S	S	600	225
Mechanical engineering	4,050	400	3,700	375	D	D	350	150
Metallurgical and materials engineering	3,100	250	2,900	275	D	D	150	50
Other engineering	8,150	425	7,450	400	S	S	650	175
Health	4,600	350	4,350	350	S	S	200	75

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job.

[b] Not in the labor force includes individuals who were not working during the survey reference week and had not been seeking work in the prior 4 weeks because of family responsibilities, chronic illness, or other reasons.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 2

U.S. residing doctoral scientists and engineers, by field of doctorate, sex, and employment status: 2019

(Number and SE)

Field of study and sex	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	1,008,950	1,450	857,200	1,975	763,350	2,000	93,900	1,525	14,100	650	120,000	1,400	17,650	625
Male	644,650	1,400	546,050	1,750	496,700	1,925	49,350	1,275	8,500	575	84,700	1,275	5,450	375
Female	364,300	1,025	311,200	1,200	266,650	1,325	44,550	925	5,600	350	35,300	650	12,200	475
Science	761,850	1,425	640,300	1,900	561,850	1,900	78,450	1,350	10,200	575	97,200	1,300	14,100	575
Male	460,650	1,500	383,900	1,700	344,350	1,775	39,550	1,075	5,850	475	67,000	1,175	3,850	325
Female	301,200	1,125	256,400	1,200	217,500	1,375	38,900	875	4,300	325	30,200	625	10,250	475
Biological, agricultural, and environmental life sciences	258,550	850	220,700	1,100	200,900	1,100	19,850	625	4,000	350	28,700	700	5,150	325
Male	147,800	975	124,550	1,025	114,500	1,075	10,050	525	2,300	325	19,850	625	1,150	175
Female	110,750	850	96,200	900	86,400	875	9,800	450	1,700	200	8,850	350	4,000	300
Agricultural and food sciences	21,700	300	17,400	350	15,800	350	1,600	175	400	125	3,550	250	350	75
Male	15,400	325	12,050	325	11,050	325	1,000	150	300	125	2,950	225	50	25
Female	6,300	225	5,350	225	4,750	225	600	75	100	50	600	100	250	75
Biochemistry and biophysics	35,350	375	29,450	425	26,700	475	2,750	300	600	150	4,650	350	700	150
Male	21,900	375	17,950	400	16,250	425	1,700	250	350	100	3,400	300	200	75
Female	13,450	325	11,500	325	10,450	375	1,050	175	250	100	1,200	175	500	125
Cell, cellular biology, and molecular biology	34,850	325	31,200	450	28,600	500	2,600	325	600	150	2,250	250	850	175
Male	18,450	425	16,800	450	15,650	450	1,200	275	250	125	1,200	225	S	S
Female	16,400	375	14,400	375	13,000	375	1,450	225	350	100	1,000	175	650	150
Microbiological sciences and immunology	27,600	300	23,800	400	21,950	425	1,900	250	450	125	2,850	275	500	125
Male	14,800	400	12,700	400	11,700	400	950	175	300	125	1,750	275	100	50
Female	12,750	375	11,150	375	10,200	375	900	175	150	50	1,100	150	400	125
Natural resources and conservation	10,950	200	8,800	225	7,750	225	1,050	150	200	75	1,800	200	200	50
Male	7,550	200	5,950	225	5,250	200	700	150	100	50	1,450	200	50	25
Female	3,450	150	2,850	125	2,550	125	350	75	50	50	350	75	150	50
Zoology	9,850	200	7,200	225	6,450	225	750	125	S	S	2,350	175	200	75
Male	6,900	200	4,950	200	4,550	200	400	100	D	D	1,750	150	S	S
Female	3,000	175	2,300	150	1,900	150	350	75	D	D	550	100	100	50
Other biological sciences	118,200	550	102,800	675	93,550	750	9,250	400	1,650	200	11,350	475	2,400	225
Male	62,800	675	54,100	700	50,050	775	4,100	325	850	150	7,350	425	450	100
Female	55,400	650	48,700	625	43,550	600	5,150	300	750	150	4,050	250	1,950	200
Computer and information sciences	33,650	375	31,100	400	29,350	450	1,750	200	300	75	1,750	200	500	125
Male	27,150	400	25,500	425	24,350	450	1,150	175	150	50	1,250	200	250	100
Female	6,500	275	5,600	300	5,000	300	600	125	100	50	500	100	250	100
Mathematics and statistics	43,800	375	36,650	450	33,450	475	3,250	300	550	125	5,900	350	700	150
Male	33,100	450	27,350	450	25,000	475	2,400	275	400	125	4,900	300	400	125
Female	10,700	325	9,300	325	8,450	350	850	125	150	50	1,000	150	300	75

TABLE 2

U.S. residing doctoral scientists and engineers, by field of doctorate, sex, and employment status: 2019

(Number and SE)

Field of study and sex	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	161,450	825	133,750	950	121,600	1,000	12,200	500	2,450	300	22,700	650	2,500	275
Male	123,650	900	101,300	925	92,400	975	8,900	450	1,650	250	19,650	625	1,050	200
Female	37,800	550	32,500	525	29,200	525	3,300	250	850	175	3,050	225	1,400	175
Astronomy and astrophysics	6,700	150	5,850	175	5,400	175	450	100	100	50	650	100	100	50
Male	5,100	150	4,450	150	4,150	175	300	75	S	S	550	100	D	D
Female	1,550	100	1,400	100	1,200	100	150	50	D	D	50	50	S	S
Chemistry, except biochemistry	80,650	475	65,300	700	59,300	700	6,050	350	1,500	225	12,350	525	1,500	225
Male	58,200	625	46,300	675	41,950	650	4,350	325	900	175	10,400	500	600	150
Female	22,450	450	19,000	450	17,300	450	1,700	175	600	150	1,950	200	900	150
Geosciences, atmospheric sciences, and ocean sciences	26,250	275	22,050	300	19,500	300	2,550	175	350	100	3,500	175	350	75
Male	18,900	275	15,600	325	13,850	325	1,750	175	250	75	3,000	175	100	50
Female	7,300	200	6,450	175	5,650	175	850	100	100	50	500	75	250	50
Physics	47,850	550	40,550	575	37,400	600	3,150	275	500	125	6,250	425	500	125
Male	41,400	600	34,950	600	32,400	625	2,550	275	450	125	5,700	400	300	100
Female	6,450	325	5,600	325	5,000	300	600	150	100	50	550	125	200	75
Psychology	139,450	575	115,350	825	87,050	975	28,250	800	1,100	175	19,850	650	3,150	275
Male	56,250	650	45,600	800	35,600	700	10,000	575	450	100	9,750	525	450	100
Female	83,200	725	69,700	775	51,500	800	18,250	600	700	150	10,100	425	2,700	250
Social sciences	124,950	800	102,700	900	89,550	800	13,200	575	1,800	200	18,300	525	2,200	200
Male	72,700	750	59,600	825	52,550	800	7,050	500	900	150	11,600	500	550	125
Female	52,250	600	43,100	575	37,000	650	6,100	325	850	150	6,700	300	1,600	175
Economics	32,450	525	26,900	550	23,750	525	3,150	300	300	100	4,850	350	450	125
Male	23,650	500	19,300	525	17,100	500	2,200	300	250	100	3,950	300	150	75
Female	8,800	250	7,600	250	6,650	275	950	150	D	D	900	150	300	100
Political science and government	25,800	350	22,450	425	20,150	450	2,300	300	300	100	2,650	250	400	100
Male	16,450	425	14,450	450	13,100	450	1,300	250	50	50	1,850	225	100	50
Female	9,350	350	8,000	325	7,000	350	950	175	250	100	800	150	300	100
Sociology, demography, and population studies	19,850	300	15,200	325	13,150	350	2,100	225	500	125	3,900	300	300	100
Male	9,150	275	6,650	275	5,800	275	850	175	250	100	2,200	250	D	D
Female	10,700	275	8,550	275	7,350	275	1,200	175	250	100	1,650	175	250	75
Other social sciences	46,800	450	38,150	500	32,500	450	5,700	325	700	100	6,900	325	1,050	125
Male	23,400	425	19,200	450	16,500	450	2,700	225	350	75	3,550	275	300	75
Female	23,400	350	18,950	350	16,000	375	3,000	225	350	75	3,350	225	750	100
Engineering	199,500	975	176,700	1,175	166,300	1,250	10,400	575	3,350	325	16,750	725	2,750	275
Male	166,800	1,000	147,250	1,200	138,900	1,200	8,350	550	2,500	300	15,650	725	1,450	250
Female	32,700	625	29,450	575	27,450	600	2,050	225	850	175	1,100	150	1,300	150

TABLE 2

U.S. residing doctoral scientists and engineers, by field of doctorate, sex, and employment status: 2019

(Number and SE)

Field of study and sex	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Aerospace, aeronautical, and astronautical engineering	7,900	200	7,050	225	6,750	225	300	75	150	50	650	100	50	25
Male	7,150	200	6,400	225	6,100	225	250	75	100	50	600	100	D	D
Female	750	75	700	75	650	75	50	25	D	D	D	D	D	D
Chemical engineering	24,450	400	20,800	500	19,650	500	1,150	250	550	200	2,650	300	500	125
Male	19,500	425	16,450	475	15,700	475	750	200	300	175	2,500	300	250	125
Female	5,000	275	4,350	275	3,950	250	400	125	200	100	150	75	250	75
Civil engineering	21,400	400	19,250	400	17,850	425	1,400	225	350	125	1,550	225	250	100
Male	17,200	400	15,350	425	14,300	450	1,050	200	250	125	1,450	200	150	75
Female	4,200	225	3,900	200	3,550	225	350	100	S	S	100	50	100	50
Electrical and computer engineering	53,950	525	48,550	650	46,300	675	2,250	275	950	175	3,850	425	600	175
Male	47,600	575	42,650	675	40,800	675	1,850	250	800	175	3,750	400	350	150
Female	6,350	300	5,900	300	5,500	300	350	100	100	75	150	75	200	75
Mechanical engineering	29,300	400	26,550	425	25,350	425	1,200	200	350	125	2,100	275	350	125
Male	25,850	400	23,300	450	22,250	450	1,100	200	200	100	2,050	275	250	125
Female	3,450	225	3,200	225	3,100	225	100	50	D	D	50	25	100	50
Metallurgical and materials engineering	19,100	300	16,450	350	15,550	350	900	150	200	75	2,000	200	450	125
Male	15,450	300	13,300	350	12,500	350	850	150	150	75	1,750	200	250	125
Female	3,650	200	3,150	200	3,050	200	100	50	D	D	250	75	200	75
Other engineering	43,400	450	38,050	450	34,850	525	3,200	275	850	150	3,950	275	600	100
Male	34,100	475	29,750	475	27,250	550	2,500	275	600	125	3,550	275	150	50
Female	9,300	300	8,250	300	7,600	300	650	100	250	100	400	75	450	75
Health	47,600	400	40,200	475	35,150	525	5,050	325	550	125	6,050	300	750	100
Male	17,200	325	14,900	325	13,450	350	1,450	200	150	50	2,050	200	100	50
Female	30,400	400	25,300	400	21,700	450	3,600	250	450	100	4,000	250	650	100

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job.

[b] Not employed or not seeking work includes individuals who were not working during the survey reference week and had not been seeking work in the prior 4 weeks because of family responsibilities, chronic illness, or other reasons.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Designation of full-time and part-time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his or her principal job but full time in the labor force. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 3

U.S. residing doctoral scientists and engineers, by broad field of doctorate, employment status, ethnicity, and race: 2019

(Number and SE)

Field of study and employment status	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	1,008,950	1,450	41,400	575	1,600	150	235,050	1,325	35,050	350	682,450	1,425	13,400	400
Full time	763,350	2,000	33,250	575	1,100	125	201,300	1,375	27,650	425	489,300	1,775	10,700	350
Part time	93,900	1,525	3,950	250	150	50	12,050	625	3,400	275	73,050	1,275	1,250	150
Unemployed[d]	14,100	650	850	125	50	50	3,950	350	1,050	175	8,000	475	150	50
Retired	120,000	1,400	2,250	200	150	50	13,500	700	2,300	200	100,800	1,400	1,000	150
Not employed or not seeking work[e]	17,650	625	1,050	175	50	50	4,200	375	650	125	11,300	500	350	75
Science	761,850	1,425	32,400	500	1,300	125	142,100	1,250	26,850	375	548,500	1,525	10,700	350
Full time	561,850	1,900	25,750	475	900	125	120,250	1,200	20,850	400	385,750	1,850	8,350	325
Part time	78,450	1,350	3,450	225	150	50	8,600	475	2,950	250	62,150	1,175	1,150	125
Unemployed[d]	10,200	575	650	100	50	50	2,400	275	750	175	6,150	425	100	50
Retired	97,200	1,300	1,800	150	100	50	7,800	475	1,800	175	84,950	1,300	800	125
Not employed or not seeking work[e]	14,100	575	700	125	50	50	3,050	300	500	100	9,450	475	300	75
Biological, agricultural, and environmental life sciences	258,550	850	11,250	300	250	50	55,700	900	7,800	275	179,600	1,075	3,950	225
Full time	200,900	1,100	9,500	300	200	50	47,850	900	6,500	250	133,650	1,050	3,200	200
Part time	19,850	625	750	100	D	D	2,800	275	550	100	15,400	550	350	100
Unemployed[d]	4,000	350	300	75	S	S	900	175	300	125	2,300	300	50	25
Retired	28,700	700	350	75	50	25	2,700	275	300	75	25,050	675	250	75
Not employed or not seeking work[e]	5,150	325	300	75	D	D	1,450	200	100	50	3,150	250	100	50
Computer and information sciences	33,650	375	1,000	100	D	D	14,000	400	650	75	17,600	350	350	100
Full time	29,350	450	950	100	D	D	13,000	400	550	75	14,600	400	300	75
Part time	1,750	200	D	D	D	D	400	125	50	25	1,250	175	S	S
Unemployed[d]	300	75	D	D	D	D	100	50	D	D	150	50	D	D
Retired	1,750	200	50	25	D	D	300	100	50	25	1,350	175	D	D
Not employed or not seeking work[e]	500	125	D	D	D	D	150	100	D	D	300	100	D	D
Mathematics and statistics	43,800	375	1,450	125	D	D	12,450	400	1,000	100	28,400	425	450	100
Full time	33,450	475	1,250	100	D	D	10,600	400	750	100	20,450	425	400	100
Part time	3,250	300	50	50	D	D	750	200	100	50	2,300	225	D	D
Unemployed[d]	550	125	D	D	D	D	200	100	D	D	350	100	D	D
Retired	5,900	350	150	50	D	D	750	175	150	75	4,850	300	D	D
Not employed or not seeking work[e]	700	150	D	D	D	D	200	75	D	D	450	125	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	161,450	825	4,850	200	100	50	36,850	750	3,350	225	114,350	875	1,850	150
Full time	121,600	1,000	3,900	200	50	25	31,050	725	2,800	225	82,250	975	1,500	150
Part time	12,200	500	450	75	D	D	1,900	275	200	75	9,500	450	150	50
Unemployed[d]	2,450	300	100	50	D	D	800	175	100	50	1,450	225	*	*
Retired	22,700	650	300	75	D	D	2,600	300	100	50	19,500	575	150	50

TABLE 3

U.S. residing doctoral scientists and engineers, by broad field of doctorate, employment status, ethnicity, and race: 2019

(Number and SE)

Field of study and employment status	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Not employed or not seeking work[e]	2,500	275	100	50	D	D	550	150	S	S	1,700	200	D	D
Psychology	139,450	575	7,350	275	350	75	8,000	450	6,700	250	114,800	750	2,250	175
Full time	87,050	975	5,000	225	200	75	5,700	375	4,900	250	69,700	1,025	1,550	150
Part time	28,250	800	1,550	175	100	50	1,400	225	900	125	23,900	750	450	100
Unemployed[d]	1,100	175	100	50	D	D	D	D	150	75	750	150	*	*
Retired	19,850	650	550	100	D	D	550	150	600	100	17,950	650	150	50
Not employed or not seeking work[e]	3,150	275	150	50	D	D	300	100	S	S	2,450	250	100	50
Social sciences	124,950	800	6,450	275	500	100	15,150	500	7,350	300	93,700	725	1,800	175
Full time	89,550	800	5,150	250	400	100	12,050	500	5,350	275	65,150	700	1,400	150
Part time	13,200	575	650	100	D	D	1,400	200	1,050	175	9,800	500	200	75
Unemployed[d]	1,800	200	100	50	D	D	350	100	200	75	1,100	175	D	D
Retired	18,300	525	400	75	S	S	900	150	550	100	16,250	525	150	50
Not employed or not seeking work[e]	2,200	200	150	50	D	D	400	125	200	75	1,450	175	S	S
Engineering	199,500	975	7,450	300	150	50	83,500	1,150	4,650	225	101,650	1,025	2,100	225
Full time	166,300	1,250	6,250	275	150	50	73,050	1,125	3,950	200	81,050	1,025	1,850	225
Part time	10,400	575	350	75	D	D	2,750	300	200	50	6,950	450	S	S
Unemployed[d]	3,350	325	150	50	D	D	1,450	225	200	75	1,500	225	D	D
Retired	16,750	725	400	100	D	D	5,200	425	200	75	10,750	600	150	75
Not employed or not seeking work[e]	2,750	275	300	125	D	D	1,050	200	100	50	1,300	175	D	D
Health	47,600	400	1,550	125	150	50	9,450	375	3,550	200	32,350	400	600	100
Full time	35,150	525	1,250	100	50	25	8,000	375	2,850	200	22,500	475	500	75
Part time	5,050	325	150	50	D	D	650	150	300	75	3,900	275	*	*
Unemployed[d]	550	125	D	D	D	D	100	50	100	50	350	100	D	D
Retired	6,050	300	50	25	D	D	500	125	300	75	5,100	275	S	S
Not employed or not seeking work[e]	750	100	50	25	D	D	100	50	50	25	500	100	D	D

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job.

[e] Not employed or not seeking work includes individuals who were not working during the survey reference week and had not been seeking work in the prior 4 weeks because of family responsibilities, chronic illness, or other reasons.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Designation of full-time and part-time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his or her principal job but full time in the labor force. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 4-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Unemployment rate	
	Percent	SE
All fields	1.6	0.10
Science	1.6	0.10
Biological, agricultural, and environmental life sciences	1.8	0.20
Agricultural and food sciences	2.4	0.70
Agricultural sciences	S	S
Animal sciences	0.9	0.45
Food sciences and technology	S	S
Plant sciences	3.8	1.85
Soil sciences	S	S
Biochemistry and biophysics	1.9	0.45
Biochemistry	2.2	0.55
Biophysics	S	S
Cell, cellular biology, and molecular biology	1.9	0.50
Microbiological sciences and immunology	1.8	0.50
Immunology	1.5	0.70
Microbiological sciences	1.9	0.65
Natural resources and conservation	2.0	0.65
Fish, fisheries, wildlife and wildlands science and management	S	S
Forestry	S	S
Natural resource conservation, research, management, and policy	1.6	0.75
Zoology	S	S
Other biological sciences	1.6	0.20
Biomathematics, bioinformatics, and computational biology	*	*
Botany and plant biology	2.3	0.65
Epidemiology, ecology, and population biology	1.8	0.70
Genetics	0.9	0.40
Neurobiology and neuroscience	1.0	0.35
Nutrition sciences	2.8	0.85
Pharmacology and toxicology	2.2	0.65
Physiology, pathology, and related sciences	1.5	0.45
Biological and biomedical sciences, general	1.4	0.55
Biological and biomedical sciences, other	2.3	0.80
Computer and information sciences	0.9	0.20
Computer science	0.7	0.25
Information science, studies	2.2	0.95
Computer and information sciences, other	1.6	0.75
Mathematics and statistics	1.5	0.35
Applied mathematics	1.0	0.40
Mathematics	2.0	0.65
Statistics	1.3	0.60
Mathematics and statistics, other	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	1.8	0.25
Astronomy and astrophysics	1.9	0.70
Chemistry, except biochemistry	2.2	0.35
Inorganic chemistry	2.5	0.95
Organic chemistry	2.7	0.70
Chemistry, other, except biochemistry	2.0	0.40
Geosciences, atmospheric sciences, and ocean sciences	1.5	0.40
Atmospheric sciences and meteorology	1.6	0.55
Geological and earth sciences, geosciences	1.3	0.35

TABLE 4-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Unemployment rate	
	Percent	SE
Ocean sciences and marine sciences	1.3	0.50
Oceanography, chemical and physical	D	D
Physics	1.3	0.30
Psychology	1.0	0.15
Clinical psychology	0.5	0.25
Counseling and applied psychology	0.7	0.35
Educational and school psychology	1.1	0.35
Industrial and organizational psychology	3.8	1.10
Research and experimental psychology	1.0	0.25
Psychology, general	1.8	0.75
Psychology, other	0.9	0.45
Social sciences	1.7	0.20
Economics	1.0	0.30
Political science and government	1.4	0.45
Political science and government	1.2	0.50
Public policy analysis	2.1	0.70
Sociology, demography, and population studies	3.1	0.80
Other social sciences	1.8	0.25
Anthropology	1.6	0.55
Area, ethnic, cultural, gender, and group studies	3.3	0.95
Geography and cartography	1.9	0.85
International relations and national security studies	1.8	0.75
Linguistics	2.3	0.85
Urban studies, affairs	3.2	1.35
Social sciences, other	1.0	0.40
Engineering	1.8	0.20
Aerospace, aeronautical, and astronautical engineering	1.9	0.70
Chemical engineering	2.5	0.90
Civil engineering	1.8	0.55
Electrical and computer engineering	1.9	0.35
Computer engineering	D	D
Electrical, electronics, and communications engineering	2.1	0.40
Mechanical engineering	1.2	0.40
Metallurgical and materials engineering	1.2	0.45
Other engineering	2.2	0.40
Agricultural engineering	1.8	0.80
Bioengineering and biomedical engineering	1.8	0.75
Engineering mechanics, physics, and science	S	S
Industrial and manufacturing engineering	1.6	0.60
Nuclear engineering	1.2	0.60
Engineering, other	4.8	1.30
Health	1.4	0.25
Communication disorders sciences and services	1.3	0.65
Hospital and medical administration services	S	S
Pharmacy, pharmaceutical sciences, and administration	1.3	0.55
Public health	0.7	0.35
Registered nursing, nursing administration, nursing research	1.3	0.60
Health sciences, other	2.0	0.65

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job. Population (P) is defined as all science, engineering, or health doctorate holders under age 76, residing in the United States during the week of 1 February 2019, who earned doctorates from U.S. institutions. Unemployment rate (UR) = U/ (E+U). Labor force participation rate (LFR) = (E+U)/ P. Residence location is based on reported living location on 1 February 2019.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2019

TABLE 4-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Involuntarily out-of-field rate	
	Percent	SE
All fields	2.8	0.10
Science	3.0	0.15
Biological, agricultural, and environmental life sciences	3.1	0.20
Agricultural and food sciences	3.7	0.70
Agricultural sciences	6.0	2.50
Animal sciences	2.6	0.70
Food sciences and technology	S	S
Plant sciences	4.3	1.25
Soil sciences	3.7	1.05
Biochemistry and biophysics	3.2	0.65
Biochemistry	3.3	0.70
Biophysics	3.0	0.95
Cell, cellular biology, and molecular biology	3.9	0.70
Microbiological sciences and immunology	1.7	0.45
Immunology	D	D
Microbiological sciences	2.5	0.70
Natural resources and conservation	3.5	0.75
Fish, fisheries, wildlife and wildlands science and management	2.0	0.70
Forestry	3.1	0.70
Natural resource conservation, research, management, and policy	4.5	1.35
Zoology	3.6	0.95
Other biological sciences	2.9	0.25
Biomathematics, bioinformatics, and computational biology	1.6	0.50
Botany and plant biology	5.7	1.15
Epidemiology, ecology, and population biology	1.5	0.40
Genetics	2.5	0.80
Neurobiology and neuroscience	3.6	0.80
Nutrition sciences	3.3	0.95
Pharmacology and toxicology	3.5	0.80
Physiology, pathology, and related sciences	2.5	0.55
Biological and biomedical sciences, general	2.0	0.65
Biological and biomedical sciences, other	4.7	1.50
Computer and information sciences	0.8	0.25
Computer science	0.8	0.30
Information science, studies	1.5	0.50
Computer and information sciences, other	D	D
Mathematics and statistics	2.2	0.25
Applied mathematics	1.5	0.50
Mathematics	3.2	0.50
Statistics	0.8	0.40
Mathematics and statistics, other	1.7	0.70
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4.8	0.35
Astronomy and astrophysics	5.9	1.10
Chemistry, except biochemistry	4.3	0.45
Inorganic chemistry	4.1	0.85
Organic chemistry	2.2	0.55
Chemistry, other, except biochemistry	5.3	0.65
Geosciences, atmospheric sciences, and ocean sciences	3.9	0.50
Atmospheric sciences and meteorology	2.9	0.60
Geological and earth sciences, geosciences	4.1	0.75

TABLE 4-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Involuntarily out-of-field rate	
	Percent	SE
Ocean sciences and marine sciences	5.6	1.40
Oceanography, chemical and physical	2.7	0.85
Physics	6.1	0.75
Psychology	1.3	0.20
Clinical psychology	0.5	0.25
Counseling and applied psychology	0.8	0.35
Educational and school psychology	0.6	0.30
Industrial and organizational psychology	1.3	0.60
Research and experimental psychology	2.9	0.55
Psychology, general	1.1	0.50
Psychology, other	2.0	0.65
Social sciences	3.2	0.30
Economics	1.2	0.50
Political science and government	3.3	0.65
Political science and government	3.5	0.75
Public policy analysis	2.3	1.00
Sociology, demography, and population studies	2.2	0.45
Other social sciences	4.9	0.45
Anthropology	4.4	0.95
Area, ethnic, cultural, gender, and group studies	8.3	1.55
Geography and cartography	2.6	1.00
International relations and national security studies	7.4	2.35
Linguistics	6.7	1.55
Urban studies, affairs	4.2	1.10
Social sciences, other	3.7	0.70
Engineering	2.5	0.25
Aerospace, aeronautical, and astronautical engineering	2.5	0.85
Chemical engineering	3.5	0.70
Civil engineering	1.5	0.40
Electrical and computer engineering	1.5	0.30
Computer engineering	0.9	0.40
Electrical, electronics, and communications engineering	1.6	0.35
Mechanical engineering	2.4	0.60
Metallurgical and materials engineering	4.5	0.95
Other engineering	3.0	0.40
Agricultural engineering	4.0	1.35
Bioengineering and biomedical engineering	3.4	0.75
Engineering mechanics, physics, and science	3.1	0.85
Industrial and manufacturing engineering	1.5	0.60
Nuclear engineering	6.1	1.75
Engineering, other	2.3	0.75
Health	2.0	0.35
Communication disorders sciences and services	D	D
Hospital and medical administration services	D	D
Pharmacy, pharmaceutical sciences, and administration	3.4	1.20
Public health	3.4	0.95
Registered nursing, nursing administration, nursing research	D	D
Health sciences, other	1.2	0.40

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Involuntarily-out-of-field rate is the percentage of employed individuals who reported, for their principal job, working in an area not related to the first doctoral degree at least partially because a job in their doctoral degree field was not available. Residence location is based on reported living location on 1 February 2019.

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

TABLE 4-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
All fields	86.4	0.20
Science	85.4	0.20
Biological, agricultural, and environmental life sciences	86.9	0.30
Agricultural and food sciences	82.1	1.10
Agricultural sciences	70.3	2.90
Animal sciences	87.1	1.80
Food sciences and technology	81.7	2.60
Plant sciences	81.6	1.95
Soil sciences	80.9	3.60
Biochemistry and biophysics	85.0	0.95
Biochemistry	84.5	1.05
Biophysics	87.4	2.00
Cell, cellular biology, and molecular biology	91.2	0.80
Microbiological sciences and immunology	87.9	1.05
Immunology	91.9	1.30
Microbiological sciences	85.7	1.45
Natural resources and conservation	82.0	1.60
Fish, fisheries, wildlife and wildlands science and management	79.0	4.35
Forestry	82.3	3.25
Natural resource conservation, research, management, and policy	83.5	1.90
Zoology	74.2	1.65
Other biological sciences	88.4	0.45
Biomathematics, bioinformatics, and computational biology	93.1	1.20
Botany and plant biology	77.4	1.80
Epidemiology, ecology, and population biology	88.2	1.10
Genetics	88.8	1.80
Neurobiology and neuroscience	95.9	0.75
Nutrition sciences	85.1	1.95
Pharmacology and toxicology	87.7	1.50
Physiology, pathology, and related sciences	87.1	1.05
Biological and biomedical sciences, general	89.8	1.25
Biological and biomedical sciences, other	81.1	2.65
Computer and information sciences	93.3	0.65
Computer science	93.9	0.80
Information science, studies	86.4	1.50
Computer and information sciences, other	95.7	0.90
Mathematics and statistics	85.0	0.80
Applied mathematics	90.2	1.35
Mathematics	81.3	1.30
Statistics	86.7	1.75
Mathematics and statistics, other	87.6	1.45
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	84.4	0.40
Astronomy and astrophysics	88.8	1.55
Chemistry, except biochemistry	82.8	0.70
Inorganic chemistry	84.9	1.35
Organic chemistry	79.2	1.50
Chemistry, other, except biochemistry	84.1	0.90
Geosciences, atmospheric sciences, and ocean sciences	85.4	0.70
Atmospheric sciences and meteorology	89.1	0.95
Geological and earth sciences, geosciences	83.7	0.95

TABLE 4-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
Ocean sciences and marine sciences	91.4	1.20
Oceanography, chemical and physical	84.5	1.85
Physics	85.9	0.90
Psychology	83.5	0.50
Clinical psychology	87.0	0.95
Counseling and applied psychology	87.0	1.35
Educational and school psychology	77.6	1.35
Industrial and organizational psychology	86.9	1.70
Research and experimental psychology	80.3	0.90
Psychology, general	83.0	2.00
Psychology, other	79.5	2.50
Social sciences	83.6	0.45
Economics	83.7	1.05
Political science and government	88.1	1.00
Political science and government	87.7	1.20
Public policy analysis	90.2	1.50
Sociology, demography, and population studies	79.1	1.40
Other social sciences	83.0	0.70
Anthropology	82.8	1.50
Area, ethnic, cultural, gender, and group studies	86.8	1.70
Geography and cartography	84.8	1.55
International relations and national security studies	85.6	2.30
Linguistics	81.5	2.20
Urban studies, affairs	75.9	2.60
Social sciences, other	82.5	1.40
Engineering	90.2	0.40
Aerospace, aeronautical, and astronautical engineering	91.1	1.35
Chemical engineering	87.1	1.25
Civil engineering	91.7	1.10
Electrical and computer engineering	91.7	0.85
Computer engineering	92.7	1.20
Electrical, electronics, and communications engineering	91.6	0.95
Mechanical engineering	91.7	1.00
Metallurgical and materials engineering	87.2	1.15
Other engineering	89.6	0.65
Agricultural engineering	85.6	2.20
Bioengineering and biomedical engineering	94.6	0.95
Engineering mechanics, physics, and science	85.5	1.95
Industrial and manufacturing engineering	87.1	1.45
Nuclear engineering	86.0	1.45
Engineering, other	89.2	1.50
Health	85.7	0.70
Communication disorders sciences and services	76.0	2.20
Hospital and medical administration services	78.5	2.95
Pharmacy, pharmaceutical sciences, and administration	91.1	1.35
Public health	90.5	1.30
Registered nursing, nursing administration, nursing research	80.3	1.75
Health sciences, other	87.4	1.35

SE = standard error.

Note(s):
Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job. Population (P) is defined as all science, engineering, or health doctorate holders under age 76, residing in the United States during the week of 1 February 2019, who earned doctorates from U.S. institutions. Labor force participation rate (LFR) = (E+U)/ P. Residence location is based on reported living location on 1 February 2019.

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

TABLE 4-4

Labor force participation rate among non-U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
All fields	91.5	0.45
Science	90.5	0.50
Biological, agricultural, and environmental life sciences	90.8	0.95
Agricultural and food sciences	88.0	1.95
Agricultural sciences	87.3	4.80
Animal sciences	91.6	2.90
Food sciences and technology	89.5	4.55
Plant sciences	86.6	3.65
Soil sciences	81.8	7.25
Biochemistry and biophysics	84.7	5.30
Biochemistry	87.5	5.35
Biophysics	73.9	14.50
Cell, cellular biology, and molecular biology	96.8	1.55
Microbiological sciences and immunology	95.2	2.40
Immunology	97.3	2.05
Microbiological sciences	94.5	3.05
Natural resources and conservation	89.9	2.65
Fish, fisheries, wildlife and wildlands science and management	79.6	6.70
Forestry	89.9	4.95
Natural resource conservation, research, management, and policy	97.0	2.00
Zoology	83.4	5.45
Other biological sciences	92.2	1.40
Biomathematics, bioinformatics, and computational biology	D	D
Botany and plant biology	79.9	4.65
Epidemiology, ecology, and population biology	93.8	2.65
Genetics	92.1	5.85
Neurobiology and neuroscience	92.4	4.20
Nutrition sciences	91.4	5.05
Pharmacology and toxicology	97.7	2.35
Physiology, pathology, and related sciences	97.3	1.60
Biological and biomedical sciences, general	99.6	0.45
Biological and biomedical sciences, other	89.0	5.20
Computer and information sciences	96.7	1.25
Computer science	96.9	1.40
Information science, studies	96.7	1.85
Computer and information sciences, other	93.4	5.55
Mathematics and statistics	89.4	2.25
Applied mathematics	97.7	2.40
Mathematics	87.4	3.20
Statistics	92.6	4.45
Mathematics and statistics, other	90.9	4.00
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90.7	1.20
Astronomy and astrophysics	92.5	3.40
Chemistry, except biochemistry	90.8	2.20
Inorganic chemistry	94.2	3.40
Organic chemistry	89.3	4.40
Chemistry, other, except biochemistry	90.7	2.75
Geosciences, atmospheric sciences, and ocean sciences	89.6	1.85
Atmospheric sciences and meteorology	96.2	1.50
Geological and earth sciences, geosciences	86.6	2.95

TABLE 4-4

Labor force participation rate among non-U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
Ocean sciences and marine sciences	90.6	6.55
Oceanography, chemical and physical	94.3	3.50
Physics	90.9	2.10
Psychology	87.2	2.20
Clinical psychology	82.3	8.10
Counseling and applied psychology	89.5	6.45
Educational and school psychology	87.8	6.05
Industrial and organizational psychology	98.1	2.20
Research and experimental psychology	87.4	2.70
Psychology, general	76.6	10.35
Psychology, other	94.9	3.80
Social sciences	90.1	1.10
Economics	91.1	1.65
Political science and government	97.5	1.30
Political science and government	98.1	1.35
Public policy analysis	95.3	3.35
Sociology, demography, and population studies	77.1	5.15
Other social sciences	89.9	1.60
Anthropology	89.6	3.85
Area, ethnic, cultural, gender, and group studies	89.5	5.35
Geography and cartography	95.5	2.45
International relations and national security studies	95.0	2.45
Linguistics	89.3	4.75
Urban studies, affairs	84.3	5.95
Social sciences, other	87.5	3.80
Engineering	93.9	0.95
Aerospace, aeronautical, and astronautical engineering	97.7	2.30
Chemical engineering	96.0	2.40
Civil engineering	95.8	1.80
Electrical and computer engineering	93.2	2.20
Computer engineering	88.1	6.65
Electrical, electronics, and communications engineering	94.0	2.30
Mechanical engineering	91.4	3.10
Metallurgical and materials engineering	95.9	1.45
Other engineering	92.1	1.90
Agricultural engineering	92.5	3.50
Bioengineering and biomedical engineering	90.1	7.90
Engineering mechanics, physics, and science	95.1	3.70
Industrial and manufacturing engineering	93.1	2.05
Nuclear engineering	92.1	4.25
Engineering, other	90.3	3.05
Health	95.1	1.50
Communication disorders sciences and services	D	D
Hospital and medical administration services	D	D
Pharmacy, pharmaceutical sciences, and administration	94.4	4.30
Public health	92.2	4.05
Registered nursing, nursing administration, nursing research	92.0	4.65
Health sciences, other	98.0	1.10

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

Note(s):
Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job. Population (P) is defined as all science, engineering, or health doctorate holders under age 76, residing in the United States during the week of 1 February 2019, who earned doctorates from U.S. institutions. Labor force participation rate (LFR) = (E+U)/ P. Residence location is based on reported living location on 1 February 2019.

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

TABLE 5

Doctoral scientists and engineers, by fine field of doctorate, residence location, and sex: 2019

(Number and SE)

	U.S. residing						Non-U.S. residing					
	All		Male		Female		All		Male		Female	
Field of study	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	1,008,950	1,450	644,650	1,400	364,300	1,025	139,850	1,350	102,950	1,350	36,900	925
Science	761,850	1,425	460,650	1,500	301,200	1,125	100,200	1,250	69,800	1,200	30,400	825
Biological, agricultural, and environmental life sciences	258,550	850	147,800	975	110,750	850	29,350	775	18,900	650	10,450	575
Agricultural and food sciences	21,700	300	15,400	325	6,300	225	5,750	300	4,400	275	1,400	175
Agricultural sciences	1,400	50	1,100	50	300	50	250	50	200	50	50	25
Animal sciences	5,300	150	3,650	150	1,650	125	1,450	150	1,200	150	250	75
Food sciences and technology	4,650	125	2,700	150	1,950	150	1,150	150	700	125	450	100
Plant sciences	7,550	200	5,850	200	1,700	125	2,300	200	1,750	175	500	100
Soil sciences	2,800	100	2,100	125	700	75	600	100	500	100	100	50
Biochemistry and biophysics	35,350	375	21,900	375	13,450	325	2,700	325	1,900	275	800	175
Biochemistry	29,450	325	17,750	350	11,700	300	2,150	300	1,450	250	650	175
Biophysics	5,900	150	4,150	150	1,750	125	550	125	450	125	100	50
Cell, cellular biology, and molecular biology	34,850	325	18,450	425	16,400	375	2,750	300	1,500	225	1,300	250
Microbiological sciences and immunology	27,600	300	14,800	400	12,750	375	2,400	275	1,300	225	1,100	150
Immunology	9,850	150	5,200	225	4,650	225	550	100	250	75	300	100
Microbiological sciences	17,700	250	9,600	300	8,100	275	1,850	225	1,100	200	750	125
Natural resources and conservation	10,950	200	7,550	200	3,450	150	2,400	200	1,800	175	600	75
Fish, fisheries, wildlife and wildlands science and management	2,850	100	2,200	100	650	75	600	100	450	75	150	50
Forestry	3,250	100	2,550	125	700	75	1,000	100	800	100	200	50
Natural resource conservation, research, management, and policy	4,900	125	2,800	150	2,100	100	850	125	600	125	250	75
Zoology	9,850	200	6,900	200	3,000	175	1,350	200	850	150	450	125
Other biological sciences	118,200	550	62,800	675	55,400	650	12,050	550	7,150	450	4,850	400
Biomathematics, bioinformatics, and computational biology	5,550	100	3,200	100	2,350	100	500	100	400	100	150	50
Botany and plant biology	8,150	225	5,050	175	3,150	175	2,200	225	1,500	200	700	150
Epidemiology, ecology, and population biology	18,400	225	8,950	250	9,450	225	2,500	225	1,400	200	1,100	175
Genetics	9,950	125	5,200	200	4,750	175	950	125	550	125	350	100
Neurobiology and neuroscience	17,700	250	9,500	275	8,150	250	1,550	250	700	150	850	200
Nutrition sciences	5,000	100	1,200	100	3,800	125	450	100	150	50	300	100
Pharmacology and toxicology	14,850	175	8,250	250	6,600	250	700	150	350	125	350	100
Physiology, pathology, and related sciences	17,950	250	10,400	275	7,550	250	1,500	225	1,000	225	500	100
Biological and biomedical sciences, general	14,350	250	7,400	300	7,000	275	1,250	200	750	200	500	100
Biological and biomedical sciences, other	6,250	100	3,650	150	2,650	150	500	100	350	100	150	50
Computer and information sciences	33,650	375	27,150	400	6,500	275	4,850	350	4,100	350	800	150
Computer science	28,700	375	23,950	400	4,700	250	4,250	350	3,650	350	600	150
Information science, studies	3,050	75	1,950	75	1,100	75	400	75	300	75	100	50
Computer and information sciences, other	1,900	50	1,250	50	650	50	200	50	150	50	50	25
Mathematics and statistics	43,800	375	33,100	450	10,700	325	7,650	325	6,300	350	1,350	175

TABLE 5

Doctoral scientists and engineers, by fine field of doctorate, residence location, and sex: 2019

(Number and SE)

Field of study	U.S. residing						Non-U.S. residing					
	All		Male		Female		All		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Applied mathematics	9,500	175	7,050	200	2,450	175	750	150	650	125	D	D
Mathematics	20,750	300	16,550	300	4,200	200	4,950	300	4,200	300	700	125
Statistics	8,700	225	5,800	225	2,950	200	800	200	550	200	250	100
Mathematics and statistics, other	4,800	125	3,700	125	1,150	75	1,150	125	850	100	300	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	161,450	825	123,650	900	37,800	550	22,750	800	18,500	750	4,250	275
Astronomy and astrophysics	6,700	150	5,100	150	1,550	100	1,000	125	850	150	200	50
Chemistry, except biochemistry	80,650	475	58,200	625	22,450	450	7,400	450	5,300	400	2,100	200
Inorganic chemistry	10,550	200	7,600	225	2,950	175	900	175	650	150	250	75
Organic chemistry	22,850	300	17,600	350	5,250	250	1,700	275	1,350	225	400	125
Chemistry, other, except biochemistry	47,300	350	33,000	475	14,300	400	4,800	350	3,300	325	1,450	175
Geosciences, atmospheric sciences, and ocean sciences	26,250	275	18,900	275	7,300	200	4,650	250	3,650	250	1,000	100
Atmospheric sciences and meteorology	4,450	75	3,250	75	1,200	75	800	75	600	75	200	50
Geological and earth sciences, geosciences	16,450	250	12,250	250	4,200	150	2,800	225	2,250	225	550	75
Ocean sciences and marine sciences	2,400	75	1,350	75	1,000	50	400	75	300	75	150	50
Oceanography, chemical and physical	2,950	125	2,100	125	900	75	600	125	500	125	100	50
Physics	47,850	550	41,400	600	6,450	325	9,700	525	8,700	500	1,000	175
Psychology	139,450	575	56,250	650	83,200	725	6,250	375	2,400	250	3,800	300
Clinical psychology	47,500	325	18,150	475	29,350	525	1,100	200	250	100	850	175
Counseling and applied psychology	17,200	175	6,400	275	10,800	300	450	125	150	75	300	100
Educational and school psychology	18,350	225	6,650	250	11,700	250	1,000	200	400	125	600	150
Industrial and organizational psychology	5,800	150	2,800	125	2,950	125	350	125	200	125	S	S
Research and experimental psychology	34,950	275	15,050	325	19,850	325	2,650	250	1,200	175	1,450	150
Psychology, general	9,650	150	4,450	250	5,200	250	350	100	150	75	150	75
Psychology, other	6,050	100	2,700	150	3,300	175	350	75	50	50	300	75
Social sciences	124,950	800	72,700	750	52,250	600	29,350	750	19,600	600	9,750	450
Economics	32,450	525	23,650	500	8,800	250	13,400	500	10,850	475	2,550	225
Political science and government	25,800	350	16,450	425	9,350	350	3,450	325	2,250	275	1,150	200
Political science and government	21,200	300	14,150	400	7,050	325	2,650	275	1,750	250	900	175
Public policy analysis	4,600	150	2,300	125	2,300	125	800	150	550	150	250	50
Sociology, demography, and population studies	19,850	300	9,150	275	10,700	275	2,900	275	1,400	200	1,500	200
Other social sciences	46,800	450	23,400	425	23,400	350	9,650	450	5,050	375	4,550	350
Anthropology	13,950	225	6,150	250	7,800	225	2,000	200	800	150	1,200	150
Area, ethnic, cultural, gender, and group studies	4,650	125	2,050	125	2,550	125	400	75	100	50	250	75
Geography and cartography	5,750	175	3,750	150	2,000	125	1,000	150	750	150	300	75
International relations and national security studies	2,800	150	1,800	125	1,050	100	900	150	600	125	300	100
Linguistics	6,200	250	2,550	200	3,650	225	2,350	250	1,100	175	1,250	200
Urban studies, affairs	2,150	75	1,400	75	750	50	400	75	300	75	100	50

TABLE 5

Doctoral scientists and engineers, by fine field of doctorate, residence location, and sex: 2019

(Number and SE)

Field of study	U.S. residing						Non-U.S. residing					
	All		Male		Female		All		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Social sciences, other	11,300	225	5,700	200	5,600	200	2,550	225	1,450	175	1,100	175
Engineering	199,500	975	166,800	1,000	32,700	625	35,050	950	30,900	925	4,150	300
Aerospace, aeronautical, and astronautical engineering	7,900	200	7,150	200	750	75	1,150	200	1,100	200	50	25
Chemical engineering	24,450	400	19,500	425	5,000	275	3,950	400	3,150	375	800	175
Civil engineering	21,400	400	17,200	400	4,200	225	5,700	425	4,950	400	750	150
Electrical and computer engineering	53,950	525	47,600	575	6,350	300	9,000	525	8,350	550	650	150
Computer engineering	7,600	175	6,650	175	950	100	1,300	175	1,100	175	150	50
Electrical, electronics, and communications engineering	46,350	525	40,900	525	5,400	300	7,700	500	7,250	525	450	150
Mechanical engineering	29,300	400	25,850	400	3,450	225	4,050	400	3,900	400	150	75
Metallurgical and materials engineering	19,100	300	15,450	300	3,650	200	3,100	250	2,450	250	650	125
Other engineering	43,400	450	34,100	475	9,300	300	8,150	425	7,000	400	1,150	175
Agricultural engineering	2,300	75	1,900	75	350	50	350	50	350	50	50	25
Bioengineering and biomedical engineering	14,200	225	9,900	275	4,300	225	1,200	225	800	200	400	100
Engineering mechanics, physics, and science	5,200	150	4,550	150	600	50	1,000	150	900	150	100	25
Industrial and manufacturing engineering	10,300	250	7,950	250	2,300	175	3,000	250	2,650	250	400	100
Nuclear engineering	3,650	125	3,350	125	350	50	600	125	550	125	50	25
Engineering, other	7,800	175	6,400	175	1,400	100	1,950	175	1,750	175	200	50
Health	47,600	400	17,200	325	30,400	400	4,600	350	2,250	250	2,350	275
Communication disorders sciences and services	4,150	100	1,150	100	3,000	100	200	75	D	D	100	50
Hospital and medical administration services	2,000	75	900	75	1,100	75	200	75	150	75	50	25
Pharmacy, pharmaceutical sciences, and administration	8,950	150	5,600	200	3,350	175	600	125	300	75	300	100
Public health	9,350	200	3,050	150	6,300	200	1,250	175	750	150	500	150
Registered nursing, nursing administration, nursing research	11,350	200	550	75	10,750	200	750	175	S	S	700	175
Health sciences, other	11,850	200	5,950	225	5,900	200	1,600	175	900	150	700	100

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 6

U.S. residing doctoral scientists and engineers, by field of doctorate, ethnicity, and race: 2019

(Number and SE)

Field of study	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	1,008,950	1,450	41,400	575	1,600	150	235,050	1,325	35,050	350	682,450	1,425	13,400	400
Science	761,850	1,425	32,400	500	1,300	125	142,100	1,250	26,850	375	548,500	1,525	10,700	350
Biological, agricultural, and environmental life sciences	258,550	850	11,250	300	250	50	55,700	900	7,800	275	179,600	1,075	3,950	225
Agricultural and food sciences	21,700	300	1,150	100	50	25	4,650	250	900	75	14,700	300	250	50
Biochemistry and biophysics	35,350	375	1,100	100	D	D	9,500	400	850	100	23,550	475	300	75
Cell, cellular biology, and molecular biology	34,850	325	1,350	125	D	D	9,100	400	900	175	22,850	500	650	100
Microbiological sciences and immunology	27,600	300	1,300	125	50	25	5,650	300	950	125	19,050	350	550	100
Natural resources and conservation	10,950	200	450	50	50	25	1,450	125	400	50	8,400	225	250	50
Zoology	9,850	200	450	75	D	D	1,000	150	250	50	8,100	200	100	50
Other biological sciences	118,200	550	5,450	200	100	50	24,350	575	3,600	225	82,850	700	1,850	175
Computer and information sciences	33,650	375	1,000	100	D	D	14,000	400	650	75	17,600	350	350	100
Mathematics and statistics	43,800	375	1,450	125	D	D	12,450	400	1,000	100	28,400	425	450	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	161,450	825	4,850	200	100	50	36,850	750	3,350	225	114,350	875	1,850	150
Astronomy and astrophysics	6,700	150	250	50	D	D	850	100	50	25	5,450	150	100	25
Chemistry, except biochemistry	80,650	475	2,550	150	100	50	18,950	500	2,300	200	56,050	575	800	100
Geosciences, atmospheric sciences, and ocean sciences	26,250	275	850	75	*	*	4,150	200	350	50	20,500	275	350	50
Physics	47,850	550	1,250	125	D	D	12,900	450	700	125	32,350	525	600	125
Psychology	139,450	575	7,350	275	350	75	8,000	450	6,700	250	114,800	750	2,250	175
Social sciences	124,950	800	6,450	275	500	100	15,150	500	7,350	300	93,700	725	1,800	175
Economics	32,450	525	1,700	125	D	D	6,300	325	1,250	150	22,850	475	300	75
Political science and government	25,800	350	1,050	150	50	25	1,900	225	2,150	225	20,150	375	500	125
Sociology, demography, and population studies	19,850	300	1,200	125	100	50	1,650	200	1,400	125	15,250	300	300	75
Other social sciences	46,800	450	2,550	150	300	75	5,300	275	2,500	125	35,450	450	750	100
Engineering	199,500	975	7,450	300	150	50	83,500	1,150	4,650	225	101,650	1,025	2,100	225
Aerospace, aeronautical, and astronautical engineering	7,900	200	300	75	D	D	2,400	175	100	25	5,000	200	50	25
Chemical engineering	24,450	400	1,000	150	D	D	9,700	400	400	75	13,050	400	300	75
Civil engineering	21,400	400	1,150	150	D	D	7,450	375	800	150	11,800	375	200	75
Electrical and computer engineering	53,950	525	1,500	125	50	25	27,100	575	1,050	125	23,900	525	350	75

TABLE 6

U.S. residing doctoral scientists and engineers, by field of doctorate, ethnicity, and race: 2019

(Number and SE)

Field of study	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Mechanical engineering	29,300	400	1,000	125	50	25	13,350	450	550	100	14,000	450	400	125
Metallurgical and materials engineering	19,100	300	600	125	D	D	8,300	325	400	75	9,450	325	300	75
Other engineering	43,400	450	1,900	125	50	25	15,250	500	1,300	100	24,400	450	500	100
Health	47,600	400	1,550	125	150	50	9,450	375	3,550	200	32,350	400	600	100

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 7

U.S. residing doctoral scientists and engineers, by fine field of doctorate and disability status: 2019

(Number and SE)

Field of study	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
All fields	1,008,950	1,450	95,700	1,450	913,250	1,675
Science	761,850	1,425	75,400	1,225	686,400	1,525
Biological, agricultural, and environmental life sciences	258,550	850	23,600	700	234,950	1,025
Agricultural and food sciences	21,700	300	2,250	175	19,450	325
Agricultural sciences	1,400	50	150	50	1,250	50
Animal sciences	5,300	150	500	100	4,750	150
Food sciences and technology	4,650	125	350	75	4,350	150
Plant sciences	7,550	200	1,000	125	6,550	225
Soil sciences	2,800	100	200	50	2,550	100
Biochemistry and biophysics	35,350	375	2,800	300	32,550	475
Biochemistry	29,450	325	2,250	300	27,200	475
Biophysics	5,900	150	550	100	5,350	175
Cell, cellular biology, and molecular biology	34,850	325	3,050	300	31,850	425
Microbiological sciences and immunology	27,600	300	2,150	250	25,400	350
Immunology	9,850	150	850	150	9,000	175
Microbiological sciences	17,700	250	1,300	200	16,400	300
Natural resources and conservation	10,950	200	1,350	150	9,600	225
Fish, fisheries, wildlife and wildlands science and management	2,850	100	350	75	2,450	100
Forestry	3,250	100	400	100	2,850	125
Natural resource conservation, research, management, and policy	4,900	125	600	125	4,300	150
Zoology	9,850	200	1,200	125	8,650	225
Other biological sciences	118,200	550	10,850	425	107,400	700
Biomathematics, bioinformatics, and computational biology	5,550	100	450	75	5,150	125
Botany and plant biology	8,150	225	1,100	150	7,050	225
Epidemiology, ecology, and population biology	18,400	225	1,550	175	16,850	275
Genetics	9,950	125	850	150	9,100	200
Neurobiology and neuroscience	17,700	250	1,200	175	16,450	300
Nutrition sciences	5,000	100	450	75	4,550	125
Pharmacology and toxicology	14,850	175	1,400	200	13,450	250
Physiology, pathology, and related sciences	17,950	250	1,750	200	16,250	275
Biological and biomedical sciences, general	14,350	250	1,300	200	13,100	300
Biological and biomedical sciences, other	6,250	100	800	125	5,450	150
Computer and information sciences	33,650	375	2,650	250	31,000	425
Computer science	28,700	375	2,100	250	26,600	425
Information science, studies	3,050	75	400	75	2,650	100
Computer and information sciences, other	1,900	50	150	50	1,700	50
Mathematics and statistics	43,800	375	4,400	300	39,400	450
Applied mathematics	9,500	175	850	125	8,650	200
Mathematics	20,750	300	2,100	175	18,650	350
Statistics	8,700	225	850	175	7,850	250
Mathematics and statistics, other	4,800	125	650	100	4,200	150
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	161,450	825	14,850	525	146,600	825
Astronomy and astrophysics	6,700	150	550	100	6,150	150
Chemistry, except biochemistry	80,650	475	7,450	400	73,200	575
Inorganic chemistry	10,550	200	850	150	9,750	225
Organic chemistry	22,850	300	1,950	250	20,850	325
Chemistry, other, except biochemistry	47,300	350	4,650	300	42,600	425
Geosciences, atmospheric sciences, and ocean sciences	26,250	275	2,800	175	23,450	300
Atmospheric sciences and meteorology	4,450	75	400	50	4,050	75
Geological and earth sciences, geosciences	16,450	250	1,800	175	14,600	275

TABLE 7

U.S. residing doctoral scientists and engineers, by fine field of doctorate and disability status: 2019

(Number and SE)

Field of study	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
Ocean sciences and marine sciences	2,400	75	200	50	2,150	75
Oceanography, chemical and physical	2,950	125	350	75	2,600	125
Physics	47,850	550	4,050	325	43,750	550
Psychology	139,450	575	15,050	575	124,400	700
Clinical psychology	47,500	325	4,350	350	43,150	425
Counseling and applied psychology	17,200	175	2,250	225	14,950	275
Educational and school psychology	18,350	225	1,950	200	16,400	275
Industrial and organizational psychology	5,800	150	400	100	5,350	150
Research and experimental psychology	34,950	275	4,300	250	30,600	350
Psychology, general	9,650	150	1,150	175	8,500	250
Psychology, other	6,050	100	600	125	5,400	150
Social sciences	124,950	800	14,800	575	110,150	875
Economics	32,450	525	3,700	325	28,750	550
Political science and government	25,800	350	2,850	250	22,950	375
Political science and government	21,200	300	2,400	250	18,750	350
Public policy analysis	4,600	150	450	75	4,150	175
Sociology, demography, and population studies	19,850	300	2,500	225	17,350	375
Other social sciences	46,800	450	5,750	300	41,050	525
Anthropology	13,950	225	1,650	200	12,300	300
Area, ethnic, cultural, gender, and group studies	4,650	125	650	75	3,950	125
Geography and cartography	5,750	175	700	100	5,050	175
International relations and national security studies	2,800	150	450	75	2,400	125
Linguistics	6,200	250	700	125	5,500	250
Urban studies, affairs	2,150	75	250	50	1,900	75
Social sciences, other	11,300	225	1,350	125	9,950	250
Engineering	199,500	975	15,450	600	184,050	1,025
Aerospace, aeronautical, and astronautical engineering	7,900	200	450	100	7,450	225
Chemical engineering	24,450	400	1,350	200	23,100	425
Civil engineering	21,400	400	1,750	250	19,650	400
Electrical and computer engineering	53,950	525	4,600	425	49,300	625
Computer engineering	7,600	175	650	150	6,950	200
Electrical, electronics, and communications engineering	46,350	525	3,950	400	42,350	600
Mechanical engineering	29,300	400	2,100	250	27,200	450
Metallurgical and materials engineering	19,100	300	1,450	175	17,650	325
Other engineering	43,400	450	3,750	275	39,650	450
Agricultural engineering	2,300	75	250	50	2,050	75
Bioengineering and biomedical engineering	14,200	225	950	175	13,250	275
Engineering mechanics, physics, and science	5,200	150	500	100	4,700	150
Industrial and manufacturing engineering	10,300	250	1,050	175	9,250	275
Nuclear engineering	3,650	125	350	75	3,300	125
Engineering, other	7,800	175	650	100	7,150	175
Health	47,600	400	4,850	325	42,800	450
Communication disorders sciences and services	4,150	100	450	75	3,700	100
Hospital and medical administration services	2,000	75	200	50	1,750	75
Pharmacy, pharmaceutical sciences, and administration	8,950	150	800	175	8,150	225
Public health	9,350	200	850	125	8,500	200
Registered nursing, nursing administration, nursing research	11,350	200	1,350	175	10,000	225
Health sciences, other	11,850	200	1,150	175	10,700	225

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Survey asks degree of difficulty—none, slight, moderate, severe, or unable to do—an individual has in seeing (with glasses), hearing (with hearing aid), walking without assistance, lifting 10 pounds, or concentrating, remembering, or making decisions. Those respondents who answered "moderate," "severe," or "unable to do" for any activity were classified as having a disability. Residence location is based on reported living location on 1 February 2019.

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

TABLE 8

U.S. residing employed doctoral scientists and engineers, by field of doctorate, ethnicity, race, and sex: 2019

(Number and SE)

Field of study	All employed						Hispanic or Latino[a]						Not Hispanic or Latino[b]																							
													American Indian or Alaska Native						Asian						Black or African American						White					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	546,050	1,750	311,200	1,200	37,250	550	21,200	450	16,050	400	1,300	125	750	100	550	75	213,350	1,325	146,800	1,250	66,550	950	31,100	400	15,750	375	15,350	375	562,350	1,750	355,000	1,800	207,300	1,175
Science	640,300	1,900	383,900	1,700	256,400	1,200	29,200	475	15,450	400	13,750	350	1,050	125	550	100	500	75	128,850	1,150	79,450	975	49,400	850	23,750	375	11,650	350	12,150	325	447,900	1,800	271,900	1,650	176,000	1,200
Biological, agricultural, and environmental life sciences	220,700	1,100	124,550	1,025	96,200	900	10,250	275	5,300	250	4,950	175	200	50	100	50	100	50	50,650	875	26,950	700	23,700	625	7,050	250	3,450	225	3,600	175	149,050	1,100	87,050	1,000	62,000	725
Agricultural and food sciences	17,400	350	12,050	325	5,350	225	1,050	100	600	75	450	50	D	D	D	D	D	D	4,000	275	2,550	225	1,450	150	750	75	550	75	200	25	11,400	325	8,250	275	3,150	150
Biochemistry and biophysics	29,450	425	17,950	400	11,500	325	1,050	100	550	75	450	75	D	D	D	D	D	D	8,300	375	4,600	325	3,700	250	750	100	350	75	400	75	19,000	475	12,250	425	6,750	300
Cell, cellular biology, and molecular biology	31,200	450	16,800	450	14,400	375	1,200	125	550	125	600	100	D	D	D	D	D	D	8,300	400	4,250	350	4,050	275	850	175	400	150	450	100	20,250	525	11,250	450	8,950	300
Microbiological sciences and immunology	23,800	400	12,700	400	11,150	375	1,200	125	550	100	650	75	D	D	D	D	D	D	5,150	300	2,900	275	2,300	225	850	125	400	75	500	75	16,100	350	8,550	325	7,500	275
Natural resources and conservation	8,800	225	5,950	225	2,850	125	400	50	200	50	150	25	*	*	*	*	D	D	1,350	125	850	100	500	75	350	50	250	50	100	25	6,550	225	4,550	200	2,000	100
Zoology	7,200	225	4,950	200	2,300	150	400	75	250	75	150	50	D	D	D	D	D	D	850	150	550	125	300	75	200	50	150	50	S	S	5,700	250	3,950	200	1,700	125
Other biological sciences	102,800	675	54,100	700	48,700	625	5,000	200	2,550	150	2,450	125	100	50	D	D	50	25	22,650	575	11,300	475	11,350	425	3,300	175	1,350	125	1,900	125	70,050	700	38,200	625	31,850	475
Computer and information sciences	31,100	400	25,500	425	5,600	300	950	100	750	100	200	50	D	D	D	D	D	D	13,400	400	10,850	350	2,550	250	600	75	350	50	250	50	15,800	375	13,250	375	2,600	175
Mathematics and statistics	36,650	450	27,350	450	9,300	325	1,300	100	1,050	100	250	50	D	D	D	D	D	D	11,300	400	7,850	350	3,450	250	850	100	650	75	250	50	22,750	425	17,500	375	5,250	225
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	101,300	925	32,500	525	4,350	200	2,950	175	1,400	100	50	25	50	25	*	*	32,900	725	24,050	625	8,850	425	3,050	225	2,200	175	850	125	91,750	975	70,900	900	20,850	400
Astronomy and astrophysics	5,850	175	4,450	150	1,400	100	200	50	150	25	50	25	D	D	D	D	D	D	750	100	550	100	200	50	50	25	50	25	D	D	4,700	150	3,650	150	1,050	100
Chemistry, except biochemistry	65,300	700	46,300	675	19,000	450	2,200	150	1,400	125	850	100	50	25	S	S	D	D	16,800	500	11,050	425	5,750	325	2,050	175	1,300	125	750	125	43,500	700	32,100	575	11,450	325
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	15,600	325	6,450	175	800	75	450	50	300	50	*	*	*	*	D	D	3,700	200	2,700	175	1,050	100	300	50	250	50	50	25	17,000	300	12,000	300	5,000	150
Physics	40,550	575	34,950	600	5,600	325	1,150	150	1,000	125	200	75	D	D	D	D	D	D	11,650	475	9,800	425	1,850	225	650	125	600	125	50	25	26,550	575	23,150	600	3,350	225
Psychology	115,350	825	45,600	800	69,700	775	6,550	250	2,050	150	4,450	225	300	75	150	50	150	50	7,100	425	2,450	325	4,650	300	5,850	225	1,500	150	4,300	225	93,600	925	38,950	825	54,650	750
Social sciences	102,700	900	59,600	825	43,100	575	5,800	275	3,300	200	2,500	175	400	100	250	75	200	50	13,500	525	7,350	400	6,150	375	6,400	300	3,500	250	2,900	175	74,950	750	44,250	725	30,700	525
Economics	26,900	550	19,300	525	7,600	250	1,600	150	1,200	125	350	50	D	D	D	D	D	D	5,750	325	3,400	250	2,350	200	1,100	125	850	125	250	50	18,200	500	13,650	475	4,550	200
Political science and government	22,450	425	14,450	450	8,000	325	950	150	600	125	350	75	50	25	D	D	D	D	1,750	225	950	175	800	150	2,000	225	1,250	175	750	125	17,250	425	11,300	400	5,950	300
Sociology, demography, and population studies	15,200	325	6,650	275	8,550	275	1,050	125	500	75	550	100	D	D	D	D	D	D	1,350	200	650	175	700	100	1,200	100	500	75	650	75	11,250	325	4,800	250	6,450	275
Other social sciences	38,150	500	19,200	450	18,950	350	2,200	150	1,000	100	1,200	100	250	75	150	75	150	50	4,600	275	2,300	175	2,300	175	2,150	150	900	100	1,250	125	28,250	400	14,500	425	13,750	300
Engineering	176,700	1,175	147,250	1,200	29,450	575	6,650	275	5,300	250	1,350	100	150	50	150	50	*	*	75,800	1,150	63,100	1,050	12,750	475	4,150	200	3,200	200	950	100	88,050	1,050	74,050	1,050	14,000	350
Aerospace, aeronautical, and astronautical engineering	7,050	225	6,400	225	700	75	300	75	250	75	50	25	D	D	D	D	D	D	2,200	175	2,000	175	150	50	100	25	50	25	*	*	4,450	225	4,000	200	400	75
Chemical engineering	20,800	500	16,450	475	4,350	275	800	100	600	100	200	50	D	D	D	D	D	D	8,450	400	6,550	350	1,900	200	400	75	200	50	150	50	10,900	400	8,900	400	2,050	175
Civil engineering	19,250	400	15,350	425	3,900	200	1,100	150	800	125	300	50	D	D	D	D	D	D	6,950	375	5,650	375	1,300	175	800	150	700	150	100	50	10,250	375	8,050	325	2,150	175
Electrical and computer engineering	48,550	650	42,650	675	5,900	300	1,350	125	1,200	100	150	50	50	25	50	25	D	D	24,800	575	21,350	575	3,450	275	950	125	800	100	150	50	21,050	550	19,000	525	2,100	175
Mechanical engineering	26,550	425	23,300	450	3,200	225	900	125	850	125	50	50	50	25	D	D	D	D	12,350	475	10,850	500	1,450	175	500	75	400	75	100	50	12,400	425	10,850	425	1,550	150
Metallurgical and materials engineering	16,450	350	13,300	350	3,150	200	500	75	350	75	150	50	D	D	D	D	D	D	7,450	325	5,950	325	1,500	175	350	75	300	75	50	25	7,900	325	6,550	325	1,350	125
Other engineering	38,050	450	29,750	475	8,250	300	1,650	125	1,200	100	450	75	50	25	*	*	D	D	13,650	500	10,750	425	2,900	250	1,100	100	750	75	350	50	21,100	450	16,700	425	4,400	200
Health	40,200	475	14,900	325	25,300	400	1,400	125	450	50	900	125	100	50	50	25	50	50	8,700	350	4,250	250	4,450	300	3,150	225	900	125	2,250	175	26,400	475	9,050	300	17,350	375

Field of study	Not Hispanic or Latino[b]											
	White						Other race[c]					
	Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	11,950	400	6,550	325	5,350	225						
Science	9,500	325	4,900	275	4,650	225						
Biological, agricultural, and environmental life sciences	3,550	200	1,700	175	1,850	150						
Agricultural and food sciences	200	50	100	50	50	25						
Biochemistry and biophysics	300	75	200	50	150	50						
Cell, cellular biology, and molecular biology	350	75	300	75	50	25						
Microbiological sciences and immunology	450	75	250	75	200	50						
Natural resources and conservation	150	50	100	50	50	25						
Zoology	100	50	50	25	50	50						
Other biological sciences	1,700	175	700	125	1,000	125						
Computer and information sciences	350	100	300	75	50	25						
Mathematics and statistics	400	100	300	100	100	25						
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	1,650	150	1,100	125	550	75						
Astronomy and astrophysics	100	25	50	25	50	25						
Chemistry, except biochemistry	450	100	250	50								
Geosciences, atmospheric sciences, and ocean sciences	300	50	150	50	100	25						
Physics	550	100	400	75	150	75						
Psychology	1,950	175	500	100	1,450	150						
Social sciences	1,600	175	950	150	700	75						
Economics	250	75	150	50	100	50						
Political science and government	300	125	150	50								
Sociology, demography, and population studies	250	75	200	75	100	50						
Other social sciences	650	100	300	75	350	50						
Engineering	1,900	225	1,500	225	400	75						
Aerospace, aeronautical, and astronautical engineering	50	25	50	25	D	D						
Chemical engineering	250	75	200	75	D	D						
Civil engineering	150	50	150	50	50	25						
Electrical and computer engineering	350	100	300	100	D	D						
Mechanical engineering	350	150	300	125	50	25						
Metallurgical and materials engineering	300	75	200	75	100	50						
Other engineering	450	75	350	75	100	50						
Health	500	75	200	50	350	75						

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.
[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.
[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2019

(Number and SE)

Field of study	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	732,750	2,000	555,150	1,575	177,600	1,675	124,450	1,600	87,200	1,475	37,300	900
Science	640,300	1,900	563,550	1,875	451,600	1,600	111,950	1,400	76,750	1,325	54,000	1,175	22,750	725
Biological, agricultural, and environmental life sciences	220,700	1,100	194,100	1,225	154,300	1,200	39,800	850	26,650	800	18,450	650	8,200	450
Agricultural and food sciences	17,400	350	14,850	325	10,900	300	4,000	250	2,550	175	1,800	150	700	100
Agricultural sciences	950	50	850	50	600	50	200	50	100	50	100	25	50	25
Animal sciences	4,550	175	4,100	150	3,400	150	700	100	500	75	400	75	100	50
Food sciences and technology	3,750	175	3,000	175	1,600	150	1,400	150	750	100	500	100	250	75
Plant sciences	5,900	250	5,050	225	3,950	200	1,150	150	850	125	600	125	250	75
Soil sciences	2,200	125	1,850	125	1,300	100	550	100	350	75	250	50	50	25
Biochemistry and biophysics	29,450	425	25,450	500	19,000	475	6,400	400	4,000	325	2,800	300	1,200	200
Biochemistry	24,350	400	21,150	500	15,900	450	5,250	375	3,200	325	2,150	275	1,050	175
Biophysics	5,100	175	4,300	175	3,100	150	1,150	150	800	150	650	125	150	50
Cell, cellular biology, and molecular biology	31,200	450	27,700	525	21,050	500	6,650	450	3,550	350	2,450	275	1,100	200
Microbiological sciences and immunology	23,800	400	21,700	425	17,350	400	4,350	325	2,150	250	1,500	225	600	125
Immunology	8,950	200	8,000	275	6,150	250	1,850	225	950	200	700	175	200	75
Microbiological sciences	14,900	325	13,700	350	11,200	350	2,500	250	1,200	175	800	150	400	100
Natural resources and conservation	8,800	225	7,700	250	6,650	225	1,050	125	1,100	125	700	100	450	100
Fish, fisheries, wildlife and wildlands science and management	2,200	150	2,100	150	1,900	125	200	50	100	50	100	50	50	25
Forestry	2,600	150	2,250	150	1,850	150	400	50	350	50	150	50	200	50
Natural resource conservation, research, management, and policy	4,000	150	3,350	175	2,900	150	450	75	650	100	400	75	250	75
Zoology	7,200	225	6,550	250	5,650	250	900	125	650	150	500	150	100	50
Other biological sciences	102,800	675	90,200	700	73,700	725	16,500	475	12,650	450	8,650	375	4,000	300
Biomathematics, bioinformatics, and computational biology	5,150	100	3,600	125	2,500	125	1,100	100	1,550	125	950	100	600	75
Botany and plant biology	6,150	225	5,450	200	4,450	200	1,000	125	700	125	450	100	250	75

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2019

(Number and SE)

Field of study	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Epidemiology, ecology, and population biology	15,950	275	14,850	275	13,450	300	1,400	175	1,100	175	650	150	450	100
Genetics	8,750	250	7,750	250	6,750	250	1,000	100	1,000	150	650	125	350	100
Neurobiology and neuroscience	16,800	275	14,800	300	11,750	350	3,000	275	2,000	200	1,250	200	750	175
Nutrition sciences	4,150	125	3,650	150	2,800	150	850	100	500	100	350	75	150	50
Pharmacology and toxicology	12,700	300	11,400	300	9,100	275	2,300	250	1,350	175	1,050	175	300	100
Physiology, pathology, and related sciences	15,400	300	13,550	325	11,250	325	2,300	175	1,900	200	1,250	175	600	125
Biological and biomedical sciences, general	12,750	300	10,700	325	8,100	275	2,600	225	2,050	225	1,600	200	450	100
Biological and biomedical sciences, other	4,950	200	4,450	200	3,550	200	900	125	500	100	400	100	100	50
Computer and information sciences	31,100	400	21,800	500	12,950	400	8,800	450	9,350	450	6,450	425	2,850	275
Computer science	26,750	400	18,550	475	10,850	375	7,700	425	8,150	450	5,700	400	2,450	250
Information science, studies	2,600	75	2,100	100	1,350	100	700	75	500	75	400	75	100	50
Computer and information sciences, other	1,800	50	1,150	75	750	50	350	50	650	50	350	50	300	50
Mathematics and statistics	36,650	450	28,500	525	19,400	400	9,100	400	8,200	400	5,300	350	2,900	300
Applied mathematics	8,500	200	6,100	250	3,700	175	2,400	200	2,400	250	1,500	175	900	225
Mathematics	16,500	375	13,700	400	10,350	325	3,350	275	2,800	250	1,800	225	1,000	175
Statistics	7,450	225	5,350	275	3,000	225	2,350	225	2,100	225	1,400	200	750	125
Mathematics and statistics, other	4,200	125	3,350	150	2,350	125	1,000	100	850	75	650	75	200	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	114,750	1,075	87,050	900	27,700	725	19,000	700	13,600	625	5,450	400
Astronomy and astrophysics	5,850	175	5,200	175	4,500	150	650	100	650	125	450	125	200	50
Chemistry, except biochemistry	65,300	700	56,600	775	43,050	675	13,550	525	8,750	450	6,250	400	2,500	275
Inorganic chemistry	8,750	225	7,900	225	6,400	225	1,500	175	850	125	650	125	250	75
Organic chemistry	17,600	375	15,500	425	11,450	350	4,000	275	2,100	250	1,700	225	450	125
Chemistry, other, except biochemistry	39,000	575	33,200	600	25,200	500	8,050	425	5,750	400	3,900	325	1,850	225
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	19,350	300	16,050	275	3,300	175	2,700	225	1,950	175	750	125

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2019

(Number and SE)

Field of study	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Atmospheric sciences and meteorology	3,900	75	3,250	75	2,450	75	800	75	650	75	450	75	200	50
Geological and earth sciences, geosciences	13,550	275	11,850	250	10,150	250	1,700	150	1,700	200	1,300	175	450	100
Ocean sciences and marine sciences	2,150	75	2,050	75	1,800	75	250	50	100	25	50	25	50	25
Oceanography, chemical and physical	2,450	125	2,150	125	1,650	100	550	100	250	75	150	75	100	50
Physics	40,550	575	33,650	675	23,450	600	10,200	525	6,900	450	4,900	425	2,000	225
Psychology	115,350	825	112,600	875	102,300	875	10,300	500	2,750	275	2,250	250	500	150
Clinical psychology	41,100	525	40,700	525	37,150	550	3,550	325	450	125	350	100	D	D
Counseling and applied psychology	14,850	275	14,550	275	13,200	325	1,350	200	300	100	200	75	100	75
Educational and school psychology	14,100	275	13,900	275	12,850	325	1,050	150	200	75	200	75	D	D
Industrial and organizational psychology	4,850	150	4,700	150	4,450	150	250	75	150	50	100	50	D	D
Research and experimental psychology	27,800	400	26,450	400	23,950	400	2,500	225	1,300	175	1,100	175	200	75
Psychology, general	7,900	250	7,700	250	6,500	300	1,200	275	D	D	D	D	D	D
Psychology, other	4,750	175	4,550	150	4,200	175	400	100	200	75	150	75	D	D
Social sciences	102,700	900	91,850	950	75,600	725	16,300	625	10,850	600	8,000	525	2,850	275
Economics	26,900	550	21,900	550	15,600	450	6,350	375	5,000	350	3,250	300	1,750	225
Political science and government	22,450	425	20,800	450	17,950	425	2,800	325	1,650	225	1,300	225	350	75
Political science and government	18,350	400	17,100	425	14,900	425	2,200	325	1,250	200	1,000	200	250	75
Public policy analysis	4,100	175	3,700	150	3,100	150	600	75	400	100	300	75	100	50
Sociology, demography, and population studies	15,200	325	14,350	350	12,600	325	1,800	250	850	175	750	175	100	50
Other social sciences	38,150	500	34,800	500	29,450	450	5,350	275	3,350	275	2,700	225	650	125
Anthropology	11,400	300	10,850	300	9,900	300	950	150	550	125	450	125	100	75
Area, ethnic, cultural, gender, and group studies	3,900	125	3,650	125	3,400	125	250	50	200	75	200	50	50	25
Geography and cartography	4,750	175	4,300	175	3,500	175	750	100	500	75	400	75	100	50
International relations and national security studies	2,350	150	2,100	150	1,650	125	450	75	250	50	200	50	50	50
Linguistics	4,950	250	4,050	250	2,850	200	1,200	150	850	175	750	175	100	50

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2019

(Number and SE)

Field of study	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Urban studies, affairs	1,600	100	1,500	100	1,150	100	300	50	100	50	100	50	S	S
Social sciences, other	9,250	250	8,350	250	6,950	250	1,400	150	850	125	650	100	200	75
Engineering	176,700	1,175	133,500	1,275	75,050	950	58,450	1,050	43,200	1,000	30,300	925	12,900	500
Aerospace, aeronautical, and astronautical engineering	7,050	225	5,900	225	3,900	225	2,000	200	1,150	125	750	100	400	75
Chemical engineering	20,800	500	16,450	500	10,550	375	5,900	425	4,350	350	3,000	300	1,350	225
Civil engineering	19,250	400	14,450	425	7,700	350	6,700	375	4,850	325	3,200	250	1,650	200
Electrical and computer engineering	48,550	650	34,150	650	15,950	500	18,250	575	14,400	475	10,700	475	3,700	300
Computer engineering	7,000	175	4,700	225	1,850	125	2,850	200	2,300	175	1,550	175	750	125
Electrical, electronics, and communications engineering	41,550	625	29,450	625	14,100	475	15,400	550	12,100	475	9,150	450	2,900	275
Mechanical engineering	26,550	425	20,050	525	9,900	400	10,100	500	6,500	450	4,450	400	2,050	225
Metallurgical and materials engineering	16,450	350	12,900	400	7,800	350	5,100	325	3,550	300	2,450	275	1,150	200
Other engineering	38,050	450	29,650	475	19,250	450	10,400	375	8,400	450	5,700	400	2,700	225
Agricultural engineering	1,900	75	1,450	100	800	75	700	75	450	75	300	50	150	75
Bioengineering and biomedical engineering	13,200	250	10,000	350	7,650	325	2,350	225	3,200	325	2,200	300	1,050	150
Engineering mechanics, physics, and science	4,400	150	3,450	150	1,800	125	1,650	125	950	125	700	100	250	75
Industrial and manufacturing engineering	8,800	275	6,850	275	4,050	225	2,750	200	2,000	200	1,250	150	750	125
Nuclear engineering	3,100	125	2,750	125	1,750	100	1,000	100	350	75	250	75	100	50
Engineering, other	6,600	200	5,150	200	3,200	175	1,950	150	1,450	150	1,050	150	400	75
Health	40,200	475	35,700	475	28,550	475	7,150	350	4,500	300	2,900	225	1,650	225
Communication disorders sciences and services	3,100	125	2,800	125	2,450	125	350	75	300	75	200	50	100	50
Hospital and medical administration services	1,550	100	1,350	100	1,000	100	350	50	150	50	100	50	S	S
Pharmacy, pharmaceutical sciences, and administration	8,050	175	6,350	225	3,400	225	2,950	225	1,700	200	1,000	175	700	150
Public health	8,400	225	7,450	225	6,400	225	1,050	150	950	150	600	100	400	150

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2019

(Number and SE)

Field of study	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Registered nursing, nursing administration, nursing research	9,000	250	8,700	275	7,800	275	850	125	300	125	200	100	S	S
Health sciences, other	10,150	225	9,050	225	7,450	225	1,600	150	1,100	150	800	150	300	75

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding.
Residence location is based on reported living location on 1 February 2019.

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

TABLE 10

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and age: 2019

(Number and SE)

Field of study	All employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	99,050	1,050	128,800	1,375	117,500	1,325	108,400	1,450	100,900	1,375	101,950	1,400	88,300	1,400	112,350	1,625
Science	640,300	1,900	68,100	925	93,250	1,175	87,450	1,200	82,700	1,250	74,250	1,100	75,100	1,250	67,900	1,200	91,550	1,400
Biological, agricultural, and environmental life sciences	220,700	1,100	25,700	550	35,350	775	34,150	950	28,900	775	24,200	675	25,100	725	22,750	825	24,600	775
Agricultural and food sciences	17,400	350	1,400	125	1,700	150	2,050	175	1,850	150	2,200	200	2,750	200	2,900	200	2,500	225
Agricultural sciences	950	50	50	25	100	25	100	25	100	25	100	25	100	50	200	50	250	50
Animal sciences	4,550	175	450	75	450	75	650	100	500	100	500	75	700	100	600	75	700	125
Food sciences and technology	3,750	175	350	75	400	75	450	100	400	75	550	100	600	100	600	100	350	100
Plant sciences	5,900	250	450	75	600	100	600	100	600	125	800	150	1,050	150	1,100	150	800	125
Soil sciences	2,200	125	100	50	150	50	300	75	200	50	250	50	350	50	400	75	400	125
Biochemistry and biophysics	29,450	425	3,250	225	4,350	250	4,300	300	4,150	300	3,100	275	3,600	300	3,000	300	3,700	325
Biochemistry	24,350	400	2,500	200	3,450	250	3,500	275	3,550	275	2,600	250	3,100	300	2,600	275	3,100	325
Biophysics	5,100	175	750	100	900	125	800	125	650	100	500	100	500	125	400	75	600	125
Cell, cellular biology, and molecular biology	31,200	450	3,050	250	5,100	375	4,900	400	4,250	400	3,950	350	3,850	375	3,450	325	2,650	300
Microbiological sciences and immunology	23,800	400	3,200	200	4,400	300	4,000	275	2,750	300	2,300	200	2,700	275	2,150	225	2,300	275
Immunology	8,950	200	1,100	150	1,900	200	1,750	200	1,100	175	950	175	850	150	450	100	900	200
Microbiological sciences	14,900	325	2,100	175	2,550	225	2,250	225	1,700	225	1,350	175	1,850	225	1,700	200	1,400	200
Natural resources and conservation	8,800	225	700	100	1,150	125	1,300	125	1,300	125	1,000	100	1,250	150	850	100	1,200	200
Fish, fisheries, wildlife and wildlands science and management	2,200	150	100	25	200	50	300	50	350	50	250	50	300	50	300	50	400	100
Forestry	2,600	150	250	75	200	50	300	50	250	50	350	50	500	100	300	50	450	150
Natural resource conservation, research, management, and policy	4,000	150	400	75	700	100	700	100	750	125	400	75	500	100	250	75	400	100
Zoology	7,200	225	350	75	650	125	800	150	1,000	125	850	125	800	125	1,150	150	1,600	150
Other biological sciences	102,800	675	13,750	400	17,950	500	16,800	625	13,550	525	10,800	450	10,100	475	9,300	500	10,550	500
Biomathematics, bioinformatics, and computational biology	5,150	100	1,250	100	1,100	100	750	75	650	100	500	100	400	75	150	50	350	75
Botany and plant biology	6,150	225	450	100	500	100	750	100	800	125	700	125	850	100	1,000	125	1,100	125
Epidemiology, ecology, and population biology	15,950	275	1,650	175	3,150	225	3,000	225	2,350	225	1,350	175	1,650	225	1,550	200	1,250	175
Genetics	8,750	250	1,100	125	1,750	175	1,450	175	1,300	150	1,000	125	700	125	550	100	900	175
Neurobiology and neuroscience	16,800	275	3,200	200	4,050	275	3,550	325	2,300	200	1,700	175	1,100	175	550	100	350	100
Nutrition sciences	4,150	125	350	75	550	75	700	100	550	100	500	75	500	100	500	100	500	75
Pharmacology and toxicology	12,700	300	1,250	125	1,400	175	2,250	250	1,650	225	1,650	200	1,450	175	1,450	175	1,650	225
Physiology, pathology, and related sciences	15,400	300	2,000	175	2,850	225	2,200	225	1,250	175	1,250	150	1,450	175	2,050	225	2,450	200
Biological and biomedical sciences, general	12,750	300	2,150	175	2,200	200	1,650	200	1,800	200	1,400	225	1,250	175	1,000	200	1,250	175
Biological and biomedical sciences, other	4,950	200	350	75	400	75	500	125	900	125	750	125	750	125	500	100	850	150
Computer and information sciences	31,100	400	3,900	275	6,850	425	5,250	350	4,400	325	3,100	275	3,450	300	2,500	250	1,700	200
Computer science	26,750	400	3,300	275	6,100	425	4,650	350	3,700	325	2,650	250	2,950	300	2,000	225	1,300	175
Information science, studies	2,600	75	200	50	350	75	300	50	400	75	250	50	350	75	400	75	350	75

TABLE 10

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and age: 2019

(Number and SE)

Field of study	All employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Computer and information sciences, other	1,800	50	400	50	400	50	250	50	300	50	150	50	150	50	100	25	50	25
Mathematics and statistics	36,650	450	5,600	300	6,050	325	5,000	275	4,400	300	3,850	275	4,150	300	3,250	325	4,450	300
Applied mathematics	8,500	200	1,350	150	1,650	175	1,300	175	900	150	950	150	950	175	600	125	850	125
Mathematics	16,500	375	2,600	225	2,650	225	2,000	200	1,900	200	1,700	200	2,050	200	1,350	200	2,300	200
Statistics	7,450	225	1,150	150	1,100	150	1,200	175	1,100	175	700	125	500	125	800	175	900	175
Mathematics and statistics, other	4,200	125	500	75	650	75	450	75	550	100	500	75	600	100	500	100	450	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	17,500	500	19,200	625	16,800	600	15,800	550	16,050	625	17,700	650	15,100	575	15,600	525
Astronomy and astrophysics	5,850	175	800	75	1,100	125	850	100	700	100	700	100	600	100	450	75	650	100
Chemistry, except biochemistry	65,300	700	8,950	375	9,450	450	8,500	425	7,900	400	7,900	450	8,450	475	7,150	425	7,050	400
Inorganic chemistry	8,750	225	1,400	150	1,100	150	900	125	1,150	150	950	125	1,150	150	1,050	175	1,000	175
Organic chemistry	17,600	375	1,800	175	2,700	250	2,450	250	2,150	225	2,150	250	2,450	275	2,100	250	1,850	200
Chemistry, other, except biochemistry	39,000	575	5,750	325	5,650	325	5,150	325	4,650	325	4,800	350	4,850	350	3,950	275	4,200	300
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	2,450	175	2,800	175	2,750	175	2,350	150	2,250	175	3,200	200	3,100	200	3,200	175
Atmospheric sciences and meteorology	3,900	75	700	50	650	75	500	50	450	50	450	75	450	50	350	50	400	50
Geological and earth sciences, geosciences	13,550	275	1,250	125	1,600	150	1,700	150	1,350	150	1,200	150	2,100	175	2,050	175	2,250	175
Ocean sciences and marine sciences	2,150	75	300	50	350	50	350	50	250	50	200	50	300	50	250	50	150	25
Oceanography, chemical and physical	2,450	125	200	50	150	50	200	50	300	75	350	75	350	75	450	75	350	75
Physics	40,550	575	5,300	325	5,850	375	4,700	350	4,850	375	5,200	450	5,500	425	4,450	375	4,700	400
Psychology	115,350	825	8,400	400	13,250	500	13,250	475	14,800	600	13,700	575	12,700	525	12,700	575	26,500	850
Clinical psychology	41,100	525	2,700	250	3,850	325	4,850	350	5,400	450	4,650	350	5,100	375	4,900	350	9,650	600
Counseling and applied psychology	14,850	275	900	125	1,650	200	1,550	175	1,800	225	2,150	250	1,750	225	1,600	225	3,450	275
Educational and school psychology	14,100	275	900	150	1,250	150	1,600	175	1,750	200	1,550	200	1,300	200	1,450	200	4,250	300
Industrial and organizational psychology	4,850	150	500	100	800	125	700	100	600	100	750	125	500	100	550	100	500	125
Research and experimental psychology	27,800	400	2,450	200	4,350	250	3,350	200	3,600	250	3,100	200	2,600	225	2,850	250	5,500	275
Psychology, general	7,900	250	650	125	850	150	600	150	900	200	1,100	150	950	150	850	150	1,950	250
Psychology, other	4,750	175	300	75	550	100	650	100	750	125	350	75	450	75	500	100	1,200	150
Social sciences	102,700	900	7,000	375	12,600	450	13,000	550	14,400	525	13,450	575	12,000	525	11,600	450	18,750	700
Economics	26,900	550	2,900	225	3,600	275	3,400	275	3,100	275	3,350	300	3,350	300	2,800	275	4,400	400
Political science and government	22,450	425	1,550	225	2,850	225	2,350	275	3,250	275	3,300	325	2,650	275	2,750	300	3,700	350
Political science and government	18,350	400	1,300	225	2,250	200	1,850	250	2,600	250	2,800	300	2,250	275	2,100	300	3,200	325
Public policy analysis	4,100	175	250	75	600	75	500	100	650	125	500	100	450	75	650	100	500	100
Sociology, demography, and population studies	15,200	325	700	125	1,800	150	2,050	225	2,250	200	1,800	200	1,550	200	1,650	200	3,400	250
Other social sciences	38,150	500	1,900	150	4,350	250	5,200	250	5,800	300	4,950	350	4,400	250	4,400	250	7,200	375
Anthropology	11,400	300	350	75	1,200	150	1,650	175	1,750	225	1,450	175	1,050	150	1,200	150	2,700	250
Area, ethnic, cultural, gender, and group studies	3,900	125	200	50	550	75	550	75	600	75	450	75	350	75	450	75	700	100

TABLE 10

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and age: 2019

(Number and SE)

Field of study	All employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Geography and cartography	4,750	175	300	75	550	100	700	100	850	100	550	100	650	100	700	100	500	100
International relations and national security studies	2,350	150	100	50	250	50	300	50	400	75	450	100	250	50	300	75	350	75
Linguistics	4,950	250	250	75	600	100	550	100	800	150	600	125	650	100	650	125	800	150
Urban studies, affairs	1,600	100	50	25	50	25	100	25	150	50	200	50	300	50	250	50	500	75
Social sciences, other	9,250	250	600	100	1,100	150	1,300	150	1,250	125	1,250	150	1,200	125	900	125	1,650	150
Engineering	176,700	1,175	27,050	650	30,900	700	24,950	700	21,250	700	21,400	700	22,000	700	14,400	600	14,700	725
Aerospace, aeronautical, and astronautical engineering	7,050	225	1,200	150	1,150	150	800	125	850	125	950	125	700	125	700	175	700	150
Chemical engineering	20,800	500	3,500	275	3,550	350	3,250	325	2,600	325	2,500	250	2,500	300	1,600	250	1,350	250
Civil engineering	19,250	400	2,650	225	2,850	275	2,650	250	2,200	250	2,050	250	2,950	325	1,850	275	2,100	250
Electrical and computer engineering	48,550	650	6,550	325	8,550	425	7,350	400	6,300	375	6,850	375	6,100	375	3,700	300	3,150	325
Computer engineering	7,000	175	850	125	1,650	175	1,150	125	900	150	900	150	750	125	300	75	450	100
Electrical, electronics, and communications engineering	41,550	625	5,700	300	6,900	375	6,200	400	5,400	375	5,950	375	5,300	350	3,400	300	2,700	300
Mechanical engineering	26,550	425	4,450	325	4,800	375	3,500	325	3,150	350	2,750	325	3,550	350	2,100	250	2,250	300
Metallurgical and materials engineering	16,450	350	2,900	225	3,100	275	2,350	275	1,950	250	1,700	225	2,000	250	1,200	175	1,300	200
Other engineering	38,050	450	5,850	300	6,900	325	5,100	325	4,200	275	4,650	275	4,250	250	3,200	225	3,850	275
Agricultural engineering	1,900	75	150	50	200	75	250	50	250	75	200	50	300	50	250	50	300	50
Bioengineering and biomedical engineering	13,200	250	3,300	250	3,500	275	2,400	250	1,150	175	1,250	175	850	150	400	125	350	75
Engineering mechanics, physics, and science	4,400	150	400	50	600	100	400	75	600	100	600	100	550	100	650	100	650	125
Industrial and manufacturing engineering	8,800	275	800	100	1,250	150	1,100	125	1,200	200	1,300	150	1,200	150	850	150	1,100	150
Nuclear engineering	3,100	125	400	75	400	75	250	75	250	50	400	75	450	75	350	75	550	100
Engineering, other	6,600	200	800	100	950	125	700	125	800	125	900	125	900	125	650	100	950	125
Health	40,200	475	3,900	250	4,650	250	5,100	325	4,450	350	5,200	325	4,800	325	6,000	375	6,100	350
Communication disorders sciences and services	3,100	125	200	75	350	75	350	75	350	75	350	75	300	75	500	75	700	100
Hospital and medical administration services	1,550	100	50	25	150	50	200	50	150	25	250	50	200	50	200	50	300	50
Pharmacy, pharmaceutical sciences, and administration	8,050	175	1,350	175	1,000	125	1,300	175	1,000	175	1,000	175	1,050	175	650	150	700	125
Public health	8,400	225	1,050	125	1,500	175	1,300	150	1,000	175	1,150	200	600	125	1,000	150	750	150
Registered nursing, nursing administration, nursing research	9,000	250	200	75	250	75	600	150	600	100	950	175	1,650	200	2,450	275	2,300	250
Health sciences, other	10,150	225	1,050	125	1,450	175	1,350	175	1,300	175	1,450	150	1,000	125	1,200	150	1,350	175

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 11-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and years since doctorate: 2019

(Number and SE)

Field of study	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	142,500	625	154,750	1,025	127,000	1,150	108,700	825	104,250	825	220,000	1,575
Science	640,300	1,900	100,000	750	112,250	1,025	93,350	1,150	82,300	875	76,550	775	175,800	1,425
Biological, agricultural, and environmental life sciences	220,700	1,100	35,700	600	41,950	750	34,050	675	28,600	600	25,250	625	55,200	925
Agricultural and food sciences	17,400	350	2,100	125	2,450	175	2,350	200	2,350	175	2,400	175	5,700	300
Agricultural sciences	950	50	150	25	150	25	100	25	150	25	50	25	400	50
Animal sciences	4,550	175	500	75	650	100	600	100	650	100	600	75	1,500	150
Food sciences and technology	3,750	175	500	75	550	100	550	75	600	100	550	100	1,000	150
Plant sciences	5,900	250	700	100	850	100	800	150	650	100	850	125	2,050	175
Soil sciences	2,200	125	250	50	250	50	300	75	350	50	350	50	700	125
Biochemistry and biophysics	29,450	425	3,550	200	4,800	275	4,450	275	3,900	250	3,400	275	9,300	450
Biochemistry	24,350	400	2,750	200	3,900	250	3,600	250	3,300	250	2,850	250	8,000	400
Biophysics	5,100	175	850	100	900	125	850	125	650	100	550	100	1,300	125
Cell, cellular biology, and molecular biology	31,200	450	4,200	300	5,500	375	4,900	350	4,750	300	4,250	325	7,700	475
Microbiological sciences and immunology	23,800	400	3,800	200	5,250	300	3,700	250	2,800	250	2,550	225	5,750	350
Immunology	8,950	200	1,500	125	1,950	175	1,600	150	1,200	150	900	150	1,850	225
Microbiological sciences	14,900	325	2,300	150	3,300	225	2,100	200	1,600	200	1,650	200	3,900	275
Natural resources and conservation	8,800	225	1,700	125	1,750	125	1,500	125	1,150	125	950	125	1,750	175
Fish, fisheries, wildlife and wildlands science and management	2,200	150	250	50	350	50	450	50	350	50	250	50	550	125
Forestry	2,600	150	400	50	350	50	350	50	300	50	350	50	750	150
Natural resource conservation, research, management, and policy	4,000	150	1,050	100	1,000	100	700	100	500	100	400	100	400	100
Zoology	7,200	225	800	125	800	125	1,000	125	900	125	850	125	2,800	200
Other biological sciences	102,800	675	19,550	450	21,400	550	16,100	450	12,700	400	10,800	400	22,200	600
Biomathematics, bioinformatics, and computational biology	5,150	100	1,750	100	1,550	125	650	100	400	100	300	75	500	75
Botany and plant biology	6,150	225	700	100	800	100	800	100	600	100	900	125	2,350	175
Epidemiology, ecology, and population biology	15,950	275	3,450	150	3,900	225	2,750	225	2,150	250	1,400	150	2,350	225
Genetics	8,750	250	1,450	125	1,900	175	1,450	125	1,100	125	1,050	150	1,800	200
Neurobiology and neuroscience	16,800	275	3,900	200	4,900	250	3,100	250	2,100	175	1,250	150	1,550	150
Nutrition sciences	4,150	125	600	75	800	100	850	100	500	75	550	75	900	100

TABLE 11-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and years since doctorate: 2019

(Number and SE)

Field of study	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Pharmacology and toxicology	12,700	300	1,500	150	2,100	225	2,000	225	1,650	175	1,750	200	3,750	250
Physiology, pathology, and related sciences	15,400	300	2,700	175	3,000	225	1,850	175	1,550	175	1,450	125	4,850	275
Biological and biomedical sciences, general	12,750	300	3,050	200	2,100	200	1,850	225	1,700	200	1,500	225	2,550	225
Biological and biomedical sciences, other	4,950	200	450	75	400	75	750	100	1,000	125	750	100	1,600	150
Computer and information sciences	31,100	400	7,350	325	7,650	350	5,200	300	3,300	225	3,300	225	4,300	300
Computer science	26,750	400	6,000	300	6,650	350	4,250	300	2,800	225	3,050	225	4,000	300
Information science, studies	2,600	75	550	75	600	75	550	75	300	50	250	50	300	50
Computer and information sciences, other	1,800	50	800	50	450	50	400	50	150	25	D	D	D	D
Mathematics and statistics	36,650	450	6,600	300	6,800	300	5,350	275	4,150	300	4,150	275	9,650	375
Applied mathematics	8,500	200	1,600	175	1,750	175	1,400	150	1,100	125	850	125	1,800	175
Mathematics	16,500	375	2,850	200	2,850	200	2,150	225	1,750	200	1,950	225	5,000	275
Statistics	7,450	225	1,500	150	1,400	150	1,250	150	700	150	700	125	1,900	225
Mathematics and statistics, other	4,200	125	700	75	750	100	550	100	600	75	650	100	950	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	19,800	425	21,800	575	17,650	575	16,250	550	16,900	575	41,350	775
Astronomy and astrophysics	5,850	175	950	75	1,100	100	850	100	700	100	800	100	1,450	125
Chemistry, except biochemistry	65,300	700	9,050	300	10,550	425	8,850	400	8,050	350	8,000	400	20,800	500
Inorganic chemistry	8,750	225	1,300	125	1,150	125	1,100	125	1,050	100	1,050	125	3,150	225
Organic chemistry	17,600	375	1,900	150	3,000	250	2,350	225	2,450	200	1,900	225	6,050	325
Chemistry, other, except biochemistry	39,000	575	5,850	250	6,400	325	5,450	350	4,600	275	5,100	325	11,600	425
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	3,700	175	3,550	175	2,850	175	2,650	150	2,700	200	6,600	275
Atmospheric sciences and meteorology	3,900	75	850	50	800	75	550	50	450	50	450	50	850	75
Geological and earth sciences, geosciences	13,550	275	2,100	150	2,050	150	1,700	150	1,600	125	1,600	175	4,500	225
Ocean sciences and marine sciences	2,150	75	550	50	400	50	300	50	250	50	250	50	450	50
Oceanography, chemical and physical	2,450	125	200	50	300	50	300	50	400	75	400	75	800	100
Physics	40,550	575	6,150	300	6,550	325	5,100	325	4,900	375	5,400	375	12,500	575
Psychology	115,350	825	14,650	375	16,800	475	16,300	425	15,650	575	14,000	525	38,000	850

TABLE 11-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and years since doctorate: 2019

(Number and SE)

Field of study	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Clinical psychology	41,100	525	4,650	275	4,700	275	5,800	350	5,700	350	4,850	300	15,450	600
Counseling and applied psychology	14,850	275	2,050	175	2,250	200	2,150	200	2,200	225	1,950	225	4,300	325
Educational and school psychology	14,100	275	1,950	150	2,000	175	2,100	175	2,000	200	1,500	150	4,500	275
Industrial and organizational psychology	4,850	150	700	100	950	100	900	100	600	100	650	75	1,100	125
Research and experimental psychology	27,800	400	3,850	175	4,750	200	3,850	200	3,600	200	3,550	225	8,200	300
Psychology, general	7,900	250	850	125	1,100	175	1,000	200	850	150	1,150	150	2,900	275
Psychology, other	4,750	175	550	75	1,000	125	550	75	700	100	400	75	1,550	150
Social sciences	102,700	900	15,900	375	17,300	475	14,850	475	14,350	500	13,000	525	27,300	700
Economics	26,900	550	4,150	250	4,050	275	3,450	275	3,250	225	3,400	275	8,650	400
Political science and government	22,450	425	3,550	225	3,750	250	3,350	275	3,400	300	3,200	300	5,250	400
Political science and government	18,350	400	2,550	225	2,750	225	2,650	250	2,950	275	2,800	275	4,650	400
Public policy analysis	4,100	175	1,000	75	1,000	100	650	125	450	75	350	75	600	100
Sociology, demography, and population studies	15,200	325	2,100	125	2,700	225	2,050	175	2,400	175	1,750	175	4,250	275
Other social sciences	38,150	500	6,150	225	6,850	275	6,000	275	5,300	300	4,700	275	9,150	375
Anthropology	11,400	300	1,600	125	1,950	150	1,750	175	1,700	175	1,350	125	3,000	200
Area, ethnic, cultural, gender, and group studies	3,900	125	850	75	800	100	600	75	500	75	350	50	800	100
Geography and cartography	4,750	175	850	100	900	100	900	125	600	100	600	100	900	125
International relations and national security studies	2,350	150	350	50	450	75	400	75	250	75	350	75	550	100
Linguistics	4,950	250	700	75	750	100	850	125	700	125	700	125	1,200	175
Urban studies, affairs	1,600	100	100	25	150	50	250	50	300	50	300	50	500	75
Social sciences, other	9,250	250	1,700	100	1,800	150	1,250	125	1,250	125	1,050	125	2,200	150
Engineering	176,700	1,175	33,400	700	34,400	750	27,250	650	20,750	550	23,250	625	37,700	825
Aerospace, aeronautical, and astronautical engineering	7,050	225	1,350	125	1,150	125	1,000	125	800	100	1,050	125	1,750	200
Chemical engineering	20,800	500	3,550	250	3,700	300	3,350	300	2,550	250	2,600	250	5,050	400
Civil engineering	19,250	400	4,050	225	3,400	275	2,850	275	1,900	200	2,650	300	4,400	275
Electrical and computer engineering	48,550	650	8,150	350	9,800	425	7,950	375	6,350	350	6,600	325	9,700	475
Computer engineering	7,000	175	1,350	125	1,550	150	1,350	125	800	100	750	75	1,200	125
Electrical, electronics, and communications engineering	41,550	625	6,800	325	8,200	400	6,600	350	5,550	325	5,850	350	8,500	475

TABLE 11-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and years since doctorate: 2019

(Number and SE)

Field of study	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Mechanical engineering	26,550	425	5,650	300	5,150	350	3,700	300	3,150	275	3,550	300	5,350	400
Metallurgical and materials engineering	16,450	350	3,300	275	3,250	250	2,550	200	1,700	200	2,150	200	3,450	275
Other engineering	38,050	450	7,350	275	7,950	350	5,850	350	4,350	275	4,600	275	7,950	325
Agricultural engineering	1,900	75	250	50	250	50	250	50	250	50	300	50	600	75
Bioengineering and biomedical engineering	13,200	250	3,650	175	4,150	225	2,150	225	1,050	150	1,050	150	1,200	150
Engineering mechanics, physics, and science	4,400	150	550	75	600	100	600	100	500	100	850	100	1,300	125
Industrial and manufacturing engineering	8,800	275	1,350	125	1,500	175	1,650	175	1,250	200	1,050	125	2,050	200
Nuclear engineering	3,100	125	450	75	500	75	350	75	350	50	350	75	1,100	100
Engineering, other	6,600	200	1,050	100	1,000	125	900	125	950	125	1,000	150	1,700	150
Health	40,200	475	9,100	275	8,100	350	6,400	300	5,650	350	4,450	250	6,500	300
Communication disorders sciences and services	3,100	125	400	75	550	75	550	75	350	50	300	75	950	100
Hospital and medical administration services	1,550	100	200	50	350	50	300	50	200	50	150	50	300	75
Pharmacy, pharmaceutical sciences, and administration	8,050	175	1,500	150	1,400	175	1,100	125	1,000	150	1,150	150	1,950	225
Public health	8,400	225	2,800	150	1,900	175	1,250	175	1,000	175	650	125	850	150
Registered nursing, nursing administration, nursing research	9,000	250	2,050	200	2,000	175	1,500	125	1,450	200	1,050	175	900	125
Health sciences, other	10,150	225	2,150	150	1,950	175	1,750	175	1,600	150	1,150	125	1,600	175

SE = standard error.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 11-2

Non-U.S. residing employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 2019

(Number and SE)

Field of study	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	126,050	1,450	15,750	575	22,450	675	21,350	800	16,400	650	18,950	725	31,150	900
Science	89,250	1,275	11,400	550	16,200	625	15,550	725	11,750	600	12,700	600	21,650	750
Biological, agricultural, and environmental life sciences	25,950	725	3,100	275	3,750	275	4,650	400	3,550	350	4,250	350	6,650	500
Agricultural and food sciences	5,000	300	550	100	550	100	800	125	700	125	850	150	1,550	200
Biochemistry and biophysics	2,250	275	200	100	400	100	300	125	150	75	450	150	750	175
Cell, cellular biology, and molecular biology	2,450	275	S	S	200	75	600	150	250	100	450	150	800	175
Microbiological sciences and immunology	2,250	275	350	100	400	100	450	125	250	100	450	150	400	150
Natural resources and conservation	2,100	200	350	75	300	50	450	125	400	100	200	50	400	100
Zoology	1,050	175	D	D	100	50	150	100	250	125	150	75	300	125
Other biological sciences	10,800	550	1,400	200	1,850	200	1,950	250	1,550	250	1,650	225	2,400	350
Computer and information sciences	4,700	350	650	150	1,250	250	900	150	400	150	600	150	900	175
Mathematics and statistics	6,800	350	1,050	200	1,350	250	1,300	175	950	150	750	175	1,400	225
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	20,300	800	2,350	300	4,100	450	3,400	375	2,400	350	2,450	325	5,650	425
Astronomy and astrophysics	900	125	150	50	350	150	S	S	S	S	100	50	150	75
Chemistry, except biochemistry	6,650	450	550	150	1,450	250	1,050	200	1,000	225	1,100	250	1,500	250
Geosciences, atmospheric sciences, and ocean sciences	4,000	225	600	100	700	100	650	100	450	100	550	125	1,100	200
Physics	8,700	525	1,050	200	1,600	275	1,550	275	850	200	750	175	2,900	375
Psychology	5,400	350	700	125	1,100	200	750	175	850	200	650	150	1,250	175
Social sciences	26,050	775	3,600	350	4,600	325	4,500	400	3,600	325	3,950	375	5,850	425
Economics	12,200	500	1,550	250	1,850	200	2,050	300	1,800	225	2,100	275	2,850	275
Political science and government	3,250	325	500	150	650	125	600	150	400	100	150	50	900	225
Sociology, demography, and population studies	2,250	250	350	125	400	100	450	100	250	100	350	125	450	125
Other social sciences	8,400	425	1,150	175	1,750	250	1,350	225	1,150	200	1,350	250	1,650	200
Engineering	32,450	900	3,650	350	5,450	400	5,050	400	4,050	375	5,450	475	8,800	525
Aerospace, aeronautical, and astronautical engineering	1,100	200	100	50	S	S	150	75	100	50	50	50	500	175
Chemical engineering	3,700	375	250	125	550	125	600	175	350	150	700	175	1,200	225
Civil engineering	5,400	400	600	150	1,050	200	900	225	1,100	225	650	200	1,150	225
Electrical and computer engineering	8,200	500	950	200	1,350	225	1,500	250	800	175	1,500	300	2,150	325
Mechanical engineering	3,700	375	400	125	650	175	350	125	250	100	950	225	1,150	250
Metallurgical and materials engineering	2,900	275	300	100	600	150	300	125	500	150	500	125	800	150
Other engineering	7,450	400	1,100	175	1,100	150	1,250	200	1,050	175	1,100	175	1,900	225
Health	4,350	350	700	150	850	175	750	175	550	150	800	175	700	175

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding.
Residence location is based on reported living location on 1 February 2019.

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

TABLE 12-1

U.S. residing employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2019

(Number and SE)

Field of study	All employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	344,350	2,325	30,900	900	306,300	2,500	55,900	1,125	50,150	1,025	18,850	750	40,750	1,100	10,050	550
Science	640,300	1,900	277,850	1,975	27,850	850	194,000	2,050	44,600	950	39,050	925	14,900	625	35,100	1,025	6,950	450
Biological, agricultural, and environmental life sciences	220,700	1,100	96,250	1,175	8,000	500	68,550	1,175	17,200	550	16,250	575	4,800	375	7,550	475	2,100	250
Agricultural and food sciences	17,400	350	7,300	300	400	100	6,550	300	550	75	1,200	125	400	75	850	125	150	50
Biochemistry and biophysics	29,450	425	11,800	550	1,300	275	10,750	525	1,900	225	1,800	225	450	125	1,250	200	150	75
Cell, cellular biology, and molecular biology	31,200	450	13,100	575	1,250	200	11,050	575	2,800	325	1,550	225	450	150	850	225	200	100
Microbiological sciences and immunology	23,800	400	9,100	425	650	150	8,150	450	2,350	250	2,050	250	450	100	850	175	200	100
Natural resources and conservation	8,800	225	3,450	225	200	50	1,900	200	600	75	1,350	125	800	100	350	75	150	50
Zoology	7,200	225	3,900	200	300	75	1,050	175	350	100	750	125	350	100	350	100	S	S
Other biological sciences	102,800	675	47,550	825	3,900	325	29,050	600	8,600	375	7,550	425	1,900	225	3,100	300	1,150	200
Computer and information sciences	31,100	400	10,750	475	400	100	16,750	575	1,250	200	800	150	250	100	650	125	250	75
Mathematics and statistics	36,650	450	20,200	525	1,550	175	11,350	475	1,400	175	1,250	175	S	S	650	150	200	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	47,350	850	6,050	350	56,600	1,025	7,250	375	8,500	450	2,500	275	4,100	350	1,350	200
Astronomy and astrophysics	5,850	175	2,900	175	250	75	1,350	125	600	100	400	100	50	50	100	50	100	50
Chemistry, except biochemistry	65,300	700	20,000	650	3,450	300	32,500	775	2,400	250	3,150	275	1,000	175	2,200	250	650	150
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	10,000	325	900	100	5,600	275	1,250	100	2,700	175	700	100	750	125	250	50
Physics	40,550	575	14,450	550	1,450	225	17,150	650	3,050	300	2,300	275	700	200	1,100	225	400	125
Psychology	115,350	825	39,150	775	7,150	400	27,450	725	11,250	500	6,650	450	4,550	375	18,200	675	950	175
Social sciences	102,700	900	64,150	975	4,700	375	13,350	575	6,200	300	5,550	350	2,700	225	3,950	300	2,100	275
Economics	26,900	550	14,400	525	350	100	5,750	400	1,350	200	2,100	225	750	175	1,050	200	1,200	225
Political science and government	22,450	425	14,950	475	1,300	250	2,400	300	1,250	150	1,050	150	700	125	550	150	200	75
Sociology, demography, and population studies	15,200	325	10,600	350	550	100	1,200	175	1,200	150	500	125	350	100	600	125	250	125
Other social sciences	38,150	500	24,200	525	2,500	250	3,950	250	2,400	200	1,900	175	950	150	1,750	200	450	100
Engineering	176,700	1,175	45,250	925	1,900	225	102,700	1,175	7,850	525	9,000	450	3,000	275	4,200	425	2,800	325
Aerospace, aeronautical, and astronautical engineering	7,050	225	1,650	175	S	S	3,450	225	650	150	950	175	D	D	200	75	100	50
Chemical engineering	20,800	500	3,850	350	500	175	13,550	450	700	150	1,150	225	250	125	450	175	300	100
Civil engineering	19,250	400	7,100	375	250	100	8,150	400	500	150	950	150	1,650	225	400	100	250	100
Electrical and computer engineering	48,550	650	9,950	500	250	75	32,800	725	1,700	250	1,550	175	200	100	950	200	1,150	225
Mechanical engineering	26,550	425	7,350	500	300	100	15,500	575	900	200	1,300	200	250	100	600	150	400	125
Metallurgical and materials engineering	16,450	350	2,800	275	S	S	11,000	400	1,000	175	800	150	200	75	350	125	200	100
Other engineering	38,050	450	12,550	450	450	100	18,250	500	2,400	225	2,350	200	400	75	1,250	175	400	100
Health	40,200	475	21,250	550	1,150	150	9,600	400	3,450	300	2,100	200	950	150	1,450	200	300	75

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.
[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.
[c] Includes those self-employed in an incorporated business.
[d] Self-employed or business owner in a nonincorporated business.
[e] Includes employers not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 12-2

Non-U.S. residing employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2019

(Number and SE)

Field of study	All employed		Educational institution[a]		Business or industry[b]		Government[c]	
	Number	SE	Number	SE	Number	SE	Number	SE
All fields	126,050	1,450	81,550	1,400	31,250	975	13,200	650
Science	89,250	1,275	58,400	1,150	20,450	725	10,400	575
Biological, agricultural, and environmental life sciences	25,950	725	15,600	550	6,550	425	3,800	350
Agricultural and food sciences	5,000	300	2,900	250	1,400	175	750	125
Biochemistry and biophysics	2,250	275	1,250	250	650	200	350	125
Cell, cellular biology, and molecular biology	2,450	275	1,300	225	800	175	350	150
Microbiological sciences and immunology	2,250	275	1,550	225	400	150	300	100
Natural resources and conservation	2,100	200	1,300	175	500	100	350	75
Zoology	1,050	175	700	175	200	75	200	100
Other biological sciences	10,800	550	6,650	425	2,600	275	1,550	200
Computer and information sciences	4,700	350	3,450	350	1,150	200	100	75
Mathematics and statistics	6,800	350	5,350	375	1,000	175	500	150
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	20,300	800	12,050	550	5,450	450	2,800	325
Astronomy and astrophysics	900	125	650	100	100	50	S	S
Chemistry, except biochemistry	6,650	450	3,450	350	2,600	325	600	175
Geosciences, atmospheric sciences, and ocean sciences	4,000	225	2,300	175	800	150	900	150
Physics	8,700	525	5,650	450	1,950	300	1,100	225
Psychology	5,400	350	3,450	325	1,450	225	500	125
Social sciences	26,050	775	18,500	700	4,850	400	2,700	300
Economics	12,200	500	8,100	475	2,550	325	1,500	225
Political science and government	3,250	325	2,100	275	850	200	250	100
Sociology, demography, and population studies	2,250	250	1,700	225	300	100	250	100
Other social sciences	8,400	425	6,600	400	1,150	175	700	150
Engineering	32,450	900	20,200	850	9,750	575	2,500	325
Aerospace, aeronautical, and astronautical engineering	1,100	200	500	150	500	175	100	50
Chemical engineering	3,700	375	2,300	350	1,250	250	200	75
Civil engineering	5,400	400	3,100	325	1,550	300	750	200
Electrical and computer engineering	8,200	500	5,300	475	2,400	325	500	125
Mechanical engineering	3,700	375	2,600	350	900	200	200	100
Metallurgical and materials engineering	2,900	275	1,750	225	1,000	175	150	75
Other engineering	7,450	400	4,700	350	2,150	225	650	125
Health	4,350	350	3,000	325	1,050	175	300	100

S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), university-affiliated research institutes, 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

[b] Business or industry includes private for profit, private not for profit, self-employed or business owners in incorporated or nonincorporated business, and employers not broken out separately.

[c] Government includes U.S. federal, state, and local government and non-U.S. government at any level.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 12-3

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and sector of employment: 2019

(Number and SE)

Field of study	All employed		Educational institution[a]		Business or industry[b]		Government[c]	
	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	375,250	2,425	413,000	2,700	68,950	1,200
Science	640,300	1,900	305,700	2,150	280,650	2,325	53,950	1,100
Biological, agricultural, and environmental life sciences	220,700	1,100	104,250	1,250	95,400	1,275	21,050	650
Agricultural and food sciences	17,400	350	7,700	300	8,100	300	1,600	125
Agricultural sciences	950	50	450	50	350	50	100	50
Animal sciences	4,550	175	2,050	150	2,300	150	250	50
Food sciences and technology	3,750	175	1,250	150	2,150	150	350	100
Plant sciences	5,900	250	3,000	200	2,550	200	400	75
Soil sciences	2,200	125	950	100	750	125	500	75
Biochemistry and biophysics	29,450	425	13,100	600	14,050	550	2,300	275
Biochemistry	24,350	400	10,900	550	11,600	500	1,900	250
Biophysics	5,100	175	2,250	175	2,450	200	400	100
Cell, cellular biology, and molecular biology	31,200	450	14,350	600	14,900	625	1,950	275
Microbiological sciences and immunology	23,800	400	9,800	425	11,550	475	2,450	250
Immunology	8,950	200	3,200	225	5,100	300	700	150
Microbiological sciences	14,900	325	6,600	375	6,450	375	1,800	225
Natural resources and conservation	8,800	225	3,700	225	3,000	200	2,150	125
Fish, fisheries, wildlife and wildlands science and management	2,200	150	850	100	550	75	800	75
Forestry	2,600	150	1,100	125	950	125	550	75
Natural resource conservation, research, management, and policy	4,000	150	1,750	150	1,500	150	800	100
Zoology	7,200	225	4,200	200	1,900	200	1,100	150
Other biological sciences	102,800	675	51,450	800	41,900	750	9,500	425
Biomathematics, bioinformatics, and computational biology	5,150	100	2,050	150	2,750	150	300	75
Botany and plant biology	6,150	225	3,450	225	2,050	175	650	100
Epidemiology, ecology, and population biology	15,950	275	9,000	375	4,100	300	2,850	250
Genetics	8,750	250	4,550	225	3,600	225	600	100
Neurobiology and neuroscience	16,800	275	9,100	425	6,750	375	1,000	175
Nutrition sciences	4,150	125	2,250	150	1,600	125	300	75
Pharmacology and toxicology	12,700	300	4,400	325	6,650	375	1,700	200
Physiology, pathology, and related sciences	15,400	300	7,550	375	6,850	300	1,000	125
Biological and biomedical sciences, general	12,750	300	6,500	325	5,500	350	750	125
Biological and biomedical sciences, other	4,950	200	2,650	200	2,000	200	300	100
Computer and information sciences	31,100	400	11,150	475	18,850	550	1,100	175
Computer science	26,750	400	9,000	450	16,900	550	850	175
Information science, studies	2,600	75	1,350	100	1,100	100	150	50
Computer and information sciences, other	1,800	50	800	75	900	75	100	25
Mathematics and statistics	36,650	450	21,750	525	13,600	525	1,350	200
Applied mathematics	8,500	200	4,650	275	3,550	275	300	100
Mathematics	16,500	375	11,050	400	4,850	350	600	125
Statistics	7,450	225	3,300	225	3,850	250	300	100
Mathematics and statistics, other	4,200	125	2,700	150	1,350	125	150	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	53,450	900	69,300	1,075	11,000	500
Astronomy and astrophysics	5,850	175	3,200	175	2,150	150	500	100
Chemistry, except biochemistry	65,300	700	23,500	700	37,700	775	4,150	325
Inorganic chemistry	8,750	225	3,650	275	4,550	250	500	100
Organic chemistry	17,600	375	6,300	375	10,550	425	750	150
Chemistry, other, except biochemistry	39,000	575	13,500	500	22,600	600	2,900	300
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	10,900	300	7,800	275	3,350	175

TABLE 12-3

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and sector of employment: 2019

(Number and SE)

Field of study	All employed		Educational institution[a]		Business or industry[b]		Government[c]	
	Number	SE	Number	SE	Number	SE	Number	SE
Atmospheric sciences and meteorology	3,900	75	1,750	100	1,400	100	800	75
Geological and earth sciences, geosciences	13,550	275	6,850	275	5,100	250	1,600	150
Ocean sciences and marine sciences	2,150	75	1,050	75	600	75	500	50
Oceanography, chemical and physical	2,450	125	1,250	100	700	100	450	75
Physics	40,550	575	15,900	550	21,650	675	3,000	350
Psychology	115,350	825	46,300	850	57,850	975	11,200	575
Clinical psychology	41,100	525	10,200	575	25,050	700	5,850	500
Counseling and applied psychology	14,850	275	4,900	300	8,400	350	1,550	175
Educational and school psychology	14,100	275	8,050	300	5,500	325	550	125
Industrial and organizational psychology	4,850	150	1,650	150	2,900	150	300	75
Research and experimental psychology	27,800	400	16,050	425	10,100	350	1,650	175
Psychology, general	7,900	250	3,200	275	3,800	300	900	150
Psychology, other	4,750	175	2,250	175	2,100	175	350	75
Social sciences	102,700	900	68,800	950	25,650	700	8,250	450
Economics	26,900	550	14,750	525	9,350	425	2,800	275
Political science and government	22,450	425	16,250	475	4,450	350	1,750	200
Political science and government	18,350	400	14,050	450	3,100	325	1,150	175
Public policy analysis	4,100	175	2,200	150	1,350	125	550	100
Sociology, demography, and population studies	15,200	325	11,150	350	3,250	275	800	150
Other social sciences	38,150	500	26,700	500	8,600	350	2,850	200
Anthropology	11,400	300	8,150	325	2,200	225	1,050	175
Area, ethnic, cultural, gender, and group studies	3,900	125	2,900	150	850	100	150	50
Geography and cartography	4,750	175	3,350	175	950	125	450	100
International relations and national security studies	2,350	150	1,600	125	600	75	150	50
Linguistics	4,950	250	3,850	225	950	150	100	50
Urban studies, affairs	1,600	100	850	75	600	75	200	50
Social sciences, other	9,250	250	6,000	225	2,500	175	700	100
Engineering	176,700	1,175	47,150	975	117,550	1,175	12,000	500
Aerospace, aeronautical, and astronautical engineering	7,050	225	1,700	175	4,400	250	1,000	175
Chemical engineering	20,800	500	4,400	350	15,000	425	1,400	225
Civil engineering	19,250	400	7,350	375	9,350	425	2,600	250
Electrical and computer engineering	48,550	650	10,200	500	36,600	725	1,750	200
Computer engineering	7,000	175	1,850	175	4,950	200	150	50
Electrical, electronics, and communications engineering	41,550	625	8,300	500	31,650	700	1,600	200
Mechanical engineering	26,550	425	7,650	525	17,400	575	1,500	225
Metallurgical and materials engineering	16,450	350	2,900	275	12,600	375	950	150
Other engineering	38,050	450	13,000	450	22,250	475	2,750	200
Agricultural engineering	1,900	75	850	75	800	75	250	50
Bioengineering and biomedical engineering	13,200	250	4,900	325	7,750	325	600	100
Engineering mechanics, physics, and science	4,400	150	1,300	150	2,650	150	450	100
Industrial and manufacturing engineering	8,800	275	3,450	225	4,850	250	550	100
Nuclear engineering	3,100	125	600	75	2,100	125	400	75
Engineering, other	6,600	200	2,000	200	4,100	250	500	100
Health	40,200	475	22,350	550	14,800	450	3,050	250
Communication disorders sciences and services	3,100	125	2,100	125	800	100	200	50
Hospital and medical administration services	1,550	100	800	100	600	75	100	50
Pharmacy, pharmaceutical sciences, and administration	8,050	175	2,250	225	5,250	250	600	125
Public health	8,400	225	4,100	250	3,150	250	1,100	150
Registered nursing, nursing administration, nursing research	9,000	250	6,550	300	2,000	250	450	100

TABLE 12-3

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and sector of employment: 2019

(Number and SE)

Field of study	All employed		Educational institution[a]		Business or industry[b]		Government[c]	
	Number	SE	Number	SE	Number	SE	Number	SE
Health sciences, other	10,150	225	6,550	275	2,950	200	600	100

SE = standard error.

[a] Educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), university-affiliated research institutes, 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

[b] Business or industry includes private for profit, private not for profit, self-employed or business owners in incorporated or nonincorporated business, non-U.S. governments, and employers not broken out separately.

[c] Government includes U.S. federal, state, and local government.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 13

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2019

(Number and SE)

Employment sector and field of study	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
All sectors	857,200	1,975	546,050	1,750	311,200	1,200
Science	640,300	1,900	383,900	1,700	256,400	1,200
Biological, agricultural, and environmental life sciences	220,700	1,100	124,550	1,025	96,200	900
Computer and information sciences	31,100	400	25,500	425	5,600	300
Mathematics and statistics	36,650	450	27,350	450	9,300	325
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	101,300	925	32,500	525
Psychology	115,350	825	45,600	800	69,700	775
Social sciences	102,700	900	59,600	825	43,100	575
Engineering	176,700	1,175	147,250	1,200	29,450	575
Health	40,200	475	14,900	325	25,300	400
4-year educational institution[a]	344,350	2,325	211,850	2,075	132,500	1,450
Science	277,850	1,975	168,250	1,725	109,600	1,225
Biological, agricultural, and environmental life sciences	96,250	1,175	55,650	1,025	40,600	775
Computer and information sciences	10,750	475	8,350	450	2,400	225
Mathematics and statistics	20,200	525	15,050	475	5,150	275
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	47,350	850	35,650	775	11,700	375
Psychology	39,150	775	15,800	575	23,300	650
Social sciences	64,150	975	37,750	800	26,400	625
Engineering	45,250	925	36,750	950	8,550	400
Health	21,250	550	6,850	325	14,350	475
Other educational institution[b]	30,900	900	14,300	675	16,600	575
Science	27,850	850	12,800	625	15,100	550
Biological, agricultural, and environmental life sciences	8,000	500	3,200	350	4,800	325
Computer and information sciences	400	100	250	100	200	50
Mathematics and statistics	1,550	175	1,000	150	550	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	6,050	350	3,700	325	2,400	200
Psychology	7,150	400	2,400	250	4,750	300
Social sciences	4,700	375	2,250	275	2,400	225
Engineering	1,900	225	1,250	200	650	100
Health	1,150	150	250	75	900	125
Private, for profit[c]	306,300	2,500	218,700	2,050	87,600	1,225
Science	194,000	2,050	126,450	1,775	67,550	1,075
Biological, agricultural, and environmental life sciences	68,550	1,175	39,500	1,025	29,000	725
Computer and information sciences	16,750	575	14,500	575	2,200	225
Mathematics and statistics	11,350	475	8,650	450	2,700	225
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	56,600	1,025	43,850	925	12,750	475
Psychology	27,450	725	11,800	550	15,650	525
Social sciences	13,350	575	8,100	475	5,250	350
Engineering	102,700	1,175	87,350	1,100	15,350	525
Health	9,600	400	4,900	300	4,700	300
Private, nonprofit	55,900	1,125	31,100	925	24,800	625
Science	44,600	950	23,950	750	20,650	600
Biological, agricultural, and environmental life sciences	17,200	550	9,300	475	7,950	375
Computer and information sciences	1,250	200	950	175	300	75
Mathematics and statistics	1,400	175	1,050	175	350	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	7,250	375	5,500	350	1,750	175
Psychology	11,250	500	4,200	375	7,100	375
Social sciences	6,200	300	3,000	250	3,200	200
Engineering	7,850	525	6,250	475	1,650	200
Health	3,450	300	950	125	2,500	275

TABLE 13

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2019

(Number and SE)

Employment sector and field of study	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
Federal government	50,150	1,025	31,150	825	19,000	650
Science	39,050	925	22,850	775	16,200	600
Biological, agricultural, and environmental life sciences	16,250	575	9,100	500	7,200	375
Computer and information sciences	800	150	550	125	250	75
Mathematics and statistics	1,250	175	950	150	300	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	8,500	450	6,450	400	2,050	150
Psychology	6,650	450	2,650	250	4,000	325
Social sciences	5,550	350	3,150	275	2,400	225
Engineering	9,000	450	7,400	425	1,600	150
Health	2,100	200	900	150	1,150	150
State or local government	18,850	750	10,950	550	7,900	425
Science	14,900	625	8,250	500	6,650	375
Biological, agricultural, and environmental life sciences	4,800	375	2,700	300	2,100	200
Computer and information sciences	250	100	200	100	50	25
Mathematics and statistics	S	S	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	2,500	275	1,900	250	600	100
Psychology	4,550	375	1,700	250	2,850	300
Social sciences	2,700	225	1,700	225	1,000	125
Engineering	3,000	275	2,300	275	700	150
Health	950	150	400	100	550	100
Self-employed[d]	40,750	1,100	21,750	950	19,000	575
Science	35,100	1,025	17,500	800	17,650	575
Biological, agricultural, and environmental life sciences	7,550	475	4,250	400	3,300	300
Computer and information sciences	650	125	500	125	150	75
Mathematics and statistics	650	150	500	125	150	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4,100	350	3,250	350	850	150
Psychology	18,200	675	6,650	475	11,550	475
Social sciences	3,950	300	2,300	250	1,650	150
Engineering	4,200	425	3,700	400	500	100
Health	1,450	200	550	125	900	150
Other sector[e]	10,050	550	6,250	450	3,800	350
Science	6,950	450	3,900	325	3,050	325
Biological, agricultural, and environmental life sciences	2,100	250	850	150	1,250	200
Computer and information sciences	250	75	200	75	50	25
Mathematics and statistics	200	75	150	75	50	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	1,350	200	950	175	400	75
Psychology	950	175	400	125	550	125
Social sciences	2,100	275	1,350	225	750	175
Engineering	2,800	325	2,300	300	500	125
Health	300	75	100	50	250	75

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 14

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2019

(Number and SE)

Employment sector and field of study	All employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All sectors	857,200	1,975	37,250	550	1,300	125	213,350	1,325	31,100	400	562,350	1,750	11,950	400
Science	640,300	1,900	29,200	475	1,050	125	128,850	1,150	23,750	375	447,900	1,800	9,500	325
Biological, agricultural, and environmental life sciences	220,700	1,100	10,250	275	200	50	50,650	875	7,050	250	149,050	1,100	3,550	200
Computer and information sciences	31,100	400	950	100	D	D	13,400	400	600	75	15,800	375	350	100
Mathematics and statistics	36,650	450	1,300	100	D	D	11,300	400	850	100	22,750	425	400	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	4,350	200	50	25	32,900	725	3,050	225	91,750	975	1,650	150
Psychology	115,350	825	6,550	250	300	75	7,100	425	5,850	225	93,600	925	1,950	175
Social sciences	102,700	900	5,800	275	400	100	13,500	525	6,400	300	74,950	750	1,600	175
Engineering	176,700	1,175	6,650	275	150	50	75,800	1,150	4,150	200	88,050	1,050	1,900	225
Health	40,200	475	1,400	125	100	50	8,700	350	3,150	225	26,400	475	500	75
4-year educational institution[d]	344,350	2,325	16,350	400	600	100	68,950	1,300	13,750	400	240,100	1,850	4,600	250
Science	277,850	1,975	13,550	325	500	100	49,450	1,075	10,750	375	199,750	1,700	3,850	225
Biological, agricultural, and environmental life sciences	96,250	1,175	4,800	225	100	50	20,250	600	2,700	200	67,050	1,000	1,400	150
Computer and information sciences	10,750	475	400	75	D	D	3,800	350	250	50	6,250	350	100	25
Mathematics and statistics	20,200	525	900	100	D	D	5,050	350	550	75	13,500	450	200	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	47,350	850	1,650	125	D	D	9,450	525	1,100	125	34,600	825	500	100
Psychology	39,150	775	2,100	150	50	25	3,400	325	2,200	175	30,700	775	700	100
Social sciences	64,150	975	3,750	200	300	75	7,550	450	4,000	250	47,650	875	900	125
Engineering	45,250	925	1,950	175	50	25	16,150	750	1,400	150	25,250	700	450	75
Health	21,250	550	800	100	50	25	3,350	275	1,600	125	15,050	475	300	75
Other educational institution[e]	30,900	900	1,900	175	100	50	3,150	400	2,450	200	22,700	725	550	100
Science	27,850	850	1,750	175	100	50	2,650	375	2,200	200	20,550	700	550	100
Biological, agricultural, and environmental life sciences	8,000	500	350	75	D	D	750	150	550	100	6,200	425	150	50
Computer and information sciences	400	100	D	D	D	D	S	S	50	25	300	100	D	D
Mathematics and statistics	1,550	175	100	50	D	D	150	75	50	25	1,200	150	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	6,050	350	400	75	D	D	950	225	300	75	4,400	325	S	S
Psychology	7,150	400	450	75	S	S	250	100	800	150	5,500	325	150	50
Social sciences	4,700	375	500	125	D	D	500	175	500	125	3,000	275	200	75
Engineering	1,900	225	100	50	D	D	450	150	150	50	1,250	175	D	D
Health	1,150	150	50	25	D	D	50	50	100	50	900	150	D	D

TABLE 14

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2019

(Number and SE)

Employment sector and field of study	All employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Private, for profit[f]	306,300	2,500	11,150	400	300	75	109,300	1,525	7,300	325	174,200	1,900	4,000	275
Science	194,000	2,050	7,600	325	250	75	55,750	1,225	5,050	275	122,700	1,600	2,700	225
Biological, agricultural, and environmental life sciences	68,550	1,175	2,900	200	D	D	19,450	725	1,850	175	43,250	950	1,000	125
Computer and information sciences	16,750	575	500	100	D	D	8,650	425	150	50	7,250	400	150	50
Mathematics and statistics	11,350	475	250	50	D	D	5,100	325	200	50	5,650	325	150	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	56,600	1,025	1,550	150	50	25	18,200	700	1,250	175	34,850	875	700	125
Psychology	27,450	725	1,800	200	100	50	1,450	225	950	150	22,700	650	400	100
Social sciences	13,350	575	550	75	D	D	2,850	300	650	100	8,950	475	250	125
Engineering	102,700	1,175	3,300	200	50	25	50,100	925	1,800	150	46,300	900	1,200	200
Health	9,600	400	250	50	D	D	3,500	250	450	75	5,250	325	100	50
Private, nonprofit	55,900	1,125	2,350	175	50	25	11,150	525	2,400	275	39,050	1,025	850	125
Science	44,600	950	2,000	175	50	25	7,750	425	1,750	200	32,250	850	750	100
Biological, agricultural, and environmental life sciences	17,200	550	800	100	D	D	4,550	350	550	150	10,950	425	350	75
Computer and information sciences	1,250	200	D	D	D	D	400	125	*	*	800	150	D	D
Mathematics and statistics	1,400	175	50	25	D	D	300	100	D	D	1,000	150	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	7,250	375	150	50	D	D	1,450	225	S	S	5,400	325	100	50
Psychology	11,250	500	700	125	D	D	700	175	600	100	9,100	475	150	50
Social sciences	6,200	300	300	75	D	D	400	75	400	75	5,050	300	100	50
Engineering	7,850	525	250	50	D	D	2,900	325	300	125	4,350	400	100	50
Health	3,450	300	100	50	D	D	500	150	350	100	2,450	275	D	D
Federal government	50,150	1,025	2,500	175	100	50	8,550	525	2,550	225	35,450	825	950	125
Science	39,050	925	1,900	150	100	50	5,550	425	2,000	200	28,700	800	800	125
Biological, agricultural, and environmental life sciences	16,250	575	900	100	*	*	2,950	300	900	125	11,150	450	350	75
Computer and information sciences	800	150	D	D	D	D	S	S	100	50	500	125	S	S
Mathematics and statistics	1,250	175	50	25	D	D	250	100	50	50	850	150	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	8,500	450	350	75	D	D	1,200	175	200	50	6,650	400	150	50
Psychology	6,650	450	350	75	S	S	300	100	400	100	5,350	425	200	75
Social sciences	5,550	350	250	100	D	D	750	175	350	75	4,150	300	*	*
Engineering	9,000	450	500	125	D	D	2,300	250	300	75	5,800	350	100	50

TABLE 14

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2019

(Number and SE)

Employment sector and field of study	All employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Health	2,100	200	100	50	D	D	700	150	300	75	950	125	S	S
State or local government	18,850	750	900	125	50	25	3,900	375	1,450	175	12,300	625	250	75
Science	14,900	625	700	100	50	25	2,500	275	1,000	125	10,450	550	200	75
Biological, agricultural, and environmental life sciences	4,800	375	200	50	D	D	950	175	350	100	3,250	300	50	25
Computer and information sciences	250	100	D	D	D	D	S	S	*	*	150	75	D	D
Mathematics and statistics	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	2,500	275	100	50	D	D	700	175	50	25	1,550	175	S	S
Psychology	4,550	375	300	100	D	D	300	100	400	100	3,450	350	50	25
Social sciences	2,700	225	100	50	D	D	400	100	200	50	2,000	225	50	25
Engineering	3,000	275	200	75	D	D	1,250	225	200	75	1,350	200	*	*
Health	950	150	D	D	D	D	150	75	250	100	500	100	D	D
Self-employed[g]	40,750	1,100	1,450	150	50	25	4,400	375	800	100	33,450	975	600	125
Science	35,100	1,025	1,250	150	50	25	3,150	325	650	100	29,400	925	600	125
Biological, agricultural, and environmental life sciences	7,550	475	250	75	D	D	1,000	200	100	25	6,050	425	150	75
Computer and information sciences	650	125	D	D	D	D	200	75	D	D	450	100	D	D
Mathematics and statistics	650	150	D	D	D	D	200	100	D	D	400	100	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4,100	350	100	50	D	D	600	150	D	D	3,350	325	50	50
Psychology	18,200	675	750	125	D	D	750	175	400	100	16,000	625	300	100
Social sciences	3,950	300	150	50	D	D	400	100	200	50	3,150	275	S	S
Engineering	4,200	425	200	50	D	D	1,000	175	50	25	2,950	350	*	*
Health	1,450	200	*	*	D	D	250	100	50	25	1,100	175	D	D
Other sector[h]	10,050	550	550	100	D	D	3,850	350	400	75	5,150	400	100	50
Science	6,950	450	450	75	D	D	2,050	275	350	75	4,100	350	50	25
Biological, agricultural, and environmental life sciences	2,100	250	50	25	D	D	750	150	100	50	1,200	175	D	D
Computer and information sciences	250	75	D	D	D	D	100	50	D	D	150	75	D	D
Mathematics and statistics	200	75	D	D	D	D	150	75	D	D	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	1,350	200	D	D	D	D	400	125	D	D	900	175	D	D
Psychology	950	175	S	S	D	D	D	D	50	50	750	150	D	D
Social sciences	2,100	275	250	75	D	D	650	200	150	50	1,050	200	D	D

TABLE 14

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2019

(Number and SE)

Employment sector and field of study	All employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Engineering	2,800	325	100	50	D	D	1,700	250	S	S	900	175	D	D
Health	300	75	D	D	D	D	100	75	D	D	150	75	D	D

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[e] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[f] Includes those self-employed in an incorporated business.

[g] Self-employed or business owner in a nonincorporated business.

[h] Includes employers not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 15-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary or secondary work activity: 2019

(Number and SE)

Field of study	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	540,350	2,375	300,950	2,225	180,500	2,150	64,450	1,275	133,400	1,625	86,100	1,425	351,450	2,375	121,550	1,600	245,900	2,050	81,800	1,475
Science	640,300	1,900	383,650	1,950	211,650	1,825	155,800	1,900	32,200	950	73,250	1,275	54,450	975	265,650	2,100	105,000	1,475	200,850	1,875	63,450	1,275
Biological, agricultural, and environmental life sciences	220,700	1,100	143,750	1,325	82,700	1,325	65,250	1,050	7,800	475	26,150	725	11,100	475	102,300	1,300	31,350	975	53,350	1,050	22,750	750
Agricultural and food sciences	17,400	350	11,900	375	8,600	325	3,050	200	750	100	3,150	225	600	75	8,300	350	1,400	150	3,950	250	1,900	175
Agricultural sciences	950	50	650	50	500	50	150	25	S	S	150	50	50	25	500	50	50	25	250	50	150	25
Animal sciences	4,550	175	2,900	175	1,900	150	800	125	150	50	800	125	100	50	2,250	175	550	100	1,250	125	500	75
Food sciences and technology	3,750	175	2,600	175	1,750	175	700	150	200	50	950	100	S	S	1,750	175	250	75	650	100	450	75
Plant sciences	5,900	250	4,300	225	3,350	225	1,000	125	250	75	1,050	150	200	75	2,900	250	400	75	1,150	150	550	100
Soil sciences	2,200	125	1,500	100	1,150	100	400	75	150	50	200	50	150	50	950	125	100	50	600	100	250	50
Biochemistry and biophysics	29,450	425	20,250	500	9,250	475	10,550	425	1,200	200	4,350	375	1,750	225	14,350	550	3,450	325	6,100	425	2,550	275
Biochemistry	24,350	400	16,550	475	7,550	425	8,600	425	950	200	3,650	350	1,100	225	12,200	525	2,850	325	5,100	375	2,200	250
Biophysics	5,100	175	3,700	175	1,750	175	1,950	175	200	75	700	125	650	125	2,150	175	650	100	1,000	150	350	75
Cell, cellular biology, and molecular biology	31,200	450	18,550	600	9,300	450	10,200	550	950	175	3,650	325	800	150	15,450	575	5,700	425	6,850	450	3,550	350
Microbiological sciences and immunology	23,800	400	15,150	475	8,550	425	7,000	400	700	150	3,650	350	400	125	11,250	450	4,250	325	4,950	350	2,450	250
Immunology	8,950	200	6,000	250	3,700	250	2,500	225	250	75	1,600	225	100	75	3,850	250	1,900	200	1,650	200	850	150
Microbiological sciences	14,900	325	9,150	375	4,850	325	4,500	300	450	125	2,050	250	250	100	7,400	375	2,350	275	3,300	250	1,600	200
Natural resources and conservation	8,800	225	5,700	225	4,350	175	1,300	150	450	75	800	125	600	100	4,400	225	600	125	2,400	150	1,200	150
Fish, fisheries, wildlife and wildlands science and management	2,200	150	1,450	100	1,250	100	300	75	100	25	100	50	150	50	1,200	125	100	50	450	75	300	75
Forestry	2,600	150	1,700	150	1,200	100	400	125	150	50	350	100	200	50	1,250	150	200	75	700	75	350	100
Natural resource conservation, research, management, and policy	4,000	150	2,600	150	1,900	150	600	100	250	75	350	75	250	75	1,950	150	250	75	1,200	125	600	100
Zoology	7,200	225	4,550	250	2,600	200	2,000	200	250	125	750	175	300	75	3,350	225	500	100	2,600	175	1,000	150
Other biological sciences	102,800	675	67,650	825	40,000	725	31,150	725	3,450	250	9,800	400	6,700	325	45,200	700	15,400	650	26,500	675	10,050	450
Biomathematics, bioinformatics, and computational biology	5,150	100	4,400	125	3,350	150	1,000	100	400	75	650	100	1,750	125	1,500	125	300	75	700	100	100	50
Botany and plant biology	6,150	225	3,950	200	2,450	175	2,000	175	150	50	500	100	300	75	2,550	175	500	125	2,050	200	750	125
Epidemiology, ecology, and population biology	15,950	275	11,450	325	8,100	325	4,350	275	250	75	700	150	1,200	175	7,400	300	650	150	5,500	325	1,700	200
Genetics	8,750	250	6,150	275	3,100	225	3,350	225	250	75	900	125	850	150	3,900	250	1,050	150	1,900	200	700	100
Neurobiology and neuroscience	16,800	275	11,200	350	5,600	325	6,100	375	700	150	1,250	175	1,200	175	7,450	350	3,500	300	3,700	300	1,600	225
Nutrition sciences	4,150	125	2,500	150	1,750	125	700	100	200	50	450	75	100	75	1,950	125	500	75	1,350	125	550	75
Pharmacology and toxicology	12,700	300	8,300	300	5,250	325	3,500	300	350	100	1,750	200	200	75	5,900	325	2,600	250	2,450	250	1,300	150
Physiology, pathology, and related sciences	15,400	300	8,650	325	4,750	275	4,050	300	550	100	1,850	175	200	75	6,950	300	3,400	250	4,300	300	1,600	225
Biological and biomedical sciences, general	12,750	300	7,800	325	4,050	275	4,450	300	450	100	1,100	150	600	150	5,500	325	2,150	275	3,250	275	1,100	150
Biological and biomedical sciences, other	4,950	200	3,200	225	1,600	175	1,650	200	150	75	600	125	250	75	2,150	175	750	150	1,400	150	600	150
Computer and information sciences	31,100	400	20,600	500	11,500	450	4,350	325	3,400	325	5,750	400	12,450	500	10,100	400	550	125	7,850	375	2,000	225
Computer science	26,750	400	17,750	500	9,800	450	3,750	325	2,950	325	5,200	400	11,450	475	8,500	400	350	100	6,350	375	1,600	225

TABLE 15-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary or secondary work activity: 2019

(Number and SE)

Field of study	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Information science, studies	2,600	75	1,600	100	1,000	100	350	75	250	50	250	50	400	75	1,050	100	150	50	1,000	100	250	75
Computer and information sciences, other	1,800	50	1,300	50	750	50	300	50	200	50	350	50	600	50	550	50	50	25	500	50	150	25
Mathematics and statistics	36,650	450	24,850	550	11,800	525	10,900	450	2,750	250	3,050	275	8,400	375	8,750	350	1,000	150	18,550	500	2,600	250
Applied mathematics	8,500	200	6,000	275	3,350	275	2,200	225	700	150	750	125	2,550	225	1,800	175	300	100	3,850	250	500	100
Mathematics	16,500	375	10,150	375	2,950	300	6,300	350	1,050	175	1,000	175	3,350	250	3,950	250	350	100	9,750	375	1,300	150
Statistics	7,450	225	5,800	275	4,050	250	1,350	200	650	125	900	200	1,700	200	1,950	200	200	75	2,750	225	450	125
Mathematics and statistics, other	4,200	125	2,850	125	1,450	125	1,050	125	400	75	350	75	800	100	1,050	125	150	50	2,200	125	350	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	89,400	1,075	45,250	975	33,700	800	12,300	575	26,550	775	16,100	650	55,000	975	8,000	450	34,650	825	13,550	600
Astronomy and astrophysics	5,850	175	4,050	200	1,200	150	2,400	175	700	125	350	75	1,200	125	2,200	150	200	75	2,000	175	500	100
Chemistry, except biochemistry	65,300	700	42,050	800	23,400	725	13,150	500	4,700	375	15,950	600	3,200	325	30,350	700	4,650	350	16,000	650	7,400	450
Inorganic chemistry	8,750	225	4,950	275	2,700	225	1,500	175	450	100	2,000	175	250	75	4,150	250	600	150	3,050	250	1,000	150
Organic chemistry	17,600	375	11,950	400	7,100	400	3,900	325	1,000	175	4,350	325	250	125	8,200	400	1,250	175	4,500	350	1,800	225
Chemistry, other, except biochemistry	39,000	575	25,100	650	13,600	525	7,750	400	3,250	325	9,600	475	2,700	325	18,000	550	2,750	250	8,400	450	4,600	350
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	15,350	325	8,350	300	7,500	275	1,200	125	1,900	150	2,950	175	8,600	275	1,150	125	6,850	250	2,250	175
Atmospheric sciences and meteorology	3,900	75	2,950	100	1,800	100	1,300	75	300	50	400	50	1,050	75	1,200	75	100	25	800	75	350	50
Geological and earth sciences, geosciences	13,550	275	9,250	275	4,800	250	4,600	250	650	100	1,300	150	1,400	175	5,500	250	800	125	4,650	225	1,400	150
Ocean sciences and marine sciences	2,150	75	1,400	75	850	75	650	75	50	25	150	25	200	50	1,050	75	100	25	600	50	250	50
Oceanography, chemical and physical	2,450	125	1,700	100	900	100	1,000	100	200	50	100	50	300	75	900	100	150	50	750	100	250	50
Physics	40,550	575	28,000	675	12,350	500	10,650	550	5,750	400	8,350	600	8,750	525	13,800	600	2,000	225	9,850	500	3,400	325
Psychology	115,350	825	43,150	875	27,200	800	12,250	525	2,850	225	6,850	375	2,300	225	51,050	1,050	55,800	900	32,450	775	10,500	575
Clinical psychology	41,100	525	9,950	550	7,300	450	1,700	250	300	100	1,450	275	350	125	18,200	700	29,700	675	8,100	525	2,650	325
Counseling and applied psychology	14,850	275	2,700	250	1,750	200	400	100	200	75	600	125	S	S	6,950	375	10,250	375	3,750	250	1,600	225
Educational and school psychology	14,100	275	5,400	350	3,700	300	950	175	350	100	1,250	150	250	75	6,450	350	5,350	325	4,650	275	1,500	200
Industrial and organizational psychology	4,850	150	2,450	150	1,550	150	350	75	350	100	450	75	D	D	3,250	175	1,050	150	1,200	150	450	100
Research and experimental psychology	27,800	400	16,950	400	9,500	350	6,950	325	1,100	150	2,350	200	1,250	150	11,250	425	4,700	275	11,050	350	3,000	275
Psychology, general	7,900	250	3,600	300	2,100	225	1,350	200	300	150	500	125	250	100	2,750	250	3,300	300	2,200	225	700	175
Psychology, other	4,750	175	2,100	175	1,350	150	550	125	250	100	300	75	100	75	2,150	125	1,450	175	1,550	175	600	100
Social sciences	102,700	900	61,900	750	33,200	750	29,300	775	3,100	300	4,900	350	4,050	350	38,500	800	8,350	500	54,000	950	12,000	525
Economics	26,900	550	18,800	600	12,800	550	6,850	450	1,050	200	1,200	200	2,050	275	10,150	500	2,750	325	11,100	475	1,950	250
Political science and government	22,450	425	12,600	450	5,750	325	7,100	450	450	125	850	150	450	100	8,350	400	1,650	225	12,650	475	2,900	275
Political science and government	18,350	400	10,400	425	3,950	300	6,700	425	400	125	600	150	200	75	6,200	375	1,150	225	11,300	450	2,400	275
Public policy analysis	4,100	175	2,250	175	1,800	150	400	75	100	50	250	75	250	75	2,100	150	500	100	1,350	150	500	100
Sociology, demography, and population studies	15,200	325	9,350	350	4,550	300	4,950	300	450	100	750	150	400	125	5,750	300	850	150	8,700	325	1,750	175
Other social sciences	38,150	500	21,150	500	10,150	350	10,350	450	1,150	175	2,150	200	1,200	150	14,250	375	3,100	225	21,600	475	5,450	300

TABLE 15-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary or secondary work activity: 2019

(Number and SE)

Field of study	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Anthropology	11,400	300	6,800	300	2,950	200	4,050	275	300	100	500	125	150	75	4,200	250	850	150	6,350	300	1,650	200
Area, ethnic, cultural, gender, and group studies	3,900	125	1,700	125	400	75	1,000	125	100	50	350	50	D	D	1,450	125	400	75	2,500	150	650	100
Geography and cartography	4,750	175	3,100	150	2,050	150	1,100	125	200	75	200	50	400	100	1,600	175	250	75	2,650	150	400	75
International relations and national security studies	2,350	150	1,050	100	500	75	550	100	50	25	50	25	D	D	900	100	250	75	1,400	100	350	75
Linguistics	4,950	250	2,450	200	800	150	1,300	175	200	75	400	100	150	50	1,850	200	200	75	3,250	225	850	150
Urban studies, affairs	1,600	100	950	100	650	75	250	50	50	50	100	50	100	50	650	75	200	50	700	75	150	50
Social sciences, other	9,250	250	5,050	250	2,750	200	2,150	175	200	50	500	100	400	75	3,600	200	950	125	4,800	200	1,350	150
Engineering	176,700	1,175	132,650	1,275	71,150	1,150	20,300	750	31,150	900	54,850	925	30,700	850	68,650	1,000	9,000	450	29,300	825	14,300	675
Aerospace, aeronautical, and astronautical engineering	7,050	225	5,850	250	3,200	225	1,000	175	1,350	175	2,000	200	1,700	200	2,450	225	200	100	1,100	150	300	75
Chemical engineering	20,800	500	14,450	475	7,300	425	2,400	300	2,800	300	7,250	375	1,750	225	10,300	475	1,150	225	2,650	275	2,600	300
Civil engineering	19,250	400	13,550	450	7,700	425	2,200	275	4,450	375	2,400	300	2,250	250	8,400	425	1,750	250	4,850	350	1,500	225
Electrical and computer engineering	48,550	650	37,900	675	19,050	575	4,950	400	8,500	500	18,950	575	12,850	575	15,650	650	1,750	250	6,400	450	3,100	325
Computer engineering	7,000	175	5,250	250	2,550	200	1,150	150	700	100	2,100	200	3,150	200	2,000	175	150	50	1,250	150	200	50
Electrical, electronics, and communications engineering	41,550	625	32,650	650	16,450	550	3,800	400	7,800	475	16,850	575	9,700	550	13,600	625	1,600	250	5,150	425	2,950	325
Mechanical engineering	26,550	425	20,950	525	10,550	600	2,950	300	5,950	450	8,800	450	5,300	450	9,200	525	700	150	4,950	425	1,600	275
Metallurgical and materials engineering	16,450	350	12,600	425	6,900	425	2,000	250	2,500	250	6,450	400	950	175	7,250	375	650	150	1,700	225	2,200	250
Other engineering	38,050	450	27,400	450	16,500	450	4,850	350	5,650	300	9,000	400	5,850	300	15,400	400	2,800	225	7,650	375	2,950	250
Agricultural engineering	1,900	75	1,350	75	1,000	75	150	50	250	50	350	75	200	50	700	75	100	50	550	75	200	50
Bioengineering and biomedical engineering	13,200	250	9,800	300	6,150	325	2,100	250	1,550	200	3,750	275	1,500	175	5,650	275	1,400	150	1,950	225	900	150
Engineering mechanics, physics, and science	4,400	150	3,550	175	1,900	150	850	150	800	100	1,100	125	650	100	1,500	125	200	75	800	125	300	75
Industrial and manufacturing engineering	8,800	275	6,000	275	3,400	225	850	125	1,450	175	1,550	200	1,900	175	3,300	225	450	100	2,700	225	650	125
Nuclear engineering	3,100	125	2,200	125	1,450	125	250	50	400	75	900	100	650	75	1,150	100	300	100	400	75	250	50
Engineering, other	6,600	200	4,550	250	2,600	200	650	150	1,150	150	1,300	150	1,000	150	3,050	175	350	75	1,250	150	700	100
Health	40,200	475	24,000	575	18,150	550	4,400	300	1,100	200	5,250	300	950	150	17,150	500	7,500	375	15,750	525	4,050	325
Communication disorders sciences and services	3,100	125	1,600	125	1,250	125	250	50	50	25	200	50	50	25	1,100	125	900	100	1,700	125	300	75
Hospital and medical administration services	1,550	100	950	75	700	75	150	50	50	25	200	50	50	25	800	100	250	50	500	75	150	50
Pharmacy, pharmaceutical sciences, and administration	8,050	175	6,200	250	4,200	250	1,100	150	450	150	2,550	225	250	75	3,600	250	850	125	1,250	175	850	150
Public health	8,400	225	5,500	275	4,400	250	950	150	300	75	800	125	300	75	3,800	225	1,650	225	2,450	250	1,000	175
Registered nursing, nursing administration, nursing research	9,000	250	3,700	250	2,750	225	500	125	100	50	600	150	S	S	3,800	300	2,000	250	5,300	300	800	175
Health sciences, other	10,150	225	6,050	250	4,850	275	1,450	175	150	50	900	125	200	75	4,000	225	1,850	175	4,550	250	950	150

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.
[b] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	351,000	1,975	168,650	1,775	92,700	1,700	24,050	975	65,600	1,400	44,450	950	165,400	2,025	97,050	1,625	161,000	1,700	38,300	975
Science	640,300	1,900	243,250	1,700	118,400	1,450	81,950	1,550	9,900	525	33,000	975	28,450	650	120,800	1,575	85,450	1,475	132,600	1,600	29,800	900
Biological, agricultural, and environmental life sciences	220,700	1,100	102,300	1,300	49,400	1,050	38,700	900	1,700	225	12,500	550	4,350	300	44,900	1,050	24,400	875	33,000	750	11,800	500
Agricultural and food sciences	17,400	350	8,150	325	5,300	275	1,150	125	200	75	1,500	150	350	75	4,350	275	950	125	2,550	175	1,050	150
Agricultural sciences	950	50	350	50	250	50	50	25	D	D	50	25	50	25	250	50	50	25	200	50	50	25
Animal sciences	4,550	175	1,850	150	1,050	125	350	75	S	S	350	100	S	S	1,200	150	400	100	800	125	300	75
Food sciences and technology	3,750	175	1,950	150	1,050	125	350	100	50	25	550	100	D	D	1,050	150	200	75	350	100	200	50
Plant sciences	5,900	250	3,050	200	2,200	200	300	75	50	50	450	100	150	50	1,350	175	200	75	800	125	400	100
Soil sciences	2,200	125	950	100	750	75	150	50	50	25	50	25	100	50	500	125	100	50	400	75	150	50
Biochemistry and biophysics	29,450	425	14,850	525	5,750	350	6,700	400	250	125	2,100	250	650	150	6,300	400	2,700	300	3,650	350	1,250	200
Biochemistry	24,350	400	12,000	500	4,650	350	5,300	375	250	125	1,800	250	450	125	5,500	375	2,200	275	3,150	300	1,050	175
Biophysics	5,100	175	2,850	175	1,100	150	1,400	150	D	D	300	75	200	75	850	125	500	100	500	100	150	50
Cell, cellular biology, and molecular biology	31,200	450	13,400	575	4,700	350	6,850	500	S	S	1,700	225	400	125	6,550	450	4,800	400	4,150	350	1,900	225
Microbiological sciences and immunology	23,800	400	11,200	475	4,950	375	4,300	300	150	75	1,800	250	150	75	4,600	350	3,400	300	2,900	250	1,600	225
Immunology	8,950	200	4,500	300	2,100	250	1,550	175	D	D	800	175	D	D	1,350	175	1,500	200	900	175	600	150
Microbiological sciences	14,900	325	6,700	350	2,900	275	2,700	250	S	S	1,000	200	100	50	3,250	300	1,850	250	2,000	200	1,000	175
Natural resources and conservation	8,800	225	3,500	175	2,550	150	500	100	150	50	300	50	250	75	2,400	200	350	100	1,600	125	700	100
Fish, fisheries, wildlife and wildlands science and management	2,200	150	1,000	100	850	100	S	S	D	D	50	25	50	25	700	100	50	25	300	50	100	50
Forestry	2,600	150	1,050	75	700	75	150	50	50	25	150	50	100	50	650	125	150	75	450	75	250	100
Natural resource conservation, research, management, and policy	4,000	150	1,500	150	1,000	125	300	100	100	50	100	50	100	50	1,050	150	150	75	850	100	300	75
Zoology	7,200	225	2,800	200	1,600	150	800	125	50	25	300	125	150	75	1,600	150	400	100	1,800	175	500	100
Other biological sciences	102,800	675	48,400	750	24,500	625	18,400	650	750	125	4,700	300	2,350	200	19,100	625	11,800	600	16,350	550	4,800	300
Biomathematics, bioinformatics, and computational biology	5,150	100	3,300	150	2,250	150	600	100	100	50	350	100	650	100	600	75	250	75	350	75	50	25
Botany and plant biology	6,150	225	2,650	175	1,400	150	1,000	150	50	50	200	50	150	50	1,150	150	300	100	1,450	150	400	100
Epidemiology, ecology, and population biology	15,950	275	7,800	350	5,650	325	1,950	200	50	25	200	75	300	75	3,150	250	500	125	3,700	300	500	100
Genetics	8,750	250	4,800	250	2,000	200	2,200	200	100	50	500	100	300	100	1,550	150	700	125	1,050	150	400	100
Neurobiology and neuroscience	16,800	275	7,950	350	2,900	275	4,350	325	150	50	600	125	400	100	2,750	275	2,800	275	2,100	225	750	125
Nutrition sciences	4,150	125	1,750	125	1,150	125	350	75	50	50	200	75	D	D	900	100	350	75	950	125	200	50
Pharmacology and toxicology	12,700	300	6,300	275	3,450	275	1,800	200	S	S	1,000	175	50	50	2,600	275	1,900	225	1,150	175	700	125
Physiology, pathology, and related sciences	15,400	300	6,000	275	2,450	225	2,400	250	50	50	1,050	175	150	75	3,150	250	2,800	250	2,650	275	750	125
Biological and biomedical sciences, general	12,750	300	5,600	325	2,450	225	2,700	275	D	D	400	75	250	125	2,450	250	1,650	225	2,000	225	750	150
Biological and biomedical sciences, other	4,950	200	2,250	200	850	125	1,050	150	S	S	300	100	S	S	800	125	600	125	950	150	300	100
Computer and information sciences	31,100	400	11,250	450	5,550	375	2,250	275	1,050	200	2,400	275	8,350	400	5,250	325	350	100	5,350	325	650	150
Computer science	26,750	400	9,600	450	4,550	350	2,000	275	850	175	2,200	275	7,800	400	4,300	300	200	75	4,300	300	500	150

TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Information science, studies	2,600	75	950	100	550	75	150	50	150	50	100	50	150	50	650	75	100	25	700	75	100	50
Computer and information sciences, other	1,800	50	700	50	400	50	100	25	50	25	100	50	400	50	300	50	*	*	350	50	50	25
Mathematics and statistics	36,650	450	13,400	450	6,150	400	5,000	350	1,150	175	1,150	150	4,150	275	4,100	275	600	125	13,500	450	900	150
Applied mathematics	8,500	200	3,250	225	1,700	200	1,000	175	250	100	300	75	1,200	150	800	125	200	75	2,850	225	200	75
Mathematics	16,500	375	5,100	275	1,350	200	2,950	225	350	100	450	100	1,900	175	1,750	225	200	75	7,250	350	300	75
Statistics	7,450	225	3,700	275	2,350	275	600	150	350	125	350	100	600	125	1,050	150	100	50	1,800	200	250	100
Mathematics and statistics, other	4,200	125	1,400	125	750	100	400	75	200	50	50	50	450	75	500	75	100	50	1,650	125	100	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	60,500	950	24,800	675	18,250	600	4,100	350	13,350	675	9,050	525	27,200	800	5,850	375	24,750	750	6,500	400
Astronomy and astrophysics	5,850	175	2,300	150	600	100	1,350	150	200	75	150	50	600	100	1,150	125	200	75	1,300	150	300	75
Chemistry, except biochemistry	65,300	700	28,800	750	12,900	525	6,450	325	1,200	200	8,250	525	2,100	275	15,050	675	3,450	325	12,550	575	3,350	300
Inorganic chemistry	8,750	225	3,100	225	1,300	150	700	125	100	50	1,000	150	150	50	2,150	225	500	125	2,450	250	400	100
Organic chemistry	17,600	375	8,300	400	3,950	300	1,650	200	300	100	2,400	300	D	D	3,600	300	1,000	175	3,800	300	800	125
Chemistry, other, except biochemistry	39,000	575	17,350	575	7,650	400	4,100	300	800	175	4,850	375	1,850	275	9,350	500	1,950	225	6,300	375	2,150	225
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	10,150	275	4,900	250	4,000	225	350	75	900	100	1,350	150	4,100	175	750	125	4,450	225	1,250	150
Atmospheric sciences and meteorology	3,900	75	2,100	100	1,050	75	750	75	100	50	150	50	450	75	650	75	50	25	450	50	200	50
Geological and earth sciences, geosciences	13,550	275	5,950	250	2,900	200	2,250	175	200	50	600	100	650	125	2,400	150	550	100	3,200	200	850	125
Ocean sciences and marine sciences	2,150	75	900	75	450	50	350	50	*	*	100	25	100	50	500	50	50	25	400	50	150	50
Oceanography, chemical and physical	2,450	125	1,150	100	500	75	600	100	D	D	50	25	150	75	500	75	100	50	400	75	100	25
Physics	40,550	575	19,250	625	6,400	400	6,450	450	2,350	250	4,050	450	5,000	425	6,850	450	1,400	200	6,400	425	1,600	225
Psychology	115,350	825	23,100	625	14,150	525	6,000	375	800	150	2,100	225	800	150	19,550	700	48,800	925	18,500	600	4,600	375
Clinical psychology	41,100	525	4,650	350	3,700	300	700	150	D	D	200	100	D	D	5,450	425	26,950	700	2,950	300	1,000	225
Counseling and applied psychology	14,850	275	900	150	700	125	100	50	S	S	S	S	D	D	2,000	250	9,050	375	2,250	200	650	150
Educational and school psychology	14,100	275	2,450	250	1,600	200	350	100	100	50	400	100	D	D	3,200	275	4,500	300	3,050	275	850	150
Industrial and organizational psychology	4,850	150	1,250	125	800	100	150	50	100	50	200	50	D	D	2,050	150	650	125	700	100	150	50
Research and experimental psychology	27,800	400	10,400	375	5,500	275	3,650	250	350	100	900	150	450	100	4,800	275	3,550	225	7,350	300	1,250	175
Psychology, general	7,900	250	2,150	275	1,100	200	750	175	D	D	150	100	D	D	1,100	175	2,900	250	1,200	175	400	150
Psychology, other	4,750	175	1,200	150	800	125	300	100	50	50	50	50	D	D	1,000	100	1,200	150	1,000	125	300	75
Social sciences	102,700	900	32,750	700	18,400	650	11,700	600	1,050	200	1,600	175	1,750	225	19,850	575	5,500	400	37,500	800	5,300	400
Economics	26,900	550	11,400	450	7,500	425	3,150	300	400	125	350	125	900	200	5,000	350	1,900	275	6,600	375	1,050	200
Political science and government	22,450	425	6,700	375	3,100	250	3,150	400	200	100	250	75	200	75	4,700	375	1,050	200	8,500	450	1,300	200
Political science and government	18,350	400	5,350	350	2,000	225	3,050	375	200	100	100	50	100	50	3,550	350	750	175	7,600	425	1,050	200
Public policy analysis	4,100	175	1,350	125	1,050	125	100	50	D	D	150	50	S	S	1,150	125	300	75	900	125	300	75
Sociology, demography, and population studies	15,200	325	4,650	275	2,500	250	1,900	200	100	50	150	50	100	50	3,000	275	550	125	6,150	325	700	125
Other social sciences	38,150	500	10,000	350	5,300	300	3,550	250	350	100	800	125	550	125	7,100	300	1,950	175	16,300	425	2,250	200

TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Anthropology	11,400	300	3,400	250	1,750	225	1,300	175	D	D	200	75	S	S	1,950	225	450	100	5,000	250	550	125
Area, ethnic, cultural, gender, and group studies	3,900	125	700	100	200	50	300	75	S	S	150	50	D	D	800	100	250	75	1,850	125	250	75
Geography and cartography	4,750	175	1,450	150	1,100	150	300	75	50	25	50	25	200	75	800	125	150	50	2,000	150	200	50
International relations and national security studies	2,350	150	450	75	250	50	200	50	D	D	D	D	D	D	500	75	150	50	1,100	100	200	50
Linguistics	4,950	250	1,000	150	350	100	500	125	D	D	100	50	150	50	850	150	150	75	2,450	200	350	100
Urban studies, affairs	1,600	100	400	50	250	50	50	25	D	D	50	25	50	50	400	50	150	50	550	75	100	25
Social sciences, other	9,250	250	2,600	175	1,400	175	900	100	100	50	200	75	150	50	1,850	150	650	100	3,400	200	600	100
Engineering	176,700	1,175	92,800	1,175	39,750	875	9,250	475	13,800	725	30,000	825	15,650	700	36,750	900	6,500	400	18,050	650	6,950	450
Aerospace, aeronautical, and astronautical engineering	7,050	225	3,900	250	1,850	200	450	125	550	100	1,100	150	650	150	1,450	200	S	S	700	125	200	75
Chemical engineering	20,800	500	10,500	450	4,150	325	1,300	225	1,300	250	3,800	325	850	150	5,750	425	850	175	1,650	225	1,250	225
Civil engineering	19,250	400	8,600	375	4,250	300	800	150	2,800	300	750	150	1,150	200	4,700	350	1,200	175	2,900	325	700	175
Electrical and computer engineering	48,550	650	26,650	600	10,350	450	2,150	250	3,100	300	11,000	500	7,450	500	7,750	400	1,350	225	3,850	300	1,550	275
Computer engineering	7,000	175	2,850	175	1,250	150	600	100	200	50	800	125	2,150	225	1,000	125	100	50	800	125	100	50
Electrical, electronics, and communications engineering	41,550	625	23,800	575	9,100	400	1,600	250	2,900	300	10,200	475	5,250	475	6,750	375	1,200	200	3,050	300	1,500	275
Mechanical engineering	26,550	425	14,700	525	5,850	425	1,150	175	2,900	375	4,800	375	2,250	300	4,550	375	500	125	3,800	400	700	175
Metallurgical and materials engineering	16,450	350	9,550	450	3,550	325	1,100	200	850	175	4,050	325	500	125	4,100	300	500	125	750	150	1,100	150
Other engineering	38,050	450	18,900	450	9,850	425	2,300	225	2,300	200	4,500	300	2,800	250	8,500	375	1,950	200	4,450	300	1,450	175
Agricultural engineering	1,900	75	900	75	550	75	50	25	100	50	150	75	150	50	400	50	50	25	300	50	100	50
Bioengineering and biomedical engineering	13,200	250	7,350	300	4,200	325	950	150	400	100	1,850	225	550	150	2,800	250	1,050	150	900	150	550	100
Engineering mechanics, physics, and science	4,400	150	2,650	150	1,100	125	500	100	400	100	600	100	300	75	800	100	100	50	400	75	150	50
Industrial and manufacturing engineering	8,800	275	3,600	225	1,750	200	400	100	650	125	800	125	900	150	1,950	175	300	100	1,800	200	300	75
Nuclear engineering	3,100	125	1,650	125	850	100	100	50	150	50	550	100	250	75	650	75	200	75	250	75	100	25
Engineering, other	6,600	200	2,750	225	1,350	175	300	100	600	100	500	100	600	125	1,850	175	200	50	900	125	300	75
Health	40,200	475	14,950	500	10,500	475	1,550	200	350	125	2,550	250	350	75	7,850	425	5,100	300	10,350	525	1,600	225
Communication disorders sciences and services	3,100	125	750	125	550	100	100	50	D	D	150	50	D	D	450	75	650	100	1,100	100	150	50
Hospital and medical administration services	1,550	100	550	75	400	75	50	25	D	D	50	50	D	D	350	50	200	50	350	75	50	50
Pharmacy, pharmaceutical sciences, and administration	8,050	175	4,750	250	2,700	225	350	100	S	S	1,550	225	50	25	1,400	200	700	125	800	125	400	100
Public health	8,400	225	3,650	225	3,100	225	250	75	50	25	250	75	150	75	1,750	175	1,000	150	1,350	200	500	150
Registered nursing, nursing administration, nursing research	9,000	250	1,650	200	1,300	200	150	75	S	S	150	75	D	D	2,200	250	1,200	175	3,750	300	150	75
Health sciences, other	10,150	225	3,600	225	2,500	200	650	125	S	S	400	100	50	25	1,650	175	1,400	150	3,050	225	350	125

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.
[b] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 15-3

Non-U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Primary work activity[a]			
			Any R&D[b]		Other[c]	
	Number	SE	Number	SE	Number	SE
All fields	126,050	1,450	60,600	1,175	65,450	1,225
Science	89,250	1,275	43,650	1,050	45,600	1,075
Biological, agricultural, and environmental life sciences	25,950	725	12,800	525	13,150	625
Agricultural and food sciences	5,000	300	2,500	250	2,500	250
Agricultural sciences	200	50	100	50	100	25
Animal sciences	1,350	150	550	125	750	150
Food sciences and technology	1,000	125	450	100	550	125
Plant sciences	1,950	200	1,200	175	800	125
Soil sciences	500	75	150	50	350	75
Biochemistry and biophysics	2,250	275	1,150	225	1,100	200
Biochemistry	1,800	250	900	225	900	175
Biophysics	400	100	200	75	200	75
Cell, cellular biology, and molecular biology	2,450	275	1,100	225	1,350	225
Microbiological sciences and immunology	2,250	275	1,200	200	1,050	200
Immunology	550	100	200	75	300	100
Microbiological sciences	1,750	225	1,000	200	750	175
Natural resources and conservation	2,100	200	950	100	1,150	175
Fish, fisheries, wildlife and wildlands science and management	450	100	200	75	250	75
Forestry	850	100	450	75	400	75
Natural resource conservation, research, management, and policy	800	125	300	50	500	125
Zoology	1,050	175	500	125	550	125
Other biological sciences	10,800	550	5,400	400	5,400	425
Biomathematics, bioinformatics, and computational biology	500	100	250	75	250	75
Botany and plant biology	1,650	200	800	150	850	175
Epidemiology, ecology, and population biology	2,300	225	1,300	175	1,000	175
Genetics	850	125	350	100	450	125
Neurobiology and neuroscience	1,400	225	750	150	650	150
Nutrition sciences	400	100	150	50	250	100
Pharmacology and toxicology	650	150	250	125	400	125
Physiology, pathology, and related sciences	1,400	225	700	175	700	150
Biological and biomedical sciences, general	1,200	200	600	150	600	175
Biological and biomedical sciences, other	450	100	250	100	200	75
Computer and information sciences	4,700	350	1,900	225	2,800	300
Computer science	4,100	350	1,650	225	2,450	300
Information science, studies	400	75	100	50	250	75
Computer and information sciences, other	200	50	100	50	100	50
Mathematics and statistics	6,800	350	3,500	325	3,350	275
Applied mathematics	700	150	450	125	250	100
Mathematics	4,300	300	2,100	250	2,200	250
Statistics	750	200	550	200	200	100
Mathematics and statistics, other	1,050	125	400	75	650	125
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	20,300	800	11,900	675	8,450	550
Astronomy and astrophysics	900	125	600	125	300	100
Chemistry, except biochemistry	6,650	450	3,600	350	3,100	375
Inorganic chemistry	850	175	450	125	400	125
Organic chemistry	1,550	275	700	175	800	200
Chemistry, other, except biochemistry	4,300	350	2,400	325	1,850	275
Geosciences, atmospheric sciences, and ocean sciences	4,000	225	2,150	175	1,850	200
Atmospheric sciences and meteorology	800	75	450	75	300	50

TABLE 15-3

Non-U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Primary work activity[a]			
			Any R&D[b]		Other[c]	
	Number	SE	Number	SE	Number	SE
Geological and earth sciences, geosciences	2,350	225	1,150	150	1,150	175
Ocean sciences and marine sciences	350	75	150	50	200	50
Oceanography, chemical and physical	550	125	350	100	200	100
Physics	8,700	525	5,550	475	3,200	375
Psychology	5,400	350	1,700	200	3,650	325
Clinical psychology	900	175	S	S	800	175
Counseling and applied psychology	400	125	*	*	350	125
Educational and school psychology	850	200	350	125	500	175
Industrial and organizational psychology	350	125	100	50	250	125
Research and experimental psychology	2,300	225	850	125	1,450	200
Psychology, general	250	100	100	75	150	75
Psychology, other	350	75	200	50	150	50
Social sciences	26,050	775	11,900	600	14,150	700
Economics	12,200	500	6,150	450	6,000	425
Political science and government	3,250	325	1,400	225	1,800	250
Political science and government	2,500	275	1,100	200	1,400	225
Public policy analysis	750	150	300	125	450	125
Sociology, demography, and population studies	2,250	250	950	175	1,300	225
Other social sciences	8,400	425	3,350	275	5,050	375
Anthropology	1,700	200	650	125	1,000	175
Area, ethnic, cultural, gender, and group studies	350	75	50	50	250	75
Geography and cartography	1,000	150	450	125	500	125
International relations and national security studies	850	125	200	75	650	125
Linguistics	2,100	250	700	150	1,400	225
Urban studies, affairs	350	75	200	75	150	50
Social sciences, other	2,150	225	1,100	175	1,100	150
Engineering	32,450	900	15,600	725	16,850	750
Aerospace, aeronautical, and astronautical engineering	1,100	200	600	150	500	175
Chemical engineering	3,700	375	2,050	300	1,650	250
Civil engineering	5,400	400	2,550	325	2,850	375
Electrical and computer engineering	8,200	500	3,800	375	4,400	425
Computer engineering	1,100	150	550	150	550	125
Electrical, electronics, and communications engineering	7,100	500	3,250	350	3,800	425
Mechanical engineering	3,700	375	1,750	275	1,900	300
Metallurgical and materials engineering	2,900	275	1,450	225	1,450	200
Other engineering	7,450	400	3,350	350	4,100	325
Agricultural engineering	300	50	150	50	150	50
Bioengineering and biomedical engineering	1,050	175	600	175	450	125
Engineering mechanics, physics, and science	950	150	450	100	500	125
Industrial and manufacturing engineering	2,800	250	1,100	200	1,700	225
Nuclear engineering	550	125	300	100	250	75
Engineering, other	1,750	175	700	125	1,050	150
Health	4,350	350	1,300	200	3,000	300
Communication disorders sciences and services	200	75	D	D	200	75
Hospital and medical administration services	200	75	150	75	50	25
Pharmacy, pharmaceutical sciences, and administration	550	125	250	100	300	100
Public health	1,150	175	350	100	750	150
Registered nursing, nursing administration, nursing research	700	175	S	S	550	175

TABLE 15-3

Non-U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Primary work activity[a]			
			Any R&D[b]		Other[c]	
	Number	SE	Number	SE	Number	SE
Health sciences, other	1,550	175	400	100	1,150	150

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Primary work activity on principal job.

[b] R&D is defined as basic research, applied research, design, and development.

[c] Other work activities includes all non-R&D activities.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 15-4

Employed U.S. residing doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Primary work activity[a]			
			Any R&D[b]		Other[c]	
	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	351,000	1,975	506,250	2,300
Science	640,300	1,900	243,250	1,700	397,100	2,150
Biological, agricultural, and environmental life sciences	220,700	1,100	102,300	1,300	118,450	1,350
Agricultural and food sciences	17,400	350	8,150	325	9,250	375
Agricultural sciences	950	50	350	50	600	50
Animal sciences	4,550	175	1,850	150	2,750	175
Food sciences and technology	3,750	175	1,950	150	1,800	150
Plant sciences	5,900	250	3,050	200	2,850	250
Soil sciences	2,200	125	950	100	1,250	125
Biochemistry and biophysics	29,450	425	14,850	525	14,600	500
Biochemistry	24,350	400	12,000	500	12,350	475
Biophysics	5,100	175	2,850	175	2,250	175
Cell, cellular biology, and molecular biology	31,200	450	13,400	575	17,850	650
Microbiological sciences and immunology	23,800	400	11,200	475	12,600	525
Immunology	8,950	200	4,500	300	4,450	325
Microbiological sciences	14,900	325	6,700	350	8,200	375
Natural resources and conservation	8,800	225	3,500	175	5,300	250
Fish, fisheries, wildlife and wildlands science and management	2,200	150	1,000	100	1,200	125
Forestry	2,600	150	1,050	75	1,550	150
Natural resource conservation, research, management, and policy	4,000	150	1,500	150	2,550	175
Zoology	7,200	225	2,800	200	4,400	225
Other biological sciences	102,800	675	48,400	750	54,450	850
Biomathematics, bioinformatics, and computational biology	5,150	100	3,300	150	1,850	150
Botany and plant biology	6,150	225	2,650	175	3,500	200
Epidemiology, ecology, and population biology	15,950	275	7,800	350	8,150	350
Genetics	8,750	250	4,800	250	3,950	225
Neurobiology and neuroscience	16,800	275	7,950	350	8,850	325
Nutrition sciences	4,150	125	1,750	125	2,400	150
Pharmacology and toxicology	12,700	300	6,300	275	6,450	325
Physiology, pathology, and related sciences	15,400	300	6,000	275	9,450	350
Biological and biomedical sciences, general	12,750	300	5,600	325	7,150	375
Biological and biomedical sciences, other	4,950	200	2,250	200	2,750	175
Computer and information sciences	31,100	400	11,250	450	19,900	475
Computer science	26,750	400	9,600	450	17,150	475
Information science, studies	2,600	75	950	100	1,650	100
Computer and information sciences, other	1,800	50	700	50	1,100	75
Mathematics and statistics	36,650	450	13,400	450	23,250	500
Applied mathematics	8,500	200	3,250	225	5,250	250
Mathematics	16,500	375	5,100	275	11,450	350
Statistics	7,450	225	3,700	275	3,800	275
Mathematics and statistics, other	4,200	125	1,400	125	2,800	125
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	60,500	950	73,300	1,075
Astronomy and astrophysics	5,850	175	2,300	150	3,550	125
Chemistry, except biochemistry	65,300	700	28,800	750	36,550	850
Inorganic chemistry	8,750	225	3,100	225	5,600	250
Organic chemistry	17,600	375	8,300	400	9,300	400
Chemistry, other, except biochemistry	39,000	575	17,350	575	21,600	625
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	10,150	275	11,900	300
Atmospheric sciences and meteorology	3,900	75	2,100	100	1,800	100

TABLE 15-4

Employed U.S. residing doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Primary work activity[a]			
			Any R&D[b]		Other[c]	
	Number	SE	Number	SE	Number	SE
Geological and earth sciences, geosciences	13,550	275	5,950	250	7,600	250
Ocean sciences and marine sciences	2,150	75	900	75	1,250	75
Oceanography, chemical and physical	2,450	125	1,150	100	1,250	125
Physics	40,550	575	19,250	625	21,300	625
Psychology	115,350	825	23,100	625	92,250	825
Clinical psychology	41,100	525	4,650	350	36,450	575
Counseling and applied psychology	14,850	275	900	150	13,950	325
Educational and school psychology	14,100	275	2,450	250	11,650	325
Industrial and organizational psychology	4,850	150	1,250	125	3,550	175
Research and experimental psychology	27,800	400	10,400	375	17,400	425
Psychology, general	7,900	250	2,150	275	5,700	325
Psychology, other	4,750	175	1,200	150	3,550	200
Social sciences	102,700	900	32,750	700	69,950	975
Economics	26,900	550	11,400	450	15,500	550
Political science and government	22,450	425	6,700	375	15,750	475
Political science and government	18,350	400	5,350	350	13,000	450
Public policy analysis	4,100	175	1,350	125	2,750	150
Sociology, demography, and population studies	15,200	325	4,650	275	10,550	350
Other social sciences	38,150	500	10,000	350	28,200	475
Anthropology	11,400	300	3,400	250	7,950	300
Area, ethnic, cultural, gender, and group studies	3,900	125	700	100	3,200	150
Geography and cartography	4,750	175	1,450	150	3,300	175
International relations and national security studies	2,350	150	450	75	1,900	125
Linguistics	4,950	250	1,000	150	3,950	250
Urban studies, affairs	1,600	100	400	50	1,200	100
Social sciences, other	9,250	250	2,600	175	6,650	250
Engineering	176,700	1,175	92,800	1,175	83,900	1,225
Aerospace, aeronautical, and astronautical engineering	7,050	225	3,900	250	3,150	250
Chemical engineering	20,800	500	10,500	450	10,300	475
Civil engineering	19,250	400	8,600	375	10,700	450
Electrical and computer engineering	48,550	650	26,650	600	21,900	650
Computer engineering	7,000	175	2,850	175	4,150	225
Electrical, electronics, and communications engineering	41,550	625	23,800	575	17,750	625
Mechanical engineering	26,550	425	14,700	525	11,850	525
Metallurgical and materials engineering	16,450	350	9,550	450	6,900	375
Other engineering	38,050	450	18,900	450	19,150	475
Agricultural engineering	1,900	75	900	75	1,000	75
Bioengineering and biomedical engineering	13,200	250	7,350	300	5,850	300
Engineering mechanics, physics, and science	4,400	150	2,650	150	1,700	150
Industrial and manufacturing engineering	8,800	275	3,600	225	5,250	275
Nuclear engineering	3,100	125	1,650	125	1,450	100
Engineering, other	6,600	200	2,750	225	3,850	200
Health	40,200	475	14,950	500	25,250	625
Communication disorders sciences and services	3,100	125	750	125	2,350	125
Hospital and medical administration services	1,550	100	550	75	950	100
Pharmacy, pharmaceutical sciences, and administration	8,050	175	4,750	250	3,300	250
Public health	8,400	225	3,650	225	4,750	250
Registered nursing, nursing administration, nursing research	9,000	250	1,650	200	7,350	325

TABLE 15-4

Employed U.S. residing doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

Field of study	All employed		Primary work activity[a]			
			Any R&D[b]		Other[c]	
	Number	SE	Number	SE	Number	SE
Health sciences, other	10,150	225	3,600	225	6,550	250

SE = standard error.

[a] Primary work activity on principal job.

[b] R&D is defined as basic research, applied research, design, and development.

[c] Other work activities includes all non-R&D activities.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 16

U.S. residing employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2019

(Number and SE)

Employer location	All employed		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All locations	857,200	1,975	640,300	1,900	220,700	1,100	31,100	400	36,650	450	133,750	950	115,350	825	102,700	900	176,700	1,175	40,200	475
New England	77,100	1,375	60,300	1,250	23,450	800	2,250	225	3,150	275	12,900	525	9,200	550	9,350	450	13,400	575	3,400	275
Connecticut	12,900	550	10,050	525	3,150	300	200	75	550	125	2,300	275	2,200	250	1,650	200	2,350	275	500	125
Maine	2,750	300	2,500	275	750	150	50	25	100	50	500	125	550	150	550	125	150	50	100	50
Massachusetts	52,350	1,150	40,350	1,050	17,250	725	1,850	200	2,150	250	9,050	425	4,700	400	5,400	350	9,550	500	2,450	250
New Hampshire	3,450	325	2,750	300	1,050	225	S	S	S	S	350	100	600	150	550	100	550	125	150	50
Rhode Island	3,400	250	2,800	225	700	125	D	D	150	75	400	100	700	150	800	150	500	150	150	50
Vermont	2,300	250	1,900	225	600	125	D	D	100	50	300	100	450	125	400	125	350	100	50	50
Middle Atlantic	117,450	1,875	92,750	1,725	29,200	925	4,650	325	6,600	375	18,150	700	18,400	700	15,750	600	19,150	650	5,550	400
New Jersey	23,700	875	17,900	750	5,900	450	950	175	1,500	225	4,800	350	2,850	300	1,950	250	4,300	400	1,500	225
New York	59,150	1,150	48,050	1,050	13,650	625	2,800	275	3,450	300	7,750	450	10,800	550	9,600	475	8,950	500	2,150	250
Pennsylvania	34,600	975	26,750	850	9,650	500	900	150	1,700	150	5,600	325	4,750	350	4,150	325	5,900	425	1,900	225
East North Central	100,900	1,550	75,450	1,275	25,550	675	2,700	275	4,400	300	16,300	625	13,850	600	12,600	525	20,300	800	5,150	350
Illinois	28,900	875	21,900	775	6,350	400	850	150	1,300	175	5,400	450	4,050	325	3,900	300	5,550	425	1,500	200
Indiana	13,450	575	10,150	450	4,050	325	550	150	750	150	1,700	225	1,450	200	1,650	250	2,500	275	800	150
Michigan	21,450	725	14,900	575	4,950	350	600	150	750	125	2,650	250	3,400	300	2,550	275	5,650	375	900	150
Ohio	24,950	800	18,900	650	6,400	350	500	100	1,000	175	4,700	325	3,350	275	3,000	250	4,700	425	1,350	175
Wisconsin	12,150	575	9,650	500	3,850	325	250	100	600	125	1,850	225	1,600	175	1,500	175	1,900	225	650	125
West North Central	48,750	1,175	38,150	1,025	15,150	650	1,000	175	2,250	250	6,350	450	7,850	525	5,550	300	7,550	475	3,100	250
Iowa	6,850	400	5,550	400	2,250	275	250	100	450	125	900	225	950	150	700	125	1,050	175	300	125
Kansas	5,500	350	4,250	300	1,450	200	100	75	200	75	600	125	1,050	150	850	150	900	200	400	100
Minnesota	16,100	725	11,750	575	4,050	325	350	100	700	125	2,600	250	2,450	275	1,600	175	3,050	350	1,350	175
Missouri	12,650	575	10,350	550	4,500	350	200	75	650	175	1,600	225	1,750	250	1,650	175	1,750	200	550	100
Nebraska	4,500	325	3,700	300	1,650	200	D	D	150	50	350	125	1,050	200	450	125	500	125	300	100
North Dakota	1,350	175	1,100	150	550	125	D	D	D	D	100	50	200	100	100	50	200	100	100	50
South Dakota	1,700	225	1,500	200	650	150	D	D	100	50	150	50	400	125	200	75	100	50	100	50
South Atlantic	163,650	1,900	126,200	1,650	43,850	850	4,800	350	6,950	425	24,300	700	20,800	725	25,550	650	28,200	775	9,250	375
Delaware	4,050	375	2,950	325	750	150	D	D	100	50	1,400	250	450	125	300	75	900	175	250	100
District of Columbia	17,600	575	14,700	525	3,000	300	250	100	500	125	2,100	225	1,400	150	7,450	375	2,100	225	850	150
Florida	23,000	775	17,050	625	4,950	275	950	175	800	150	2,800	275	4,750	375	2,800	275	4,600	350	1,400	150
Georgia	20,050	700	15,500	600	5,400	325	550	100	1,200	175	2,100	250	3,700	325	2,550	275	3,250	300	1,300	200
Maryland	36,150	1,025	28,150	850	12,550	575	1,000	200	1,100	150	6,850	425	2,850	325	3,750	300	5,750	375	2,250	200
North Carolina	26,100	800	20,650	750	9,050	450	700	150	1,300	150	3,050	275	3,300	275	3,200	325	3,850	300	1,650	175

TABLE 16

U.S. residing employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2019

(Number and SE)

Employer location	All employed		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
South Carolina	7,350	475	5,550	425	1,750	225	150	50	450	125	1,150	175	1,100	200	950	150	1,450	250	350	100
Virginia	26,800	850	19,850	700	5,500	350	1,150	200	1,350	175	4,550	325	3,050	275	4,250	325	5,900	425	1,100	175
West Virginia	2,450	275	1,900	250	950	175	D	D	150	100	250	100	200	75	300	100	450	150	100	50
East South Central	30,550	1,000	23,300	850	9,300	525	750	125	1,200	175	4,550	325	3,900	325	3,650	325	5,100	350	2,150	200
Alabama	8,250	450	6,100	375	2,300	250	250	75	450	100	1,200	200	1,000	175	900	150	1,500	200	700	150
Kentucky	6,700	475	5,400	425	2,100	275	100	50	250	75	1,050	200	1,000	175	900	175	850	200	400	100
Mississippi	4,100	400	3,050	350	1,450	225	S	S	100	75	500	125	450	125	500	125	650	150	350	75
Tennessee	11,500	575	8,750	475	3,450	325	350	75	400	100	1,800	225	1,450	175	1,350	175	2,050	250	700	100
West South Central	68,800	1,325	49,000	1,175	16,550	750	1,800	200	3,300	275	10,450	425	9,650	500	7,250	400	16,550	775	3,250	250
Arkansas	4,200	350	3,500	350	1,350	200	100	50	150	75	300	100	850	175	800	175	400	100	300	75
Louisiana	6,300	400	5,200	375	1,750	200	150	100	450	125	950	175	900	150	1,000	175	900	175	200	75
Oklahoma	5,650	375	4,100	325	1,750	225	50	25	200	75	600	100	900	175	600	125	1,150	225	350	100
Texas	52,650	1,125	36,150	950	11,750	575	1,500	200	2,500	225	8,600	400	7,000	425	4,850	325	14,100	725	2,350	225
Mountain	58,200	1,275	43,100	1,050	12,900	575	1,600	225	2,200	200	11,150	475	8,900	525	6,400	425	12,900	650	2,200	225
Arizona	13,100	625	9,050	525	2,400	250	250	100	400	100	2,450	250	1,900	250	1,650	200	3,550	375	500	100
Colorado	19,050	650	14,750	500	4,300	325	500	125	700	125	3,800	275	3,300	350	2,150	250	3,650	350	650	125
Idaho	3,450	350	2,450	275	1,100	200	D	D	100	50	550	100	450	100	250	75	950	175	50	25
Montana	2,600	250	2,300	225	1,000	150	D	D	150	75	350	100	400	125	350	100	200	75	100	50
Nevada	3,200	325	2,400	250	800	150	100	75	50	50	500	125	600	150	350	75	650	175	150	75
New Mexico	8,200	425	5,350	350	1,250	175	150	75	350	75	2,150	225	850	175	600	150	2,650	250	200	75
Utah	7,850	450	6,050	400	1,800	200	450	125	450	125	1,200	200	1,200	175	950	150	1,250	200	500	125
Wyoming	800	125	700	125	250	75	D	D	D	D	100	50	150	75	100	50	S	S	50	50
Pacific	185,950	2,075	127,600	1,650	43,450	850	11,400	525	6,350	350	28,800	800	21,900	725	15,700	625	52,400	1,000	5,950	400
Alaska	1,450	175	1,200	150	550	100	D	D	D	D	350	100	100	50	150	50	200	75	50	25
California	140,650	1,850	95,250	1,500	32,900	800	8,650	475	4,850	325	21,850	675	15,700	625	11,300	500	41,300	950	4,100	350
Hawaii	3,100	275	2,700	250	850	150	S	S	100	50	600	100	500	100	600	125	300	125	100	50
Oregon	16,600	700	10,550	550	3,250	325	500	100	400	100	2,750	300	2,350	250	1,300	175	5,350	400	650	125
Washington	24,200	825	17,900	650	5,950	350	2,150	200	950	175	3,250	275	3,250	350	2,400	250	5,250	400	1,100	125
Puerto Rico	2,600	225	2,050	200	600	150	S	S	50	25	350	75	700	125	300	75	450	100	100	50
U.S. territories and other areas	3,250	350	2,450	300	800	175	S	S	150	75	550	150	200	75	650	175	700	150	S	S

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Because survey sample design does not include geography, the reliability of estimates in some states may be poor due to small sample size. Residence location is based on reported living location on 1 February 2019.

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

TABLE 17

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2019

(Number and SE)

Field of study and sex	All employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	344,350	2,325	113,200	1,550	76,200	1,225	68,900	1,225	21,850	625	1,550	175	62,600	1,075
Male	211,850	2,075	81,300	1,350	46,400	975	38,100	925	11,450	525	1,000	175	33,550	775
Female	132,500	1,450	31,900	875	29,800	725	30,800	700	10,400	400	550	100	29,050	800
Science	277,850	1,975	91,000	1,350	61,000	1,075	53,200	1,075	18,600	600	1,150	150	52,900	1,050
Male	168,250	1,725	64,550	1,175	36,950	850	29,000	775	9,600	475	700	125	27,400	725
Female	109,600	1,225	26,450	775	24,050	625	24,200	625	9,000	375	450	100	25,500	775
Biological, agricultural, and environmental life sciences	96,250	1,175	26,800	725	17,950	675	18,200	575	5,600	375	450	100	27,250	725
Male	55,650	1,025	18,950	675	11,000	575	9,450	400	2,950	300	200	100	13,050	550
Female	40,600	775	7,800	425	6,950	375	8,750	400	2,650	200	200	75	14,200	525
Agricultural and food sciences	7,300	300	3,050	200	1,300	150	1,300	150	150	50	50	50	1,450	125
Male	5,050	275	2,400	200	1,000	125	800	100	100	50	D	D	800	125
Female	2,250	150	600	100	350	75	500	75	100	25	D	D	650	75
Biochemistry and biophysics	11,800	550	3,650	350	2,400	275	1,750	200	450	125	S	S	3,550	325
Male	7,500	450	2,750	325	1,600	225	1,050	150	300	100	S	S	1,750	250
Female	4,350	300	900	150	800	125	700	125	150	75	D	D	1,750	200
Cell, cellular biology, and molecular biology	13,100	575	2,900	350	2,600	300	2,100	250	750	150	D	D	4,700	375
Male	7,300	450	2,000	300	1,550	250	1,050	175	450	125	D	D	2,200	275
Female	5,800	400	900	150	1,050	175	1,000	150	300	100	D	D	2,500	275
Microbiological sciences and immunology	9,100	425	2,150	275	1,700	225	1,750	150	650	150	D	D	2,800	225
Male	4,850	350	1,350	225	950	175	700	125	300	125	D	D	1,450	200
Female	4,250	250	800	125	750	125	1,000	125	350	75	D	D	1,350	150
Natural resources and conservation	3,450	225	1,050	150	600	75	700	100	300	75	D	D	800	125
Male	2,300	200	850	150	350	75	350	75	200	75	D	D	500	100
Female	1,150	100	150	50	200	50	300	75	100	50	D	D	300	75
Zoology	3,900	200	1,750	150	850	125	400	100	150	50	D	D	750	150
Male	2,650	175	1,400	150	600	100	250	75	D	D	D	D	400	100
Female	1,250	125	350	75	250	75	200	75	100	50	D	D	350	100
Other biological sciences	47,550	825	12,300	500	8,550	400	10,200	450	3,100	275	200	75	13,250	550
Male	26,000	775	8,200	450	4,950	350	5,250	350	1,600	225	D	D	5,950	400
Female	21,550	525	4,100	275	3,600	275	5,000	275	1,500	150	150	75	7,300	425
Computer and information sciences	10,750	475	3,400	300	2,750	250	2,900	275	550	100	D	D	1,150	175
Male	8,350	450	2,700	275	2,250	250	2,200	250	350	100	D	D	800	150
Female	2,400	225	700	125	500	100	700	125	200	75	D	D	350	125
Mathematics and statistics	20,200	525	8,000	425	5,300	300	4,100	250	1,600	175	D	D	1,100	150
Male	15,050	475	6,700	400	3,800	300	2,800	225	900	125	D	D	750	150
Female	5,150	275	1,300	150	1,500	150	1,300	125	750	125	D	D	300	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	47,350	850	16,100	575	8,550	400	8,100	450	3,450	300	250	100	10,900	450

TABLE 17

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2019

(Number and SE)

Field of study and sex	All employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Male	35,650	775	13,150	525	6,250	350	5,800	400	2,100	275	200	100	8,050	400
Female	11,700	375	2,950	250	2,300	175	2,300	175	1,350	150	50	50	2,800	200
Astronomy and astrophysics	2,900	175	950	125	600	125	550	100	150	50	D	D	650	100
Male	2,200	175	800	125	500	125	350	100	50	50	D	D	500	100
Female	700	75	150	50	100	50	200	50	50	50	D	D	200	50
Chemistry, except biochemistry	20,000	650	6,650	425	3,700	275	3,450	325	1,850	225	100	50	4,250	300
Male	14,300	575	5,150	375	2,550	250	2,450	275	1,100	200	D	D	2,900	250
Female	5,750	300	1,500	175	1,100	125	1,000	125	750	125	D	D	1,350	175
Geosciences, atmospheric sciences, and ocean sciences	10,000	325	3,400	200	1,650	175	1,700	150	600	100	50	25	2,550	175
Male	6,900	275	2,650	200	1,150	150	1,050	125	250	50	50	25	1,750	150
Female	3,100	150	750	100	500	75	650	75	350	75	*	*	800	75
Physics	14,450	550	5,100	400	2,600	275	2,400	275	900	200	D	D	3,400	325
Male	12,300	550	4,600	375	2,050	250	1,950	250	700	175	D	D	2,900	300
Female	2,200	200	500	125	550	125	450	125	200	75	D	D	500	100
Psychology	39,150	775	12,750	575	9,150	450	7,750	400	2,650	225	50	50	6,800	475
Male	15,800	575	6,600	425	3,800	325	2,500	275	800	150	D	D	2,100	275
Female	23,300	650	6,150	375	5,350	325	5,250	325	1,850	200	S	S	4,700	325
Social sciences	64,150	975	23,950	650	17,300	600	12,150	475	4,750	350	300	75	5,700	350
Male	37,750	800	16,450	600	9,900	425	6,200	350	2,450	250	150	75	2,600	250
Female	26,400	625	7,500	350	7,400	400	5,950	325	2,300	200	150	50	3,100	250
Economics	14,400	525	6,100	425	3,850	300	2,800	250	800	150	D	D	800	175
Male	10,650	500	5,000	400	2,750	250	1,850	200	550	150	D	D	500	150
Female	3,750	250	1,150	150	1,100	125	950	150	250	75	D	D	300	100
Political science and government	14,950	475	6,100	375	4,100	350	2,900	275	600	125	D	D	1,150	175
Male	9,600	450	4,550	350	2,500	300	1,550	200	300	100	D	D	700	150
Female	5,350	325	1,550	200	1,600	225	1,350	200	300	75	D	D	500	100
Sociology, demography, and population studies	10,600	350	4,000	275	3,000	275	1,900	150	750	150	D	D	900	150
Male	4,950	250	2,250	200	1,300	175	650	125	350	125	D	D	350	100
Female	5,650	275	1,750	200	1,700	200	1,250	125	400	100	D	D	550	125
Other social sciences	24,200	525	7,750	350	6,350	325	4,550	275	2,600	225	150	50	2,800	225
Male	12,550	450	4,650	300	3,300	275	2,150	175	1,300	200	100	50	1,050	125
Female	11,650	325	3,100	200	3,000	200	2,450	175	1,300	150	S	S	1,750	150
Engineering	45,250	925	16,650	675	9,150	475	9,500	525	2,400	275	350	125	7,200	425
Male	36,750	950	14,500	650	7,550	450	7,400	450	1,700	250	300	100	5,300	375
Female	8,550	400	2,150	200	1,600	175	2,100	225	750	100	50	25	1,900	200
Aerospace, aeronautical, and astronautical engineering	1,650	175	650	125	350	100	350	75	50	25	D	D	250	100
Male	1,450	175	600	125	250	100	300	75	D	D	D	D	250	100
Female	200	50	50	25	100	50	50	25	D	D	D	D	50	25
Chemical engineering	3,850	350	1,400	250	900	175	600	125	250	100	D	D	800	200
Male	3,050	325	1,200	250	750	150	400	125	150	75	D	D	600	150
Female	800	150	200	75	150	75	150	75	D	D	D	D	200	75

TABLE 17

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2019

(Number and SE)

Field of study and sex	All employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Civil engineering	7,100	375	2,700	275	1,650	225	1,550	200	350	100	D	D	750	125
Male	5,700	350	2,350	275	1,400	225	1,100	200	200	75	D	D	550	125
Female	1,400	150	350	100	250	50	450	100	150	75	D	D	200	75
Electrical and computer engineering	9,950	500	4,350	350	2,100	225	1,800	250	450	125	D	D	1,200	175
Male	8,350	450	3,750	325	1,750	225	1,450	200	300	125	D	D	1,050	175
Female	1,600	175	600	125	350	100	350	125	150	50	D	D	150	50
Mechanical engineering	7,350	500	2,800	350	1,200	200	1,850	300	600	175	D	D	850	150
Male	6,400	500	2,600	350	1,050	200	1,600	275	500	175	D	D	600	150
Female	950	150	200	75	150	50	250	125	100	50	D	D	200	100
Metallurgical and materials engineering	2,800	275	900	150	350	100	650	150	100	75	D	D	750	150
Male	2,150	250	800	150	300	100	500	125	D	D	D	D	450	100
Female	650	125	100	50	50	50	100	50	D	D	D	D	300	125
Other engineering	12,550	450	3,900	250	2,650	225	2,750	250	650	125	100	50	2,550	200
Male	9,600	425	3,200	225	2,100	200	2,000	225	450	100	50	50	1,750	175
Female	3,000	200	700	125	550	100	700	100	200	50	D	D	800	100
Health	21,250	550	5,550	325	6,050	350	6,200	350	850	125	100	50	2,550	200
Male	6,850	325	2,300	200	1,850	200	1,650	200	150	75	D	D	900	150
Female	14,350	475	3,300	275	4,150	325	4,550	325	650	100	S	S	1,650	175

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 18

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, faculty rank, and years since doctorate: 2019

(Number and SE)

Field of study and sex	All employed				Full professor				Associate professor				Assistant professor				Instructor or lecturer				All other faculty				Rank not applicable			
	< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	108,100	1,200	236,250	2,075	1,250	175	111,950	1,525	12,550	525	63,650	1,075	48,950	1,025	19,950	725	10,000	425	11,850	525	500	125	1,050	125	34,800	875	27,800	750
Male	58,550	975	153,300	1,825	550	125	80,750	1,350	7,300	450	39,100	900	27,050	725	11,050	575	5,150	375	6,350	400	300	100	750	150	18,250	675	15,350	550
Female	49,550	825	82,950	1,225	700	125	31,200	850	5,300	275	24,500	675	21,900	625	8,900	450	4,850	250	5,550	350	250	75	300	100	16,550	575	12,450	575
Science	84,150	1,075	193,700	1,850	850	125	90,150	1,325	9,050	425	51,950	950	36,500	900	16,750	650	8,300	375	10,300	500	400	100	750	125	29,050	825	23,800	750
Male	44,400	850	123,850	1,575	450	100	64,100	1,175	5,350	350	31,600	800	19,650	625	9,400	500	4,150	300	5,450	375	200	100	500	125	14,600	625	12,800	550
Female	39,750	800	69,850	1,075	400	100	26,050	775	3,700	250	20,350	550	16,850	575	7,350	400	4,150	250	4,850	325	200	75	250	75	14,450	525	11,000	550
Biological, agricultural, and environmental life sciences	31,050	675	65,200	1,025	250	75	26,550	725	1,500	200	16,450	625	9,700	400	8,500	450	2,700	225	2,900	275	200	75	250	75	16,700	575	10,550	475
Male	15,500	575	40,150	975	200	75	18,800	675	900	175	10,100	525	4,800	300	4,650	375	1,550	175	1,450	225	100	50	S	S	8,000	450	5,050	400
Female	15,550	450	25,050	625	100	50	7,750	425	600	100	6,350	375	4,850	275	3,850	275	1,150	125	1,500	175	100	50	100	75	8,700	375	5,500	375
Computer and information sciences	4,250	250	6,500	400	100	50	3,350	300	650	150	2,100	250	2,600	250	300	75	250	75	300	75	D	D	D	D	650	125	500	150
Male	3,150	250	5,150	375	S	S	2,650	275	450	125	1,750	250	1,950	225	250	75	200	75	150	75	D	D	D	D	550	125	300	100
Female	1,100	125	1,300	175	S	S	650	125	200	75	300	75	650	125	50	25	50	50	100	50	D	D	D	D	150	50	S	S
Mathematics and statistics	5,900	300	14,300	500	D	D	7,950	450	1,100	150	4,200	300	3,300	225	850	150	900	150	700	125	D	D	D	D	600	125	500	100
Male	3,800	250	11,250	450	D	D	6,700	400	700	150	3,100	275	2,150	175	700	150	500	100	350	75	D	D	D	D	400	100	350	100
Female	2,100	175	3,050	225	D	D	1,250	150	350	75	1,150	125	1,150	125	150	50	400	100	350	100	D	D	D	D	150	50	150	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	13,500	500	33,900	700	100	50	16,000	575	800	125	7,750	375	5,300	375	2,800	250	1,350	175	2,150	250	S	S	150	75	5,850	325	5,050	325
Male	9,150	425	26,500	675	D	D	13,150	525	550	100	5,750	350	3,700	325	2,150	250	750	150	1,400	225	D	D	150	50	4,100	300	3,950	300
Female	4,350	225	7,400	300	S	S	2,900	250	300	75	2,000	175	1,600	150	650	100	600	100	750	125	S	S	D	D	1,700	150	1,100	125
Psychology	11,300	450	27,850	750	100	50	12,650	575	1,700	225	7,450	400	5,500	350	2,250	250	1,050	150	1,600	200	D	D	S	S	2,950	275	3,850	350
Male	3,500	275	12,350	550	S	S	6,550	425	800	150	3,000	300	1,700	225	800	150	250	75	550	125	D	D	D	D	700	150	1,400	250
Female	7,800	375	15,500	550	50	25	6,100	375	950	150	4,450	300	3,800	275	1,450	200	800	125	1,050	150	D	D	D	D	2,250	250	2,450	250
Social sciences	18,150	575	46,000	850	250	75	23,700	650	3,250	275	14,050	550	10,100	425	2,050	200	2,100	225	2,650	275	50	25	250	75	2,350	200	3,350	300
Male	9,300	425	28,450	750	150	75	16,300	600	1,950	225	7,900	425	5,350	350	850	125	950	150	1,500	200	S	S	150	75	850	150	1,750	225
Female	8,850	325	17,550	500	150	50	7,400	350	1,300	150	6,100	350	4,750	275	1,200	150	1,150	150	1,150	150	D	D	100	50	1,450	150	1,600	225
Engineering	15,250	550	30,050	825	100	50	16,550	675	1,750	225	7,450	450	7,750	475	1,750	225	1,250	200	1,200	200	50	50	250	100	4,300	300	2,850	275
Male	11,500	475	25,200	800	50	25	14,450	650	1,450	200	6,100	425	6,000	400	1,400	225	850	175	850	175	D	D	250	100	3,150	275	2,150	250
Female	3,700	275	4,800	275	S	S	2,100	200	300	75	1,300	150	1,750	225	300	75	400	75	350	100	D	D	D	D	1,150	150	750	150
Health	8,700	350	12,500	475	300	100	5,250	325	1,750	175	4,250	300	4,700	275	1,450	200	450	100	400	100	50	25	D	D	1,450	150	1,100	175
Male	2,600	225	4,250	250	100	50	2,200	200	500	100	1,400	175	1,450	175	250	50	100	75	S	S	D	D	D	D	500	100	400	100
Female	6,100	300	8,250	375	200	75	3,050	250	1,300	150	2,850	250	3,300	250	1,250	200	350	75	300	100	*	*	D	D	950	125	700	150

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 19

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and faculty rank: 2019

(Number and SE)

Field of study, ethnicity, and race	All employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	344,350	2,325	113,200	1,550	76,200	1,225	68,900	1,225	21,850	625	1,550	175	62,600	1,075
Hispanic or Latino[a]	16,350	400	4,400	275	3,450	225	4,050	175	1,350	150	S	S	3,000	200
Not Hispanic or Latino[b]														
American Indian or Alaska Native	600	100	100	50	250	75	100	50	50	25	D	D	50	25
Asian	68,950	1,300	18,550	800	13,600	650	15,550	650	3,200	325	450	125	17,600	650
Black or African American	13,750	400	3,200	225	3,700	225	3,450	200	950	150	50	50	2,350	175
White	240,100	1,850	86,100	1,300	54,100	1,000	44,500	1,025	15,950	575	950	125	38,450	925
Other race[c]	4,600	250	850	125	1,050	150	1,250	125	350	75	D	D	1,100	150
Science	277,850	1,975	91,000	1,350	61,000	1,075	53,200	1,075	18,600	600	1,150	150	52,900	1,050
Hispanic or Latino[a]	13,550	325	3,450	225	2,800	225	3,400	175	1,200	150	S	S	2,650	200
Not Hispanic or Latino[b]														
American Indian or Alaska Native	500	100	100	50	200	75	100	25	50	25	D	D	50	25
Asian	49,450	1,075	12,050	600	10,000	600	10,750	575	2,500	250	250	100	13,900	525
Black or African American	10,750	375	2,450	175	3,000	200	2,550	175	800	125	50	50	1,900	175
White	199,750	1,700	72,200	1,150	44,200	875	35,400	975	13,750	550	800	125	33,450	925
Other race[c]	3,850	225	700	100	850	125	1,050	125	300	75	D	D	950	125
Biological, agricultural, and environmental life sciences	96,250	1,175	26,800	725	17,950	675	18,200	575	5,600	375	450	100	27,250	725
Hispanic or Latino[a]	4,800	225	850	125	750	150	1,350	100	350	75	S	S	1,500	150
Not Hispanic or Latino[b]														
American Indian or Alaska Native	100	50	D	D	50	25	S	S	D	D	D	D	50	25
Asian	20,250	600	3,150	275	3,650	375	4,200	375	750	150	50	50	8,400	400
Black or African American	2,700	200	450	75	600	100	700	75	200	75	D	D	700	100
White	67,050	1,000	22,200	675	12,550	525	11,650	450	4,200	325	300	75	16,150	600
Other race[c]	1,400	150	150	50	350	100	300	75	100	50	D	D	450	100
Computer and information sciences	10,750	475	3,400	300	2,750	250	2,900	275	550	100	D	D	1,150	175
Hispanic or Latino[a]	400	75	100	50	100	25	50	25	100	75	D	D	S	S
Not Hispanic or Latino[b]														
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	3,800	350	1,100	175	950	175	1,100	225	100	50	D	D	500	150
Black or African American	250	50	50	25	100	25	100	50	D	D	D	D	D	D
White	6,250	350	2,100	225	1,600	225	1,600	175	300	75	D	D	600	125
Other race[c]	100	25	50	25	D	D	*	*	D	D	D	D	*	*
Mathematics and statistics	20,200	525	8,000	425	5,300	300	4,100	250	1,600	175	D	D	1,100	150
Hispanic or Latino[a]	900	100	450	100	150	50	150	50	50	25	D	D	100	50

TABLE 19

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and faculty rank: 2019

(Number and SE)

Field of study, ethnicity, and race	All employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Not Hispanic or Latino[b]														
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	5,050	350	1,850	250	1,450	200	1,200	175	450	100	D	D	200	75
Black or African American	550	75	100	50	200	50	150	50	D	D	D	D	S	S
White	13,500	450	5,650	325	3,500	250	2,500	200	1,050	150	D	D	750	125
Other race[c]	200	75	*	*	S	S	50	25	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	47,350	850	16,100	575	8,550	400	8,100	450	3,450	300	250	100	10,900	450
Hispanic or Latino[a]	1,650	125	500	75	300	75	400	75	150	50	D	D	350	75
Not Hispanic or Latino[b]														
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	9,450	525	2,750	300	1,200	175	1,400	200	600	150	D	D	3,400	300
Black or African American	1,100	125	300	75	300	75	200	50	100	50	D	D	250	50
White	34,600	825	12,450	500	6,700	375	5,950	400	2,550	250	150	50	6,750	375
Other race[c]	500	100	100	50	100	25	150	75	50	25	D	D	150	50
Psychology	39,150	775	12,750	575	9,150	450	7,750	400	2,650	225	50	50	6,800	475
Hispanic or Latino[a]	2,100	150	500	100	500	100	500	75	200	50	D	D	400	75
Not Hispanic or Latino[b]														
American Indian or Alaska Native	50	25	D	D	D	D	D	D	D	D	D	D	D	D
Asian	3,400	325	950	225	750	125	700	125	200	75	D	D	750	175
Black or African American	2,200	175	550	100	600	100	450	100	100	50	D	D	450	100
White	30,700	775	10,500	500	7,250	450	5,850	375	2,050	200	S	S	5,000	425
Other race[c]	700	100	150	50	100	50	200	75	50	50	D	D	150	50
Social sciences	64,150	975	23,950	650	17,300	600	12,150	475	4,750	350	300	75	5,700	350
Hispanic or Latino[a]	3,750	200	1,100	125	1,000	125	900	100	400	75	D	D	300	75
Not Hispanic or Latino[b]														
American Indian or Alaska Native	300	75	50	50	150	75	50	25	D	D	D	D	D	D
Asian	7,550	450	2,300	250	2,000	225	2,200	225	350	100	D	D	600	175
Black or African American	4,000	250	1,050	150	1,250	175	900	125	350	125	D	D	450	75
White	47,650	875	19,250	575	12,600	525	7,850	400	3,550	325	200	75	4,200	275
Other race[c]	900	125	250	75	250	50	250	75	50	25	D	D	100	50
Engineering	45,250	925	16,650	675	9,150	475	9,500	525	2,400	275	350	125	7,200	425
Hispanic or Latino[a]	1,950	175	750	125	500	100	350	75	100	50	D	D	300	50
Not Hispanic or Latino[b]														

TABLE 19

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and faculty rank: 2019

(Number and SE)

Field of study, ethnicity, and race	All employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
American Indian or Alaska Native	50	25	S	S	D	D	D	D	D	D	D	D	D	D
Asian	16,150	750	5,850	575	2,850	275	3,800	375	600	175	200	100	2,900	275
Black or African American	1,400	150	450	75	350	100	250	75	100	50	D	D	250	50
White	25,250	700	9,500	475	5,400	375	5,000	350	1,600	225	100	75	3,650	300
Other race[c]	450	75	50	50	100	50	100	50	50	25	D	D	150	50
Health	21,250	550	5,550	325	6,050	350	6,200	350	850	125	100	50	2,550	200
Hispanic or Latino[a]	800	100	150	50	200	50	300	75	S	S	D	D	100	50
Not Hispanic or Latino[b]														
American Indian or Alaska Native	50	25	D	D	D	D	D	D	D	D	D	D	D	D
Asian	3,350	275	650	150	750	150	1,000	150	100	50	D	D	850	175
Black or African American	1,600	125	300	75	350	75	650	100	50	25	D	D	250	50
White	15,050	475	4,400	275	4,550	300	4,100	325	600	100	S	S	1,350	175
Other race[c]	300	75	S	S	100	50	100	50	D	D	D	D	50	25

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 20

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2019

(Number and SE)

Field of study and sex	All employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	344,350	2,325	160,500	1,650	50,850	1,000	52,200	1,125	80,800	1,250
Male	211,850	2,075	110,100	1,600	29,300	750	29,650	925	42,800	975
Female	132,500	1,450	50,350	1,025	21,600	575	22,500	675	38,050	825
Science	277,850	1,975	129,850	1,525	38,450	900	42,600	950	67,000	1,150
Male	168,250	1,725	87,650	1,325	21,900	625	23,900	775	34,800	900
Female	109,600	1,225	42,200	925	16,550	500	18,700	600	32,200	750
Biological, agricultural, and environmental life sciences	96,250	1,175	35,800	900	12,700	500	17,850	600	29,850	825
Male	55,650	1,025	24,500	800	7,150	375	9,650	450	14,350	625
Female	40,600	775	11,300	450	5,550	325	8,200	400	15,550	575
Agricultural and food sciences	7,300	300	3,700	250	1,150	150	900	125	1,500	150
Male	5,050	275	2,950	225	750	125	500	125	900	125
Female	2,250	150	800	100	450	75	400	75	650	100
Biochemistry and biophysics	11,800	550	4,850	375	1,200	175	2,200	250	3,600	325
Male	7,500	450	3,500	350	750	150	1,300	175	1,900	250
Female	4,350	300	1,350	175	450	100	900	150	1,650	225
Cell, cellular biology, and molecular biology	13,100	575	4,100	400	1,350	225	2,350	275	5,300	450
Male	7,300	450	2,650	350	700	150	1,600	250	2,300	300
Female	5,800	400	1,400	175	650	125	750	125	2,950	300
Microbiological sciences and immunology	9,100	425	2,950	275	1,100	150	1,750	225	3,350	275
Male	4,850	350	1,750	225	500	125	950	200	1,650	225
Female	4,250	250	1,200	175	550	100	850	125	1,650	175
Natural resources and conservation	3,450	225	1,400	150	500	75	600	100	950	125
Male	2,300	200	1,100	150	300	75	350	75	600	100
Female	1,150	100	300	50	200	50	250	50	400	75
Zoology	3,900	200	2,400	200	300	75	550	125	700	125
Male	2,650	175	1,850	175	150	50	300	100	350	75
Female	1,250	125	500	100	150	50	250	75	350	75
Other biological sciences	47,550	825	16,400	525	7,150	375	9,500	450	14,500	575
Male	26,000	775	10,700	500	4,000	300	4,600	325	6,700	400
Female	21,550	525	5,750	325	3,100	225	4,900	325	7,850	400
Computer and information sciences	10,750	475	5,500	375	2,400	250	1,100	125	1,750	225
Male	8,350	450	4,450	350	1,800	225	900	125	1,200	175
Female	2,400	225	1,100	175	600	125	250	50	550	125
Mathematics and statistics	20,200	525	12,300	500	2,950	225	2,450	225	2,500	225
Male	15,050	475	9,800	450	1,950	200	1,750	200	1,600	200
Female	5,150	275	2,500	200	1,000	125	750	125	900	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	47,350	850	21,650	650	5,800	400	7,050	400	12,850	525
Male	35,650	775	16,900	625	4,250	325	5,100	350	9,400	525
Female	11,700	375	4,750	250	1,550	150	2,000	200	3,450	250
Astronomy and astrophysics	2,900	175	1,400	150	400	100	450	100	650	100
Male	2,200	175	1,150	150	300	100	350	75	450	100
Female	700	75	250	50	150	50	100	50	200	50
Chemistry, except biochemistry	20,000	650	9,150	450	2,450	300	2,950	275	5,500	350
Male	14,300	575	6,800	425	1,800	250	2,050	250	3,650	325
Female	5,750	300	2,350	200	650	125	900	150	1,850	200

TABLE 20

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2019

(Number and SE)

Field of study and sex	All employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Geosciences, atmospheric sciences, and ocean sciences	10,000	325	4,600	225	1,250	125	1,600	125	2,500	150
Male	6,900	275	3,400	200	800	100	1,000	125	1,650	150
Female	3,100	150	1,200	100	450	75	600	75	850	75
Physics	14,450	550	6,550	475	1,650	225	2,050	250	4,200	325
Male	12,300	550	5,550	450	1,350	175	1,650	250	3,650	325
Female	2,200	200	950	175	300	100	400	100	550	100
Psychology	39,150	775	17,650	675	5,300	350	5,750	375	10,450	550
Male	15,800	575	8,550	475	1,950	250	2,050	250	3,250	300
Female	23,300	650	9,100	450	3,350	275	3,750	275	7,150	400
Social sciences	64,150	975	36,950	800	9,300	425	8,300	450	9,600	450
Male	37,750	800	23,450	725	4,800	300	4,500	375	4,950	350
Female	26,400	625	13,450	500	4,500	250	3,800	250	4,650	275
Economics	14,400	525	8,750	450	2,400	225	1,650	250	1,600	225
Male	10,650	500	6,700	425	1,600	200	1,200	225	1,100	200
Female	3,750	250	2,050	175	750	125	450	100	500	125
Political science and government	14,950	475	9,400	400	2,100	250	1,600	225	1,900	225
Male	9,600	450	6,400	375	1,150	175	850	200	1,250	175
Female	5,350	325	3,000	300	950	150	750	125	650	150
Sociology, demography, and population studies	10,600	350	6,550	325	1,450	150	1,250	175	1,350	175
Male	4,950	250	3,400	250	450	100	500	125	600	125
Female	5,650	275	3,150	225	1,050	125	750	125	750	125
Other social sciences	24,200	525	12,250	425	3,400	250	3,750	250	4,800	250
Male	12,550	450	7,000	375	1,600	150	1,950	200	2,000	175
Female	11,650	325	5,250	250	1,800	150	1,850	175	2,750	200
Engineering	45,250	925	22,400	800	7,850	475	6,050	425	8,950	450
Male	36,750	950	19,300	775	6,050	400	4,800	425	6,550	400
Female	8,550	400	3,100	225	1,800	225	1,250	150	2,400	225
Aerospace, aeronautical, and astronautical engineering	1,650	175	800	150	250	75	150	50	450	100
Male	1,450	175	700	150	250	75	100	50	400	100
Female	200	50	100	50	S	S	*	*	50	25
Chemical engineering	3,850	350	1,950	275	500	125	550	150	850	175
Male	3,050	325	1,700	275	350	125	400	125	600	150
Female	800	150	250	75	150	50	100	75	300	100
Civil engineering	7,100	375	4,050	300	1,350	200	800	150	900	150
Male	5,700	350	3,550	300	1,000	175	600	150	550	100
Female	1,400	150	500	100	350	100	200	50	350	100
Electrical and computer engineering	9,950	500	5,650	375	1,400	225	1,200	175	1,700	200
Male	8,350	450	4,850	350	1,050	175	1,000	175	1,400	200
Female	1,600	175	800	125	350	125	200	75	250	75
Mechanical engineering	7,350	500	3,500	400	1,600	275	1,000	200	1,250	200
Male	6,400	500	3,200	400	1,350	275	900	200	950	200
Female	950	150	300	75	250	125	100	50	300	100
Metallurgical and materials engineering	2,800	275	1,150	175	500	125	500	125	700	150
Male	2,150	250	950	175	400	125	400	125	400	100
Female	650	125	150	50	100	50	100	50	300	125
Other engineering	12,550	450	5,300	325	2,250	225	1,900	200	3,100	250

TABLE 20

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2019

(Number and SE)

Field of study and sex	All employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Male	9,600	425	4,350	325	1,650	200	1,350	200	2,200	200
Female	3,000	200	950	150	550	100	550	100	900	125
Health	21,250	550	8,250	425	4,550	300	3,550	250	4,850	350
Male	6,850	325	3,150	250	1,300	150	1,000	150	1,450	175
Female	14,350	475	5,100	350	3,250	275	2,550	225	3,450	325

* = suppressed when population estimate < 25. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 21

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, tenure status, and years since doctorate: 2019

(Number and SE)

Field of study and sex	All employed				Tenured				Not tenured								Tenure not applicable			
									On tenure track				Not on tenure track							
	< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	108,100	1,200	236,250	2,075	10,300	500	150,200	1,575	37,750	875	13,150	550	23,550	600	28,650	925	36,500	775	44,300	975
Male	58,550	975	153,300	1,825	6,050	400	104,050	1,525	21,600	675	7,650	400	12,950	500	16,700	775	17,900	625	24,850	775
Female	49,550	825	82,950	1,225	4,250	275	46,150	950	16,100	500	5,450	325	10,600	425	11,900	550	18,600	575	19,450	675
Science	84,150	1,075	193,700	1,850	7,600	400	122,200	1,450	27,950	775	10,500	525	18,500	550	24,100	825	30,150	700	36,850	975
Male	44,400	850	123,850	1,575	4,550	325	83,100	1,250	15,450	550	6,450	375	10,000	450	13,900	625	14,400	525	20,400	800
Female	39,750	800	69,850	1,075	3,050	225	39,150	850	12,450	450	4,050	300	8,500	375	10,200	500	15,750	550	16,450	600
Biological, agricultural, and environmental life sciences	31,050	675	65,200	1,025	1,100	175	34,700	850	6,750	325	5,950	375	7,950	375	9,900	500	15,250	500	14,600	650
Male	15,500	575	40,150	975	650	150	23,800	750	3,550	250	3,650	300	4,250	275	5,400	400	7,050	375	7,300	525
Female	15,550	450	25,050	625	400	75	10,900	425	3,250	225	2,350	200	3,700	250	4,500	300	8,200	375	7,350	425
Computer and information sciences	4,250	250	6,500	400	550	125	4,950	350	2,200	225	200	75	600	100	500	100	900	150	850	175
Male	3,150	250	5,150	375	400	125	4,050	325	1,650	225	150	75	450	100	400	100	650	150	550	125
Female	1,100	125	1,300	175	150	75	900	150	550	100	50	25	150	50	100	50	250	75	250	125
Mathematics and statistics	5,900	300	14,300	500	900	150	11,400	475	2,400	225	500	100	1,550	175	950	150	1,050	150	1,450	175
Male	3,800	250	11,250	450	550	125	9,200	425	1,550	200	400	100	1,100	175	650	125	600	125	1,000	150
Female	2,100	175	3,050	225	350	75	2,150	175	900	125	100	50	450	100	300	75	400	75	500	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	13,500	500	33,900	700	800	150	20,850	625	4,100	300	1,700	200	2,950	225	4,100	325	5,650	325	7,200	425
Male	9,150	425	26,500	675	600	150	16,350	625	2,850	275	1,350	200	2,000	225	3,050	275	3,700	275	5,700	425
Female	4,350	225	7,400	300	200	75	4,550	250	1,200	125	350	75	950	125	1,050	150	1,950	200	1,500	175
Psychology	11,300	450	27,850	750	1,350	200	16,300	675	4,050	300	1,250	175	2,050	225	3,750	325	3,850	325	6,550	450
Male	3,500	275	12,350	550	650	125	7,900	475	1,400	225	550	125	550	125	1,500	250	900	150	2,400	275
Female	7,800	375	15,500	550	700	150	8,400	450	2,650	225	700	125	1,500	175	2,250	225	3,000	275	4,150	325
Social sciences	18,150	575	46,000	850	2,900	250	34,050	775	8,400	400	900	125	3,400	250	4,900	400	3,450	250	6,150	400
Male	9,300	425	28,450	750	1,700	200	21,750	700	4,450	300	350	100	1,650	175	2,850	325	1,500	175	3,500	300
Female	8,850	325	17,550	500	1,200	150	12,250	475	3,950	250	550	100	1,750	175	2,050	200	1,950	175	2,700	250
Engineering	15,250	550	30,050	825	1,400	200	21,000	825	6,600	475	1,250	175	3,000	300	3,050	300	4,200	325	4,750	325
Male	11,500	475	25,200	800	1,150	175	18,150	775	5,050	400	1,000	175	2,400	275	2,400	300	2,850	250	3,650	300
Female	3,700	275	4,800	275	250	75	2,850	225	1,550	200	250	75	600	100	650	125	1,350	175	1,050	175
Health	8,700	350	12,500	475	1,300	150	6,950	375	3,200	250	1,350	200	2,050	200	1,500	200	2,150	200	2,700	275
Male	2,600	225	4,250	250	300	100	2,800	250	1,100	150	200	50	550	150	450	100	650	100	750	150
Female	6,100	300	8,250	375	950	125	4,150	300	2,100	225	1,150	200	1,500	175	1,050	150	1,500	175	1,900	250

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 22

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and tenure status: 2019

(Number and SE)

Field of study, ethnicity, and race	All employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	344,350	2,325	160,500	1,650	50,850	1,000	52,200	1,125	80,800	1,250
Hispanic or Latino[a]	16,350	400	6,900	325	3,000	200	2,650	175	3,850	225
Not Hispanic or Latino[b]										
American Indian or Alaska Native	600	100	300	75	100	50	100	50	100	50
Asian	68,950	1,300	27,400	975	12,500	575	10,850	550	18,200	650
Black or African American	13,750	400	5,800	300	2,450	175	2,250	200	3,250	225
White	240,100	1,850	118,500	1,325	31,800	825	35,550	925	54,250	1,100
Other race[c]	4,600	250	1,650	175	1,000	125	800	125	1,150	125
Science	277,850	1,975	129,850	1,525	38,450	900	42,600	950	67,000	1,150
Hispanic or Latino[a]	13,550	325	5,600	275	2,450	175	2,200	175	3,300	225
Not Hispanic or Latino[b]										
American Indian or Alaska Native	500	100	250	75	100	25	50	25	100	50
Asian	49,450	1,075	18,550	800	8,600	500	8,000	400	14,350	625
Black or African American	10,750	375	4,650	250	1,750	150	1,750	175	2,550	200
White	199,750	1,700	99,400	1,275	24,700	750	29,900	800	45,750	1,025
Other race[c]	3,850	225	1,350	175	850	125	700	100	950	125
Biological, agricultural, and environmental life sciences	96,250	1,175	35,800	900	12,700	500	17,850	600	29,850	825
Hispanic or Latino[a]	4,800	225	1,400	150	900	100	1,000	100	1,550	150
Not Hispanic or Latino[b]										
American Indian or Alaska Native	100	50	S	S	S	S	D	D	50	25
Asian	20,250	600	4,650	375	3,100	325	4,350	350	8,150	425
Black or African American	2,700	200	850	125	450	75	500	100	900	100
White	67,050	1,000	28,450	750	8,000	350	11,750	550	18,800	675
Other race[c]	1,400	150	400	100	200	50	300	75	450	100
Computer and information sciences	10,750	475	5,500	375	2,400	250	1,100	125	1,750	225
Hispanic or Latino[a]	400	75	150	50	50	25	S	S	100	50
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	3,800	350	1,900	250	1,100	225	200	75	650	175
Black or African American	250	50	100	50	100	50	*	*	D	D
White	6,250	350	3,300	275	1,150	150	800	125	1,000	150
Other race[c]	100	25	50	25	D	D	D	D	*	*
Mathematics and statistics	20,200	525	12,300	500	2,950	225	2,450	225	2,500	225
Hispanic or Latino[a]	900	100	500	100	100	50	150	50	150	50
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	5,050	350	3,100	300	900	150	600	125	450	100
Black or African American	550	75	250	50	150	50	50	50	100	50
White	13,500	450	8,350	375	1,700	175	1,650	175	1,800	175
Other race[c]	200	75	S	S	50	25	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	47,350	850	21,650	650	5,800	400	7,050	400	12,850	525
Hispanic or Latino[a]	1,650	125	700	100	350	75	200	50	450	75
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D

TABLE 22

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and tenure status: 2019

(Number and SE)

Field of study, ethnicity, and race	All employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Asian	9,450	525	3,300	325	900	175	1,750	225	3,500	325
Black or African American	1,100	125	500	100	150	50	150	50	300	75
White	34,600	825	17,050	625	4,300	350	4,800	325	8,450	475
Other race[c]	500	100	150	50	150	75	150	50	100	50
Psychology	39,150	775	17,650	675	5,300	350	5,750	375	10,450	550
Hispanic or Latino[a]	2,100	150	900	125	350	75	300	75	600	100
Not Hispanic or Latino[b]										
American Indian or Alaska Native	50	25	50	25	D	D	D	D	D	D
Asian	3,400	325	1,450	250	700	150	350	100	900	175
Black or African American	2,200	175	900	125	300	100	400	75	550	100
White	30,700	775	14,150	625	3,800	325	4,550	350	8,200	525
Other race[c]	700	100	250	75	150	50	150	75	200	50
Social sciences	64,150	975	36,950	800	9,300	425	8,300	450	9,600	450
Hispanic or Latino[a]	3,750	200	2,000	150	750	125	500	75	500	100
Not Hispanic or Latino[b]										
American Indian or Alaska Native	300	75	200	75	50	25	S	S	D	D
Asian	7,550	450	4,150	350	1,900	225	750	150	750	175
Black or African American	4,000	250	2,100	200	600	100	550	125	750	125
White	47,650	875	28,100	750	5,750	325	6,350	400	7,450	425
Other race[c]	900	125	450	75	250	75	100	50	150	50
Engineering	45,250	925	22,400	800	7,850	475	6,050	425	8,950	450
Hispanic or Latino[a]	1,950	175	1,050	150	250	75	300	50	350	75
Not Hispanic or Latino[b]										
American Indian or Alaska Native	50	25	S	S	D	D	D	D	D	D
Asian	16,150	750	7,800	625	3,150	300	2,200	300	3,000	275
Black or African American	1,400	150	650	100	200	75	200	75	300	75
White	25,250	700	12,700	550	4,100	325	3,250	275	5,200	350
Other race[c]	450	75	150	50	100	50	50	50	150	50
Health	21,250	550	8,250	425	4,550	300	3,550	250	4,850	350
Hispanic or Latino[a]	800	100	200	50	300	75	150	50	200	50
Not Hispanic or Latino[b]										
American Indian or Alaska Native	50	25	D	D	D	D	D	D	D	D
Asian	3,350	275	1,050	175	700	125	700	150	900	150
Black or African American	1,600	125	500	75	450	75	250	75	400	75
White	15,050	475	6,350	350	3,000	275	2,400	225	3,300	300
Other race[c]	300	75	150	50	50	25	50	25	100	50

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 23

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, primary work activity, and secondary work activity: 2019

(Number and SE)

Field of study and primary work activity	All employed		Secondary work activity											
			Computer applications		Management, sales, or administration[a]		R&D[b]		Teaching		Other[c]		None	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	344,350	2,325	9,050	450	76,250	1,225	133,300	1,825	68,950	1,300	26,600	750	30,300	825
Computer applications	3,450	275	na	na	450	100	2,200	225	200	75	150	75	450	125
Management and administration	45,900	850	250	100	12,150	475	15,850	600	11,750	525	4,750	375	1,150	200
Research and development	140,200	1,550	6,800	375	31,000	825	39,250	925	50,800	1,150	4,950	325	7,400	425
Teaching	132,800	1,575	1,800	225	25,700	775	70,950	1,300	na	na	16,100	600	18,200	625
Others	21,950	800	150	100	6,950	475	5,050	350	6,150	450	600	175	3,100	225
Science	277,850	1,975	7,050	375	62,800	1,075	105,550	1,400	55,250	1,250	21,750	675	25,400	750
Computer applications	2,650	225	na	na	350	100	1,700	200	150	75	150	50	300	100
Management and administration	36,600	775	150	50	9,550	425	12,900	500	9,200	500	4,000	325	850	175
Research and development	111,950	1,450	5,400	325	25,650	725	29,900	750	40,600	1,075	4,050	300	6,400	400
Teaching	107,650	1,475	1,400	175	21,250	700	56,800	1,050	na	na	13,050	550	15,200	550
Others	19,000	775	S	S	6,000	450	4,250	325	5,350	425	550	150	2,700	200
Biological, agricultural, and environmental life sciences	96,250	1,175	2,450	200	26,100	800	36,150	825	16,050	650	7,050	400	8,450	425
Computer applications	800	125	na	na	150	75	550	100	D	D	D	D	100	50
Management and administration	13,350	575	D	D	3,200	275	5,800	400	2,600	275	1,450	225	300	100
Research and development	49,050	900	2,200	200	14,500	575	15,300	575	11,150	525	2,100	225	3,750	325
Teaching	24,400	625	200	75	5,800	350	12,200	475	na	na	3,300	275	2,950	225
Others	8,650	500	D	D	2,450	275	2,350	225	2,300	275	150	75	1,350	175
Computer and information sciences	10,750	475	1,000	175	1,800	225	4,300	350	2,350	275	700	150	600	100
Computer applications	500	150	na	na	D	D	300	125	D	D	D	D	D	D
Management and administration	1,400	200	D	D	250	100	600	125	450	125	100	50	50	25
Research and development	3,800	300	450	125	600	125	800	150	1,800	250	50	50	S	S
Teaching	4,850	300	550	100	850	175	2,550	250	na	na	500	150	400	100
Others	250	75	D	D	50	50	D	D	100	75	D	D	*	*
Mathematics and statistics	20,200	525	750	150	2,600	200	8,150	425	4,800	375	1,450	175	2,400	275
Computer applications	250	75	na	na	D	D	100	50	D	D	D	D	D	D
Management and administration	1,200	150	D	D	400	75	250	75	500	100	*	*	S	S
Research and development	6,500	375	400	100	350	75	1,250	175	4,150	350	100	50	300	75
Teaching	11,900	450	350	100	1,750	175	6,550	400	na	na	1,350	150	1,900	225
Others	350	125	D	D	50	50	D	D	100	50	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	47,350	850	1,900	225	10,400	525	19,400	700	8,550	450	2,550	250	4,600	350
Computer applications	850	150	na	na	100	50	500	125	S	S	S	S	S	S

TABLE 23

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, primary work activity, and secondary work activity: 2019

(Number and SE)

Field of study and primary work activity	All employed		Secondary work activity											
			Computer applications		Management, sales, or administration[a]		R&D[b]		Teaching		Other[c]		None	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Management and administration	6,350	325	100	50	1,350	175	2,800	275	1,650	200	450	125	50	25
Research and development	19,900	625	1,600	200	3,700	300	6,400	400	6,400	375	500	100	1,300	175
Teaching	18,500	650	150	75	4,500	350	9,400	500	na	na	1,450	175	3,000	275
Others	1,750	225	D	D	750	125	300	75	450	150	50	25	200	75
Psychology	39,150	775	350	75	10,200	450	12,450	475	8,350	500	4,600	350	3,150	250
Computer applications	50	50	na	na	D	D	50	50	D	D	D	D	D	D
Management and administration	6,000	400	D	D	1,750	200	1,700	200	1,400	250	1,000	175	150	50
Research and development	12,900	500	300	75	3,500	300	2,500	225	5,550	425	700	125	350	100
Teaching	14,800	575	D	D	3,000	250	7,150	375	na	na	2,650	275	2,000	200
Others	5,350	450	D	D	2,000	275	1,050	175	1,350	225	250	125	700	125
Social sciences	64,150	975	600	150	11,650	475	25,100	650	15,200	600	5,400	375	6,200	400
Computer applications	200	75	na	na	D	D	150	75	D	D	D	D	D	D
Management and administration	8,250	400	D	D	2,600	250	1,800	200	2,650	250	950	175	200	100
Research and development	19,800	675	450	125	3,000	275	3,600	300	11,500	525	550	125	700	150
Teaching	33,200	775	100	50	5,350	350	19,000	550	na	na	3,800	350	4,950	375
Others	2,650	275	D	D	650	125	550	125	1,000	175	S	S	300	100
Engineering	45,250	925	1,800	275	8,350	450	20,100	675	9,700	550	2,300	275	3,000	275
Computer applications	800	150	na	na	S	S	500	125	D	D	D	D	S	S
Management and administration	5,900	350	S	S	1,500	200	2,200	225	1,450	200	400	100	250	100
Research and development	21,550	700	1,350	200	3,550	300	7,700	475	7,750	500	500	125	700	150
Teaching	15,750	625	400	150	2,800	300	9,400	525	na	na	1,350	225	1,800	225
Others	1,250	175	D	D	450	100	300	100	450	125	D	D	50	50
Health	21,250	550	150	75	5,150	325	7,600	425	3,950	275	2,500	250	1,900	250
Computer applications	50	25	na	na	D	D	*	*	D	D	D	D	D	D
Management and administration	3,400	250	D	D	1,100	150	750	125	1,100	175	350	100	50	25
Research and development	6,700	375	50	50	1,800	225	1,650	200	2,450	250	400	100	300	100
Teaching	9,350	500	D	D	1,700	200	4,750	325	na	na	1,700	225	1,200	200
Others	1,750	225	D	D	500	125	450	125	400	100	S	S	350	100

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. na = not applicable. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] R&D includes applied and basic research, design, and development.

[c] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Primary and secondary work activities were self-defined by the respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 24

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2019

(Number and SE)

Characteristic	All employed		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipient	857,200	1,975	640,300	1,900	220,700	1,100	31,100	400	36,650	450	133,750	950	115,350	825	102,700	900	176,700	1,175	40,200	475
Sex																				
Male	546,050	1,750	383,900	1,700	124,550	1,025	25,500	425	27,350	450	101,300	925	45,600	800	59,600	825	147,250	1,200	14,900	325
Female	311,200	1,200	256,400	1,200	96,200	900	5,600	300	9,300	325	32,500	525	69,700	775	43,100	575	29,450	575	25,300	400
Ethnicity																				
Hispanic or Latino[a]	37,250	550	29,200	475	10,250	275	950	100	1,300	100	4,350	200	6,550	250	5,800	275	6,650	275	1,400	125
Not Hispanic or Latino[b]																				
American Indian or Alaska Native	1,300	125	1,050	125	200	50	D	D	D	D	50	25	300	75	400	100	150	50	100	50
Asian	213,350	1,325	128,850	1,150	50,650	875	13,400	400	11,300	400	32,900	725	7,100	425	13,500	525	75,800	1,150	8,700	350
Black or African American	31,100	400	23,750	375	7,050	250	600	75	850	100	3,050	225	5,850	225	6,400	300	4,150	200	3,150	225
White	562,350	1,750	447,900	1,800	149,050	1,100	15,800	375	22,750	425	91,750	975	93,600	925	74,950	750	88,050	1,050	26,400	475
Other race[c]	11,950	400	9,500	325	3,550	200	350	100	400	100	1,650	150	1,950	175	1,600	175	1,900	225	500	75
Age																				
Under 35	99,050	1,050	68,100	925	25,700	550	3,900	275	5,600	300	17,500	500	8,400	400	7,000	375	27,050	650	3,900	250
35–39	128,800	1,375	93,250	1,175	35,350	775	6,850	425	6,050	325	19,200	625	13,250	500	12,600	450	30,900	700	4,650	250
40–44	117,500	1,325	87,450	1,200	34,150	950	5,250	350	5,000	275	16,800	600	13,250	475	13,000	550	24,950	700	5,100	325
45–49	108,400	1,450	82,700	1,250	28,900	775	4,400	325	4,400	300	15,800	550	14,800	600	14,400	525	21,250	700	4,450	350
50–54	100,900	1,375	74,250	1,100	24,200	675	3,100	275	3,850	275	16,050	625	13,700	575	13,450	575	21,400	700	5,200	325
55–59	101,950	1,400	75,100	1,250	25,100	725	3,450	300	4,150	300	17,700	650	12,700	525	12,000	525	22,000	700	4,800	325
60–64	88,300	1,400	67,900	1,200	22,750	825	2,500	250	3,250	325	15,100	575	12,700	575	11,600	450	14,400	600	6,000	375
65–75	112,350	1,625	91,550	1,400	24,600	775	1,700	200	4,450	300	15,600	525	26,500	850	18,750	700	14,700	725	6,100	350
Citizenship																				
U.S. citizen	732,750	2,000	563,550	1,875	194,100	1,225	21,800	500	28,500	525	114,750	1,075	112,600	875	91,850	950	133,500	1,275	35,700	475
Native-born	555,150	1,575	451,600	1,600	154,300	1,200	12,950	400	19,400	400	87,050	900	102,300	875	75,600	725	75,050	950	28,550	475
Naturalized	177,600	1,675	111,950	1,400	39,800	850	8,800	450	9,100	400	27,700	725	10,300	500	16,300	625	58,450	1,050	7,150	350
Non-U.S. citizen	124,450	1,600	76,750	1,325	26,650	800	9,350	450	8,200	400	19,000	700	2,750	275	10,850	600	43,200	1,000	4,500	300
Permanent resident	87,200	1,475	54,000	1,175	18,450	650	6,450	425	5,300	350	13,600	625	2,250	250	8,000	525	30,300	925	2,900	225
Temporary resident	37,300	900	22,750	725	8,200	450	2,850	275	2,900	300	5,450	400	500	150	2,850	275	12,900	500	1,650	225
Years since doctorate																				
≤ 5	142,500	625	100,000	750	35,700	600	7,350	325	6,600	300	19,800	425	14,650	375	15,900	375	33,400	700	9,100	275
6–10	154,750	1,025	112,250	1,025	41,950	750	7,650	350	6,800	300	21,800	575	16,800	475	17,300	475	34,400	750	8,100	350
11–15	127,000	1,150	93,350	1,150	34,050	675	5,200	300	5,350	275	17,650	575	16,300	425	14,850	475	27,250	650	6,400	300

TABLE 24

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2019

(Number and SE)

Characteristic	All employed		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
16–20	108,700	825	82,300	875	28,600	600	3,300	225	4,150	300	16,250	550	15,650	575	14,350	500	20,750	550	5,650	350
21–25	104,250	825	76,550	775	25,250	625	3,300	225	4,150	275	16,900	575	14,000	525	13,000	525	23,250	625	4,450	250
> 25	220,000	1,575	175,800	1,425	55,200	925	4,300	300	9,650	375	41,350	775	38,000	850	27,300	700	37,700	825	6,500	300
Place of birth																				
United States	544,400	1,525	443,200	1,500	151,600	1,150	12,750	400	19,000	425	85,000	850	100,950	875	73,850	750	73,250	875	27,950	450
Asia	217,650	1,500	126,750	1,200	47,650	825	13,900	450	11,550	400	32,800	775	6,550	450	14,250	575	82,350	1,250	8,550	350
Europe[d]	46,050	900	35,450	775	9,750	500	2,700	275	3,650	275	9,000	425	3,450	325	6,900	375	9,300	425	1,250	150
North America[e]	8,200	400	6,550	375	1,950	225	250	125	300	75	1,350	175	1,200	175	1,500	225	1,150	175	500	100
Central America[f]	5,800	325	4,350	275	1,650	150	200	75	300	75	900	150	450	75	900	150	1,300	175	150	50
Caribbean	4,000	250	3,150	225	900	125	100	50	50	25	550	100	950	150	600	100	600	100	250	75
South America	11,750	475	8,300	425	3,400	250	400	75	650	100	1,450	150	750	100	1,700	175	3,000	225	450	100
Africa	13,950	475	9,250	400	2,950	225	500	125	750	100	2,000	225	700	150	2,350	200	3,800	325	900	150
Oceania	1,850	225	1,400	200	400	125	S	S	200	75	300	125	100	50	300	75	350	100	100	50
Unknown	3,550	400	1,900	275	450	125	200	100	250	150	450	150	250	100	300	100	1,500	275	150	75

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes Russia.

[e] Excludes United States.

[f] Includes Mexico.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 25

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and citizenship status: 2019

(Number and SE)

Characteristic	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipient	857,200	1,975	732,750	2,000	555,150	1,575	177,600	1,675	124,450	1,600	87,200	1,475	37,300	900
Sex														
Male	546,050	1,750	458,800	1,875	335,250	1,525	123,600	1,350	87,200	1,400	60,750	1,275	26,500	800
Female	311,200	1,200	273,950	1,250	219,900	1,150	54,000	800	37,250	825	26,450	775	10,800	500
Ethnicity														
Hispanic or Latino[a]	37,250	550	31,850	500	20,500	425	11,350	325	5,350	275	3,500	200	1,850	175
Not Hispanic or Latino[b]														
American Indian or Alaska Native	1,300	125	1,250	125	1,250	125	*	*	D	D	D	D	D	D
Asian	213,350	1,325	123,800	1,275	18,750	575	105,000	1,300	89,600	1,175	60,600	1,200	29,000	775
Black or African American	31,100	400	27,500	425	19,250	350	8,250	300	3,600	250	2,550	200	1,050	150
White	562,350	1,750	536,900	1,750	485,550	1,675	51,350	1,125	25,450	875	20,200	800	5,250	400
Other race[c]	11,950	400	11,500	375	9,850	350	1,650	200	450	100	300	75	150	75
Age														
Under 35	99,050	1,050	63,200	975	55,950	950	7,200	400	35,850	850	15,100	625	20,750	625
35–39	128,800	1,375	91,050	1,200	75,550	1,075	15,500	600	37,750	975	27,300	900	10,450	600
40–44	117,500	1,325	93,100	1,200	66,800	1,000	26,300	800	24,400	875	20,800	750	3,600	375
45–49	108,400	1,450	95,950	1,425	67,050	1,100	28,900	950	12,450	600	11,400	575	1,050	150
50–54	100,900	1,375	95,050	1,375	65,400	1,175	29,650	925	5,850	450	5,150	400	700	150
55–59	101,950	1,400	97,450	1,425	66,650	1,275	30,850	825	4,500	375	4,000	375	500	150
60–64	88,300	1,400	86,200	1,375	65,850	1,200	20,350	750	2,150	250	1,950	250	150	50
65–75	112,350	1,625	110,850	1,550	91,950	1,425	18,900	800	1,550	275	1,450	275	D	D
Years since doctorate														
≤ 5	142,500	625	91,600	775	79,700	825	11,900	425	50,900	800	22,400	700	28,450	725
6–10	154,750	1,025	114,900	1,025	92,450	925	22,450	700	39,900	950	33,750	900	6,150	450
11–15	127,000	1,150	108,050	1,150	74,250	1,025	33,850	850	18,950	800	17,550	775	1,400	225
16–20	108,700	825	102,200	850	71,700	750	30,500	750	6,500	400	5,900	375	600	150
21–25	104,250	825	100,300	875	68,100	875	32,150	775	3,950	425	3,600	400	350	150
> 25	220,000	1,575	215,700	1,575	169,000	1,500	46,700	1,025	4,300	450	4,000	425	300	125
Place of birth														
United States	544,400	1,525	543,550	1,525	541,750	1,575	1,800	250	800	175	300	100	500	150
Asia	217,650	1,500	123,550	1,450	5,350	350	118,200	1,450	94,100	1,150	64,300	1,200	29,800	750
Europe[d]	46,050	900	32,300	800	4,450	325	27,850	750	13,750	650	11,200	575	2,550	275
North America[e]	8,200	400	5,350	325	1,000	150	4,350	300	2,850	275	2,350	250	500	125
Central America[f]	5,800	325	3,950	225	650	100	3,350	200	1,850	225	1,100	150	750	175
Caribbean	4,000	250	3,200	250	100	50	3,100	250	800	125	600	100	150	50
South America	11,750	475	8,300	400	800	150	7,550	400	3,450	225	2,300	200	1,150	150
Africa	13,950	475	10,000	425	700	150	9,300	425	4,000	300	2,800	250	1,150	175
Oceania	1,850	225	1,000	150	300	100	700	125	850	175	800	175	S	S
Unknown	3,550	400	1,550	275	S	S	1,450	275	2,000	325	1,450	300	600	175

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes Russia.

[e] Excludes United States.

[f] Includes Mexico.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 26-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, primary or secondary work activity, and sector of employment: 2019

(Number and SE)

Characteristic	All employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate Recipient	857,200	1,975	344,350	2,325	30,900	900	306,300	2,500	55,900	1,125	50,150	1,025	18,850	750	40,750	1,100	10,050	550
Sex																		
Male	546,050	1,750	211,850	2,075	14,300	675	218,700	2,050	31,100	925	31,150	825	10,950	550	21,750	950	6,250	450
Female	311,200	1,200	132,500	1,450	16,600	575	87,600	1,225	24,800	625	19,000	650	7,900	425	19,000	575	3,800	350
Ethnicity																		
Hispanic or Latino[f]	37,250	550	16,350	400	1,900	175	11,150	400	2,350	175	2,500	175	900	125	1,450	150	550	100
Not Hispanic or Latino[g]																		
American Indian or Alaska Native	1,300	125	600	100	100	50	300	75	50	25	100	50	50	25	50	25	D	D
Asian	213,350	1,325	68,950	1,300	3,150	400	109,300	1,525	11,150	525	8,550	525	3,900	375	4,400	375	3,850	350
Black or African American	31,100	400	13,750	400	2,450	200	7,300	325	2,400	275	2,550	225	1,450	175	800	100	400	75
White	562,350	1,750	240,100	1,850	22,700	725	174,200	1,900	39,050	1,025	35,450	825	12,300	625	33,450	975	5,150	400
Other race[h]	11,950	400	4,600	250	550	100	4,000	275	850	125	950	125	250	75	600	125	100	50
Age																		
Under 35	99,050	1,050	37,250	900	1,700	175	44,850	925	6,600	375	4,950	300	1,800	250	950	150	950	150
35–39	128,800	1,375	52,050	925	3,350	275	52,300	1,100	8,700	450	6,600	375	2,650	250	1,950	225	1,200	200
40–44	117,500	1,325	47,450	950	4,000	300	44,650	925	8,000	450	7,150	450	2,100	250	2,700	275	1,450	250
45–49	108,400	1,450	45,750	1,100	4,350	275	37,400	900	7,000	400	7,100	475	2,350	225	3,100	300	1,300	200
50–54	100,900	1,375	39,200	1,050	4,750	375	37,000	1,050	6,700	475	6,250	375	2,200	275	3,600	300	1,250	225
55–59	101,950	1,400	39,950	1,050	4,300	325	35,500	825	6,300	425	6,900	400	2,500	350	5,100	425	1,350	200
60–64	88,300	1,400	37,000	1,025	3,800	325	26,250	850	5,600	350	6,350	450	2,300	250	5,950	375	1,050	200
65–75	112,350	1,625	45,650	1,100	4,650	375	28,350	950	7,000	475	4,800	400	2,950	325	17,450	725	1,550	225
Citizenship																		
U.S. citizen	732,750	2,000	296,150	2,175	29,550	900	245,250	2,275	49,900	1,100	48,550	1,000	16,950	700	39,100	1,075	7,300	450
Native-born	555,150	1,575	234,600	1,775	24,850	800	165,250	1,825	40,300	925	38,850	900	13,250	625	33,650	950	4,400	325
Naturalized	177,600	1,675	61,550	1,425	4,650	375	80,000	1,325	9,600	575	9,750	525	3,700	350	5,450	450	2,900	325
Non-U.S. citizen	124,450	1,600	48,250	1,125	1,350	200	61,000	1,250	6,000	375	1,550	225	1,900	275	1,600	250	2,800	275
Permanent resident	87,200	1,475	33,150	1,000	950	175	43,750	1,200	4,050	325	950	150	1,400	225	1,500	225	1,450	200
Temporary resident	37,300	900	15,100	650	450	125	17,250	625	1,950	250	600	150	450	125	100	75	1,300	225
Years since doctorate																		
≤ 5	142,500	625	57,300	900	3,950	275	55,950	875	10,600	500	7,950	400	3,500	325	1,800	175	1,450	175
6–10	154,750	1,025	63,300	975	5,250	350	58,850	950	10,450	475	8,250	425	3,300	275	3,200	275	2,150	250
11–15	127,000	1,150	52,350	975	4,750	300	46,000	1,050	8,400	450	8,000	475	2,550	275	3,750	325	1,250	175
16–20	108,700	825	44,650	825	4,500	350	37,450	775	6,800	375	7,900	500	2,550	225	3,650	325	1,200	200
21–25	104,250	825	38,950	875	4,500	375	38,700	950	6,550	425	6,650	350	2,350	275	5,100	400	1,400	225
> 25	220,000	1,575	87,800	1,425	7,950	475	69,350	1,200	13,100	625	11,350	550	4,550	375	23,250	800	2,700	300

TABLE 26-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, primary or secondary work activity, and sector of employment: 2019

(Number and SE)

Characteristic	All employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Primary or secondary work activity[i]																		
Any R&D	540,350	2,375	234,300	2,225	6,750	400	201,550	2,075	33,450	825	33,950	850	9,950	475	13,950	625	6,450	450
Applied research	300,950	2,225	119,750	1,750	3,000	300	110,550	1,575	23,400	725	25,700	725	6,750	450	7,850	450	4,000	325
Basic research	180,500	2,150	134,700	1,750	2,350	225	15,800	700	11,000	425	10,900	475	2,350	275	2,200	250	1,200	200
Design	64,450	1,275	7,250	425	750	150	44,850	1,100	3,800	350	2,800	250	1,500	200	2,500	300	1,050	200
Development	133,400	1,625	11,850	550	1,400	200	98,900	1,475	5,900	325	5,800	425	1,850	250	5,200	400	2,500	325
Computer applications	86,100	1,425	12,500	500	800	150	58,050	1,175	5,150	400	4,350	325	2,150	250	1,800	200	1,300	200
Management, sales, or administration[j]	351,450	2,375	110,000	1,375	10,250	500	146,550	1,850	28,350	875	24,600	575	10,050	550	17,200	800	4,400	325
Professional services	121,550	1,600	20,050	775	3,900	300	46,500	1,125	14,000	650	7,650	475	4,750	375	22,950	800	1,750	250
Teaching	245,900	2,050	201,700	1,950	23,150	825	8,450	500	4,400	350	2,050	225	1,200	175	4,500	375	400	125
Other work activities[k]	81,800	1,475	28,500	850	4,300	300	27,950	800	5,200	350	7,100	425	2,900	275	4,450	375	1,400	225

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

[f] Hispanic or Latino may be of any race.

[g] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[h] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[i] Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Detail may exceed total due to multiple responses.

[j] Administration includes accounting, finance, contracts, and human resources.

[k] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 26-2

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, primary work activity, and sector of employment: 2019

(Number and SE)

Primary work activity	All employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipients	857,200	1,975	344,350	2,325	30,900	900	306,300	2,500	55,900	1,125	50,150	1,025	18,850	750	40,750	1,100	10,050	550
Any R&D	351,000	1,975	140,200	1,550	1,750	225	139,500	1,625	25,300	700	24,300	750	6,650	400	8,750	500	4,500	325
Applied research	168,650	1,775	61,700	1,250	950	175	63,450	1,200	15,150	575	16,600	600	4,350	325	4,200	300	2,200	225
Basic research	92,700	1,700	74,100	1,475	400	125	4,650	425	6,350	350	4,750	325	1,100	200	800	150	600	150
Design	24,050	975	1,400	200	100	50	18,050	875	1,300	200	850	150	700	175	1,150	200	500	125
Development	65,600	1,400	3,050	275	250	75	53,350	1,225	2,500	250	2,100	225	550	125	2,600	275	1,200	200
Computer applications	44,450	950	3,450	275	200	50	34,250	925	2,050	300	1,700	225	1,100	200	1,000	150	650	150
Management, sales, or administration[f]	165,400	2,025	45,900	850	3,450	300	76,300	1,475	13,200	600	13,250	475	5,600	375	5,400	400	2,300	250
Professional services	97,050	1,625	12,600	650	2,700	250	38,150	1,125	11,200	600	6,150	425	3,600	325	21,250	750	1,450	250
Teaching	161,000	1,700	132,800	1,575	21,550	775	2,750	250	1,350	200	350	75	350	125	1,750	250	150	75
Other work activities[g]	38,300	975	9,350	500	1,300	175	15,350	525	2,850	250	4,350	325	1,600	200	2,600	275	1,000	225

SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

[f] Administration includes accounting, finance, contracts, and human resources.

[g] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 27-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2019

(Number and SE)

Characteristic	All employed						Hispanic or Latino[a]						Not Hispanic or Latino[b]																							
													American Indian or Alaska Native						Asian						Black or African American						White					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipient	857,200	1,975	546,050	1,750	311,200	1,200	37,250	550	21,200	450	16,050	400	1,300	125	750	100	550	75	213,350	1,325	146,800	1,250	66,550	950	31,100	400	15,750	375	15,350	375	562,350	1,750	355,000	1,800	207,300	1,175
Age																																				
Under 35	99,050	1,050	56,650	950	42,400	775	4,750	275	2,400	175	2,350	200	100	50	50	50	50	25	35,500	775	22,150	650	13,350	500	2,850	200	1,050	150	1,850	175	53,500	825	29,800	725	23,750	600
35–39	128,800	1,375	76,650	1,250	52,100	900	6,950	275	3,600	225	3,350	225	200	50	50	25	150	50	38,950	900	25,500	875	13,450	575	4,900	275	2,000	175	2,900	200	75,550	1,125	44,350	875	31,150	700
40–44	117,500	1,325	68,950	1,200	48,550	825	5,900	250	3,000	200	2,900	175	200	50	100	50	100	50	36,350	850	23,600	775	12,750	525	4,900	250	2,400	225	2,500	175	68,300	1,075	38,800	850	29,450	700
45–49	108,400	1,450	66,000	1,150	42,400	950	4,950	275	2,850	200	2,100	175	150	50	100	50	50	25	29,600	800	19,600	725	10,000	475	4,650	275	2,350	200	2,300	175	67,650	1,150	40,350	900	27,300	750
50–54	100,900	1,375	64,250	1,225	36,600	800	4,250	225	2,500	175	1,750	150	200	75	150	50	50	25	24,750	825	17,650	725	7,100	375	3,450	225	1,600	175	1,850	200	66,850	1,225	41,700	975	25,150	700
55–59	101,950	1,400	69,400	1,075	32,500	750	4,050	250	2,550	225	1,500	150	100	50	50	50	50	25	23,250	725	17,700	650	5,550	375	3,350	250	2,000	200	1,350	175	70,050	1,200	46,400	950	23,700	650
60–64	88,300	1,400	60,700	1,200	27,600	725	3,100	225	1,950	175	1,150	150	150	50	100	50	50	25	14,700	650	11,750	625	2,950	275	2,900	200	1,700	150	1,250	150	66,650	1,175	44,700	1,000	22,000	650
65–75	112,350	1,625	83,350	1,350	29,000	750	3,200	250	2,250	250	950	100	200	75	100	50	100	50	10,300	625	8,900	625	1,400	175	4,050	300	2,600	275	1,400	125	93,800	1,425	68,950	1,150	24,850	675
Years since doctorate																																				
≤ 5	142,500	625	80,500	825	61,950	775	8,700	325	4,350	225	4,300	275	250	75	100	50	150	50	46,750	725	29,750	625	17,000	525	6,850	325	3,000	225	3,850	250	76,850	800	41,700	700	35,150	575
6–10	154,750	1,025	90,400	875	64,350	775	8,200	350	4,300	250	3,950	200	250	50	100	50	150	50	45,550	900	29,650	775	15,900	525	6,550	275	2,850	225	3,700	200	91,450	1,025	52,100	750	39,300	625
11–15	127,000	1,150	74,800	975	52,200	875	5,750	300	3,150	225	2,550	175	300	75	200	50	100	50	38,000	900	24,650	750	13,350	525	4,850	275	2,500	225	2,400	150	76,350	1,050	43,400	850	32,950	675
16–20	108,700	825	66,000	800	42,700	750	4,550	250	2,600	200	1,950	175	200	50	100	25	100	50	25,450	675	17,650	625	7,800	400	4,300	225	1,850	175	2,450	175	72,800	825	42,950	825	29,850	625
21–25	104,250	825	69,150	850	35,100	725	3,800	225	2,250	175	1,500	125	150	50	100	50	50	25	26,650	650	19,800	625	6,850	350	2,900	250	1,750	200	1,150	150	69,800	825	44,700	700	25,100	600
> 25	220,000	1,575	165,200	1,450	54,800	950	6,250	325	4,450	275	1,800	175	200	75	150	75	S	S	30,950	875	25,300	775	5,650	425	5,600	325	3,750	275	1,850	175	175,100	1,625	130,150	1,425	44,950	800
Citizenship																																				
U.S. citizen	732,750	2,000	458,800	1,875	273,950	1,250	31,850	500	17,700	400	14,150	375	1,250	125	700	100	550	75	123,800	1,275	84,400	1,100	39,350	750	27,500	425	13,050	375	14,450	325	536,900	1,750	336,700	1,850	200,200	1,175
Native-born	555,150	1,575	335,250	1,525	219,900	1,150	20,500	425	10,350	350	10,150	325	1,250	125	700	100	550	75	18,750	575	10,600	475	8,150	375	19,250	350	7,200	300	12,050	350	485,550	1,675	301,050	1,575	184,500	1,100
Naturalized	177,600	1,675	123,600	1,350	54,000	800	11,350	325	7,350	275	4,000	225	*	*	*	*	D	D	105,000	1,300	73,800	1,075	31,200	750	8,250	300	5,850	275	2,400	175	51,350	1,125	35,700	1,000	15,700	500
Non-U.S. citizen	124,450	1,600	87,200	1,400	37,250	825	5,350	275	3,500	225	1,900	175	D	D	D	D	D	D	89,600	1,175	62,400	1,125	27,200	700	3,600	250	2,700	225	900	125	25,450	875	18,300	750	7,150	400
Permanent resident	87,200	1,475	60,750	1,275	26,450	775	3,500	200	2,250	175	1,250	125	D	D	D	D	D	D	60,600	1,200	41,850	1,025	18,750	675	2,550	200	1,950	200	600	100	20,200	800	14,500	675	5,700	350
Temporary resident	37,300	900	26,500	800	10,800	500	1,850	175	1,250	150	600	100	D	D	D	D	D	D	29,000	775	20,550	725	8,450	475	1,050	150	750	125	250	75	5,250	400	3,800	325	1,450	175
Employer location																																				
New England	77,100	1,375	48,500	1,100	28,600	825	2,600	175	1,500	150	1,100	125	100	50	50	25	50	25	17,650	800	11,600	625	6,050	400	1,450	150	700	100	750	125	54,200	1,050	34,000	825	20,200	700
Middle Atlantic	117,450	1,875	72,450	1,600	45,000	1,125	4,150	225	2,250	175	1,900	150	50	25	50	25	D	D	30,250	1,025	20,150	875	10,100	500	4,050	225	2,050	175	2,000	175	77,500	1,450	47,300	1,250	30,150	950
East North Central	100,900	1,550	64,950	1,325	35,950	850	3,250	175	1,850	150	1,400	125	200	75	100	50	100	50	22,550	850	16,150	775	6,400	375	3,550	225	1,900	175	1,650	175	70,350	1,200	44,400	1,000	25,950	775
West North Central	48,750	1,175	30,550	925	18,200	675	1,300	125	750	100	550	100	100	50	*	*	100	50	9,350	575	6,500	525	2,850	250	1,250	175	700	150	550	75	36,100	1,000	22,200	775	13,900	575
South Atlantic	163,650	1,900	100,700	1,475	62,950	1,075	7,200	300	4,050	225	3,150	225	200	75	100	50	100	50	33,200	1,000	22,250	850	10,950	575	11,400	425	5,350	325	6,100	275	109,600	1,550	67,850	1,275	41,800	850
East South Central	30,550	1,000	19,500	775	11,050	525	750	125	400	100	350	75	50	25	D	D	*	*	5,750	475	3,900	375	1,900	250	2,000	175	900	125	1,150	125	21,550	825	14,100	650	7,450	450
West South Central	68,800	1,325	45,750	1,200	23,050	650	4,800	275	2,750	250	2,000	150	200	50	100	50	50	25	19,400	775	13,850	675	5,550	425	2,950	250	1,600	200	1,350	175	40,700	1,050	26,900	875	13,750	575
Mountain	58,200	1,275	37,850	950	20,350	675	2,800	200	1,650	175	1,150	125	200	50	150	50	50	50	8,350	500	5,650	450	2,700	275	800	150	450	100	300	100	45,300	1,050	29,450	825	15,850	600

Characteristic	Not Hispanic or Latino[b]																							
	Other race[c]																							
	Total		Male		Female																			
	Number	SE	Number	SE	Number	SE																		
Doctorate recipient	11,950	400	6,550	325	5,350	225																		
Age																								
Under 35	2,300	200	1,250	175	1,100	125																		
35–39	2,250	150	1,100	125	1,100	100																		
40–44	1,850	175	1,000	125	850	100																		
45–49	1,400	175	750	150	650	100																		
50–54	1,350	175	700	125	650	125																		
55–59	1,150	150	750	125	450	75																		
60–64	750	125	500	125	200	50																		
65–75	850	125	500	100	350	75																		
Years since doctorate																								
≤ 5	3,100	225	1,600	175	1,500	150																		
6–10	2,800	200	1,400	150	1,400	125																		
11–15	1,800	150	900	125	900	100																		
16–20	1,400	200	850	175	550	100																		
21–25	950	125	550	125	450	75																		
> 25	1,900	200	1,300	175	550	125																		
Citizenship																								
U.S. citizen	11,500	375	6,250	300	5,200	250																		
Native-born	9,850	350	5,350	300	4,500	200																		
Naturalized	1,650	200	900	175	700	125																		
Non-U.S. citizen	450	100	300	75	150	50																		
Permanent resident	300	75	200	75	100	50																		
Temporary resident	150	75	100	50	S	S																		
Employer location																								
New England	1,100	175	600	150	500	100																		
Middle Atlantic	1,400	175	600	100	800	125																		
East North Central	1,050	100	600	100	450	75																		
West North Central	650	125	400	100	300	75																		
South Atlantic	2,000	150	1,100	150	900	100																		
East South Central	400	100	200	75	200	50																		
West South Central	800	125	500	100	300	75																		
Mountain	800	125	550	125	250	75																		

TABLE 27-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2019

(Number and SE)

Characteristic	All employed						Hispanic or Latino[a]						Not Hispanic or Latino[b]																							
													American Indian or Alaska Native						Asian						Black or African American						White					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Pacific	185,950	2,075	121,950	1,700	64,050	1,150	7,950	325	4,650	275	3,250	200	250	75	150	50	100	50	65,350	1,400	45,500	1,200	19,850	700	3,400	250	1,950	175	1,450	175	105,400	1,575	67,700	1,400	37,700	800
U.S. territories and other areas	5,850	425	3,900	350	1,950	225	2,450	225	1,300	175	1,150	150	D	D	D	D	D	D	1,450	225	1,250	225	200	75	200	100	150	100	50	50	1,650	200	1,150	175	500	125
Sector of employment																																				
4-year educational institution[d]	344,350	2,325	211,850	2,075	132,500	1,450	16,350	400	9,150	325	7,200	275	600	100	350	75	250	50	68,950	1,300	45,650	1,125	23,300	700	13,750	400	7,150	325	6,550	275	240,100	1,850	147,300	1,700	92,800	1,150
Other educational institution[e]	30,900	900	14,300	675	16,600	575	1,900	175	850	150	1,050	125	100	50	50	25	50	50	3,150	400	1,450	275	1,750	225	2,450	200	950	150	1,500	175	22,700	725	10,800	575	11,900	450
Private, for profit[f]	306,300	2,500	218,700	2,050	87,600	1,225	11,150	400	7,250	300	3,950	225	300	75	200	75	100	50	109,300	1,525	79,750	1,250	29,550	825	7,300	325	4,200	225	3,100	225	174,200	1,900	124,550	1,550	49,650	950
Private, nonprofit	55,900	1,125	31,100	925	24,800	625	2,350	175	950	125	1,400	150	50	25	S	S	50	25	11,150	525	6,850	450	4,350	300	2,400	275	1,100	200	1,300	150	39,050	1,025	21,800	825	17,300	550
Federal government	50,150	1,025	31,150	825	19,000	650	2,500	175	1,550	150	950	125	100	50	100	50	50	25	8,550	525	5,200	375	3,350	325	2,550	225	1,100	125	1,500	150	35,450	825	22,700	700	12,750	525
State or local government	18,850	750	10,950	550	7,900	425	900	125	450	100	450	100	50	25	D	D	D	D	3,900	375	2,550	300	1,400	200	1,450	175	700	125	700	125	12,300	625	7,100	450	5,200	375
Self-employed[g]	40,750	1,100	21,750	950	19,000	575	1,450	150	600	100	850	125	50	25	D	D	D	D	4,400	375	2,900	325	1,500	200	800	100	350	100	400	75	33,450	975	17,650	850	15,800	575
Other sector[h]	10,050	550	6,250	450	3,800	350	550	100	400	75	200	50	D	D	D	D	D	D	3,850	350	2,450	300	1,400	225	400	75	200	50	250	75	5,150	400	3,200	300	1,950	250
Primary or secondary work activity[j]																																				
Any R&D	540,350	2,375	366,550	1,925	173,750	1,350	22,950	525	13,850	400	9,100	325	700	100	400	75	300	50	156,850	1,350	110,450	1,250	46,400	900	16,300	400	9,000	325	7,300	250	336,550	2,000	228,900	1,650	107,650	1,250
Applied research	300,950	2,225	198,500	1,700	102,500	1,250	13,350	400	7,750	300	5,600	275	300	50	150	50	150	50	84,400	1,225	58,050	950	26,350	775	9,650	325	5,050	250	4,600	225	189,350	1,700	125,300	1,325	64,050	1,000
Basic research	180,500	2,150	121,950	1,675	58,500	1,000	8,200	325	4,800	250	3,400	225	300	75	150	75	150	50	47,100	1,150	31,950	950	15,150	600	5,450	300	3,350	250	2,100	175	117,000	1,625	80,400	1,275	36,650	825
Design	64,450	1,275	50,250	1,075	14,200	575	2,400	200	1,800	175	600	75	100	50	100	50	50	25	24,200	825	18,950	750	5,250	375	1,200	125	750	100	450	75	35,850	925	28,200	825	7,650	400
Development	133,400	1,625	97,600	1,425	35,750	900	4,550	250	3,000	200	1,550	150	100	25	50	25	D	D	52,750	1,150	39,350	975	13,400	625	3,500	225	1,850	150	1,650	150	70,850	1,225	52,250	1,175	18,600	575
Computer applications	86,100	1,425	70,400	1,275	15,700	575	2,700	200	2,100	175	600	100	50	25	S	S	D	D	37,700	1,000	29,450	925	8,250	425	1,350	150	1,050	125	300	75	43,400	950	37,050	925	6,350	325
Management, sales, or administration[j]	351,450	2,375	213,100	1,975	138,350	1,275	14,450	425	8,100	325	6,350	275	600	100	400	75	200	50	69,500	1,225	45,750	1,000	23,750	700	13,600	425	6,100	325	7,500	300	247,750	2,050	149,750	1,725	97,950	1,125
Professional services	121,550	1,600	60,100	1,325	61,450	1,000	6,000	250	2,450	200	3,550	250	300	75	150	50	150	50	19,150	800	10,850	575	8,350	525	5,150	300	1,900	200	3,250	250	89,100	1,300	44,000	1,175	45,100	800
Teaching	245,900	2,050	146,800	1,925	99,100	1,175	12,250	400	6,700	300	5,550	250	550	100	300	75	250	50	40,200	1,000	26,400	875	13,800	575	11,850	400	6,300	325	5,500	250	177,650	1,650	105,500	1,500	72,200	875
Other work activities[k]	81,800	1,475	44,500	1,150	37,350	825	3,900	200	1,800	150	2,050	125	150	50	50	50	50	50	17,050	750	10,650	600	6,400	425	3,650	225	1,550	175	2,100	200	55,600	1,150	29,600	950	26,050	650
Federal support																																				
Receiving support	219,850	2,075	145,500	1,800	74,400	1,150	8,950	375	5,250	275	3,750	200	350	75	200	75	150	50	46,500	1,025	32,000	950	14,500	575	6,200	275	3,250	225	2,950	175	154,450	1,800	103,000	1,475	51,450	925
Not receiving support	636,250	2,425	399,750	2,275	236,450	1,400	28,200	525	15,900	450	12,300	375	900	125	500	100	400	75	166,450	1,400	114,500	1,350	51,950	850	24,800	400	12,400	350	12,400	350	407,300	2,150	251,600	1,875	155,700	1,225
Degree-job relationship																																				
Closely related	564,300	2,500	358,900	2,100	205,400	1,525	25,550	500	14,500	375	11,100	350	900	100	600	100	350	75	135,000	1,625	94,550	1,425	40,450	850	20,950	450	10,650	400	10,300	325	374,600	1,850	234,700	1,650	139,900	1,275
Somewhat related	226,450	2,175	144,700	1,950	81,750	1,050	9,300	350	5,300	275	4,050	225	300	75	100	50	200	50	61,100	1,350	40,950	1,125	20,150	675	7,500	325	3,650	275	3,850	225	144,800	1,650	92,800	1,450	52,000	850
Not related	66,450	1,325	42,400	1,075	24,050	700	2,350	200	1,450	150	950	125	100	50	50	25	S	S	17,250	700	11,300	600	6,000	375	2,650	200	1,450	175	1,150	125	43,000	1,050	27,500	825	15,450	600

Characteristic	Not Hispanic or Latino[b]											
	Other race[c]											
	Total		Male		Female							
	Number	SE	Number	SE	Number	SE						
Pacific	3,650	250	2,000	200	1,600	150						
U.S. territories and other areas	50	50	D	D	D	D						
Sector of employment												
4-year educational institution[d]	4,600	250	2,200	200	2,400	150						
Other educational institution[e]	550	100	250	75	350	75						
Private, for profit[f]	4,000	275	2,800	250	1,200	125						
Private, nonprofit	850	125	400	100	450	75						
Federal government	950	125	500	125	400	100						
State or local government	250	75	150	50	150	50						
Self-employed[g]	600	125	200	75	400	100						
Other sector[h]	100	50	50	25	50	25						
Primary or secondary work activity[j]												
Any R&D	7,050	325	4,000	300	3,000	175						
Applied research	3,950	225	2,150	200	1,750	150						
Basic research	2,450	175	1,300	150	1,150	125						
Design	750	100	500	100	250	75						
Development	1,650	200	1,150	175	550	100						
Computer applications	850	125	650	100	200	75						
Management, sales, or administration[j]	5,600	275	3,000	250	2,600	200						
Professional services	1,800	200	750	125	1,000	125						
Teaching	3,400	225	1,600	200	1,800	150						
Other work activities[k]	1,500	175	800	150	700	100						
Federal support												
Receiving support	3,350	225	1,750	175	1,600	125						
Not receiving support	8,600	350	4,800	300	3,750	225						
Degree-job relationship												
Closely related	7,350	350	3,950	300	3,400	200						
Somewhat related	3,450	200	1,950	175	1,500	150						
Not related	1,150	175	700	150	450	100						

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[e] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[f] Includes those self-employed in an incorporated business.

[g] Self-employed or business owner in a nonincorporated business.

[h] Includes employers not broken out separately.

[i] Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Detail may exceed total due to multiple responses.

[j] Administration includes accounting, finance, contracts, and human resources.

[k] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 27-2

U.S. residing employed doctoral scientists and engineers, by primary work activity, ethnicity, race, and sex: 2019

(Number and SE)

	All employed						Hispanic or Latino[a]						Not Hispanic or Latino[b]																							
													American Indian or Alaska Native						Asian						Black or African American						White						Other race[c]					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
Primary work activity	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipients	857,200	1,975	546,050	1,750	311,200	1,200	37,250	550	21,200	450	16,050	400	1,300	125	750	100	550	75	213,350	1,325	146,800	1,250	66,550	950	31,100	400	15,750	375	15,350	375	562,350	1,750	355,000	1,800	207,300	1,175	11,950	400	6,550	325	5,350	225
Any R&D	351,000	1,975	242,850	1,725	108,100	1,125	14,200	400	8,900	350	5,300	225	400	75	250	75	150	50	112,800	1,225	79,400	1,075	33,450	775	8,850	300	5,000	250	3,850	225	210,100	1,650	146,750	1,375	63,350	975	4,600	275	2,600	225	2,000	150
Applied research	168,650	1,775	110,700	1,425	57,950	925	7,250	300	4,250	250	3,000	200	200	50	100	50	100	50	46,400	1,075	31,250	900	15,150	575	5,300	275	2,700	200	2,600	175	107,300	1,425	71,300	1,100	36,000	675	2,200	175	1,050	125	1,150	125
Basic research	92,700	1,700	63,300	1,450	29,400	675	3,800	225	2,350	200	1,400	125	150	50	S	S	50	25	28,550	950	19,050	825	9,500	450	1,800	175	1,100	175	650	100	57,100	1,100	39,950	975	17,100	550	1,400	150	750	125	650	100
Design	24,050	975	19,350	850	4,700	375	900	125	700	125	200	50	50	25	50	25	D	D	9,100	575	6,950	525	2,200	300	400	75	250	75	100	50	13,350	650	11,250	600	2,150	200	200	75	150	50	50	25
Development	65,600	1,400	49,500	1,275	16,050	575	2,250	150	1,600	125	650	100	50	25	*	*	D	D	28,750	950	22,150	850	6,600	400	1,400	125	900	100	500	75	32,350	975	24,250	925	8,100	400	800	150	600	150	200	50
Computer applications	44,450	950	37,650	875	6,800	400	1,100	125	950	125	150	50	D	D	D	D	D	D	21,600	750	17,600	700	4,000	325	500	75	400	75	100	25	20,850	625	18,300	600	2,550	225	400	100	350	100	50	25
Management, sales, or administration[d]	165,400	2,025	104,100	1,625	61,300	1,075	6,900	325	4,150	250	2,750	150	250	50	150	50	100	50	33,650	875	22,250	675	11,350	525	7,200	325	3,200	250	4,000	250	114,850	1,700	72,850	1,425	42,000	925	2,600	225	1,500	200	1,100	125
Professional services	97,050	1,625	47,200	1,300	49,850	925	4,900	250	1,900	175	3,000	225	250	75	100	50	150	50	14,650	725	7,850	525	6,850	475	3,950	300	1,600	175	2,400	250	72,000	1,275	35,200	1,075	36,750	800	1,300	175	600	125	700	100
Teaching	161,000	1,700	93,000	1,575	68,050	1,075	8,200	350	4,400	250	3,800	225	300	75	200	50	100	50	22,500	825	14,400	625	8,100	450	8,850	325	4,800	275	4,000	225	118,850	1,450	68,050	1,300	50,800	825	2,300	175	1,100	150	1,200	150
Other work activities[e]	38,300	975	21,250	800	17,050	550	1,900	150	900	125	1,000	100	50	50	D	D	D	D	8,150	425	5,300	375	2,850	275	1,700	150	700	125	1,000	125	25,800	825	13,900	700	11,900	475	750	125	450	100	300	75

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Administration includes accounting, finance, contracts, and human resources.

[e] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 28-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2019

(Number and SE)

Characteristic	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipient	857,200	1,975	540,350	2,375	300,950	2,225	180,500	2,150	64,450	1,275	133,400	1,625	86,100	1,425	351,450	2,375	121,550	1,600	245,900	2,050	81,800	1,475
Sex																						
Male	546,050	1,750	366,550	1,925	198,500	1,700	121,950	1,675	50,250	1,075	97,600	1,425	70,400	1,275	213,100	1,975	60,100	1,325	146,800	1,925	44,500	1,150
Female	311,200	1,200	173,750	1,350	102,500	1,250	58,500	1,000	14,200	575	35,750	900	15,700	575	138,350	1,275	61,450	1,000	99,100	1,175	37,350	825
Ethnicity																						
Hispanic or Latino[c]	37,250	550	22,950	525	13,350	400	8,200	325	2,400	200	4,550	250	2,700	200	14,450	425	6,000	250	12,250	400	3,900	200
Not Hispanic or Latino[d]																						
American Indian or Alaska Native	1,300	125	700	100	300	50	300	75	100	50	100	25	50	25	600	100	300	75	550	100	150	50
Asian	213,350	1,325	156,850	1,350	84,400	1,225	47,100	1,150	24,200	825	52,750	1,150	37,700	1,000	69,500	1,225	19,150	800	40,200	1,000	17,050	750
Black or African American	31,100	400	16,300	400	9,650	325	5,450	300	1,200	125	3,500	225	1,350	150	13,600	425	5,150	300	11,850	400	3,650	225
White	562,350	1,750	336,550	2,000	189,350	1,700	117,000	1,625	35,850	925	70,850	1,225	43,400	950	247,750	2,050	89,100	1,300	177,650	1,650	55,600	1,150
Other race[e]	11,950	400	7,050	325	3,950	225	2,450	175	750	100	1,650	200	850	125	5,600	275	1,800	200	3,400	225	1,500	175
Age																						
Under 35	99,050	1,050	75,950	975	45,150	900	26,000	750	10,450	400	21,300	725	16,150	575	31,000	725	9,350	450	18,500	625	8,550	375
35–39	128,800	1,375	92,350	1,300	52,700	975	30,700	800	11,300	625	23,950	800	17,600	625	48,100	900	14,050	625	32,400	825	11,100	525
40–44	117,500	1,325	78,950	1,350	45,300	1,100	26,200	775	8,550	425	18,950	750	13,100	650	47,600	900	13,800	525	32,300	800	10,750	500
45–49	108,400	1,450	66,700	1,175	34,800	875	23,250	775	7,550	450	15,200	625	9,400	525	49,200	1,050	14,500	725	34,000	1,025	10,450	500
50–54	100,900	1,375	58,850	1,200	30,800	900	18,200	675	7,200	475	15,500	675	9,300	575	47,400	1,050	14,650	650	30,350	900	9,500	450
55–59	101,950	1,400	59,200	1,075	32,650	975	18,500	775	7,550	475	14,350	525	8,900	550	47,400	1,075	13,450	650	30,300	875	10,700	525
60–64	88,300	1,400	51,600	1,150	28,100	775	16,850	700	5,950	400	12,400	575	6,100	425	37,000	950	14,100	600	30,200	875	9,350	550
65–75	112,350	1,625	56,750	1,250	31,450	825	20,700	800	5,950	400	11,750	550	5,600	325	43,750	1,075	27,550	950	37,850	1,025	11,450	600
Years since doctorate																						
≤ 5	142,500	625	104,750	925	63,350	1,100	35,200	800	13,800	550	27,600	800	22,700	625	42,850	825	15,750	550	32,500	775	12,500	500
6–10	154,750	1,025	105,800	1,150	61,100	850	34,000	825	12,600	600	27,400	775	17,900	650	59,800	1,125	17,300	500	43,300	900	14,400	525
11–15	127,000	1,150	81,650	1,125	44,250	925	27,450	825	9,350	500	19,250	725	12,050	525	54,200	975	16,350	675	38,050	850	12,000	575
16–20	108,700	825	64,150	1,050	34,650	850	21,200	650	6,900	450	15,600	625	9,200	525	50,450	900	15,200	700	33,800	825	11,250	525
21–25	104,250	825	60,500	875	31,000	775	18,450	725	8,400	500	15,700	650	10,000	550	48,400	975	15,950	750	30,300	750	10,100	500
> 25	220,000	1,575	123,500	1,550	66,600	1,100	44,150	1,000	13,400	675	27,850	825	14,250	575	95,700	1,475	40,950	975	67,900	1,100	21,600	800
Citizenship																						
U.S. citizen	732,750	2,000	440,950	2,575	245,450	2,000	147,100	1,775	49,950	1,075	101,900	1,600	60,900	1,125	320,750	2,250	113,850	1,500	219,950	2,000	73,400	1,375
Native-born	555,150	1,575	321,450	1,900	182,950	1,500	110,850	1,500	32,300	900	66,300	1,225	37,900	875	251,350	2,125	94,450	1,275	175,950	1,725	57,350	1,150
Naturalized	177,600	1,675	119,500	1,775	62,500	1,275	36,250	1,075	17,650	750	35,600	1,000	22,950	775	69,400	1,225	19,400	800	44,000	1,175	16,050	700
Non-U.S. citizen	124,450	1,600	99,400	1,375	55,500	1,200	33,400	1,125	14,500	650	31,500	975	25,200	925	30,700	950	7,700	450	25,950	875	8,400	500
Permanent resident	87,200	1,475	67,650	1,275	36,650	975	22,200	925	9,700	525	22,300	825	16,500	800	23,700	825	5,800	375	19,850	800	6,000	450

TABLE 28-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2019

(Number and SE)

Characteristic	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Temporary resident	37,300	900	31,750	800	18,850	675	11,200	600	4,750	375	9,200	475	8,700	450	7,000	450	1,900	250	6,100	425	2,450	275
Sector of employment																						
4-year educational institution[f]	344,350	2,325	234,300	2,225	119,750	1,750	134,700	1,750	7,250	425	11,850	550	12,500	500	110,000	1,375	20,050	775	201,700	1,950	28,500	850
Other educational institution[g]	30,900	900	6,750	400	3,000	300	2,350	225	750	150	1,400	200	800	150	10,250	500	3,900	300	23,150	825	4,300	300
Private, for profit[h]	306,300	2,500	201,550	2,075	110,550	1,575	15,800	700	44,850	1,100	98,900	1,475	58,050	1,175	146,550	1,850	46,500	1,125	8,450	500	27,950	800
Private, nonprofit	55,900	1,125	33,450	825	23,400	725	11,000	425	3,800	350	5,900	325	5,150	400	28,350	875	14,000	650	4,400	350	5,200	350
Federal government	50,150	1,025	33,950	850	25,700	725	10,900	475	2,800	250	5,800	425	4,350	325	24,600	575	7,650	475	2,050	225	7,100	425
State or local government	18,850	750	9,950	475	6,750	450	2,350	275	1,500	200	1,850	250	2,150	250	10,050	550	4,750	375	1,200	175	2,900	275
Self-employed[i]	40,750	1,100	13,950	625	7,850	450	2,200	250	2,500	300	5,200	400	1,800	200	17,200	800	22,950	800	4,500	375	4,450	375
Other sector[j]	10,050	550	6,450	450	4,000	325	1,200	200	1,050	200	2,500	325	1,300	200	4,400	325	1,750	250	400	125	1,400	225
Employer location																						
New England	77,100	1,375	50,150	1,100	27,800	850	17,550	625	5,000	400	13,000	575	7,550	475	32,550	975	11,500	575	20,650	675	6,500	450
Middle Atlantic	117,450	1,875	70,900	1,450	38,650	1,050	26,150	850	7,100	425	15,500	675	10,950	525	48,250	1,175	19,300	800	37,250	900	10,950	550
East North Central	100,900	1,550	62,350	1,275	34,750	950	22,800	700	6,850	425	14,200	625	8,750	525	41,150	950	13,350	600	34,100	950	9,400	475
West North Central	48,750	1,175	30,250	900	16,500	650	11,350	650	3,200	350	7,100	475	2,900	275	19,250	775	6,600	450	17,500	625	5,200	400
South Atlantic	163,650	1,900	101,800	1,625	61,450	1,200	35,500	1,050	9,800	575	20,500	725	13,600	625	69,900	1,275	23,150	725	45,250	925	17,750	650
East South Central	30,550	1,000	19,200	750	10,900	525	8,300	525	1,550	200	2,700	300	1,800	225	11,300	575	3,950	350	13,050	600	2,550	225
West South Central	68,800	1,325	42,250	1,000	22,650	775	14,750	650	5,800	400	9,400	600	5,800	425	26,550	800	10,000	475	22,600	750	6,400	450
Mountain	58,200	1,275	37,250	1,025	21,150	750	12,350	600	4,700	350	8,650	550	4,950	325	23,600	825	8,500	550	17,600	650	5,600	400
Pacific	185,950	2,075	122,750	1,775	65,450	1,300	30,650	850	20,000	850	41,500	1,075	29,400	850	76,700	1,425	24,250	850	35,400	900	16,800	650
U.S. territories and other areas	5,850	425	3,400	325	1,700	200	1,100	175	450	125	850	175	400	125	2,200	250	850	175	2,500	250	650	150

SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] Includes production, operations, maintenance, and other activities not broken out separately.

[c] Hispanic or Latino may be of any race.

[d] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[e] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[f] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[g] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[h] Includes those self-employed in an incorporated business.

[i] Self-employed or business owner in a nonincorporated business.

[j] Includes employers not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by the respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 28-2

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary work activity: 2019

(Number and SE)

Characteristic	All employed		Research and development										Total		Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development													
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipient	857,200	1,975	351,000	1,975	168,650	1,775	92,700	1,700	24,050	975	65,600	1,400	506,250	2,300	44,450	950	165,400	2,025	97,050	1,625	161,000	1,700	38,300	975
Sex																								
Male	546,050	1,750	242,850	1,725	110,700	1,425	63,300	1,450	19,350	850	49,500	1,275	303,150	2,100	37,650	875	104,100	1,625	47,200	1,300	93,000	1,575	21,250	800
Female	311,200	1,200	108,100	1,125	57,950	925	29,400	675	4,700	375	16,050	575	203,050	1,350	6,800	400	61,300	1,075	49,850	925	68,050	1,075	17,050	550
Ethnicity																								
Hispanic or Latino[c]	37,250	550	14,200	400	7,250	300	3,800	225	900	125	2,250	150	23,050	500	1,100	125	6,900	325	4,900	250	8,200	350	1,900	150
Not Hispanic or Latino[d]																								
American Indian or Alaska Native	1,300	125	400	75	200	50	150	50	50	25	50	25	900	100	D	D	250	50	250	75	300	75	50	50
Asian	213,350	1,325	112,800	1,225	46,400	1,075	28,550	950	9,100	575	28,750	950	100,550	1,300	21,600	750	33,650	875	14,650	725	22,500	825	8,150	425
Black or African American	31,100	400	8,850	300	5,300	275	1,800	175	400	75	1,400	125	22,200	425	500	75	7,200	325	3,950	300	8,850	325	1,700	150
White	562,350	1,750	210,100	1,650	107,300	1,425	57,100	1,100	13,350	650	32,350	975	352,250	1,875	20,850	625	114,850	1,700	72,000	1,275	118,850	1,450	25,800	825
Other race[e]	11,950	400	4,600	275	2,200	175	1,400	150	200	75	800	150	7,300	325	400	100	2,600	225	1,300	175	2,300	175	750	125
Age																								
Under 35	99,050	1,050	57,250	925	26,500	750	15,900	525	3,750	300	11,150	550	41,800	850	8,250	400	10,550	475	7,500	400	11,400	475	4,150	300
35–39	128,800	1,375	63,900	1,175	32,000	800	15,950	600	4,050	350	11,850	550	64,900	1,050	8,350	450	20,450	625	10,850	575	20,600	650	4,600	300
40–44	117,500	1,325	51,300	1,175	25,250	800	13,550	575	3,050	300	9,400	600	66,200	1,125	7,100	550	21,750	675	11,000	500	21,450	700	4,850	350
45–49	108,400	1,450	40,550	925	18,400	650	11,600	575	2,400	250	8,100	425	67,850	1,250	4,900	350	24,450	800	11,500	650	22,300	775	4,700	350
50–54	100,900	1,375	36,650	1,000	16,900	750	9,400	550	2,600	300	7,750	425	64,250	1,125	5,000	450	24,750	775	11,450	575	19,050	700	3,950	300
55–59	101,950	1,400	35,700	875	17,200	750	8,600	475	3,150	375	6,750	400	66,250	1,275	4,500	350	24,750	825	10,950	625	21,200	675	4,800	325
60–64	88,300	1,400	31,550	850	15,700	500	7,750	500	2,650	300	5,450	400	56,750	1,175	3,300	300	18,150	700	11,250	500	19,500	650	4,550	400
65–75	112,350	1,625	34,150	900	16,700	625	9,950	550	2,350	300	5,150	400	78,250	1,475	2,950	275	20,600	750	22,500	850	25,500	775	6,700	450
Years since doctorate																								
≤ 5	142,500	625	75,600	975	37,250	900	19,650	575	4,900	400	13,800	600	66,850	900	10,850	475	15,650	500	12,550	500	22,250	650	5,600	375
6–10	154,750	1,025	71,500	1,075	35,550	800	17,450	625	4,350	400	14,150	600	83,250	1,100	9,200	475	25,600	725	13,100	475	29,000	775	6,350	375
11–15	127,000	1,150	51,100	1,025	24,700	750	13,550	650	3,500	325	9,300	500	75,900	1,150	6,450	450	26,200	750	12,900	625	25,100	750	5,250	350
16–20	108,700	825	39,750	900	18,800	675	10,800	550	2,550	275	7,650	450	68,950	1,125	5,100	375	24,750	725	11,950	625	21,700	625	5,450	350
21–25	104,250	825	35,750	925	15,650	525	9,200	625	3,100	325	7,750	475	68,500	1,000	5,550	425	25,700	725	12,700	650	20,050	675	4,500	350
> 25	220,000	1,575	77,300	1,225	36,700	950	22,050	800	5,650	525	12,900	525	142,750	1,575	7,250	400	47,500	1,225	33,850	975	42,950	825	11,150	575
Citizenship																								
U.S. citizen	732,750	2,000	277,600	2,025	138,450	1,525	72,400	1,375	18,500	825	48,250	1,275	455,150	2,050	31,050	750	152,800	1,950	91,100	1,550	145,750	1,650	34,500	925
Native-born	555,150	1,575	199,050	1,625	105,050	1,300	52,700	1,150	11,550	575	29,650	925	356,150	1,750	17,700	525	116,700	1,675	76,050	1,300	119,350	1,550	26,350	825
Naturalized	177,600	1,675	78,600	1,250	33,400	950	19,700	875	6,950	525	18,600	800	99,000	1,350	13,350	575	36,100	975	15,000	750	26,400	875	8,150	475
Non-U.S. citizen	124,450	1,600	73,350	1,250	30,200	900	20,300	750	5,550	450	17,350	700	51,100	1,025	13,400	650	12,650	575	6,000	425	15,300	625	3,800	375
Permanent resident	87,200	1,475	48,400	1,050	19,350	750	12,900	625	3,750	375	12,450	575	38,750	1,025	9,100	600	10,600	550	4,600	350	11,650	600	2,800	325

TABLE 28-2

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary work activity: 2019

(Number and SE)

Characteristic	All employed		Research and development										Total		Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development													
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Temporary resident	37,300	900	24,950	775	10,850	550	7,400	450	1,800	250	4,900	375	12,300	550	4,300	325	2,000	250	1,400	225	3,650	325	1,000	175
Sector of employment																								
4-year educational institution[f]	344,350	2,325	140,200	1,550	61,700	1,250	74,100	1,475	1,400	200	3,050	275	204,150	1,725	3,450	275	45,900	850	12,600	650	132,800	1,575	9,350	500
Other educational institution[g]	30,900	900	1,750	225	950	175	400	125	100	50	250	75	29,150	875	200	50	3,450	300	2,700	250	21,550	775	1,300	175
Private, for profit[h]	306,300	2,500	139,500	1,625	63,450	1,200	4,650	425	18,050	875	53,350	1,225	166,750	2,075	34,250	925	76,300	1,475	38,150	1,125	2,750	250	15,350	525
Private, nonprofit	55,900	1,125	25,300	700	15,150	575	6,350	350	1,300	200	2,500	250	30,600	900	2,050	300	13,200	600	11,200	600	1,350	200	2,850	250
Federal government	50,150	1,025	24,300	750	16,600	600	4,750	325	850	150	2,100	225	25,850	725	1,700	225	13,250	475	6,150	425	350	75	4,350	325
State or local government	18,850	750	6,650	400	4,350	325	1,100	200	700	175	550	125	12,200	650	1,100	200	5,600	375	3,600	325	350	125	1,600	200
Self-employed[i]	40,750	1,100	8,750	500	4,200	300	800	150	1,150	200	2,600	275	32,000	975	1,000	150	5,400	400	21,250	750	1,750	250	2,600	275
Other sector[j]	10,050	550	4,500	325	2,200	225	600	150	500	125	1,200	200	5,550	400	650	150	2,300	250	1,450	250	150	75	1,000	225
Employer location																								
New England	77,100	1,375	34,250	975	16,150	575	10,200	525	1,950	275	5,950	425	42,850	1,075	3,600	325	14,500	675	9,100	525	12,800	525	2,900	275
Middle Atlantic	117,450	1,875	44,500	1,125	21,600	775	13,150	675	2,050	250	7,750	450	72,900	1,450	5,850	400	21,950	850	15,650	675	24,750	775	4,750	375
East North Central	100,900	1,550	40,050	975	19,250	725	11,800	550	2,350	250	6,700	450	60,850	1,050	4,350	350	19,150	700	10,400	550	22,750	750	4,150	325
West North Central	48,750	1,175	18,950	725	9,150	475	5,800	500	1,000	225	3,000	300	29,800	850	1,400	200	8,750	525	5,400	400	11,800	525	2,450	275
South Atlantic	163,650	1,900	66,450	1,300	36,050	900	17,150	700	3,900	400	9,300	550	97,200	1,325	6,500	425	34,250	875	17,800	650	30,000	750	8,650	475
East South Central	30,550	1,000	11,400	600	5,750	350	3,950	350	500	100	1,150	200	19,150	750	850	150	5,100	400	2,900	275	9,200	450	1,050	150
West South Central	68,800	1,325	27,100	825	12,000	475	7,650	500	2,400	275	5,050	425	41,700	1,075	2,750	300	13,400	625	8,300	450	14,250	575	3,000	300
Mountain	58,200	1,275	25,450	800	12,550	525	6,200	375	2,300	300	4,400	375	32,750	950	2,150	250	10,700	525	7,050	500	10,350	475	2,500	250
Pacific	185,950	2,075	81,100	1,400	35,250	825	16,400	650	7,600	500	21,850	925	104,850	1,525	16,750	675	36,450	950	19,750	800	23,350	700	8,550	500
U.S. territories and other areas	5,850	425	1,700	200	900	175	350	75	D	D	400	125	4,150	350	200	75	1,150	150	700	175	1,800	225	300	100

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] Includes production, operations, maintenance, and other activities not broken out separately.

[c] Hispanic or Latino may be of any race.

[d] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[e] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[f] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[g] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[h] Includes those self-employed in an incorporated business.

[i] Self-employed or business owner in a nonincorporated business.

[j] Includes employers not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by the respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 29

U.S. residing doctoral scientists and engineers, by occupation and employment status: 2019

(Number and SE)

Occupation	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	1,008,750	1,475	857,200	1,975	763,350	2,000	93,900	1,525	14,100	650	120,000	1,400	17,450	625
Science occupations	578,050	2,425	492,750	2,500	438,250	2,325	54,500	1,225	7,250	425	67,750	1,125	10,300	450
Biological, agricultural, and other life scientist	183,050	1,625	156,650	1,525	145,900	1,575	10,750	525	2,950	300	19,650	725	3,750	275
Agricultural, food scientist	14,500	525	11,600	450	10,600	400	1,000	175	250	75	2,500	250	150	50
Biochemists, biophysicist	19,650	725	16,350	675	15,300	650	1,100	200	500	125	1,950	275	800	150
Biological scientist	30,700	700	26,750	675	25,200	650	1,550	225	500	100	2,750	275	750	150
Forestry, conservation scientist	2,750	225	2,250	175	2,000	175	250	75	S	S	400	125	S	S
Medical scientist	48,300	1,100	42,350	1,025	39,950	1,050	2,400	325	950	200	4,100	300	850	175
Postsecondary teachers, agricultural, other natural sciences	7,150	375	5,550	350	5,350	350	250	75	S	S	1,400	200	100	50
Postsecondary teachers, biological sciences	37,800	800	32,400	775	29,550	775	2,850	250	200	75	4,750	375	400	100
Other biological, agricultural, life scientist	22,250	725	19,350	700	18,000	675	1,350	200	450	125	1,850	225	600	125
Computer and information scientist	71,350	1,075	63,000	1,100	59,750	1,075	3,250	350	750	125	6,600	375	1,000	175
Computer and information scientist	60,650	1,075	53,450	1,075	51,000	1,075	2,450	300	700	125	5,550	375	950	175
Postsecondary teachers, computer science	10,700	525	9,550	525	8,800	500	750	150	50	25	1,050	150	100	50
Mathematical scientist	47,850	825	41,400	750	38,150	750	3,300	300	600	125	5,050	325	750	150
Mathematical scientist	24,750	700	21,800	650	20,650	650	1,150	150	350	100	2,200	200	400	125
Postsecondary teachers, mathematics, statistics	23,050	600	19,600	575	17,450	525	2,150	275	250	100	2,900	275	300	75
Physical scientist	101,350	1,325	84,550	1,275	76,850	1,250	7,700	425	1,450	175	13,950	550	1,450	150
Chemists, except biochemist	27,250	800	21,850	725	20,000	675	1,850	225	550	125	4,400	325	500	100
Earth, atmospheric, ocean scientist	14,550	400	11,750	400	10,600	350	1,150	150	300	100	2,300	200	200	75
Physicists, astronomers	14,700	700	12,450	625	11,450	600	950	175	200	100	1,950	225	150	75
Postsecondary teachers, chemistry	19,500	675	16,900	625	15,050	600	1,850	250	150	75	2,150	250	300	75
Postsecondary teachers, physics	12,350	600	10,650	575	9,900	550	750	150	50	25	1,450	225	150	75

TABLE 29

U.S. residing doctoral scientists and engineers, by occupation and employment status: 2019

(Number and SE)

Occupation	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Postsecondary teachers, other physical science	8,400	300	7,300	300	6,650	325	650	125	S	S	950	125	50	25
Other physical scientist	4,550	325	3,650	250	3,200	250	450	125	S	S	750	150	D	D
Psychologist	91,600	975	77,600	950	56,250	1,000	21,350	775	500	125	11,650	575	1,850	200
Psychologist	67,850	1,025	57,500	1,000	38,550	975	18,950	775	400	125	8,400	525	1,550	200
Postsecondary teachers, psychology	23,750	675	20,100	625	17,700	625	2,400	250	100	50	3,250	300	250	75
Social scientist	82,850	1,050	69,500	1,025	61,300	875	8,200	475	1,050	150	10,800	475	1,500	175
Economist	11,300	575	9,600	500	8,300	475	1,250	225	100	50	1,550	200	S	S
Political scientist	2,450	300	1,850	275	1,500	225	350	150	D	D	400	100	150	75
Postsecondary teachers, economics	12,800	550	10,900	500	9,900	500	1,000	150	D	D	1,750	225	150	75
Postsecondary teachers, political science	12,600	475	11,450	450	10,500	425	900	200	D	D	950	175	150	75
Postsecondary teachers, sociology	9,450	375	7,500	350	6,750	325	750	150	150	75	1,650	225	150	75
Postsecondary teachers, other social sciences	19,200	600	16,550	575	14,700	525	1,800	200	200	75	2,250	200	250	75
Sociologist, anthropologist	4,500	325	3,500	275	2,850	250	600	125	S	S	800	150	100	50
Other social scientist	10,500	525	8,250	475	6,800	425	1,450	175	300	75	1,550	175	450	100
Engineering occupations	136,750	1,375	120,650	1,375	114,500	1,350	6,100	425	2,250	250	12,350	575	1,550	225
Aerospace, aeronautical, astronautical engineer	8,250	475	7,150	425	6,850	450	300	100	100	50	1,000	175	S	S
Chemical engineer	10,950	525	9,250	525	8,950	525	300	125	300	125	1,250	225	150	100
Civil, architectural, sanitary engineer	7,750	475	6,900	425	6,250	425	650	150	S	S	700	150	100	50
Electrical engineer	30,700	825	27,500	750	26,450	750	1,050	175	650	150	2,450	300	150	50
Industrial engineers	2,100	275	1,950	250	1,750	225	S	S	D	D	S	S	D	D
Mechanical engineer	15,000	575	13,450	550	12,950	525	500	125	150	75	1,200	175	150	75
Postsecondary teacher, engineering	25,750	800	23,950	750	22,500	725	1,450	250	150	100	1,300	200	300	125
Other engineer	36,200	725	30,500	675	28,850	700	1,650	175	750	150	4,350	325	600	150
S&E-related occupations	108,900	1,600	92,350	1,475	83,900	1,475	8,450	450	1,450	200	13,750	550	1,400	175
Health occupations, except postsecondary teachers and managers	36,200	875	30,800	825	26,050	825	4,750	300	450	100	4,100	275	850	150

TABLE 29

U.S. residing doctoral scientists and engineers, by occupation and employment status: 2019

(Number and SE)

Occupation	Total		Employed						Unemployed[a]		Retired		Not employed or not seeking work[b]	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Postsecondary teacher, health and related science	27,600	700	23,600	675	21,650	675	1,950	200	150	75	3,700	325	150	50
S&E managers, including health	28,900	925	24,650	850	24,000	850	650	175	500	125	3,750	325	50	25
S&E precollege teachers	6,850	450	5,200	400	4,600	400	600	125	200	75	1,250	225	200	75
S&E technicians/ technologists	8,300	475	7,200	475	6,650	425	550	150	150	75	750	150	150	75
Other S&E-related occupation	1,100	175	900	150	900	150	D	D	D	D	200	100	D	D
Non-S&E occupations	185,050	1,900	151,500	1,650	126,700	1,575	24,800	825	3,150	300	26,150	825	4,250	350
Arts, humanities-related occupation	11,100	450	8,900	425	5,600	325	3,300	300	350	100	1,150	175	650	150
Management-related occupation	42,000	1,275	33,050	1,175	27,800	1,075	5,250	425	850	150	7,350	500	750	150
Non-S&E managers	64,350	1,175	55,650	1,175	51,800	1,125	3,850	350	600	125	7,750	450	350	100
Non-S&E postsecondary teachers	23,750	725	19,700	650	17,100	625	2,600	275	200	75	3,450	275	450	100
Non-S&E precollege/ other teachers	6,950	450	4,750	375	2,350	275	2,400	275	250	75	1,300	225	650	150
Sales, marketing occupation	11,350	550	9,400	450	7,450	400	1,950	225	250	100	1,300	225	400	125
Social service-related occupation	8,150	450	6,300	400	4,400	375	1,950	225	100	50	1,400	200	300	100
Other non-S&E occupation	17,400	700	13,750	650	10,250	575	3,500	300	550	175	2,450	275	650	125

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job.

[b] Not employed or not seeking work includes individuals who were not working during the survey reference week and had not been seeking work in the prior 4 weeks because of family responsibilities, chronic illness, or other reasons.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 350 individuals who reported never having worked so could not be classified by occupation. Designation of full-time and part-time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his or her principal job but full time in the labor force. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 30

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, and sex: 2019

(Number and SE)

Occupation and employment status	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
All occupations	1,008,750	1,475	644,550	1,400	364,200	1,025
Full time	763,350	2,000	496,700	1,925	266,650	1,325
Part time	93,900	1,525	49,350	1,275	44,550	925
Unemployed[a]	14,100	650	8,500	575	5,600	350
Retired	120,000	1,400	84,700	1,275	35,300	650
Not employed or not seeking work[b]	17,450	625	5,300	375	12,100	475
Science occupations	578,050	2,425	358,950	2,050	219,100	1,350
Full time	438,250	2,325	275,700	1,975	162,550	1,300
Part time	54,500	1,225	28,350	925	26,150	750
Unemployed[a]	7,250	425	4,050	350	3,200	250
Retired	67,750	1,125	47,950	1,025	19,750	550
Not employed or not seeking work[b]	10,300	450	2,850	275	7,450	375
Biological, agricultural, and other life scientist	183,050	1,625	106,250	1,275	76,850	975
Full time	145,900	1,575	83,650	1,225	62,250	950
Part time	10,750	525	6,350	450	4,400	275
Unemployed[a]	2,950	300	1,700	250	1,250	150
Retired	19,650	725	13,600	600	6,050	325
Not employed or not seeking work[b]	3,750	275	900	150	2,850	225
Computer and information scientist	71,350	1,075	59,100	1,000	12,250	475
Full time	59,750	1,075	50,200	1,000	9,550	450
Part time	3,250	350	2,450	300	750	125
Unemployed[a]	750	125	550	100	200	75
Retired	6,600	375	5,300	375	1,250	150
Not employed or not seeking work[b]	1,000	175	550	150	500	125
Mathematical scientist	47,850	825	33,500	800	14,300	450
Full time	38,150	750	26,750	725	11,350	400
Part time	3,300	300	2,200	275	1,100	125
Unemployed[a]	600	125	350	100	250	75
Retired	5,050	325	3,900	300	1,200	150
Not employed or not seeking work[b]	750	150	350	125	400	100
Physical scientist	101,350	1,325	77,500	1,125	23,850	575
Full time	76,850	1,250	58,300	1,125	18,550	475
Part time	7,700	425	5,550	400	2,150	200
Unemployed[a]	1,450	175	900	150	550	125
Retired	13,950	550	12,250	525	1,700	175
Not employed or not seeking work[b]	1,450	150	500	125	950	125
Psychologist	91,600	975	36,150	675	55,400	850
Full time	56,250	1,000	22,250	625	34,050	800
Part time	21,350	775	7,550	550	13,800	550
Unemployed[a]	500	125	150	75	350	100
Retired	11,650	575	5,900	400	5,750	350
Not employed or not seeking work[b]	1,850	200	300	100	1,500	200
Social scientist	82,850	1,050	46,450	800	36,400	700
Full time	61,300	875	34,550	725	26,800	600
Part time	8,200	475	4,200	375	3,950	275
Unemployed[a]	1,050	150	400	100	650	125
Retired	10,800	475	7,050	400	3,750	275
Not employed or not seeking work[b]	1,500	175	250	75	1,200	150

TABLE 30

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, and sex: 2019

(Number and SE)

Occupation and employment status	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
Engineering occupations	136,750	1,375	115,950	1,375	20,800	650
Full time	114,500	1,350	96,650	1,350	17,900	600
Part time	6,100	425	5,000	425	1,100	175
Unemployed[a]	2,250	250	1,800	250	400	100
Retired	12,350	575	11,600	575	750	125
Not employed or not seeking work[b]	1,550	225	900	200	600	125
S&E-related occupations	108,900	1,600	60,950	1,325	47,950	900
Full time	83,900	1,475	48,200	1,175	35,700	800
Part time	8,450	450	3,400	300	5,050	350
Unemployed[a]	1,450	200	750	150	700	150
Retired	13,750	550	8,250	425	5,500	325
Not employed or not seeking work[b]	1,400	175	350	100	1,050	150
Non-S&E occupations	185,050	1,900	108,700	1,550	76,350	1,225
Full time	126,700	1,575	76,200	1,400	50,500	1,050
Part time	24,800	825	12,550	625	12,250	525
Unemployed[a]	3,150	300	1,850	250	1,300	175
Retired	26,150	825	16,900	700	9,300	450
Not employed or not seeking work[b]	4,250	350	1,200	225	3,050	250

S&E = science and engineering; SE = standard error.

[a] Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job.

[b] Not employed or not seeking work includes individuals who were not working during the survey reference week and had not been seeking work in the prior 4 weeks because of family responsibilities, chronic illness, or other reasons.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 350 individuals who reported never having worked so could not be classified by occupation. Designation of full-time and part-time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his or her principal job but full time in the labor force. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 31

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, ethnicity, and race: 2019

(Number and SE)

Occupation and employment status	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	1,008,750	1,475	41,350	550	1,600	150	235,000	1,325	35,050	350	682,350	1,425	13,400	400
Full time	763,350	2,000	33,250	575	1,100	125	201,300	1,375	27,650	425	489,300	1,775	10,700	350
Part time	93,900	1,525	3,950	250	150	50	12,050	625	3,400	275	73,050	1,275	1,250	150
Unemployed[d]	14,100	650	850	125	50	50	3,950	350	1,050	175	8,000	475	150	50
Retired	120,000	1,400	2,250	200	150	50	13,500	700	2,300	200	100,800	1,400	1,000	150
Not employed or not seeking work[e]	17,450	625	1,000	175	50	50	4,150	350	650	125	11,200	500	350	75
Science occupations	578,050	2,425	25,100	475	800	125	124,200	1,600	18,400	400	401,750	2,100	7,750	325
Full time	438,250	2,325	20,200	450	500	100	107,700	1,475	14,300	425	289,400	1,950	6,150	300
Part time	54,500	1,225	2,550	200	100	50	5,850	425	2,050	200	43,200	1,075	750	125
Unemployed[d]	7,250	425	550	100	50	50	2,050	250	650	150	3,900	300	100	50
Retired	67,750	1,125	1,300	125	100	50	6,100	425	1,100	150	58,550	1,050	600	125
Not employed or not seeking work[e]	10,300	450	550	75	D	D	2,500	300	350	100	6,700	375	200	75
Biological, agricultural, and other life scientist	183,050	1,625	8,050	300	150	50	43,300	925	5,100	250	123,600	1,400	2,850	200
Full time	145,900	1,575	6,950	275	100	25	38,350	900	4,100	200	94,100	1,200	2,350	175
Part time	10,750	525	400	75	D	D	1,250	200	350	100	8,600	450	150	50
Unemployed[d]	2,950	300	300	75	S	S	850	175	300	125	1,450	200	50	25
Retired	19,650	725	250	50	D	D	1,750	225	200	50	17,200	675	250	75
Not employed or not seeking work[e]	3,750	275	200	50	D	D	1,150	200	100	50	2,250	200	50	25
Computer and information scientist	71,350	1,075	1,850	150	D	D	31,250	900	1,150	125	36,450	750	650	100
Full time	59,750	1,075	1,600	150	D	D	28,150	825	900	100	28,500	700	600	100
Part time	3,250	350	100	50	D	D	800	175	150	75	2,200	275	D	D
Unemployed[d]	750	125	50	50	D	D	200	75	D	D	450	100	D	D
Retired	6,600	375	100	50	D	D	1,650	250	50	50	4,800	300	D	D
Not employed or not seeking work[e]	1,000	175	D	D	D	D	450	125	50	25	500	125	D	D
Mathematical scientist	47,850	825	1,850	150	D	D	15,650	575	1,250	125	28,550	650	550	75
Full time	38,150	750	1,500	150	D	D	13,600	575	950	100	21,600	625	400	75
Part time	3,300	300	100	50	D	D	900	200	150	50	2,100	200	50	50
Unemployed[d]	600	125	S	S	D	D	300	100	D	D	250	75	D	D
Retired	5,050	325	150	50	D	D	650	175	100	50	4,150	275	S	S
Not employed or not seeking work[e]	750	150	D	D	D	D	200	75	*	*	450	125	D	D
Physical scientist	101,350	1,325	3,600	200	100	50	19,550	725	2,500	225	74,450	1,125	1,150	125
Full time	76,850	1,250	2,900	175	50	25	16,550	675	2,100	200	54,250	1,000	1,000	125
Part time	7,700	425	350	75	D	D	1,000	200	200	75	6,100	400	50	25
Unemployed[d]	1,450	175	50	50	D	D	500	150	S	S	800	125	D	D
Retired	13,950	550	250	50	D	D	1,250	225	150	50	12,250	500	100	50
Not employed or not seeking work[e]	1,450	150	50	50	D	D	300	100	D	D	1,050	150	D	D
Psychologist	91,600	975	4,950	225	250	75	5,000	350	3,850	225	76,200	950	1,350	150
Full time	56,250	1,000	3,400	200	150	75	3,550	325	2,850	225	45,550	925	800	125
Part time	21,350	775	1,150	150	D	D	850	175	600	100	18,300	750	350	100

TABLE 31

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, ethnicity, and race: 2019

(Number and SE)

Occupation and employment status	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Unemployed[d]	500	125	*	*	D	D	D	D	S	S	350	100	D	D
Retired	11,650	575	300	75	D	D	400	125	250	75	10,600	575	50	50
Not employed or not seeking work[e]	1,850	200	100	50	D	D	200	75	D	D	1,350	200	100	50
Social scientist	82,850	1,050	4,750	250	300	75	9,450	450	4,600	275	62,500	975	1,250	150
Full time	61,300	875	3,850	250	200	75	7,550	400	3,400	250	45,350	825	950	100
Part time	8,200	475	450	75	D	D	1,050	200	650	125	5,900	400	150	75
Unemployed[d]	1,050	150	50	50	D	D	200	75	150	75	600	125	D	D
Retired	10,800	475	300	75	50	50	450	100	350	75	9,550	425	S	S
Not employed or not seeking work[e]	1,500	175	100	50	D	D	200	75	100	50	1,100	175	D	D
Engineering occupations	136,750	1,375	5,300	275	100	50	54,300	1,125	3,200	175	72,300	1,125	1,550	200
Full time	114,500	1,350	4,450	250	100	50	47,900	1,125	2,850	175	57,850	1,100	1,300	200
Part time	6,100	425	250	75	D	D	1,750	300	50	25	4,000	325	50	25
Unemployed[d]	2,250	250	50	25	D	D	1,000	200	S	S	1,000	175	D	D
Retired	12,350	575	250	75	D	D	3,150	325	100	50	8,700	475	150	75
Not employed or not seeking work[e]	1,550	225	S	S	D	D	450	125	50	25	750	150	D	D
S&E-related occupations	108,900	1,600	4,000	225	250	50	24,350	850	4,600	250	74,250	1,325	1,400	150
Full time	83,900	1,475	3,400	200	150	50	20,950	825	3,800	225	54,400	1,150	1,200	125
Part time	8,450	450	350	75	D	D	1,050	175	400	75	6,550	400	100	50
Unemployed[d]	1,450	200	S	S	D	D	350	125	50	25	1,000	175	D	D
Retired	13,750	550	200	75	S	S	1,600	250	350	75	11,500	500	100	50
Not employed or not seeking work[e]	1,400	175	50	25	D	D	450	125	50	50	800	125	D	D
Non-S&E occupations	185,050	1,900	6,950	300	400	75	32,150	950	8,850	350	134,050	1,775	2,650	175
Full time	126,700	1,575	5,200	250	350	75	24,750	825	6,700	325	87,700	1,400	2,000	175
Part time	24,800	825	850	125	50	25	3,400	350	950	125	19,250	725	350	75
Unemployed[d]	3,150	300	200	50	D	D	550	175	250	75	2,100	250	50	25
Retired	26,150	825	500	125	D	D	2,700	300	750	125	22,050	800	200	50
Not employed or not seeking work[e]	4,250	350	200	50	D	D	800	175	200	75	2,950	275	100	50

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job.

[e] Not employed or not seeking work includes individuals who were not working during the survey reference week and had not been seeking work in the prior 4 weeks because of family responsibilities, chronic illness, or other reasons.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 350 individuals who reported never having worked so could not be classified by occupation. Designation of full-time and part-time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his or her principal job but full time in the labor force. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 32-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by occupation: 2019

(Percent and SE)

Occupation	Unemployment rate	
	Percent	SE
All occupations	1.6	0.10
Science occupations	1.5	0.10
Biological, agricultural, and other life scientist	1.9	0.20
Agricultural, food scientist	2.1	0.60
Biochemists, biophysicist	3.1	0.70
Biological scientist	1.8	0.35
Forestry, conservation scientist	S	S
Medical scientist	2.2	0.45
Postsecondary teachers, agricultural, other natural sciences	S	S
Postsecondary teachers, biological sciences	0.7	0.20
Other biological, agricultural, life scientist	2.3	0.60
Computer and information scientist	1.2	0.20
Computer and information scientist	1.3	0.25
Postsecondary teachers, computer science	0.4	0.20
Mathematical scientist	1.5	0.30
Mathematical scientist	1.6	0.40
Postsecondary teachers, mathematics, statistics	1.3	0.45
Physical scientist	1.7	0.20
Chemists, except biochemist	2.4	0.50
Earth, atmospheric, ocean scientist	2.4	0.75
Physicists, astronomers	1.5	0.65
Postsecondary teachers, chemistry	0.9	0.35
Postsecondary teachers, physics	0.4	0.25
Postsecondary teachers, other physical science	S	S
Other physical scientist	S	S
Psychologist	0.6	0.15
Psychologist	0.7	0.20
Postsecondary teachers, psychology	0.5	0.20
Social scientist	1.5	0.25
Economist	1.1	0.45
Political scientist	D	D
Postsecondary teachers, economics	D	D
Postsecondary teachers, political science	D	D
Postsecondary teachers, sociology	1.7	0.75
Postsecondary teachers, other social sciences	1.2	0.40
Sociologist, anthropologist	S	S
Other social scientist	3.3	0.80
Engineering occupations	1.8	0.20
Aerospace, aeronautical, astronautical engineer	1.5	0.65
Chemical engineer	2.9	1.30
Civil, architectural, sanitary engineer	S	S
Electrical engineer	2.3	0.55
Industrial engineers	D	D
Mechanical engineer	1.3	0.55
Postsecondary teacher, engineering	0.7	0.35
Other engineer	2.4	0.45
S&E-related occupations	1.5	0.25
Health occupations, except postsecondary teachers and managers	1.5	0.35
Postsecondary teacher, health and related science	0.6	0.25
S&E managers, including health	1.9	0.50

TABLE 32-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by occupation: 2019

(Percent and SE)

Occupation	Unemployment rate	
	Percent	SE
S&E precollege teachers	3.4	1.30
S&E technicians/ technologists	2.3	1.00
Other S&E-related occupation	D	D
Non-S&E occupations	2.0	0.20
Arts, humanities-related occupation	3.7	1.00
Management-related occupation	2.5	0.45
Non-S&E managers	1.1	0.25
Non-S&E postsecondary teachers	0.9	0.30
Non-S&E precollege/ other teachers	4.5	1.25
Sales, marketing occupation	2.8	0.85
Social service-related occupation	1.9	0.70
Other non-S&E occupation	3.9	1.15

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Unemployment rate (UR) = U/ (E+U). Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job. Residence location is based on reported living location on 1 February 2019.

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

TABLE 32-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by occupation: 2019

(Percent and SE)

Occupation	Involuntarily out-of-field rate	
	Percent	SE
All occupations	2.8	0.10
Science occupations	1.7	0.10
Biological, agricultural, and other life scientist	0.9	0.15
Agricultural, food scientist	1.0	0.40
Biochemists, biophysicist	1.3	0.35
Biological scientist	0.7	0.20
Forestry, conservation scientist	D	D
Medical scientist	1.2	0.30
Postsecondary teachers, agricultural, other natural sciences	D	D
Postsecondary teachers, biological sciences	S	S
Other biological, agricultural, life scientist	1.7	0.55
Computer and information scientist	7.5	0.55
Computer and information scientist	8.8	0.65
Postsecondary teachers, computer science	D	D
Mathematical scientist	2.4	0.35
Mathematical scientist	4.0	0.60
Postsecondary teachers, mathematics, statistics	0.6	0.25
Physical scientist	1.1	0.20
Chemists, except biochemist	1.5	0.35
Earth, atmospheric, ocean scientist	1.0	0.50
Physicists, astronomers	1.3	0.50
Postsecondary teachers, chemistry	D	D
Postsecondary teachers, physics	D	D
Postsecondary teachers, other physical science	D	D
Other physical scientist	3.4	1.45
Psychologist	D	D
Psychologist	D	D
Postsecondary teachers, psychology	D	D
Social scientist	0.5	0.15
Economist	S	S
Political scientist	D	D
Postsecondary teachers, economics	D	D
Postsecondary teachers, political science	D	D
Postsecondary teachers, sociology	D	D
Postsecondary teachers, other social sciences	D	D
Sociologist, anthropologist	D	D
Other social scientist	2.0	0.65
Engineering occupations	1.8	0.25
Aerospace, aeronautical, astronautical engineer	2.1	0.80
Chemical engineer	1.4	0.55
Civil, architectural, sanitary engineer	0.9	0.45
Electrical engineer	1.9	0.45
Industrial engineers	D	D
Mechanical engineer	3.7	1.00
Postsecondary teacher, engineering	S	S
Other engineer	2.4	0.45
S&E-related occupations	4.2	0.35
Health occupations, except postsecondary teachers and managers	6.4	0.75
Postsecondary teacher, health and related science	S	S
S&E managers, including health	3.5	0.60

TABLE 32-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by occupation: 2019

(Percent and SE)

Occupation	Involuntarily out-of-field rate	
	Percent	SE
S&E precollege teachers	6.7	1.35
S&E technicians/ technologists	6.1	1.20
Other S&E-related occupation	25.4	7.70
Non-S&E occupations	6.3	0.35
Arts, humanities-related occupation	8.4	1.35
Management-related occupation	9.0	0.80
Non-S&E managers	2.9	0.40
Non-S&E postsecondary teachers	0.9	0.35
Non-S&E precollege/ other teachers	11.4	2.75
Sales, marketing occupation	14.1	1.70
Social service-related occupation	4.1	0.95
Other non-S&E occupation	14.2	1.40

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Involuntarily out-of-field rate is the percentage of employed individuals who reported, for their principal job, working in an area not related to their first doctoral degree at least partially because a job in their doctoral degree field was not available. Residence location is based on reported living location on 1 February 2019.

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

TABLE 32-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by occupation: 2019

(Percent and SE)

Occupation	Labor force participation rate	
	Percent	SE
All occupations	86.4	0.20
Science occupations	86.5	0.25
Biological, agricultural, and other life scientist	87.2	0.40
Agricultural, food scientist	81.7	1.50
Biochemists, biophysicist	86.0	1.35
Biological scientist	88.7	0.95
Forestry, conservation scientist	83.6	3.30
Medical scientist	89.7	0.70
Postsecondary teachers, agricultural, other natural sciences	78.5	2.50
Postsecondary teachers, biological sciences	86.3	0.95
Other biological, agricultural, life scientist	89.0	1.10
Computer and information scientist	89.3	0.60
Computer and information scientist	89.3	0.70
Postsecondary teachers, computer science	89.6	1.30
Mathematical scientist	87.9	0.70
Mathematical scientist	89.5	0.85
Postsecondary teachers, mathematics, statistics	86.1	1.15
Physical scientist	84.8	0.55
Chemists, except biochemist	82.1	1.15
Earth, atmospheric, ocean scientist	82.8	1.35
Physicists, astronomers	85.8	1.40
Postsecondary teachers, chemistry	87.4	1.20
Postsecondary teachers, physics	86.8	1.70
Postsecondary teachers, other physical science	87.6	1.45
Other physical scientist	82.5	2.75
Psychologist	85.3	0.65
Psychologist	85.3	0.75
Postsecondary teachers, psychology	85.1	1.10
Social scientist	85.1	0.55
Economist	85.6	1.50
Political scientist	78.0	4.15
Postsecondary teachers, economics	85.3	1.75
Postsecondary teachers, political science	91.4	1.30
Postsecondary teachers, sociology	81.0	2.10
Postsecondary teachers, other social sciences	87.2	1.05
Sociologist, anthropologist	79.6	3.00
Other social scientist	81.1	1.75
Engineering occupations	89.8	0.45
Aerospace, aeronautical, astronautical engineer	87.7	1.80
Chemical engineer	87.0	1.90
Civil, architectural, sanitary engineer	89.9	1.80
Electrical engineer	91.6	0.90
Industrial engineer	94.0	3.15
Mechanical engineer	90.9	1.20
Postsecondary teacher, engineering	93.7	0.85
Other engineer	86.2	0.90
S&E-related occupations	86.1	0.50
Health occupations, except postsecondary teachers and managers	86.4	0.85
Postsecondary teacher, health and related science	86.0	1.10
S&E managers, including health	86.9	1.00

TABLE 32-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by occupation: 2019

(Percent and SE)

Occupation	Labor force participation rate	
	Percent	SE
S&E precollege teachers	78.8	2.75
S&E technicians/ technologists	88.9	1.75
Other S&E-related occupation	82.0	6.35
Non-S&E occupations	83.6	0.45
Arts, humanities-related occupation	83.4	1.70
Management-related occupation	80.8	1.15
Non-S&E managers	87.4	0.70
Non-S&E postsecondary teachers	83.7	1.10
Non-S&E precollege/ other teachers	71.4	3.10
Sales, marketing occupation	85.1	1.75
Social service-related occupation	79.0	2.20
Other non-S&E occupation	82.3	1.65

S&E = science and engineering; SE = standard error.

Note(s):
Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job. Population (P) is defined as all S&E doctorate holders less than 76 years of age, who were residing in the United States during the week of 1 February 2019, and who earned doctorates from U.S. institutions. Labor force participation rate (RLF) = (E+U)/ P. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 350 individuals who reported never having worked so could not be classified by occupation. Residence location is based on reported living location on 1 February 2019.

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

TABLE 33

U.S. residing doctoral scientists and engineers, by occupation and sex: 2019

(Number and SE)

Occupation	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
All occupations	1,008,750	1,475	644,550	1,400	364,200	1,025
Science occupations	578,050	2,425	358,950	2,050	219,100	1,350
Biological, agricultural, and other life scientist	183,050	1,625	106,250	1,275	76,850	975
Agricultural, food scientist	14,500	525	10,350	475	4,150	250
Biochemists, biophysicist	19,650	725	12,550	550	7,100	450
Biological scientist	30,700	700	17,250	600	13,450	475
Forestry, conservation scientist	2,750	225	1,750	200	950	125
Medical scientist	48,300	1,100	26,350	800	21,900	725
Postsecondary teachers, agricultural, other natural sciences	7,150	375	4,650	350	2,550	175
Postsecondary teachers, biological sciences	37,800	800	22,100	725	15,700	475
Other biological, agricultural, life scientist	22,250	725	11,250	550	11,000	475
Computer and information scientist	71,350	1,075	59,100	1,000	12,250	475
Computer and information scientist	60,650	1,075	50,550	1,000	10,050	475
Postsecondary teachers, computer science	10,700	525	8,500	500	2,200	225
Mathematical scientist	47,850	825	33,500	800	14,300	450
Mathematical scientist	24,750	700	16,750	675	8,000	400
Postsecondary teachers, mathematics, statistics	23,050	600	16,750	550	6,300	325
Physical scientist	101,350	1,325	77,500	1,125	23,850	575
Chemists, except biochemist	27,250	800	20,900	675	6,350	375
Earth, atmospheric, ocean scientist	14,550	400	11,200	375	3,400	175
Physicists, astronomers	14,700	700	12,900	650	1,850	200
Postsecondary teachers, chemistry	19,500	675	12,850	550	6,650	325
Postsecondary teachers, physics	12,350	600	10,250	575	2,100	200
Postsecondary teachers, other physical science	8,400	300	6,000	275	2,450	175
Other physical scientist	4,550	325	3,450	300	1,100	150
Psychologist	91,600	975	36,150	675	55,400	850
Psychologist	67,850	1,025	25,450	725	42,400	875
Postsecondary teachers, psychology	23,750	675	10,750	500	13,000	550
Social scientist	82,850	1,050	46,450	800	36,400	700
Economist	11,300	575	7,850	500	3,450	275
Political scientist	2,450	300	1,600	275	850	125
Postsecondary teachers, economics	12,800	550	9,600	500	3,200	250
Postsecondary teachers, political science	12,600	475	8,400	400	4,250	300
Postsecondary teachers, sociology	9,450	375	4,300	275	5,150	275
Postsecondary teachers, other social sciences	19,200	600	9,400	475	9,800	400
Sociologist, anthropologist	4,500	325	1,750	200	2,750	250
Other social scientist	10,500	525	3,600	275	6,900	375
Engineering occupations	136,750	1,375	115,950	1,375	20,800	650
Aerospace, aeronautical, astronautical engineer	8,250	475	7,400	450	850	150
Chemical engineer	10,950	525	8,900	500	2,050	275
Civil, architectural, sanitary engineer	7,750	475	6,550	475	1,200	150
Electrical engineer	30,700	825	27,500	800	3,250	300
Industrial engineer	2,100	275	1,600	275	500	100
Mechanical engineer	15,000	575	13,600	550	1,400	150
Postsecondary teacher, engineering	25,750	800	21,400	750	4,350	300
Other engineer	36,200	725	29,000	725	7,200	400
S&E-related occupations	108,900	1,600	60,950	1,325	47,950	900
Health occupations, except postsecondary teachers and managers	36,200	875	17,700	675	18,450	575
Postsecondary teacher, health and related science	27,600	700	11,500	600	16,100	500
S&E managers, including health	28,900	925	20,250	825	8,600	425

TABLE 33

U.S. residing doctoral scientists and engineers, by occupation and sex: 2019

(Number and SE)

Occupation	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
S&E precollege teachers	6,850	450	4,100	375	2,750	225
S&E technicians/ technologists	8,300	475	6,600	425	1,650	225
Other S&E-related occupation	1,100	175	750	150	350	100
Non-S&E occupations	185,050	1,900	108,700	1,550	76,350	1,225
Arts, humanities-related occupation	11,100	450	3,800	325	7,300	350
Management-related occupation	42,000	1,275	25,800	1,000	16,200	700
Non-S&E managers	64,350	1,175	43,200	1,025	21,200	650
Non-S&E postsecondary teachers	23,750	725	13,000	575	10,750	450
Non-S&E precollege/ other teachers	6,950	450	2,550	300	4,400	300
Sales, marketing occupation	11,350	550	7,200	500	4,150	325
Social service-related occupation	8,150	450	3,350	325	4,800	350
Other non-S&E occupation	17,400	700	9,750	525	7,650	475

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 350 individuals who reported never having worked so could not be classified by occupation. Residence location is based on reported living location on 1 February 2019.

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

TABLE 34

U.S. residing doctoral scientists and engineers, by occupation, ethnicity, and race: 2019

(Number and SE)

Occupation	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	1,008,750	1,475	41,350	550	1,600	150	235,000	1,325	35,050	350	682,350	1,425	13,400	400
Science occupations	578,050	2,425	25,100	475	800	125	124,200	1,600	18,400	400	401,750	2,100	7,750	325
Biological, agricultural, and other life scientist	183,050	1,625	8,050	300	150	50	43,300	925	5,100	250	123,600	1,400	2,850	200
Agricultural, food scientist	14,500	525	900	100	D	D	2,950	275	600	100	10,000	400	100	25
Biochemists, biophysicist	19,650	725	450	75	D	D	7,350	425	250	75	11,400	525	200	75
Biological scientist	30,700	700	1,550	125	D	D	6,750	425	650	100	21,100	550	650	100
Forestry, conservation scientist	2,750	225	50	25	D	D	150	50	*	*	2,400	225	50	50
Medical scientist	48,300	1,100	1,750	150	50	25	13,400	575	1,500	125	30,950	825	650	125
Postsecondary teachers, agricultural, other natural sciences	7,150	375	400	75	D	D	1,000	150	300	75	5,350	325	100	50
Postsecondary teachers, biological sciences	37,800	800	2,000	175	*	*	4,150	375	1,100	125	29,900	725	650	100
Other biological, agricultural, life scientist	22,250	725	1,000	125	D	D	7,500	450	750	125	12,500	550	450	125
Computer and information scientist	71,350	1,075	1,850	150	D	D	31,250	900	1,150	125	36,450	750	650	100
Computer and information scientist	60,650	1,075	1,550	150	D	D	27,600	875	800	100	30,150	750	500	75
Postsecondary teachers, computer science	10,700	525	300	75	D	D	3,600	375	350	75	6,300	350	S	S
Mathematical scientist	47,850	825	1,850	150	D	D	15,650	575	1,250	125	28,550	650	550	75
Mathematical scientist	24,750	700	800	125	D	D	10,200	550	650	100	12,700	525	400	75
Postsecondary teachers, mathematics, statistics	23,050	600	1,000	125	D	D	5,450	425	600	100	15,850	475	150	50
Physical scientist	101,350	1,325	3,600	200	100	50	19,550	725	2,500	225	74,450	1,125	1,150	125
Chemists, except biochemist	27,250	800	900	125	50	25	7,100	450	850	125	18,050	650	300	75
Earth, atmospheric, ocean scientist	14,550	400	400	75	D	D	2,600	200	150	50	11,150	375	200	50
Physicists, astronomers	14,700	700	500	100	D	D	3,000	325	250	100	10,750	550	200	75
Postsecondary teachers, chemistry	19,500	675	850	100	D	D	2,800	325	800	100	14,900	625	150	50
Postsecondary teachers, physics	12,350	600	500	100	D	D	2,150	275	200	50	9,300	550	150	75
Postsecondary teachers, other physical science	8,400	300	250	50	D	D	900	150	150	50	6,950	275	100	50
Other physical scientist	4,550	325	150	50	D	D	950	175	100	50	3,350	300	50	25
Psychologist	91,600	975	4,950	225	250	75	5,000	350	3,850	225	76,200	950	1,350	150
Psychologist	67,850	1,025	3,750	225	200	75	3,100	300	2,450	200	57,400	950	950	150
Postsecondary teachers, psychology	23,750	675	1,200	150	50	50	1,900	275	1,350	150	18,800	625	350	75

TABLE 34

U.S. residing doctoral scientists and engineers, by occupation, ethnicity, and race: 2019

(Number and SE)

Occupation	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Social scientist	82,850	1,050	4,750	250	300	75	9,450	450	4,600	275	62,500	975	1,250	150
Economist	11,300	575	650	100	D	D	2,550	300	300	75	7,700	450	150	75
Political scientist	2,450	300	100	50	D	D	S	S	100	50	2,000	250	D	D
Postsecondary teachers, economics	12,800	550	650	100	D	D	1,850	200	550	100	9,700	450	S	S
Postsecondary teachers, political science	12,600	475	600	125	D	D	1,050	150	1,000	200	9,650	450	250	100
Postsecondary teachers, sociology	9,450	375	700	100	D	D	700	125	750	125	7,000	350	250	75
Postsecondary teachers, other social sciences	19,200	600	1,350	150	150	50	1,600	200	900	100	14,900	550	300	75
Sociologist, anthropologist	4,500	325	300	75	D	D	250	100	200	50	3,650	275	100	25
Other social scientist	10,500	525	450	75	50	25	1,300	175	800	125	7,800	425	150	50
Engineering occupations	136,750	1,375	5,300	275	100	50	54,300	1,125	3,200	175	72,300	1,125	1,550	200
Aerospace, aeronautical, astronautical engineer	8,250	475	300	100	D	D	2,100	250	100	50	5,700	375	50	25
Chemical engineer	10,950	525	400	100	D	D	4,800	425	200	75	5,450	350	150	50
Civil, architectural, sanitary engineer	7,750	475	450	125	D	D	2,700	300	350	100	4,200	350	S	S
Electrical engineer	30,700	825	900	100	D	D	14,850	700	600	100	14,050	575	300	75
Industrial engineers	2,100	275	150	50	D	D	750	200	100	50	1,100	175	D	D
Mechanical engineer	15,000	575	450	100	*	*	7,050	425	200	50	7,000	325	250	125
Postsecondary teacher, engineering	25,750	800	1,250	150	D	D	8,550	550	800	125	14,850	625	250	75
Other engineer	36,200	725	1,400	150	*	*	13,450	600	800	100	20,000	600	550	100
S&E-related occupations	108,900	1,600	4,000	225	250	50	24,350	850	4,600	250	74,250	1,325	1,400	150
Health occupations, except postsecondary teachers and managers	36,200	875	1,500	150	50	25	8,950	550	1,900	175	23,300	725	500	75
Postsecondary teacher, health and related science	27,600	700	950	125	100	50	4,200	325	1,550	125	20,500	625	300	75
S&E managers, including health	28,900	925	1,050	125	50	25	6,550	500	750	125	20,100	700	350	75
S&E precollege teachers	6,850	450	300	50	D	D	550	175	400	75	5,500	400	100	50
S&E technicians/ technologists	8,300	475	200	50	D	D	3,550	375	50	25	4,400	325	100	50
Other S&E-related occupation	1,100	175	S	S	D	D	550	125	D	D	500	125	D	D
Non-S&E occupations	185,050	1,900	6,950	300	400	75	32,150	950	8,850	350	134,050	1,775	2,650	175
Arts, humanities-related occupation	11,100	450	250	75	D	D	1,300	175	300	75	8,950	450	200	50
Management-related occupation	42,000	1,275	1,900	175	50	25	9,000	550	2,150	200	28,250	950	700	100
Non-S&E managers	64,350	1,175	2,000	150	150	50	11,200	625	2,850	225	47,500	975	700	100
Non-S&E postsecondary teachers	23,750	725	1,150	100	50	50	3,400	325	1,300	150	17,550	650	300	75

TABLE 34

U.S. residing doctoral scientists and engineers, by occupation, ethnicity, and race: 2019

(Number and SE)

Occupation	Total		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Non-S&E precollege/ other teachers	6,950	450	350	75	D	D	850	175	350	75	5,200	400	150	50
Sales, marketing occupation	11,350	550	400	75	D	D	3,050	325	350	75	7,300	450	250	125
Social service-related occupation	8,150	450	450	100	S	S	750	150	900	150	5,900	400	100	50
Other non-S&E occupation	17,400	700	500	75	D	D	2,600	325	650	125	13,350	650	300	100

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 350 individuals who reported never having worked so could not be classified by occupation. Residence location is based on reported living location on 1 February 2019.

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

TABLE 35

U.S. residing doctoral scientists and engineers, by occupation and disability status: 2019

(Number and SE)

Occupation	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
All occupations	1,008,750	1,475	95,650	1,450	913,100	1,700
Science occupations	578,050	2,425	56,200	1,150	521,850	2,450
Biological, agricultural, and other life scientist	183,050	1,625	17,050	575	166,050	1,550
Agricultural, food scientist	14,500	525	1,800	200	12,750	475
Biochemists, biophysicist	19,650	725	1,900	275	17,700	725
Biological scientist	30,700	700	3,000	275	27,750	700
Forestry, conservation scientist	2,750	225	250	75	2,500	225
Medical scientist	48,300	1,100	3,700	275	44,600	1,050
Postsecondary teachers, agricultural, other natural sciences	7,150	375	900	125	6,250	375
Postsecondary teachers, biological sciences	37,800	800	3,850	275	33,950	775
Other biological, agricultural, life scientist	22,250	725	1,700	200	20,550	700
Computer and information scientist	71,350	1,075	5,600	400	65,750	1,125
Computer and information scientist	60,650	1,075	4,400	350	56,250	1,100
Postsecondary teachers, computer science	10,700	525	1,200	175	9,500	475
Mathematical scientist	47,850	825	4,400	275	43,400	775
Mathematical scientist	24,750	700	2,100	225	22,650	675
Postsecondary teachers, mathematics, statistics	23,050	600	2,300	225	20,800	575
Physical scientist	101,350	1,325	9,900	450	91,450	1,275
Chemists, except biochemist	27,250	800	2,450	250	24,800	775
Earth, atmospheric, ocean scientist	14,550	400	1,450	150	13,100	400
Physicists, astronomers	14,700	700	1,600	250	13,150	625
Postsecondary teachers, chemistry	19,500	675	1,650	200	17,850	625
Postsecondary teachers, physics	12,350	600	1,050	175	11,300	600
Postsecondary teachers, other physical science	8,400	300	1,250	150	7,200	325
Other physical scientist	4,550	325	450	100	4,100	300
Psychologist	91,600	975	9,650	550	81,900	975
Psychologist	67,850	1,025	6,800	450	61,050	1,000
Postsecondary teachers, psychology	23,750	675	2,900	275	20,850	650
Social scientist	82,850	1,050	9,600	525	73,250	975
Economist	11,300	575	1,050	175	10,300	550
Political scientist	2,450	300	350	150	2,100	250
Postsecondary teachers, economics	12,800	550	1,600	225	11,200	500
Postsecondary teachers, political science	12,600	475	1,500	225	11,150	475
Postsecondary teachers, sociology	9,450	375	1,200	150	8,250	375
Postsecondary teachers, other social sciences	19,200	600	2,650	250	16,550	575
Sociologist, anthropologist	4,500	325	450	100	4,100	325
Other social scientist	10,500	525	900	125	9,650	500
Engineering occupations	136,750	1,375	11,300	525	125,450	1,375
Aerospace, aeronautical, astronautical engineer	8,250	475	600	150	7,650	450
Chemical engineer	10,950	525	600	125	10,350	525
Civil, architectural, sanitary engineer	7,750	475	750	150	7,050	450
Electrical engineer	30,700	825	2,500	275	28,200	825
Industrial engineers	2,100	275	200	100	1,900	250
Mechanical engineer	15,000	575	1,050	200	13,900	550
Postsecondary teacher, engineering	25,750	800	3,000	275	22,700	750
Other engineer	36,200	725	2,550	250	33,650	700
S&E-related occupations	108,900	1,600	10,000	450	98,900	1,500
Health occupations, except postsecondary teachers and managers	36,200	875	3,150	250	33,000	800
Postsecondary teacher, health and related science	27,600	700	2,900	250	24,700	675
S&E managers, including health	28,900	925	2,300	250	26,550	850

TABLE 35

U.S. residing doctoral scientists and engineers, by occupation and disability status: 2019

(Number and SE)

Occupation	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
S&E precollege teachers	6,850	450	550	100	6,300	450
S&E technician/ technologist	8,300	475	1,000	200	7,250	475
Other S&E-related occupation	1,100	175	D	D	1,050	175
Non-S&E occupations	185,050	1,900	18,150	700	166,900	1,750
Arts, humanities-related occupation	11,100	450	1,200	175	9,900	400
Management-related occupation	42,000	1,275	3,500	350	38,500	1,225
Non-S&E managers	64,350	1,175	5,100	350	59,300	1,200
Non-S&E postsecondary teachers	23,750	725	2,650	275	21,100	700
Non-S&E precollege/ other teachers	6,950	450	1,000	175	5,950	425
Sales, marketing occupation	11,350	550	1,200	225	10,150	500
Social service-related occupation	8,150	450	1,250	175	6,900	425
Other non-S&E occupation	17,400	700	2,250	250	15,150	650

D = suppressed to avoid disclosure of confidential information.

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 350 individuals who reported never having worked so could not be classified by occupation. Survey asks degree of difficulty—none, slight, moderate, severe, or unable to do—an individual has in seeing (with glasses), hearing (with hearing aid), walking without assistance, lifting 10 pounds, or concentrating, remembering, or making decisions. Those respondents who answered "moderate," "severe," or "unable to do" for any activity were classified as having a disability. Residence location is based on reported living location on 1 February 2019.

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

TABLE 36

U.S. residing doctoral scientists and engineers employed as postdocs, by occupation: 2019

(Number and SE)

Occupation	Number	SE
All occupations	25,400	725
Science occupations	22,000	725
Biological, agricultural, and other life scientist	15,350	575
Agricultural, food scientist	550	100
Biochemists, biophysicist	2,900	275
Biological scientist	4,200	225
Forestry, conservation scientist	150	50
Medical scientist	4,700	375
Postsecondary teachers, agricultural, other natural sciences	50	25
Postsecondary teachers, biological sciences	300	100
Other biological, agricultural, life scientist	2,550	250
Computer and information scientist	450	100
Computer and information scientist	400	100
Postsecondary teachers, computer science	D	D
Mathematical scientist	1,000	150
Mathematical scientist	500	100
Postsecondary teachers, mathematics, statistics	500	125
Physical scientist	3,850	325
Chemists, except biochemist	1,300	200
Earth, atmospheric, ocean scientist	700	100
Physicists, astronomers	1,650	250
Postsecondary teachers, chemistry	D	D
Postsecondary teachers, physics	D	D
Postsecondary teachers, other physical science	D	D
Other physical scientist	100	50
Psychologist	750	125
Psychologist	700	125
Postsecondary teachers, psychology	D	D
Social scientist	550	100
Economist	50	25
Political scientist	D	D
Postsecondary teachers, economics	D	D
Postsecondary teachers, political science	D	D
Postsecondary teachers, sociology	D	D
Postsecondary teachers, other social sciences	50	25
Sociologist, anthropologist	200	75
Other social scientist	200	50
Engineering occupations	1,900	200
Aerospace, aeronautical, astronautical engineer	D	D
Chemical engineer	250	100
Civil, architectural, sanitary engineer	150	50
Electrical engineer	300	100
Industrial engineers	D	D
Mechanical engineer	250	75
Postsecondary teacher, engineering	50	25
Other engineer	850	125
S&E-related occupations	1,300	200
Health occupations, except postsecondary teachers and managers	750	175
Postsecondary teacher, health and related science	100	50
S&E managers, including health	150	50
S&E precollege teachers	D	D

TABLE 36

U.S. residing doctoral scientists and engineers employed as postdocs, by occupation: 2019

(Number and SE)

Occupation	Number	SE
S&E technician/ technologist	300	100
Other S&E-related occupation	D	D
Non-S&E occupations	250	75
Arts, humanities-related occupation	D	D
Management-related occupation	D	D
Non-S&E managers	D	D
Non-S&E postsecondary teachers	50	50
Non-S&E precollege/ other teachers	D	D
Sales, marketing occupation	D	D
Social service-related occupation	D	D
Other non-S&E occupation	50	50

D = suppressed to avoid disclosure of confidential information.

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. A postdoc is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc status is reported for principal job as of survey reference date (1 February 2019). Residence location is based on reported living location on 1 February 2019.

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

TABLE 37

U.S. residing employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2019

(Number and SE)

Occupation	All employed						Asian[a]						Other minority[b]						White[c]					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	857,200	1,975	546,050	1,750	311,200	1,200	213,350	1,325	146,800	1,250	66,550	950	81,500	850	44,250	700	37,300	525	562,350	1,750	355,000	1,800	207,300	1,175
Science occupations	492,750	2,500	304,050	1,950	188,700	1,400	113,550	1,500	73,500	1,175	40,050	850	46,600	725	24,600	575	22,000	475	332,600	2,075	205,950	1,575	126,650	1,400
Biological, agricultural, and other life scientist	156,650	1,525	90,050	1,175	66,650	925	39,550	900	21,800	650	17,800	575	14,350	325	7,200	275	7,150	225	102,750	1,250	61,050	1,000	41,700	800
Agricultural, food scientist	11,600	450	8,100	400	3,500	225	2,650	275	1,650	225	1,000	150	1,400	125	950	125	450	75	7,550	350	5,550	325	2,000	150
Biochemists, biophysicist	16,350	675	10,650	500	5,700	425	6,350	400	3,850	300	2,500	250	750	100	400	75	350	75	9,200	500	6,350	425	2,850	300
Biological scientist	26,750	675	15,000	550	11,750	475	6,350	425	3,150	300	3,150	300	2,550	175	1,150	150	1,400	150	17,900	475	10,700	425	7,200	325
Forestry, conservation scientist	2,250	175	1,500	175	750	100	150	50	100	50	50	25	150	50	100	25	50	25	1,950	175	1,300	175	650	100
Medical scientist	42,350	1,025	22,900	750	19,450	700	12,250	600	6,900	450	5,400	400	3,500	200	1,600	150	1,950	150	26,550	775	14,450	625	12,150	525
Postsecondary teachers, agricultural, other natural sciences	5,550	350	3,550	325	2,000	175	900	150	550	125	350	100	700	100	450	100	250	50	3,950	300	2,550	275	1,400	150
Postsecondary teachers, biological sciences	32,400	775	18,400	700	14,000	475	3,950	375	2,150	275	1,800	225	3,400	200	1,700	150	1,700	150	25,050	700	14,550	625	10,450	400
Other biological, agricultural, life scientist	19,350	700	9,900	550	9,450	450	6,950	450	3,400	350	3,550	325	1,900	175	900	150	1,000	100	10,500	525	5,600	400	4,900	350
Computer and information scientist	63,000	1,100	52,650	1,000	10,350	475	28,950	850	23,850	750	5,100	350	3,350	225	2,600	175	750	125	30,700	725	26,250	700	4,450	250
Computer and information scientist	53,450	1,075	45,050	1,000	8,400	450	25,500	825	21,000	750	4,550	350	2,650	200	2,100	150	550	100	25,250	725	21,950	700	3,350	225
Postsecondary teachers, computer science	9,550	525	7,650	500	1,900	200	3,450	375	2,850	350	600	125	700	100	500	100	200	50	5,450	325	4,300	300	1,100	150
Mathematical scientist	41,400	750	28,950	725	12,450	425	14,500	575	9,200	500	5,300	325	3,200	200	2,400	200	850	100	23,700	625	17,400	550	6,300	300
Mathematical scientist	21,800	650	14,750	625	7,050	400	9,600	525	5,600	450	4,000	325	1,650	175	1,200	150	500	75	10,550	475	8,000	450	2,550	225
Postsecondary teachers, mathematics, statistics	19,600	575	14,200	500	5,400	300	4,900	375	3,600	350	1,300	150	1,550	125	1,200	125	350	75	13,150	425	9,400	400	3,750	250
Physical scientist	84,550	1,275	63,850	1,125	20,650	500	17,550	700	12,900	600	4,650	350	6,650	275	4,600	275	2,050	150	60,350	1,025	46,350	925	14,000	375
Chemists, except biochemist	21,850	725	16,550	625	5,250	350	6,250	425	4,300	300	1,950	275	1,850	175	1,200	150	650	100	13,750	575	11,100	525	2,700	200
Earth, atmospheric, ocean scientist	11,750	400	8,850	375	2,900	150	2,350	200	1,750	200	550	75	750	100	500	75	200	50	8,700	350	6,600	325	2,100	150
Physicists, astronomers	12,450	625	10,950	600	1,500	200	2,800	325	2,450	300	350	100	900	150	750	150	150	50	8,750	475	7,750	450	1,000	150
Postsecondary teachers, chemistry	16,900	625	10,900	525	6,000	300	2,750	325	1,650	250	1,100	175	1,650	150	1,000	125	650	100	12,500	575	8,200	500	4,300	225
Postsecondary teachers, physics	10,650	575	8,750	550	1,950	200	1,850	250	1,550	225	300	100	850	125	650	100	150	75	8,000	500	6,550	500	1,450	175
Postsecondary teachers, other physical science	7,300	300	5,100	275	2,200	150	850	125	600	125	200	50	500	75	300	75	150	50	5,950	275	4,150	250	1,800	125
Other physical scientist	3,650	250	2,750	250	850	125	750	150	600	125	150	75	200	50	150	50	50	25	2,650	250	2,000	225	650	100
Psychologist	77,600	950	29,800	700	47,850	850	4,400	350	1,300	225	3,100	300	9,350	325	2,600	175	6,750	300	63,850	950	25,850	700	38,000	800
Psychologist	57,500	1,000	20,900	750	36,650	825	2,700	275	650	150	2,050	250	6,650	300	1,750	150	4,900	275	48,150	950	18,500	725	29,650	775
Postsecondary teachers, psychology	20,100	625	8,900	450	11,200	475	1,700	275	650	150	1,000	200	2,750	200	900	125	1,850	175	15,700	575	7,350	425	8,350	400
Social scientist	69,500	1,025	38,750	800	30,750	625	8,600	425	4,500	350	4,100	300	9,650	375	5,150	325	4,500	225	51,250	900	29,100	725	22,150	575
Economist	9,600	500	6,500	450	3,050	250	2,300	275	1,300	200	1,050	175	950	125	600	100	300	75	6,350	400	4,650	375	1,700	175
Political scientist	1,850	275	1,250	225	600	125	S	S	D	D	D	D	200	50	150	50	50	50	1,500	225	1,000	200	450	100
Postsecondary teachers, economics	10,900	500	8,000	450	2,850	225	1,800	200	1,150	150	650	125	1,150	150	850	150	250	50	7,950	400	6,000	350	1,950	175
Postsecondary teachers, political science	11,450	450	7,500	400	3,900	300	950	175	550	125	350	100	1,850	250	1,300	225	550	125	8,650	425	5,650	375	3,000	275
Postsecondary teachers, sociology	7,500	350	3,200	250	4,300	275	650	125	350	100	300	75	1,400	125	700	100	700	100	5,500	325	2,150	225	3,350	250

TABLE 37

U.S. residing employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2019

(Number and SE)

Occupation	All employed						Asian[a]						Other minority[b]						White[c]					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Postsecondary teachers, other social sciences	16,550	575	8,150	450	8,400	375	1,500	200	700	150	800	125	2,400	175	1,100	150	1,300	100	12,600	525	6,300	400	6,300	325
Sociologist, anthropologist	3,500	275	1,350	175	2,150	225	200	75	S	S	150	50	450	100	100	50	350	100	2,850	250	1,200	175	1,650	175
Other social scientist	8,250	475	2,750	275	5,450	325	1,050	175	250	100	800	125	1,250	125	300	75	950	125	5,950	375	2,200	225	3,750	275
Engineering occupations	120,650	1,375	101,600	1,400	19,000	625	49,650	1,150	41,700	1,100	7,950	425	9,150	375	7,350	375	1,800	125	61,850	1,125	52,600	1,075	9,250	425
Aerospace, aeronautical, astronautical engineer	7,150	425	6,350	400	800	125	1,900	250	1,750	225	150	50	450	100	400	100	50	25	4,800	350	4,250	325	600	125
Chemical engineer	9,250	525	7,450	475	1,800	250	4,100	400	3,300	350	850	175	600	100	400	100	150	50	4,600	350	3,750	350	800	175
Civil, architectural, sanitary engineer	6,900	425	5,750	425	1,100	150	2,500	275	2,150	275	400	125	850	150	750	150	100	50	3,500	300	2,850	300	600	100
Electrical engineer	27,500	750	24,500	725	3,000	300	13,800	675	11,950	625	1,850	250	1,600	150	1,500	150	100	50	12,100	525	11,050	525	1,050	150
Industrial engineers	1,950	250	1,500	250	450	100	700	175	450	150	300	75	250	50	200	50	50	25	1,000	175	850	175	150	50
Mechanical engineer	13,450	550	12,150	525	1,300	150	6,600	425	5,900	425	700	125	900	150	750	150	150	50	5,950	300	5,500	300	450	100
Postsecondary teacher, engineering	23,950	750	19,750	700	4,200	300	8,100	525	6,950	525	1,150	200	2,100	200	1,700	175	400	75	13,750	600	11,100	550	2,700	225
Other engineer	30,500	675	24,200	675	6,300	375	11,950	550	9,300	525	2,650	300	2,400	175	1,650	150	750	100	16,150	575	13,250	550	2,900	250
S&E-related occupations	92,350	1,475	51,600	1,200	40,750	850	22,000	850	13,450	625	8,550	525	9,350	350	4,350	275	5,050	225	60,950	1,125	33,850	900	27,150	725
Health occupations, except postsecondary teachers and managers	30,800	825	15,350	625	15,450	550	8,150	500	4,300	375	3,850	350	3,650	225	1,550	200	2,050	150	19,000	650	9,500	475	9,500	450
Postsecondary teacher, health and related science	23,600	675	9,700	525	13,900	475	3,750	275	2,100	275	1,650	175	2,650	175	800	100	1,850	150	17,200	575	6,800	425	10,400	450
S&E managers, including health	24,650	850	17,200	750	7,450	400	5,850	500	4,150	400	1,700	225	2,000	175	1,300	150	700	100	16,800	625	11,750	600	5,050	325
S&E precollege teachers	5,200	400	2,950	325	2,300	225	450	175	150	100	250	100	700	100	350	75	350	75	4,050	350	2,400	300	1,650	175
S&E technicians/ technologists	7,200	475	5,800	425	1,350	200	3,300	350	2,450	300	850	175	350	75	300	50	50	25	3,550	300	3,100	300	450	100
Other S&E-related occupation	900	150	600	125	300	100	550	125	300	100	200	75	50	50	50	50	D	D	350	100	250	75	100	50
Non-S&E occupations	151,500	1,650	88,750	1,450	62,750	1,100	28,150	850	18,150	725	10,000	500	16,450	475	7,950	350	8,450	325	106,950	1,525	62,650	1,375	44,300	925
Arts, humanities-related occupation	8,900	425	2,900	300	6,000	350	1,000	150	350	100	650	125	700	100	200	75	500	75	7,200	400	2,350	275	4,850	350
Management-related occupation	33,050	1,175	19,600	925	13,500	625	7,850	500	4,900	400	2,950	325	4,050	325	2,000	250	2,000	175	21,200	875	12,650	700	8,550	450
Non-S&E managers	55,650	1,175	37,100	1,000	18,550	650	9,850	575	7,450	525	2,400	275	5,200	250	2,800	200	2,450	200	40,550	1,000	26,850	850	13,700	525
Non-S&E postsecondary teachers	19,700	650	10,900	525	8,800	375	3,050	300	1,800	250	1,250	175	2,650	175	1,200	125	1,450	125	14,000	575	7,900	475	6,100	350
Non-S&E precollege/ other teachers	4,750	375	1,700	250	3,050	275	650	150	200	100	450	125	600	100	200	50	400	75	3,500	300	1,300	200	2,200	250
Sales, marketing occupation	9,400	450	6,050	400	3,350	275	2,750	300	1,900	275	850	150	800	125	500	125	300	75	5,850	375	3,650	300	2,150	250
Social service-related occupation	6,300	400	2,700	300	3,650	300	650	150	400	125	250	100	1,200	150	350	125	850	100	4,450	350	1,950	275	2,500	275
Other non-S&E occupation	13,750	650	7,850	500	5,900	375	2,300	300	1,150	225	1,150	225	1,250	175	750	125	500	100	10,200	575	5,950	500	4,250	325

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Asian is single race.

[b] Other minority includes Hispanic or Latino; non-Hispanic or Latino American Indian or Alaska Native, Black or African American, and Native Hawaiian or Other Pacific Islander; and respondents reporting more than one race. Detail for Other minority can be found in table 38.

[c] White is single race.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 38

U.S. residing employed minority doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2019

(Number and SE)

Occupation	All employed minority[a]						Hispanic or Latino[b]						Not Hispanic or Latino[c]															
													American Indian or Alaska Native						Black or African American						Native Hawaiian or Other Pacific Islander					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	81,500	850	44,250	700	37,300	525	37,250	550	21,200	450	16,050	400	1,300	125	750	100	550	75	31,100	400	15,750	375	15,350	375	900	100	500	100	400	75
Science occupations	46,600	725	24,600	575	22,000	475	22,750	475	12,300	375	10,400	350	600	100	350	100	300	75	16,350	400	8,300	325	8,000	275	450	75	250	75	250	50
Biological, agricultural, and other life scientist	14,350	325	7,200	275	7,150	225	7,300	300	3,800	250	3,500	175	100	25	50	25	50	25	4,450	225	2,150	175	2,350	150	200	50	100	50	100	50
Agricultural, food scientist	1,400	125	950	125	450	75	800	100	450	75	350	75	D	D	D	D	D	D	550	100	450	100	100	25	D	D	D	D	D	D
Biochemists, biophysicist	750	100	400	75	350	75	400	75	200	75	200	50	D	D	D	D	D	D	200	50	50	25	100	50	D	D	D	D	D	D
Biological scientist	2,550	175	1,150	150	1,400	150	1,350	125	700	100	650	100	D	D	D	D	D	D	550	100	250	75	350	75	100	50	S	S	50	50
Forestry, conservation scientist	150	50	100	25	50	25	50	25	50	25	50	25	D	D	D	D	D	D	*	*	D	D	D	D	D	D	D	D	D	D
Medical scientist	3,500	200	1,600	150	1,950	150	1,600	150	800	125	800	100	D	D	D	D	D	D	1,300	125	500	100	800	100	S	S	D	D	D	D
Postsecondary teachers, agricultural, other natural sciences	700	100	450	100	250	50	350	75	250	75	100	50	D	D	D	D	D	D	300	75	200	75	100	50	D	D	D	D	D	D
Postsecondary teachers, biological sciences	3,400	200	1,700	150	1,700	150	1,800	175	950	150	900	100	*	*	D	D	D	D	1,000	125	500	100	500	100	50	25	D	D	D	D
Other biological, agricultural, life scientist	1,900	175	900	150	1,000	100	900	125	450	100	450	75	D	D	D	D	D	D	550	75	200	50	350	75	D	D	D	D	D	D
Computer and information scientist	3,350	225	2,600	175	750	125	1,700	150	1,400	125	300	75	D	D	D	D	D	D	1,050	125	650	100	400	100	100	50	100	50	D	D
Computer and information scientist	2,650	200	2,100	150	550	100	1,400	150	1,200	125	250	75	D	D	D	D	D	D	750	100	450	75	250	75	100	50	100	50	D	D
Postsecondary teachers, computer science	700	100	500	100	200	50	250	50	200	50	50	25	D	D	D	D	D	D	300	75	200	50	100	50	D	D	D	D	D	D
Mathematical scientist	3,200	200	2,400	200	850	100	1,650	150	1,300	150	350	50	D	D	D	D	D	D	1,100	125	800	100	300	75	50	50	D	D	S	S
Mathematical scientist	1,650	175	1,200	150	500	75	750	125	550	125	150	50	D	D	D	D	D	D	600	100	400	75	200	75	50	50	D	D	D	D
Postsecondary teachers, mathematics, statistics	1,550	125	1,200	125	350	75	900	125	750	125	150	50	D	D	D	D	D	D	500	75	400	75	100	50	D	D	D	D	D	D
Physical scientist	6,650	275	4,600	275	2,050	150	3,250	200	2,150	175	1,100	125	50	25	50	25	D	D	2,300	200	1,700	175	600	75	50	25	D	D	50	25
Chemists, except biochemist	1,850	175	1,200	150	650	100	800	125	500	100	300	75	50	25	D	D	D	D	750	125	500	100	300	75	D	D	D	D	D	D
Earth, atmospheric, ocean scientist	750	100	500	75	200	50	400	75	250	50	150	50	D	D	D	D	D	D	150	50	100	50	*	*	D	D	D	D	D	D
Physicists, astronomers	900	150	750	150	150	50	500	100	400	100	100	50	D	D	D	D	D	D	200	100	200	100	D	D	D	D	D	D	D	D
Postsecondary teachers, chemistry	1,650	150	1,000	125	650	100	750	100	400	75	350	75	D	D	D	D	D	D	750	100	550	75	200	50	D	D	D	D	D	D
Postsecondary teachers, physics	850	125	650	100	150	75	500	100	400	75	S	S	D	D	D	D	D	D	200	50	200	50	*	*	D	D	D	D	D	D
Postsecondary teachers, other physical science	500	75	300	75	150	50	250	50	150	50	100	25	D	D	D	D	D	D	150	50	100	50	50	25	D	D	D	D	D	D
Other physical scientist	200	50	150	50	50	25	150	50	100	50	50	25	D	D	D	D	D	D	50	25	50	25	*	*	D	D	D	D	D	D
Psychologist	9,350	325	2,600	175	6,750	300	4,550	225	1,350	125	3,200	200	200	75	D	D	150	50	3,450	225	850	125	2,550	200	50	25	D	D	50	25
Psychologist	6,650	300	1,750	150	4,900	275	3,450	225	900	125	2,550	225	150	75	D	D	100	50	2,150	200	550	125	1,650	175	D	D	D	D	D	D
Postsecondary teachers, psychology	2,750	200	900	125	1,850	175	1,100	125	450	100	650	100	50	25	D	D	50	25	1,250	150	350	75	900	125	50	25	D	D	D	D
Social scientist	9,650	375	5,150	325	4,500	225	4,300	250	2,300	225	2,000	175	250	75	150	75	100	25	4,050	250	2,150	200	1,850	150	D	D	D	D	D	D
Economist	950	125	600	100	300	75	600	100	450	100	100	50	D	D	D	D	D	D	250	75	100	50	150	50	D	D	D	D	D	D
Political scientist	200	50	150	50	50	50	100	50	S	S	D	D	D	D	D	D	D	D	100	50	50	50	D	D	D	D	D	D	D	D
Postsecondary teachers, economics	1,150	150	850	150	250	50	550	100	400	100	200	50	D	D	D	D	D	D	500	100	450	100	50	50	D	D	D	D	D	D
Postsecondary teachers, political science	1,850	250	1,300	225	550	125	600	125	400	125	200	75	D	D	D	D	D	D	1,000	200	750	175	250	100	D	D	D	D	D	D

TABLE 38

U.S. residing employed minority doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2019

(Number and SE)

Occupation	All employed minority[a]						Hispanic or Latino[b]						Not Hispanic or Latino[c]															
													American Indian or Alaska Native						Black or African American						Native Hawaiian or Other Pacific Islander					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Postsecondary teachers, sociology	1,400	125	700	100	700	100	600	100	300	75	300	75	D	D	D	D	D	D	550	100	300	75	300	75	D	D	D	D	D	D
Postsecondary teachers, other social sciences	2,400	175	1,100	150	1,300	100	1,200	125	550	100	650	100	150	50	S	S	50	25	800	100	400	75	400	50	D	D	D	D	D	D
Sociologist, anthropologist	450	100	100	50	350	100	250	75	50	25	200	75	D	D	D	D	D	D	150	50	D	D	100	50	D	D	D	D	D	D
Other social scientist	1,250	125	300	75	950	125	400	50	100	50	300	50	D	D	D	D	D	D	700	125	100	50	550	100	D	D	D	D	D	D
Engineering occupations	9,150	375	7,350	375	1,800	125	4,700	275	3,850	225	850	100	100	50	100	25	D	D	2,900	175	2,350	175	600	75	S	S	S	S	D	D
Aerospace, aeronautical, astronautical engineer	450	100	400	100	50	25	300	100	300	100	50	25	D	D	D	D	D	D	100	25	50	25	D	D	D	D	D	D	D	D
Chemical engineer	600	100	400	100	150	50	250	75	250	75	50	25	D	D	D	D	D	D	200	75	100	50	50	50	D	D	D	D	D	D
Civil, architectural, sanitary engineer	850	150	750	150	100	50	450	125	350	100	100	50	D	D	D	D	D	D	350	100	350	100	D	D	D	D	D	D	D	D
Electrical engineer	1,600	150	1,500	150	100	50	800	100	750	100	50	25	D	D	D	D	D	D	550	100	500	100	50	25	D	D	D	D	D	D
Industrial engineers	250	50	200	50	50	25	150	50	100	25	50	25	D	D	D	D	D	D	100	50	100	50	D	D	D	D	D	D	D	D
Mechanical engineer	900	150	750	150	150	50	450	100	400	100	S	S	*	*	D	D	D	D	200	50	150	50	50	50	D	D	D	D	D	D
Postsecondary teacher, engineering	2,100	200	1,700	175	400	75	1,100	150	900	150	200	50	D	D	D	D	D	D	750	125	600	100	150	50	D	D	D	D	D	D
Other engineer	2,400	175	1,650	150	750	100	1,200	125	850	100	350	75	*	*	*	*	D	D	700	100	450	75	250	50	50	25	D	D	D	D
S&E-related occupations	9,350	350	4,350	275	5,050	225	3,700	225	1,850	150	1,900	150	200	50	100	50	100	50	4,150	225	1,700	175	2,500	175	150	50	100	50	50	50
Health occupations, except postsecondary teachers and managers	3,650	225	1,550	200	2,050	150	1,400	150	650	125	750	100	50	25	D	D	D	D	1,750	175	700	150	1,050	125	D	D	D	D	D	D
Postsecondary teacher, health and related science	2,650	175	800	100	1,850	150	900	125	350	75	550	100	100	50	S	S	50	25	1,350	125	350	75	1,000	100	S	S	D	D	D	D
S&E managers, including health	2,000	175	1,300	150	700	100	950	125	550	100	400	75	50	25	50	25	D	D	650	125	450	100	200	75	S	S	D	D	D	D
S&E precollege teachers	700	100	350	75	350	75	250	50	150	50	100	50	D	D	D	D	D	D	350	75	150	50	200	50	D	D	D	D	D	D
S&E technicians/ technologists	350	75	300	50	50	25	200	50	150	50	S	S	D	D	D	D	D	D	50	25	50	25	D	D	D	D	D	D	D	D
Other S&E-related occupation	50	50	50	50	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Non-S&E occupations	16,450	475	7,950	350	8,450	325	6,050	300	3,150	225	2,900	175	400	75	200	50	150	50	7,650	350	3,400	250	4,250	250	150	50	100	50	50	25
Arts, humanities-related occupation	700	100	200	75	500	75	200	75	50	25	200	75	D	D	D	D	D	D	250	75	150	50	150	50	D	D	D	D	D	D
Management-related occupation	4,050	325	2,000	250	2,000	175	1,600	150	900	150	650	75	50	25	D	D	D	D	1,850	200	800	150	1,050	125	D	D	D	D	D	D
Non-S&E managers	5,200	250	2,800	200	2,450	200	1,850	150	1,200	150	700	100	150	50	100	50	50	25	2,600	225	1,100	125	1,450	175	50	50	D	D	50	25
Non-S&E postsecondary teachers	2,650	175	1,200	125	1,450	125	1,100	100	500	75	600	75	50	50	S	S	S	S	1,200	150	550	125	650	100	*	*	D	D	D	D
Non-S&E precollege/ other teachers	600	100	200	50	400	75	250	75	50	50	150	50	D	D	D	D	D	D	250	50	100	50	150	50	D	D	D	D	D	D
Sales, marketing occupation	800	125	500	125	300	75	300	75	150	50	150	50	D	D	D	D	D	D	250	50	150	50	100	50	D	D	D	D	D	D
Social service-related occupation	1,200	150	350	125	850	100	350	75	50	25	300	75	S	S	D	D	D	D	750	150	250	125	450	75	D	D	D	D	D	D
Other non-S&E occupation	1,250	175	750	125	500	100	400	75	250	75	150	50	D	D	D	D	D	D	550	125	300	75	250	100	D	D	D	D	D	D

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] In this table, all employed minorities includes Hispanic or Latino; non-Hispanic or Latino American Indian or Alaska Native, Black or African American, and Native Hawaiian or Other Pacific Islander; and 10,950 respondents reporting more than one race (data not shown). Because of the large number of Asians among the doctoral population, they are shown separately in table 37.

[b] Hispanic or Latino may be of any race.

[c] American Indian or Alaska Native, Black or African American, and Native Hawaiian or Other Pacific Islander are single race.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 39

U.S. residing employed doctoral scientists and engineers, by occupation and citizenship status: 2019

(Number and SE)

Occupation	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	857,200	1,975	732,750	2,000	555,150	1,575	177,600	1,675	124,450	1,600	87,200	1,475	37,300	900
Science occupations	492,750	2,500	418,050	2,275	330,150	2,000	87,900	1,450	74,700	1,500	50,800	1,225	23,950	750
Biological, agricultural, and other life scientist	156,650	1,525	132,250	1,425	105,400	1,275	26,850	775	24,400	775	15,600	650	8,800	450
Agricultural, food scientist	11,600	450	9,500	400	7,350	375	2,200	225	2,100	225	1,450	200	650	100
Biochemists, biophysicist	16,350	675	12,150	650	9,050	500	3,100	325	4,200	350	2,200	250	2,000	275
Biological scientist	26,750	675	22,800	575	18,750	475	4,050	350	3,950	325	2,350	275	1,650	200
Forestry, conservation scientist	2,250	175	2,150	175	2,000	175	150	50	100	50	S	S	S	S
Medical scientist	42,350	1,025	35,800	925	27,300	725	8,500	525	6,550	450	4,450	350	2,150	275
Postsecondary teachers, agricultural, other natural sciences	5,550	350	4,900	350	4,050	300	850	150	650	150	550	125	150	50
Postsecondary teachers, biological sciences	32,400	775	30,100	750	26,050	700	4,050	300	2,300	300	1,900	275	400	100
Other biological, agricultural, life scientist	19,350	700	14,850	550	10,800	500	4,050	300	4,500	375	2,750	300	1,750	275
Computer and information scientist	63,000	1,100	44,800	875	26,000	650	18,800	625	18,200	725	12,500	625	5,700	375
Computer and information scientist	53,450	1,075	37,350	850	21,750	650	15,600	550	16,100	725	10,950	625	5,150	375
Postsecondary teachers, computer science	9,550	525	7,450	450	4,250	300	3,150	350	2,100	275	1,600	250	550	100
Mathematical scientist	41,400	750	30,800	775	20,250	575	10,550	550	10,600	475	7,050	425	3,550	300
Mathematical scientist	21,800	650	14,900	575	9,200	425	5,750	425	6,900	450	4,400	350	2,550	275
Postsecondary teachers, mathematics, statistics	19,600	575	15,900	525	11,100	400	4,800	350	3,700	300	2,700	275	1,000	175
Physical scientist	84,550	1,275	72,350	1,100	57,950	975	14,400	550	12,200	675	8,900	550	3,300	325
Chemists, except biochemist	21,850	725	18,200	625	13,750	525	4,400	350	3,650	350	2,400	300	1,250	225
Earth, atmospheric, ocean scientist	11,750	400	9,900	350	8,350	350	1,550	150	1,900	200	1,300	175	600	100
Physicists, astronomers	12,450	625	10,250	550	8,150	450	2,100	250	2,200	300	1,500	250	700	150
Postsecondary teachers, chemistry	16,900	625	15,000	550	12,500	525	2,500	300	1,950	225	1,600	225	300	75
Postsecondary teachers, physics	10,650	575	9,250	525	6,900	450	2,350	275	1,400	225	1,200	200	200	100
Postsecondary teachers, other physical science	7,300	300	6,450	275	5,650	275	800	100	850	150	650	100	200	100

TABLE 39

U.S. residing employed doctoral scientists and engineers, by occupation and citizenship status: 2019

(Number and SE)

Occupation	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Other physical scientist	3,650	250	3,350	250	2,600	225	700	125	300	75	250	75	50	25
Psychologist	77,600	950	75,700	975	68,850	975	6,850	450	1,950	250	1,550	225	400	125
Psychologist	57,500	1,000	56,450	1,000	51,700	975	4,750	400	1,050	175	850	150	200	100
Postsecondary teachers, psychology	20,100	625	19,250	625	17,200	550	2,050	300	850	200	700	175	150	100
Social scientist	69,500	1,025	62,150	1,025	51,700	800	10,500	575	7,350	450	5,150	375	2,200	250
Economist	9,600	500	7,100	425	5,250	325	1,850	250	2,500	275	1,500	200	1,000	200
Political scientist	1,850	275	1,700	275	1,450	225	S	S	150	75	150	75	D	D
Postsecondary teachers, economics	10,900	500	9,300	450	6,850	375	2,450	225	1,600	225	1,000	175	600	125
Postsecondary teachers, political science	11,450	450	10,600	450	9,000	450	1,600	250	800	175	650	150	200	75
Postsecondary teachers, sociology	7,500	350	7,100	325	6,050	325	1,050	200	450	125	350	100	S	S
Postsecondary teachers, other social sciences	16,550	575	15,250	600	13,250	550	2,000	200	1,300	175	1,100	150	200	75
Sociologist, anthropologist	3,500	275	3,400	275	3,000	250	400	150	100	50	50	50	D	D
Other social scientist	8,250	475	7,750	450	6,800	400	950	150	450	100	300	100	150	75
Engineering occupations	120,650	1,375	90,550	1,350	52,850	1,050	37,650	900	30,100	900	21,100	800	9,050	475
Aerospace, aeronautical, astronautical engineer	7,150	425	6,400	425	4,400	350	2,000	300	750	150	500	125	250	100
Chemical engineer	9,250	525	6,700	450	4,150	350	2,550	300	2,600	300	1,700	275	850	175
Civil, architectural, sanitary engineer	6,900	425	5,000	375	2,450	275	2,550	300	1,900	250	1,250	200	650	125
Electrical engineer	27,500	750	18,550	725	9,850	475	8,650	600	8,950	525	6,500	450	2,450	275
Industrial engineers	1,950	250	1,550	225	900	150	650	150	400	125	300	125	100	50
Mechanical engineer	13,450	550	10,050	500	5,300	300	4,750	375	3,400	300	2,100	225	1,300	225
Postsecondary teacher, engineering	23,950	750	19,150	675	10,850	500	8,300	525	4,800	400	3,450	350	1,350	200
Other engineer	30,500	675	23,150	625	15,000	550	8,150	400	7,350	450	5,250	425	2,100	225
S&E-related occupations	92,350	1,475	83,500	1,400	62,300	1,125	21,200	800	8,850	475	6,750	375	2,100	275
Health occupations, except postsecondary teachers and managers	30,800	825	28,050	800	20,750	650	7,300	475	2,750	300	2,000	225	750	200
Postsecondary teacher, health and related science	23,600	675	21,850	650	18,150	575	3,650	250	1,750	175	1,400	175	350	100
S&E managers, including health	24,650	850	22,250	825	15,650	625	6,600	525	2,350	275	2,000	275	400	100

TABLE 39

U.S. residing employed doctoral scientists and engineers, by occupation and citizenship status: 2019

(Number and SE)

Occupation	All employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
S&E precollege teachers	5,200	400	5,000	375	4,100	350	950	175	200	75	100	50	D	D
S&E technicians/ technologists	7,200	475	5,700	400	3,300	300	2,350	300	1,500	225	1,000	175	550	150
Other S&E-related occupation	900	150	650	125	300	100	350	75	300	125	250	125	D	D
Non-S&E occupations	151,500	1,650	140,700	1,600	109,900	1,375	30,850	875	10,800	650	8,550	575	2,250	250
Arts, humanities-related occupation	8,900	425	8,300	425	7,450	400	800	150	600	150	450	125	150	75
Management-related occupation	33,050	1,175	30,100	1,100	22,500	900	7,600	525	2,950	350	2,250	325	700	150
Non-S&E managers	55,650	1,175	52,850	1,150	40,450	925	12,450	625	2,800	300	2,300	275	500	125
Non-S&E postsecondary teachers	19,700	650	17,300	600	13,900	550	3,400	300	2,400	300	1,900	275	500	100
Non-S&E precollege/ other teachers	4,750	375	4,450	350	3,750	300	700	150	300	100	200	100	S	S
Sales, marketing occupation	9,400	450	8,550	400	6,150	350	2,450	275	800	175	750	150	100	50
Social service-related occupation	6,300	400	6,150	400	5,250	350	850	175	200	100	150	75	D	D
Other non-S&E occupation	13,750	650	13,000	625	10,450	575	2,550	300	750	175	600	175	150	75

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 40

U.S. residing employed doctoral scientists and engineers, by occupation and age: 2019

(Number and SE)

Occupation	All employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	857,200	1,975	99,050	1,050	128,800	1,375	117,500	1,325	108,400	1,450	100,900	1,375	101,950	1,400	88,300	1,400	112,350	1,625
Science occupations	492,750	2,500	63,200	950	79,050	1,125	71,750	1,150	62,100	1,200	52,050	1,100	53,850	1,175	48,150	1,125	62,600	1,275
Biological, agricultural, and other life scientist	156,650	1,525	22,600	550	26,900	625	25,650	800	19,400	650	15,800	575	16,150	625	15,000	725	15,200	700
Agricultural, food scientist	11,600	450	1,350	150	1,600	175	1,750	200	1,050	125	1,400	175	1,400	175	1,600	175	1,450	200
Biochemists, biophysicist	16,350	675	3,950	275	3,250	350	2,300	275	2,100	250	1,200	200	1,400	225	950	175	1,200	200
Biological scientist	26,750	675	4,400	300	4,850	300	4,650	400	3,350	325	2,200	250	2,550	275	2,700	275	2,000	200
Forestry, conservation scientist	2,250	175	100	50	300	50	450	100	300	75	200	50	250	75	350	100	300	100
Medical scientist	42,350	1,025	6,100	350	7,700	375	7,300	525	4,900	350	4,300	350	4,450	350	3,350	325	4,250	350
Postsecondary teachers, agricultural, other natural sciences	5,550	350	400	100	750	125	700	150	750	125	600	100	750	150	850	125	750	150
Postsecondary teachers, biological sciences	32,400	775	1,750	175	4,500	275	5,600	350	5,050	350	4,050	300	3,600	275	3,700	325	4,100	350
Other biological, agricultural, life scientist	19,350	700	4,450	325	3,950	300	2,900	300	1,900	225	1,800	200	1,750	200	1,500	225	1,100	175
Computer and information scientist	63,000	1,100	10,100	425	12,950	575	9,000	500	7,650	425	6,700	450	7,050	425	5,250	375	4,300	325
Computer and information scientist	53,450	1,075	9,350	400	11,150	525	7,850	450	6,250	375	5,850	425	5,800	425	4,100	350	3,100	275
Postsecondary teachers, computer science	9,550	525	750	125	1,800	250	1,150	175	1,450	225	900	150	1,250	200	1,150	200	1,200	175
Mathematical scientist	41,400	750	7,150	325	7,450	375	6,450	375	5,050	325	3,550	250	4,450	375	3,400	300	4,000	300
Mathematical scientist	21,800	650	4,700	325	4,600	350	3,700	300	2,400	225	1,650	175	2,050	275	1,350	200	1,450	175
Postsecondary teachers, mathematics, statistics	19,600	575	2,450	225	2,850	250	2,750	250	2,650	250	1,900	200	2,400	250	2,050	225	2,550	250
Physical scientist	84,550	1,275	11,350	450	12,650	500	11,400	500	9,850	450	8,900	500	10,250	550	9,550	475	10,500	475
Chemists, except biochemist	21,850	725	4,500	300	3,400	325	2,650	300	2,550	275	1,700	225	2,550	250	2,350	250	2,050	225
Earth, atmospheric, ocean scientist	11,750	400	1,600	150	1,400	150	1,600	175	1,300	150	1,250	150	1,250	150	1,550	150	1,800	200
Physicists, astronomers	12,450	625	2,300	250	2,150	250	1,350	200	1,550	200	950	175	1,550	250	1,100	200	1,450	200
Postsecondary teachers, chemistry	16,900	625	1,400	175	2,750	250	3,000	300	2,150	225	2,050	225	1,900	225	1,700	225	1,950	300
Postsecondary teachers, physics	10,650	575	650	150	1,500	200	1,350	200	1,300	225	1,650	250	1,350	250	1,300	225	1,550	250
Postsecondary teachers, other physical science	7,300	300	600	100	850	125	1,000	125	700	125	850	100	1,050	125	1,100	150	1,050	175
Other physical scientist	3,650	250	250	50	600	125	400	100	300	100	500	125	550	125	400	75	650	125
Psychologist	77,600	950	6,150	375	9,550	500	9,250	450	9,900	625	8,500	450	8,300	475	8,300	425	17,650	700
Psychologist	57,500	1,000	4,550	325	6,050	400	6,300	375	6,650	550	6,000	425	6,200	450	6,450	400	15,250	675
Postsecondary teachers, psychology	20,100	625	1,550	200	3,450	300	2,950	225	3,250	325	2,500	275	2,100	250	1,850	200	2,350	225
Social scientist	69,500	1,025	5,850	350	9,550	425	10,000	475	10,250	500	8,550	500	7,650	450	6,650	425	11,000	550
Economist	9,600	500	1,350	175	1,800	225	1,250	200	800	150	1,050	200	1,000	175	850	150	1,500	275
Political scientist	1,850	275	150	75	300	100	300	100	200	75	200	75	D	D	S	S	300	125
Postsecondary teachers, economics	10,900	500	1,150	175	1,150	150	1,650	200	1,600	225	1,050	150	1,150	200	1,450	225	1,700	225
Postsecondary teachers, political science	11,450	450	800	175	1,450	200	1,300	225	1,700	200	1,950	250	1,450	225	1,100	200	1,700	225
Postsecondary teachers, sociology	7,500	350	450	100	900	125	1,150	175	1,150	175	1,050	150	750	125	700	150	1,350	175
Postsecondary teachers, other social sciences	16,550	575	1,000	125	2,300	200	2,600	200	2,850	300	1,650	175	2,050	200	1,450	175	2,650	250

TABLE 40

U.S. residing employed doctoral scientists and engineers, by occupation and age: 2019

(Number and SE)

Occupation	All employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Sociologist, anthropologist	3,500	275	150	50	450	75	500	100	500	100	500	150	250	75	300	100	800	175
Other social scientist	8,250	475	800	125	1,250	150	1,250	175	1,450	200	1,100	175	850	125	600	100	950	175
Engineering occupations	120,650	1,375	19,100	650	22,150	800	16,900	725	13,850	650	13,700	625	14,200	575	10,450	475	10,200	600
Aerospace, aeronautical, astronautical engineer	7,150	425	900	150	1,250	200	800	125	750	150	950	150	1,050	200	650	150	800	175
Chemical engineer	9,250	525	1,800	250	1,750	250	1,700	250	1,050	225	950	175	900	175	600	150	500	150
Civil, architectural, sanitary engineer	6,900	425	1,050	150	1,000	175	750	150	1,200	250	600	150	1,100	200	550	175	650	150
Electrical engineer	27,500	750	5,000	350	5,250	425	4,750	400	3,100	300	3,750	325	2,650	250	1,750	225	1,200	200
Industrial engineers	1,950	250	350	100	350	100	200	100	200	75	150	75	150	75	300	100	S	S
Mechanical engineer	13,450	550	2,300	250	2,500	275	1,650	225	1,700	250	1,350	225	1,750	250	1,100	200	1,100	200
Postsecondary teacher, engineering	23,950	750	2,350	250	3,600	300	3,150	325	2,850	250	2,550	300	3,300	325	2,850	300	3,250	350
Other engineer	30,500	675	5,350	325	6,450	450	3,850	300	3,050	325	3,400	325	3,300	275	2,600	250	2,450	250
S&E-related occupations	92,350	1,475	7,600	375	12,450	600	12,150	575	11,950	500	12,900	550	12,050	550	11,400	575	11,900	550
Health occupations, except postsecondary teachers and managers	30,800	825	2,700	250	4,700	400	3,950	350	3,200	300	4,050	325	3,200	275	4,050	325	4,900	400
Postsecondary teacher, health and related science	23,600	675	1,500	175	2,500	225	3,050	300	3,200	300	3,000	275	3,200	275	3,200	300	3,950	325
S&E managers, including health	24,650	850	1,750	175	3,450	300	3,350	225	3,750	325	3,650	325	3,800	325	2,800	350	2,100	250
S&E precollege teachers	5,200	400	400	100	600	125	450	100	850	150	1,000	175	950	175	550	150	350	100
S&E technicians/ technologists	7,200	475	1,200	175	1,050	150	1,100	200	900	200	1,000	175	800	175	700	150	400	125
Other S&E-related occupation	900	150	S	S	150	50	200	100	50	50	200	75	50	25	100	50	150	75
Non-S&E occupations	151,500	1,650	9,100	475	15,150	500	16,700	600	20,450	675	22,250	675	21,900	750	18,300	725	27,700	875
Arts, humanities-related occupation	8,900	425	950	150	1,350	175	1,050	150	950	150	950	150	700	125	950	175	2,000	250
Management-related occupation	33,050	1,175	2,900	250	3,950	325	4,400	300	4,350	325	4,750	400	3,950	400	3,150	325	5,700	450
Non-S&E managers	55,650	1,175	1,800	225	4,150	325	5,450	375	7,700	400	9,200	500	10,050	550	7,850	450	9,450	525
Non-S&E postsecondary teachers	19,700	650	950	125	2,050	200	2,050	175	3,100	325	3,100	275	2,200	250	2,500	225	3,750	350
Non-S&E precollege/ other teachers	4,750	375	250	75	350	100	350	100	550	125	550	125	650	150	700	150	1,350	250
Sales, marketing occupation	9,400	450	1,000	150	1,300	200	1,250	175	1,200	200	1,350	200	1,300	225	750	125	1,250	200
Social service-related occupation	6,300	400	250	75	500	100	450	100	650	125	850	200	1,000	175	1,000	175	1,700	250
Other non-S&E occupation	13,750	650	1,000	175	1,550	200	1,700	225	2,000	250	1,500	200	2,050	275	1,500	200	2,500	250

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 41

U.S. residing employed doctoral scientists and engineers, by occupation and years since doctorate: 2019

(Number and SE)

Occupation	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	857,200	1,975	142,500	625	154,750	1,025	127,000	1,150	108,700	825	104,250	825	220,000	1,575
Science occupations	492,750	2,500	90,100	900	92,650	1,125	72,550	1,125	60,950	800	54,250	900	122,200	1,575
Biological, agricultural, and other life scientist	156,650	1,525	31,200	650	31,400	750	24,200	725	18,700	525	16,050	550	35,050	950
Agricultural, food scientist	11,600	450	1,950	175	2,150	200	1,850	175	750	100	1,500	175	3,350	275
Biochemists, biophysicist	16,350	675	4,800	375	3,350	300	2,150	250	1,950	225	1,250	200	2,900	350
Biological scientist	26,750	675	6,300	325	5,800	325	3,950	350	2,850	275	2,650	275	5,200	350
Forestry, conservation scientist	2,250	175	350	75	450	75	500	100	300	75	200	75	450	100
Medical scientist	42,350	1,025	8,750	475	9,000	475	6,250	425	5,050	325	4,250	375	9,100	525
Postsecondary teachers, agricultural, other natural sciences	5,550	350	750	150	950	125	900	150	700	125	600	100	1,700	200
Postsecondary teachers, biological sciences	32,400	775	2,800	225	5,450	300	6,000	375	5,050	350	3,950	325	9,150	500
Other biological, agricultural, life scientist	19,350	700	5,450	350	4,250	325	2,650	300	2,050	225	1,700	200	3,250	275
Computer and information scientist	63,000	1,100	14,300	500	14,200	600	9,050	450	6,650	425	7,650	425	11,200	575
Computer and information scientist	53,450	1,075	12,850	475	11,850	600	7,800	400	5,600	400	6,550	425	8,800	475
Postsecondary teachers, computer science	9,550	525	1,450	175	2,350	275	1,250	175	1,100	200	1,100	150	2,400	275
Mathematical scientist	41,400	750	9,100	325	8,350	375	6,750	400	4,600	350	3,850	325	8,700	425
Mathematical scientist	21,800	650	6,150	350	4,800	300	3,750	300	2,050	250	1,900	250	3,200	275
Postsecondary teachers, mathematics, statistics	19,600	575	2,950	225	3,550	275	3,000	275	2,600	225	2,000	200	5,500	325
Physical scientist	84,550	1,275	13,350	500	14,750	475	11,800	500	10,650	450	9,350	425	24,650	750
Chemists, except biochemist	21,850	725	4,700	300	3,950	300	2,700	250	2,700	300	2,100	275	5,650	400
Earth, atmospheric, ocean scientist	11,750	400	2,250	175	2,000	175	1,500	125	1,450	150	1,150	150	3,450	225
Physicists, astronomers	12,450	625	2,650	275	2,200	225	1,550	225	1,650	225	1,000	175	3,400	325
Postsecondary teachers, chemistry	16,900	625	1,550	150	2,950	275	3,100	275	2,100	225	2,100	225	5,150	375
Postsecondary teachers, physics	10,650	575	850	150	1,900	200	1,400	175	1,550	275	1,350	225	3,650	375
Postsecondary teachers, other physical science	7,300	300	1,000	125	1,350	150	1,100	125	700	100	1,050	125	2,150	225
Other physical scientist	3,650	250	400	75	500	100	450	100	500	100	600	125	1,150	200
Psychologist	77,600	950	10,250	375	11,250	475	10,750	450	10,050	525	9,300	475	26,000	775
Psychologist	57,500	1,000	7,650	350	7,150	400	7,600	425	6,900	425	6,700	425	21,450	750

TABLE 41

U.S. residing employed doctoral scientists and engineers, by occupation and years since doctorate: 2019

(Number and SE)

Occupation	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Postsecondary teachers, psychology	20,100	625	2,550	225	4,100	300	3,150	250	3,150	300	2,600	250	4,550	300
Social scientist	69,500	1,025	11,950	400	12,700	525	9,950	475	10,300	450	8,000	475	16,550	600
Economist	9,600	500	2,150	225	1,550	175	1,100	175	1,050	175	1,150	200	2,600	300
Political scientist	1,850	275	300	100	400	125	300	100	250	125	S	S	450	150
Postsecondary teachers, economics	10,900	500	1,450	175	1,750	200	1,300	175	1,700	225	1,000	150	3,700	300
Postsecondary teachers, political science	11,450	450	1,700	225	1,800	200	1,800	225	1,950	275	1,650	225	2,550	275
Postsecondary teachers, sociology	7,500	350	1,150	125	1,350	175	1,050	150	1,300	175	950	150	1,700	175
Postsecondary teachers, other social sciences	16,550	575	2,800	200	3,350	250	2,750	225	2,200	225	1,950	200	3,500	300
Sociologist, anthropologist	3,500	275	700	100	800	150	350	75	600	125	300	75	800	175
Other social scientist	8,250	475	1,700	175	1,750	200	1,350	175	1,300	200	850	150	1,300	200
Engineering occupations	120,650	1,375	23,750	675	24,700	750	18,750	650	13,350	500	14,850	550	25,150	800
Aerospace, aeronautical, astronautical engineer	7,150	425	1,000	175	1,300	175	900	175	1,050	175	1,150	175	1,750	200
Chemical engineer	9,250	525	1,900	250	1,950	250	1,800	275	1,000	225	850	150	1,800	250
Civil, architectural, sanitary engineer	6,900	425	1,650	175	1,400	200	750	150	950	200	650	175	1,450	225
Electrical engineer	27,500	750	6,100	425	6,250	475	4,650	400	3,400	300	3,400	300	3,750	325
Industrial engineers	1,950	250	450	100	450	150	250	100	150	50	S	S	550	175
Mechanical engineer	13,450	550	2,900	275	2,450	275	2,250	250	1,700	225	1,750	225	2,450	275
Postsecondary teacher, engineering	23,950	750	3,150	275	4,200	350	3,800	300	2,300	250	3,450	375	7,000	450
Other engineer	30,500	675	6,600	350	6,700	450	4,350	350	2,800	250	3,650	275	6,400	350
S&E-related occupations	92,350	1,475	13,150	475	17,300	650	14,100	475	13,300	550	12,650	575	21,850	825
Health occupations, except postsecondary teachers and managers	30,800	825	4,850	325	5,950	375	4,350	325	4,000	325	3,900	300	7,750	450
Postsecondary teacher, health and related science	23,600	675	3,650	250	4,750	300	4,000	275	3,550	325	2,700	250	4,850	375
S&E managers, including health	24,650	850	2,450	225	4,000	300	4,100	300	3,650	300	4,200	375	6,250	425
S&E precollege teachers	5,200	400	650	125	800	150	700	125	950	175	750	150	1,350	225
S&E technicians/ technologists	7,200	475	1,400	200	1,700	250	800	150	1,000	175	900	175	1,350	225
Other S&E-related occupation	900	150	100	75	150	75	150	100	S	S	200	75	250	75
Non-S&E occupations	151,500	1,650	15,450	575	20,100	600	21,600	700	21,100	700	22,500	750	50,800	1,200
Arts, humanities-related occupation	8,900	425	1,450	175	1,500	175	1,000	150	1,000	150	1,050	150	2,950	300
Management-related occupation	33,050	1,175	3,950	300	5,050	375	5,150	325	4,750	400	4,200	350	9,950	575
Non-S&E managers	55,650	1,175	2,950	275	5,500	400	6,950	400	8,100	425	10,500	550	21,650	800

TABLE 41

U.S. residing employed doctoral scientists and engineers, by occupation and years since doctorate: 2019

(Number and SE)

Occupation	All employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Non-S&E postsecondary teachers	19,700	650	2,650	175	3,150	250	3,550	350	2,700	250	2,500	250	5,150	400
Non-S&E precollege/ other teachers	4,750	375	550	100	600	125	650	125	700	150	400	100	1,850	275
Sales, marketing occupation	9,400	450	1,250	175	1,600	200	1,350	200	1,200	175	1,200	175	2,750	275
Social service-related occupation	6,300	400	1,000	175	750	125	750	125	950	125	1,000	175	1,850	275
Other non-S&E occupation	13,750	650	1,650	225	1,900	200	2,200	275	1,700	225	1,650	250	4,650	400

S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 42

U.S. residing employed doctoral scientists and engineers, by occupation and sector of employment: 2019

(Number and SE)

Occupation	All employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	857,200	1,975	344,350	2,325	30,900	900	306,300	2,500	55,900	1,125	50,150	1,025	18,850	750	40,750	1,100	10,050	550
Science occupations	492,750	2,500	230,400	1,950	18,100	700	142,200	1,800	29,850	775	33,300	850	10,400	525	23,250	825	5,250	425
Biological, agricultural, and other life scientist	156,650	1,525	76,650	1,200	4,600	375	42,900	1,175	10,650	475	14,550	550	3,050	275	3,350	275	1,000	150
Agricultural, food scientist	11,600	450	3,900	275	D	D	4,900	300	350	100	1,600	200	200	75	500	100	100	50
Biochemists, biophysicist	16,350	675	5,800	400	D	D	7,250	525	1,300	200	1,150	175	150	75	500	150	150	75
Biological scientist	26,750	675	11,650	500	550	125	5,400	375	2,150	200	5,150	400	1,250	175	450	100	200	75
Forestry, conservation scientist	2,250	175	500	100	D	D	150	50	500	100	650	100	250	75	200	75	*	*
Medical scientist	42,350	1,025	16,000	625	250	125	15,250	600	4,800	375	4,150	300	700	125	900	175	300	75
Postsecondary teachers, agricultural, other natural sciences	5,550	350	5,400	350	150	50	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, biological sciences	32,400	775	28,850	750	3,550	300	D	D	D	D	D	D	D	D	D	D	D	D
Other biological, agricultural, life scientist	19,350	700	4,550	325	D	D	9,950	525	1,500	225	1,850	175	450	100	750	175	200	75
Computer and information scientist	63,000	1,100	14,050	600	550	100	41,750	1,075	2,600	275	1,400	175	600	150	1,250	200	850	175
Computer and information scientist	53,450	1,075	4,950	325	100	50	41,750	1,075	2,600	275	1,400	175	600	150	1,250	200	850	175
Postsecondary teachers, computer science	9,550	525	9,150	500	400	100	D	D	D	D	D	D	D	D	D	D	D	D
Mathematical scientist	41,400	750	21,600	600	1,350	175	13,700	525	1,900	200	1,850	200	500	125	300	75	250	75
Mathematical scientist	21,800	650	3,100	250	250	75	13,700	525	1,900	200	1,850	200	500	125	300	75	250	75
Postsecondary teachers, mathematics, statistics	19,600	575	18,500	550	1,100	150	D	D	D	D	D	D	D	D	D	D	D	D
Physical scientist	84,550	1,275	42,000	925	4,350	325	22,650	675	4,400	350	6,800	375	2,000	225	1,300	150	1,000	175
Chemists, except biochemist	21,850	725	2,900	250	150	75	14,000	550	1,000	150	2,050	250	650	150	650	125	450	125
Earth, atmospheric, ocean scientist	11,750	400	4,100	275	50	50	3,350	250	850	100	2,300	175	500	100	400	100	150	50
Physicists, astronomers	12,450	625	3,450	350	D	D	3,800	350	2,150	275	1,850	250	650	175	150	75	300	125
Postsecondary teachers, chemistry	16,900	625	14,250	550	2,650	275	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, physics	10,650	575	9,600	550	1,050	175	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, other physical science	7,300	300	6,900	300	350	75	D	D	D	D	D	D	D	D	D	D	D	D
Other physical scientist	3,650	250	750	125	S	S	1,500	200	400	100	550	125	250	75	50	50	100	75
Psychologist	77,600	950	25,900	700	4,700	300	16,350	575	6,600	400	5,200	425	2,750	300	15,550	700	500	150
Psychologist	57,500	1,000	7,450	500	3,050	275	16,350	575	6,600	400	5,200	425	2,750	300	15,550	700	500	150
Postsecondary teachers, psychology	20,100	625	18,450	600	1,650	200	D	D	D	D	D	D	D	D	D	D	D	D
Social scientist	69,500	1,025	50,200	950	2,550	275	4,900	325	3,650	300	3,500	300	1,550	225	1,550	200	1,600	250
Economist	9,600	500	1,450	225	D	D	2,600	275	1,200	175	1,800	225	700	175	650	150	1,250	225
Political scientist	1,850	275	850	200	D	D	S	S	200	75	350	100	50	50	D	D	D	D
Postsecondary teachers, economics	10,900	500	10,600	500	250	100	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, political science	11,450	450	10,650	425	800	175	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, sociology	7,500	350	7,100	350	400	100	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, other social sciences	16,550	575	15,950	600	600	100	D	D	D	D	D	D	D	D	D	D	D	D

TABLE 42

U.S. residing employed doctoral scientists and engineers, by occupation and sector of employment: 2019

(Number and SE)

Occupation	All employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Sociologist, anthropologist	3,500	275	1,250	175	50	50	350	75	500	100	500	125	250	100	400	100	S	S
Other social scientist	8,250	475	2,350	225	250	75	1,850	200	1,800	200	900	125	550	100	400	100	150	50
Engineering occupations	120,650	1,375	35,900	850	450	150	67,300	1,325	4,550	350	6,450	375	2,100	250	2,150	275	1,750	275
Aerospace, aeronautical, astronautical engineer	7,150	425	750	150	D	D	4,050	350	700	150	1,350	200	D	D	100	50	200	100
Chemical engineer	9,250	525	1,150	200	D	D	6,900	450	350	100	500	175	D	D	D	D	100	75
Civil, architectural, sanitary engineer	6,900	425	1,450	250	D	D	3,500	300	150	50	500	125	950	175	250	100	D	D
Electrical engineer	27,500	750	2,450	275	D	D	21,600	775	1,050	200	1,300	200	150	75	300	100	600	175
Industrial engineers	1,950	250	400	100	D	D	1,050	175	250	100	S	S	D	D	S	S	D	D
Mechanical engineer	13,450	550	2,100	225	D	D	9,500	525	550	150	750	125	S	S	200	100	250	100
Postsecondary teacher, engineering	23,950	750	23,550	725	400	150	D	D	D	D	D	D	D	D	D	D	D	D
Other engineer	30,500	675	3,950	350	*	*	20,750	625	1,450	175	2,000	200	850	150	950	150	450	100
S&E-related occupations	92,350	1,475	35,800	925	5,950	400	29,000	875	9,950	500	4,750	350	2,900	275	2,750	225	1,300	225
Health occupations, except postsecondary teachers and managers	30,800	825	7,550	450	300	75	9,800	500	6,900	425	1,800	200	1,450	200	2,250	225	750	175
Postsecondary teacher, health and related science	23,600	675	23,150	675	450	75	D	D	D	D	D	D	D	D	D	D	D	D
S&E managers, including health	24,650	850	4,050	325	50	25	13,650	600	2,600	300	2,550	250	1,150	175	150	75	400	100
S&E precollege teachers	5,200	400	S	S	5,150	400	D	D	D	D	D	D	D	D	D	D	D	D
S&E technicians/ technologists	7,200	475	950	150	50	25	4,900	400	350	100	300	75	250	100	250	100	S	S
Other S&E-related occupation	900	150	D	D	D	D	650	125	D	D	D	D	D	D	D	D	D	D
Non-S&E occupations	151,500	1,650	42,300	850	6,400	325	67,800	1,175	11,600	550	5,650	400	3,400	300	12,600	650	1,800	250
Arts, humanities-related occupation	8,900	425	600	100	100	75	4,100	300	1,000	175	150	75	50	50	2,650	275	150	75
Management-related occupation	33,050	1,175	4,400	325	600	125	18,500	800	2,600	250	2,400	250	1,000	150	3,000	325	550	125
Non-S&E managers	55,650	1,175	15,950	550	1,950	200	28,100	825	4,900	350	1,350	175	1,150	150	1,750	250	550	125
Non-S&E postsecondary teachers	19,700	650	18,850	650	850	150	D	D	D	D	D	D	D	D	D	D	D	D
Non-S&E precollege/ other teachers	4,750	375	200	100	2,300	250	800	125	250	75	S	S	100	50	950	200	D	D
Sales, marketing occupation	9,400	450	S	S	D	D	7,100	400	200	75	D	D	D	D	1,600	225	200	100
Social service-related occupation	6,300	400	850	150	350	75	1,450	200	1,950	275	250	125	500	175	900	150	100	50
Other non-S&E occupation	13,750	650	1,300	175	200	75	7,650	500	700	125	1,350	200	550	100	1,750	200	200	75

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 43

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2019

(Number and SE)

Employment sector and occupation	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
All sectors	857,200	1,975	546,050	1,750	311,200	1,200
Science occupations	492,750	2,500	304,050	1,950	188,700	1,400
Biological, agricultural, and other life scientist	156,650	1,525	90,050	1,175	66,650	925
Computer and information scientist	63,000	1,100	52,650	1,000	10,350	475
Mathematical scientist	41,400	750	28,950	725	12,450	425
Physical scientist	84,550	1,275	63,850	1,125	20,650	500
Psychologist	77,600	950	29,800	700	47,850	850
Social scientist	69,500	1,025	38,750	800	30,750	625
Engineering occupations	120,650	1,375	101,600	1,400	19,000	625
S&E-related occupations	92,350	1,475	51,600	1,200	40,750	850
Non-S&E occupations	151,500	1,650	88,750	1,450	62,750	1,100
4-year educational institution[a]	344,350	2,325	211,850	2,075	132,500	1,450
Science occupations	230,400	1,950	142,300	1,725	88,050	1,150
Biological, agricultural, and other life scientist	76,650	1,200	45,100	1,000	31,550	650
Computer and information scientist	14,050	600	11,350	575	2,700	225
Mathematical scientist	21,600	600	15,450	500	6,100	325
Physical scientist	42,000	925	31,100	875	10,900	400
Psychologist	25,900	700	10,600	450	15,300	600
Social scientist	50,200	950	28,650	775	21,500	575
Engineering occupations	35,900	850	29,950	875	5,950	325
S&E-related occupations	35,800	925	17,100	725	18,700	575
Non-S&E occupations	42,300	850	22,500	675	19,750	550
Other educational institution[b]	30,900	900	14,300	675	16,600	575
Science occupations	18,100	700	8,600	525	9,500	425
Biological, agricultural, and other life scientist	4,600	375	1,900	250	2,650	250
Computer and information scientist	550	100	400	125	100	50
Mathematical scientist	1,350	175	850	150	500	100
Physical scientist	4,350	325	2,600	275	1,750	175
Psychologist	4,700	300	1,550	200	3,150	250
Social scientist	2,550	275	1,250	225	1,350	175
Engineering occupations	450	150	300	125	100	75
S&E-related occupations	5,950	400	3,150	325	2,850	225
Non-S&E occupations	6,400	325	2,250	225	4,150	275
Private, for profit[c]	306,300	2,500	218,700	2,050	87,600	1,225
Science occupations	142,200	1,800	96,300	1,550	45,950	925
Biological, agricultural, and other life scientist	42,900	1,175	24,400	925	18,500	625
Computer and information scientist	41,750	1,075	35,650	1,000	6,100	400
Mathematical scientist	13,700	525	9,500	500	4,200	325
Physical scientist	22,650	675	18,100	625	4,550	275
Psychologist	16,350	575	6,300	425	10,050	475
Social scientist	4,900	325	2,350	250	2,550	225
Engineering occupations	67,300	1,325	57,300	1,250	10,000	475
S&E-related occupations	29,000	875	19,900	775	9,100	450
Non-S&E occupations	67,800	1,175	45,250	1,050	22,550	775
Private, nonprofit	55,900	1,125	31,100	925	24,800	625
Science occupations	29,850	775	16,850	575	13,000	500
Biological, agricultural, and other life scientist	10,650	475	5,950	375	4,700	300
Computer and information scientist	2,600	275	1,950	250	650	125
Mathematical scientist	1,900	200	1,350	175	600	100
Physical scientist	4,400	350	3,500	325	900	125

TABLE 43

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2019

(Number and SE)

Employment sector and occupation	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
Psychologist	6,600	400	2,450	275	4,150	350
Social scientist	3,650	300	1,700	200	1,950	175
Engineering occupations	4,550	350	3,700	325	850	125
S&E-related occupations	9,950	500	5,250	375	4,700	350
Non-S&E occupations	11,600	550	5,350	400	6,300	350
Federal government	50,150	1,025	31,150	825	19,000	650
Science occupations	33,300	850	19,450	700	13,900	575
Biological, agricultural, and other life scientist	14,550	550	8,300	475	6,200	350
Computer and information scientist	1,400	175	1,100	150	300	100
Mathematical scientist	1,850	200	1,100	150	750	125
Physical scientist	6,800	375	5,050	350	1,750	175
Psychologist	5,200	425	2,000	250	3,250	300
Social scientist	3,500	300	1,900	250	1,650	200
Engineering occupations	6,450	375	5,450	375	1,000	100
S&E-related occupations	4,750	350	2,900	275	1,850	200
Non-S&E occupations	5,650	400	3,350	375	2,250	250
State or local government	18,850	750	10,950	550	7,900	425
Science occupations	10,400	525	6,300	425	4,150	325
Biological, agricultural, and other life scientist	3,050	275	1,800	200	1,250	150
Computer and information scientist	600	150	450	125	150	75
Mathematical scientist	500	125	350	125	150	50
Physical scientist	2,000	225	1,600	225	400	75
Psychologist	2,750	300	1,150	200	1,600	225
Social scientist	1,550	225	950	200	600	125
Engineering occupations	2,100	250	1,550	225	550	125
S&E-related occupations	2,900	275	1,500	225	1,400	200
Non-S&E occupations	3,400	300	1,600	250	1,800	200
Self-employed[d]	40,750	1,100	21,750	950	19,000	575
Science occupations	23,250	825	11,000	575	12,250	500
Biological, agricultural, and other life scientist	3,350	275	2,200	275	1,150	150
Computer and information scientist	1,250	200	1,100	200	100	50
Mathematical scientist	300	75	200	75	S	S
Physical scientist	1,300	150	1,150	150	150	50
Psychologist	15,550	700	5,500	450	10,100	475
Social scientist	1,550	200	900	175	650	125
Engineering occupations	2,150	275	1,950	275	200	75
S&E-related occupations	2,750	225	1,400	200	1,350	150
Non-S&E occupations	12,600	650	7,400	525	5,200	350
Other sector[e]	10,050	550	6,250	450	3,800	350
Science occupations	5,250	425	3,300	350	1,950	250
Biological, agricultural, and other life scientist	1,000	150	350	75	600	125
Computer and information scientist	850	175	650	150	200	75
Mathematical scientist	250	75	150	75	100	50
Physical scientist	1,000	175	800	175	200	50
Psychologist	500	150	250	125	300	100
Social scientist	1,600	250	1,050	200	550	150
Engineering occupations	1,750	275	1,450	250	300	100
S&E-related occupations	1,300	225	450	125	850	175
Non-S&E occupations	1,800	250	1,100	175	700	125

S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

Note(s):
Numbers are rounded to nearest 50. Detail may not add to total because of rounding. Standard errors are rounded up to nearest 25. Residence location is based on reported living location on 1 February 2019.

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

TABLE 44

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Number and SE)

Employment sector and occupation	All employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All sectors	857,200	1,975	37,250	550	1,300	125	213,350	1,325	31,100	400	562,350	1,750	11,950	400
Science occupations	492,750	2,500	22,750	475	600	100	113,550	1,500	16,350	400	332,600	2,075	6,900	300
Biological, agricultural, and other life scientist	156,650	1,525	7,300	300	100	25	39,550	900	4,450	225	102,750	1,250	2,500	175
Computer and information scientist	63,000	1,100	1,700	150	D	D	28,950	850	1,050	125	30,700	725	650	100
Mathematical scientist	41,400	750	1,650	150	D	D	14,500	575	1,100	125	23,700	625	450	75
Physical scientist	84,550	1,275	3,250	200	50	25	17,550	700	2,300	200	60,350	1,025	1,050	125
Psychologist	77,600	950	4,550	225	200	75	4,400	350	3,450	225	63,850	950	1,150	150
Social scientist	69,500	1,025	4,300	250	250	75	8,600	425	4,050	250	51,250	900	1,100	125
Engineering occupations	120,650	1,375	4,700	275	100	50	49,650	1,150	2,900	175	61,850	1,125	1,400	200
S&E-related occupations	92,350	1,475	3,700	225	200	50	22,000	850	4,150	225	60,950	1,125	1,300	125
Non-S&E occupations	151,500	1,650	6,050	300	400	75	28,150	850	7,650	350	106,950	1,525	2,350	175
4-year educational institution[d]	344,350	2,325	16,350	400	600	100	68,950	1,300	13,750	400	240,100	1,850	4,600	250
Science occupations	230,400	1,950	11,400	350	300	75	43,800	975	8,200	300	163,450	1,700	3,200	225
Biological, agricultural, and other life scientist	76,650	1,200	3,950	225	50	25	17,250	600	1,900	150	52,400	1,075	1,150	150
Computer and information scientist	14,050	600	400	75	D	D	5,100	400	350	75	8,050	400	150	75
Mathematical scientist	21,600	600	1,000	125	D	D	5,850	375	600	100	14,050	450	150	50
Physical scientist	42,000	925	1,550	150	*	*	8,100	575	1,000	125	30,750	775	550	100
Psychologist	25,900	700	1,450	150	50	25	2,250	250	1,300	150	20,400	650	450	100
Social scientist	50,200	950	3,100	200	200	75	5,300	325	3,000	250	37,850	850	750	100
Engineering occupations	35,900	850	1,600	150	50	25	12,700	675	1,100	150	20,100	725	350	75
S&E-related occupations	35,800	925	1,400	125	100	50	7,150	425	1,700	125	24,950	750	450	100
Non-S&E occupations	42,300	850	1,950	150	150	50	5,250	400	2,700	200	31,600	775	600	100
Other educational institution[e]	30,900	900	1,900	175	100	50	3,150	400	2,450	200	22,700	725	550	100
Science occupations	18,100	700	1,150	150	S	S	1,850	275	1,500	175	13,300	600	300	75
Biological, agricultural, and other life scientist	4,600	375	200	50	D	D	450	125	300	75	3,550	325	100	50
Computer and information scientist	550	100	D	D	D	D	S	S	D	D	400	100	D	D
Mathematical scientist	1,350	175	100	25	D	D	150	50	50	25	1,000	175	S	S
Physical scientist	4,350	325	300	75	D	D	700	150	300	75	3,100	300	D	D
Psychologist	4,700	300	250	50	D	D	150	75	550	150	3,600	250	50	50
Social scientist	2,550	275	300	100	D	D	250	125	300	100	1,650	200	S	S
Engineering occupations	450	150	S	S	D	D	D	D	D	D	250	75	D	D
S&E-related occupations	5,950	400	300	75	D	D	450	175	400	75	4,650	350	100	50
Non-S&E occupations	6,400	325	400	75	50	25	700	150	550	100	4,550	325	100	50
Private, for profit[f]	306,300	2,500	11,150	400	300	75	109,300	1,525	7,300	325	174,200	1,900	4,000	275
Science occupations	142,200	1,800	5,450	300	150	50	51,100	1,125	3,200	225	80,650	1,400	1,650	175
Biological, agricultural, and other life scientist	42,900	1,175	1,750	175	D	D	14,750	725	1,150	150	24,700	850	550	100
Computer and information scientist	41,750	1,075	1,150	125	D	D	21,500	825	500	100	18,250	650	350	75
Mathematical scientist	13,700	525	450	75	D	D	7,050	475	200	50	5,750	375	200	75

TABLE 44

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Number and SE)

Employment sector and occupation	All employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Physical scientist	22,650	675	750	100	50	25	6,050	425	600	125	14,950	575	300	75
Psychologist	16,350	575	1,200	175	D	D	700	175	550	125	13,650	525	150	75
Social scientist	4,900	325	200	75	D	D	1,050	150	200	75	3,300	275	100	50
Engineering occupations	67,300	1,325	2,350	175	50	25	31,350	950	1,250	125	31,450	925	850	175
S&E-related occupations	29,000	875	1,100	150	50	25	9,400	600	750	100	17,300	650	450	75
Non-S&E occupations	67,800	1,175	2,250	175	50	25	17,500	650	2,100	200	44,800	1,100	1,050	150
Private, nonprofit	55,900	1,125	2,350	175	50	25	11,150	525	2,400	275	39,050	1,025	850	125
Science occupations	29,850	775	1,250	150	D	D	5,950	350	850	150	21,300	725	500	100
Biological, agricultural, and other life scientist	10,650	475	400	100	D	D	3,050	325	150	50	6,850	350	200	75
Computer and information scientist	2,600	275	50	25	D	D	900	200	S	S	1,550	175	S	S
Mathematical scientist	1,900	200	50	25	D	D	550	125	S	S	1,200	150	D	D
Physical scientist	4,400	350	150	50	D	D	750	150	S	S	3,350	300	50	25
Psychologist	6,600	400	450	100	D	D	400	100	200	75	5,450	400	100	50
Social scientist	3,650	300	200	50	D	D	300	100	200	75	2,900	275	50	50
Engineering occupations	4,550	350	150	50	D	D	1,650	225	100	50	2,550	275	50	25
S&E-related occupations	9,950	500	450	75	*	*	2,250	275	500	100	6,550	425	150	50
Non-S&E occupations	11,600	550	500	100	D	D	1,300	200	950	200	8,600	450	200	50
Federal government	50,150	1,025	2,500	175	100	50	8,550	525	2,550	225	35,450	825	950	125
Science occupations	33,300	850	1,750	150	S	S	5,600	400	1,400	150	23,850	750	700	125
Biological, agricultural, and other life scientist	14,550	550	850	100	D	D	2,800	275	700	100	9,800	450	350	75
Computer and information scientist	1,400	175	50	25	D	D	350	100	S	S	900	150	D	D
Mathematical scientist	1,850	200	50	25	D	D	550	125	100	50	1,100	150	50	25
Physical scientist	6,800	375	350	100	D	D	950	150	200	50	5,200	350	100	50
Psychologist	5,200	425	200	75	D	D	200	75	300	75	4,350	400	150	75
Social scientist	3,500	300	200	75	D	D	700	175	50	25	2,500	225	*	*
Engineering occupations	6,450	375	250	75	D	D	1,450	250	200	50	4,450	325	50	25
S&E-related occupations	4,750	350	250	75	D	D	900	175	400	75	3,100	275	50	25
Non-S&E occupations	5,650	400	250	75	D	D	650	150	500	100	4,050	300	S	S
State or local government	18,850	750	900	125	50	25	3,900	375	1,450	175	12,300	625	250	75
Science occupations	10,400	525	550	100	D	D	1,850	250	650	100	7,200	475	150	50
Biological, agricultural, and other life scientist	3,050	275	100	50	D	D	600	125	200	75	2,100	225	S	S
Computer and information scientist	600	150	D	D	D	D	150	75	*	*	400	125	D	D
Mathematical scientist	500	125	S	S	D	D	150	75	D	D	300	100	D	D
Physical scientist	2,000	225	50	50	D	D	500	150	50	50	1,300	175	S	S
Psychologist	2,750	300	250	100	D	D	200	75	250	75	2,050	250	D	D
Social scientist	1,550	225	S	S	D	D	300	100	100	50	1,050	200	D	D
Engineering occupations	2,100	250	100	50	D	D	950	200	200	75	850	175	D	D
S&E-related occupations	2,900	275	100	50	D	D	800	175	350	125	1,600	200	50	25
Non-S&E occupations	3,400	300	150	50	D	D	300	100	250	75	2,600	275	50	25
Self-employed[g]	40,750	1,100	1,450	150	50	25	4,400	375	800	100	33,450	975	600	125
Science occupations	23,250	825	900	125	D	D	1,600	225	400	100	20,050	725	300	100

TABLE 44

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Number and SE)

Employment sector and occupation	All employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Biological, agricultural, and other life scientist	3,350	275	100	50	D	D	400	125	50	25	2,800	275	S	S
Computer and information scientist	1,250	200	50	25	D	D	250	75	D	D	900	150	D	D
Mathematical scientist	300	75	D	D	D	D	100	50	D	D	200	75	D	D
Physical scientist	1,300	150	S	S	D	D	200	75	D	D	1,050	150	D	D
Psychologist	15,550	700	700	125	D	D	550	150	300	75	13,850	625	250	75
Social scientist	1,550	200	50	25	D	D	150	75	50	25	1,250	200	D	D
Engineering occupations	2,150	275	100	50	D	D	400	150	D	D	1,550	250	D	D
S&E-related occupations	2,750	225	S	S	D	D	500	125	50	25	2,100	200	D	D
Non-S&E occupations	12,600	650	350	75	D	D	1,900	250	350	75	9,750	600	200	50
Other sector[h]	10,050	550	550	100	D	D	3,850	350	400	75	5,150	400	100	50
Science occupations	5,250	425	350	75	D	D	1,850	250	150	50	2,800	325	50	25
Biological, agricultural, and other life scientist	1,000	150	50	25	D	D	350	100	50	25	550	100	D	D
Computer and information scientist	850	175	D	D	D	D	550	150	D	D	250	125	D	D
Mathematical scientist	250	75	D	D	D	D	S	S	S	S	100	50	D	D
Physical scientist	1,000	175	D	D	D	D	350	100	D	D	650	150	D	D
Psychologist	500	150	D	D	D	D	D	D	D	D	450	150	D	D
Social scientist	1,600	250	250	75	D	D	550	175	50	25	750	175	D	D
Engineering occupations	1,750	275	100	50	D	D	950	225	S	S	600	150	D	D
S&E-related occupations	1,300	225	50	25	D	D	550	150	50	25	700	150	D	D
Non-S&E occupations	1,800	250	100	50	D	D	500	150	150	50	1,000	175	D	D

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[e] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[f] Includes those self-employed in an incorporated business.

[g] Self-employed or business owner in a nonincorporated business.

[h] Includes employers not broken out separately.

Note(s):
Numbers are rounded to nearest 50. Detail may not add to total because of rounding. Standard errors are rounded up to nearest 25. Residence location is based on reported living location on 1 February 2019.

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

TABLE 45-1

U.S. residing employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2019

(Number and SE)

Occupation	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	857,200	1,975	540,350	2,375	300,950	2,225	180,500	2,150	64,450	1,275	133,400	1,625	86,100	1,425	351,450	2,375	121,550	1,600	245,900	2,050	81,800	1,475
Science occupations	492,750	2,500	337,450	2,100	191,300	1,800	145,500	1,850	26,750	850	62,500	1,375	60,850	1,125	160,350	1,900	62,250	1,125	164,500	1,800	41,900	1,050
Biological, agricultural, and other life scientist	156,650	1,525	125,800	1,425	75,200	1,225	63,400	1,100	6,100	425	24,200	800	6,450	325	61,150	1,100	7,450	500	37,050	900	14,550	650
Agricultural, food scientist	11,600	450	9,800	400	7,800	350	2,400	225	550	125	3,400	275	300	75	4,500	275	700	150	900	125	1,400	200
Biochemists, biophysicist	16,350	675	15,100	675	8,650	550	7,800	450	1,250	200	4,800	400	900	175	5,700	400	250	75	300	100	1,150	175
Biological scientist	26,750	675	22,450	575	13,350	450	13,650	525	1,050	150	2,700	275	1,450	150	11,500	525	900	150	2,600	225	2,600	275
Forestry, conservation scientist	2,250	175	1,750	150	1,550	150	250	50	200	100	200	75	250	75	1,150	125	150	50	250	75	300	75
Medical scientist	42,350	1,025	37,300	1,025	26,400	875	15,650	625	1,850	250	7,900	450	1,700	200	17,500	700	3,400	325	2,300	275	3,500	325
Postsecondary teachers, agricultural, other natural sciences	5,550	350	3,700	275	2,700	250	1,250	175	D	D	150	50	S	S	1,850	200	150	50	4,150	325	400	100
Postsecondary teachers, biological sciences	32,400	775	19,850	700	4,000	325	16,500	625	200	75	300	75	150	50	10,350	475	650	150	26,250	675	3,000	250
Other biological, agricultural, life scientist	19,350	700	15,800	675	10,850	575	5,900	350	950	175	4,650	450	1,650	200	8,650	500	1,200	200	300	75	2,250	250
Computer and information scientist	63,000	1,100	41,350	850	21,450	700	6,400	400	8,800	500	13,150	625	35,750	850	17,400	725	1,100	150	9,800	500	3,600	325
Computer and information scientist	53,450	1,075	35,550	825	18,150	650	3,650	325	8,700	500	12,850	625	34,700	850	15,450	675	1,050	150	1,450	200	2,900	300
Postsecondary teachers, computer science	9,550	525	5,800	375	3,250	275	2,700	250	S	S	300	75	1,100	175	1,950	250	S	S	8,350	475	700	150
Mathematical scientist	41,400	750	30,900	725	16,700	575	11,900	525	4,100	300	3,800	350	10,550	450	8,250	375	1,100	150	18,600	550	2,850	250
Mathematical scientist	21,800	650	18,550	625	13,000	500	2,850	250	4,000	300	3,600	350	9,950	450	5,300	325	900	150	850	150	1,100	175
Postsecondary teachers, mathematics, statistics	19,600	575	12,350	500	3,650	300	9,050	475	100	50	200	75	650	150	2,900	225	150	75	17,750	525	1,750	200
Physical scientist	84,550	1,275	63,400	1,100	34,100	825	29,650	875	5,550	400	14,650	525	5,700	375	26,400	825	2,100	250	32,950	750	7,750	425
Chemists, except biochemist	21,850	725	19,000	675	13,550	550	4,250	350	1,950	250	8,600	475	750	175	8,500	450	750	150	600	125	2,800	275
Earth, atmospheric, ocean scientist	11,750	400	9,950	350	6,600	300	4,450	275	750	125	1,400	150	2,100	200	4,050	225	500	100	1,250	150	1,050	150
Physicists, astronomers	12,450	625	11,150	575	6,350	425	5,150	350	1,850	225	3,100	300	2,250	275	3,300	300	300	75	500	125	850	175
Postsecondary teachers, chemistry	16,900	625	8,700	450	2,050	225	6,700	400	150	75	300	100	D	D	4,950	375	150	75	15,150	600	1,450	200
Postsecondary teachers, physics	10,650	575	6,650	475	1,350	200	5,500	450	250	100	100	50	200	100	2,550	275	200	100	8,850	500	750	175
Postsecondary teachers, other physical science	7,300	300	4,900	275	2,050	200	2,900	200	D	D	150	50	100	50	1,800	200	S	S	6,350	300	400	75
Other physical scientist	3,650	250	3,050	250	2,100	200	750	150	550	125	1,050	150	250	75	1,250	150	150	50	300	75	450	100
Psychologist	77,600	950	26,550	750	16,050	625	9,200	475	1,100	150	3,700	350	500	125	28,400	775	47,350	900	23,500	650	5,700	425
Psychologist	57,500	1,000	14,750	650	10,200	550	3,050	325	1,050	150	3,350	350	500	125	23,700	750	45,750	850	6,000	425	3,750	400
Postsecondary teachers, psychology	20,100	625	11,850	475	5,850	350	6,150	375	D	D	300	75	S	S	4,700	350	1,600	250	17,500	600	1,950	200
Social scientist	69,500	1,025	49,450	850	27,800	750	25,000	700	1,100	175	3,000	300	1,800	250	18,700	650	3,150	300	42,550	875	7,450	425
Economist	9,600	500	7,850	450	6,950	425	1,950	250	500	150	700	150	1,000	200	4,300	325	1,400	225	350	100	900	175
Political scientist	1,850	275	1,500	225	1,300	200	750	175	D	D	50	25	D	D	650	150	100	50	250	125	200	75
Postsecondary teachers, economics	10,900	500	8,100	450	4,400	325	4,150	350	D	D	S	S	D	D	1,550	200	150	75	9,600	500	600	125
Postsecondary teachers, political science	11,450	450	7,300	400	1,650	200	5,800	400	D	D	150	75	D	D	1,500	200	D	D	10,650	450	1,500	225
Postsecondary teachers, sociology	7,500	350	4,500	300	1,200	175	3,400	275	D	D	100	50	D	D	1,650	200	50	50	6,750	325	800	125

TABLE 45-1

U.S. residing employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2019

(Number and SE)

Occupation	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Postsecondary teachers, other social sciences	16,550	575	10,650	475	4,150	325	6,700	350	D	D	400	100	D	D	3,450	275	350	100	14,500	500	1,600	200
Sociologist, anthropologist	3,500	275	2,800	250	2,250	225	1,100	150	150	50	400	150	100	50	1,500	175	300	100	250	75	500	150
Other social scientist	8,250	475	6,750	425	5,900	375	1,250	175	350	75	1,050	150	550	100	4,150	350	750	125	200	75	1,300	175
Engineering occupations	120,650	1,375	100,850	1,275	53,500	1,075	15,000	625	27,000	875	44,900	1,050	14,450	650	37,250	900	4,100	350	23,500	725	11,000	575
Aerospace, aeronautical, astronautical engineer	7,150	425	6,400	425	3,350	325	700	175	2,100	250	3,000	300	1,500	200	2,150	250	S	S	200	75	500	100
Chemical engineer	9,250	525	7,950	475	4,250	375	1,100	200	2,000	250	4,400	400	550	175	3,450	350	200	100	300	100	1,400	200
Civil, architectural, sanitary engineer	6,900	425	5,350	425	2,450	300	750	200	2,600	275	1,150	225	600	150	3,150	325	1,000	175	650	175	550	125
Electrical engineer	27,500	750	24,700	725	11,550	525	1,750	250	7,450	450	16,000	700	5,600	425	6,650	400	550	175	750	150	2,600	300
Industrial engineers	1,950	250	1,450	225	750	175	100	50	400	150	750	175	200	75	800	150	D	D	250	75	400	150
Mechanical engineer	13,450	550	11,850	550	6,000	400	1,350	200	4,300	350	5,800	400	2,100	300	4,550	375	250	100	750	125	700	175
Postsecondary teacher, engineering	23,950	750	17,600	675	11,600	550	6,350	400	650	200	750	175	400	150	5,100	375	300	125	19,850	725	1,100	250
Other engineer	30,500	675	25,500	675	13,500	600	2,850	350	7,450	425	13,100	575	3,450	300	11,350	525	1,600	200	750	125	3,750	300
S&E-related occupations	92,350	1,475	46,150	950	28,300	725	8,950	475	4,100	325	9,150	550	5,350	400	47,050	1,100	27,200	925	30,250	825	6,650	425
Health occupations, except postsecondary teachers and managers	30,800	825	11,050	500	8,300	425	2,150	250	550	100	1,750	225	550	125	11,900	550	21,750	800	5,600	375	2,250	275
Postsecondary teacher, health and related science	23,600	675	13,950	475	10,150	450	4,100	350	S	S	500	125	50	50	6,500	375	3,300	275	19,200	600	1,450	175
S&E managers, including health	24,650	850	14,200	600	6,750	425	1,750	250	1,550	200	4,100	350	1,100	175	24,600	850	1,800	275	150	50	1,850	250
S&E precollege teachers	5,200	400	900	175	250	100	300	100	150	75	200	75	S	S	1,700	200	D	D	5,050	400	450	125
S&E technicians/ technologists	7,200	475	5,500	425	2,650	300	550	125	1,400	225	2,400	275	3,200	275	1,900	225	150	75	300	100	600	125
Other S&E-related occupation	900	150	550	125	150	75	D	D	300	100	150	75	300	75	450	125	200	75	D	D	D	D
Non-S&E occupations	151,500	1,650	55,900	950	27,900	725	11,050	550	6,650	425	16,800	700	5,450	425	106,800	1,425	27,950	850	27,600	725	22,250	775
Arts, humanities-related occupation	8,900	425	3,400	275	1,800	225	800	125	250	100	1,400	175	200	75	4,050	275	3,500	275	600	125	2,250	275
Management-related occupation	33,050	1,175	11,850	625	5,700	425	900	200	2,400	250	4,500	375	1,700	250	26,350	1,000	6,350	450	1,600	200	5,800	350
Non-S&E managers	55,650	1,175	23,000	725	11,700	525	2,850	275	3,150	325	7,900	475	2,550	275	49,700	1,075	5,250	375	1,400	200	6,300	475
Non-S&E postsecondary teachers	19,700	650	10,600	525	5,350	350	5,000	350	150	50	750	150	150	75	5,150	350	950	175	17,300	575	1,950	225
Non-S&E precollege/ other teachers	4,750	375	1,050	175	250	75	300	100	150	75	400	100	100	50	1,650	275	250	100	4,200	325	450	100
Sales, marketing occupation	9,400	450	2,100	225	950	150	200	75	250	100	900	150	400	100	8,600	425	950	175	250	75	1,000	150
Social service-related occupation	6,300	400	950	175	450	100	200	75	S	S	350	125	D	D	3,450	325	3,750	275	1,650	250	1,000	150
Other non-S&E occupation	13,750	650	2,900	250	1,700	200	750	150	200	75	600	125	250	125	7,900	450	6,900	500	550	100	3,550	300

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by the respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 45-2

U.S. residing employed doctoral scientists and engineers, by occupation and primary work activity: 2019

(Number and SE)

Occupation	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All occupations	857,200	1,975	351,000	1,975	168,650	1,775	92,700	1,700	24,050	975	65,600	1,400	44,450	950	165,400	2,025	97,050	1,625	161,000	1,700	38,300	975
Science occupations	492,750	2,500	224,950	1,825	112,050	1,450	76,700	1,475	7,850	525	28,350	900	33,450	825	54,250	1,100	51,400	1,075	111,400	1,550	17,300	725
Biological, agricultural, and other life scientist	156,650	1,525	98,200	1,300	46,800	1,025	38,300	950	1,150	200	11,950	600	1,400	175	21,850	650	4,450	375	24,200	700	6,550	400
Agricultural, food scientist	11,600	450	7,900	375	5,200	275	950	150	150	50	1,600	200	50	50	1,800	200	500	150	450	100	850	150
Biochemists, biophysicist	16,350	675	13,600	650	5,000	400	5,800	400	300	125	2,500	275	150	75	1,950	250	100	50	S	S	450	125
Biological scientist	26,750	675	19,000	550	8,250	375	9,400	450	150	75	1,200	200	350	100	4,100	325	500	100	1,600	200	1,250	200
Forestry, conservation scientist	2,250	175	1,150	125	950	125	100	50	S	S	50	25	100	75	650	100	100	50	100	50	150	50
Medical scientist	42,350	1,025	31,250	975	17,800	750	9,250	550	300	125	3,900	325	250	75	6,200	425	2,050	250	850	150	1,800	225
Postsecondary teachers, agricultural, other natural sciences	5,550	350	2,250	225	1,550	200	650	125	D	D	50	50	D	D	650	100	50	25	2,500	250	100	50
Postsecondary teachers, biological sciences	32,400	775	10,200	475	1,600	225	8,550	450	D	D	D	D	D	D	2,850	275	300	100	18,500	600	500	125
Other biological, agricultural, life scientist	19,350	700	12,800	625	6,450	450	3,650	250	200	75	2,550	300	450	100	3,700	325	850	200	100	50	1,400	200
Computer and information scientist	63,000	1,100	21,450	725	10,400	500	3,100	275	2,800	325	5,150	400	25,650	750	7,150	400	600	125	6,550	425	1,600	225
Computer and information scientist	53,450	1,075	18,900	700	9,250	475	1,750	200	2,800	325	5,150	400	25,400	750	6,550	375	550	100	650	125	1,450	225
Postsecondary teachers, computer science	9,550	525	2,550	250	1,150	175	1,350	200	D	D	D	D	250	100	650	150	D	D	5,900	400	150	75
Mathematical scientist	41,400	750	19,500	600	10,350	475	5,450	375	2,000	250	1,750	225	4,300	325	2,850	250	400	100	13,400	500	950	150
Mathematical scientist	21,800	650	13,850	525	8,950	475	1,200	175	2,000	250	1,750	225	4,250	325	2,200	225	400	100	500	100	650	125
Postsecondary teachers, mathematics, statistics	19,600	575	5,650	350	1,400	175	4,250	325	D	D	D	D	D	D	650	100	D	D	12,900	500	300	125
Physical scientist	84,550	1,275	44,550	950	19,850	550	15,550	650	1,350	200	7,800	400	1,500	200	9,500	450	1,350	200	24,200	725	3,450	300
Chemists, except biochemist	21,850	725	15,800	600	8,450	400	2,100	275	350	100	4,850	350	350	150	3,350	300	500	125	450	125	1,450	200
Earth, atmospheric, ocean scientist	11,750	400	7,900	350	4,500	275	2,550	200	200	75	650	100	600	125	1,450	125	350	75	750	125	750	125
Physicists, astronomers	12,450	625	9,700	525	3,950	325	3,550	325	600	150	1,600	225	500	125	1,300	200	250	75	200	75	500	125
Postsecondary teachers, chemistry	16,900	625	3,150	275	350	100	2,750	250	D	D	D	D	D	D	1,150	200	D	D	12,300	525	200	75
Postsecondary teachers, physics	10,650	575	3,350	350	400	125	2,900	325	D	D	D	D	D	D	850	175	100	75	6,100	450	S	S
Postsecondary teachers, other physical science	7,300	300	2,200	200	800	150	1,350	150	D	D	D	D	D	D	800	150	D	D	4,250	225	100	25
Other physical scientist	3,650	250	2,500	225	1,400	175	400	100	150	75	550	100	*	*	600	125	100	50	200	50	200	75
Psychologist	77,600	950	13,300	500	7,750	400	4,500	350	200	75	850	175	100	50	6,100	400	42,850	900	13,300	525	2,000	275
Psychologist	57,500	1,000	7,550	400	5,300	375	1,250	175	200	75	800	175	100	50	4,750	350	42,050	850	1,400	200	1,700	275
Postsecondary teachers, psychology	20,100	625	5,750	400	2,400	275	3,250	300	D	D	D	D	D	D	1,350	200	800	200	11,900	500	300	100
Social scientist	69,500	1,025	27,950	725	16,950	675	9,800	550	300	125	850	125	500	150	6,800	400	1,750	225	29,700	750	2,800	300
Economist	9,600	500	5,750	375	4,700	325	600	150	200	100	250	100	300	150	1,700	225	1,000	175	200	75	700	150
Political scientist	1,850	275	1,200	175	850	150	350	125	D	D	D	D	D	D	250	100	S	S	S	S	150	75
Postsecondary teachers, economics	10,900	500	4,400	300	2,200	250	2,150	225	D	D	D	D	D	D	500	150	D	D	5,850	375	100	75
Postsecondary teachers, political science	11,450	450	3,150	300	600	125	2,500	325	D	D	D	D	D	D	550	125	D	D	7,450	425	300	100
Postsecondary teachers, sociology	7,500	350	1,650	200	350	75	1,350	175	D	D	D	D	D	D	650	150	D	D	5,050	275	150	50

TABLE 45-2

U.S. residing employed doctoral scientists and engineers, by occupation and primary work activity: 2019

(Number and SE)

Occupation	All employed		Research and development										Computer applications		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Applied research		Basic research		Design		Development											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Postsecondary teachers, other social sciences	16,550	575	4,150	350	1,950	225	2,150	250	D	D	S	S	D	D	1,200	175	50	25	10,750	450	300	100
Sociologist, anthropologist	3,500	275	2,300	250	1,700	225	400	100	D	D	150	75	D	D	500	100	150	75	200	75	350	125
Other social scientist	8,250	475	5,350	375	4,650	350	300	100	100	50	350	100	150	75	1,450	200	450	100	100	50	750	150
Engineering occupations	120,650	1,375	75,550	1,125	29,800	850	6,600	450	12,900	675	26,200	825	5,300	450	17,500	625	2,850	300	14,150	600	5,300	375
Aerospace, aeronautical, astronautical engineer	7,150	425	5,000	400	2,050	275	300	125	1,050	200	1,550	225	600	150	1,000	175	S	S	100	50	250	75
Chemical engineer	9,250	525	6,550	450	2,350	275	550	175	800	200	2,850	325	S	S	1,450	250	200	100	150	75	800	150
Civil, architectural, sanitary engineer	6,900	425	3,850	325	1,500	225	150	75	1,850	250	400	100	150	75	1,250	250	800	150	450	150	350	125
Electrical engineer	27,500	750	19,900	650	6,000	425	550	175	3,100	350	10,250	550	2,300	275	3,100	275	350	150	450	125	1,400	250
Industrial engineers	1,950	250	1,050	225	350	100	50	25	S	S	500	150	D	D	400	100	D	D	200	75	200	75
Mechanical engineer	13,450	550	9,450	525	3,300	350	700	175	2,150	300	3,300	325	500	100	2,500	275	150	75	500	100	350	150
Postsecondary teacher, engineering	23,950	750	9,750	500	6,100	425	3,450	325	D	D	200	100	S	S	1,850	175	D	D	12,050	600	150	75
Other engineer	30,500	675	19,950	625	8,100	475	900	175	3,750	350	7,200	400	1,450	225	5,850	350	1,200	175	200	75	1,750	200
S&E-related occupations	92,350	1,475	23,800	675	13,950	575	4,700	350	1,350	225	3,750	350	3,400	275	22,900	825	22,050	875	17,650	650	2,550	275
Health occupations, except postsecondary teachers and managers	30,800	825	5,850	400	4,150	350	900	150	200	75	650	125	250	75	3,500	325	18,800	750	1,100	150	1,300	200
Postsecondary teacher, health and related science	23,600	675	7,400	400	5,050	350	2,250	250	D	D	D	D	D	D	2,650	250	2,000	225	11,350	475	200	75
S&E managers, including health	24,650	850	7,050	425	3,500	250	1,250	225	550	150	1,800	250	550	125	15,500	700	950	175	S	S	550	125
S&E precollege teachers	5,200	400	50	25	D	D	D	D	D	D	D	D	D	D	150	75	D	D	4,950	400	D	D
S&E technicians/ technologists	7,200	475	3,150	325	1,200	175	300	100	400	150	1,200	225	2,500	250	900	150	100	75	150	75	400	100
Other S&E-related occupation	900	150	300	100	D	D	D	D	200	75	D	D	100	50	250	100	200	75	D	D	D	D
Non-S&E occupations	151,500	1,650	26,700	800	12,850	450	4,650	425	1,950	225	7,300	475	2,300	275	70,750	1,350	20,750	725	17,850	575	13,150	550
Arts, humanities-related occupation	8,900	425	2,200	225	850	150	350	100	S	S	900	150	S	S	1,700	175	2,750	225	300	100	1,850	225
Management-related occupation	33,050	1,175	5,850	450	2,600	275	400	150	700	150	2,100	275	650	150	17,650	750	4,300	350	650	150	4,000	325
Non-S&E managers	55,650	1,175	11,100	525	5,850	375	1,100	200	850	150	3,300	300	1,250	200	36,900	1,025	3,150	325	400	75	2,850	275
Non-S&E postsecondary teachers	19,700	650	4,800	375	2,350	225	2,300	300	D	D	100	50	D	D	2,100	275	600	150	11,650	475	550	100
Non-S&E precollege/ other teachers	4,750	375	350	100	D	D	S	S	D	D	150	75	D	D	350	100	100	50	3,800	325	150	50
Sales, marketing occupation	9,400	450	950	150	350	75	S	S	150	75	350	100	150	75	7,200	400	500	150	100	50	500	125
Social service-related occupation	6,300	400	350	125	150	75	D	D	D	D	S	S	D	D	1,600	250	3,150	250	700	150	550	125
Other non-S&E occupation	13,750	650	1,200	150	600	100	250	75	100	50	250	75	S	S	3,200	300	6,200	475	300	75	2,750	275

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by the respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 46

U.S. residing employed doctoral scientists and engineers, by employer location and broad occupation: 2019

(Number and SE)

Employer location	All employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations	
			Total		Biological, agricultural, and other life scientist		Computer and information scientist		Mathematical scientist		Physical scientist		Psychologist		Social scientist							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All locations	857,200	1,975	492,750	2,500	156,650	1,525	63,000	1,100	41,400	750	84,550	1,275	77,600	950	69,500	1,025	120,650	1,375	92,350	1,475	151,500	1,650
New England	77,100	1,375	45,650	1,125	17,600	625	5,300	400	3,450	300	6,550	400	6,350	475	6,400	425	8,800	500	8,900	525	13,750	475
Connecticut	12,900	550	7,650	450	2,450	250	650	150	500	100	1,250	175	1,550	225	1,250	200	1,650	250	1,400	200	2,200	250
Maine	2,750	300	1,900	250	700	150	50	50	150	50	300	100	350	125	300	100	100	50	250	100	500	125
Massachusetts	52,350	1,150	30,400	950	13,050	575	4,100	350	2,550	250	4,050	300	3,100	325	3,550	325	6,100	375	6,400	450	9,450	400
New Hampshire	3,450	325	1,900	250	550	125	250	100	S	S	300	100	450	125	300	75	350	100	350	100	850	150
Rhode Island	3,400	250	2,300	225	400	100	100	50	100	50	450	125	550	125	700	150	400	125	300	100	400	100
Vermont	2,300	250	1,550	200	450	100	150	75	100	50	150	75	350	125	350	100	250	100	150	75	300	75
Middle Atlantic	117,450	1,875	70,150	1,450	20,500	775	8,400	450	7,450	425	10,700	550	13,050	625	10,050	525	11,550	575	12,900	575	22,800	750
New Jersey	23,700	875	13,800	675	4,400	350	2,100	250	1,750	250	2,500	250	1,650	250	1,350	200	2,800	350	2,350	250	4,750	350
New York	59,150	1,150	35,850	925	8,950	525	4,750	375	3,850	300	4,200	375	8,000	500	6,100	425	5,200	375	6,650	450	11,500	600
Pennsylvania	34,600	975	20,550	775	7,150	450	1,550	225	1,850	175	4,000	325	3,400	300	2,600	275	3,550	350	3,950	325	6,550	400
East North Central	100,900	1,550	58,350	1,250	17,950	600	5,550	450	5,050	375	11,550	550	9,350	525	8,900	475	13,850	650	10,550	500	18,200	675
Illinois	28,900	875	16,650	700	4,750	350	1,850	225	1,500	200	3,350	325	2,400	275	2,800	275	3,300	325	2,900	275	6,100	375
Indiana	13,450	575	8,150	425	3,100	275	800	200	850	150	1,200	175	1,150	175	1,100	225	1,800	250	1,400	175	2,100	250
Michigan	21,450	725	11,700	525	3,400	300	1,200	200	900	125	2,200	225	2,100	250	1,850	225	4,000	300	2,050	200	3,650	300
Ohio	24,950	800	14,250	575	3,950	325	1,050	175	1,200	175	3,400	275	2,600	250	1,950	225	3,450	375	3,000	250	4,250	325
Wisconsin	12,150	575	7,650	475	2,750	275	700	125	600	125	1,350	200	1,100	175	1,150	175	1,300	175	1,200	175	2,050	225
West North Central	48,750	1,175	29,600	800	11,600	500	2,250	275	2,300	225	4,650	375	4,850	400	4,000	300	5,250	425	5,700	350	8,250	475
Iowa	6,850	400	4,550	375	1,700	225	300	100	450	125	750	200	650	150	650	125	850	175	700	175	750	125
Kansas	5,500	350	3,650	300	1,300	200	300	100	250	75	450	100	750	150	600	100	650	175	550	125	700	125
Minnesota	16,100	725	9,150	500	3,200	300	850	150	750	125	1,800	250	1,650	250	950	125	2,250	275	1,900	225	2,850	300
Missouri	12,650	575	7,550	450	3,200	275	700	150	600	125	1,000	150	950	175	1,100	150	900	150	1,600	200	2,600	275
Nebraska	4,500	325	2,700	250	1,250	175	D	D	100	50	400	100	500	125	450	125	350	100	600	150	850	175
North Dakota	1,350	175	900	150	500	125	D	D	D	D	100	50	150	75	100	50	150	75	100	50	200	75
South Dakota	1,700	225	1,100	200	500	150	D	D	100	50	100	50	200	100	150	75	100	50	200	75	300	100
South Atlantic	163,650	1,900	97,100	1,550	31,850	900	9,250	500	8,800	475	16,150	575	13,300	600	17,750	575	18,650	625	17,750	600	30,100	800
Delaware	4,050	375	2,250	275	800	150	100	50	250	125	650	150	300	100	150	50	750	150	400	125	700	150
District of Columbia	17,600	575	10,650	450	1,850	225	600	150	700	150	1,250	175	600	100	5,650	350	950	175	1,250	200	4,750	300
Florida	23,000	775	12,400	525	3,500	250	1,400	175	950	150	1,950	200	2,900	325	1,700	200	3,200	300	2,850	225	4,550	325
Georgia	20,050	700	12,200	575	3,850	275	1,050	175	1,400	175	1,650	200	2,400	250	1,800	250	1,950	225	2,550	275	3,350	350
Maryland	36,150	1,025	22,150	750	10,250	500	1,750	225	1,600	175	4,250	325	1,850	250	2,500	250	4,150	350	4,050	325	5,750	400
North Carolina	26,100	800	16,350	700	6,350	425	1,650	200	1,550	175	2,200	225	2,400	250	2,250	250	2,150	225	3,050	250	4,600	300
South Carolina	7,350	475	4,450	375	1,200	200	350	125	450	125	1,050	175	800	200	650	150	1,100	200	900	150	900	175

TABLE 46

U.S. residing employed doctoral scientists and engineers, by employer location and broad occupation: 2019

(Number and SE)

Employer location	All employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations	
			Total		Biological, agricultural, and other life scientist		Computer and information scientist		Mathematical scientist		Physical scientist		Psychologist		Social scientist							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Virginia	26,800	850	15,200	650	3,450	275	2,400	275	1,750	200	2,900	250	1,900	200	2,750	250	4,000	325	2,500	250	5,150	350
West Virginia	2,450	275	1,450	200	600	125	D	D	150	100	250	75	200	75	250	100	400	125	250	100	350	125
East South Central	30,550	1,000	17,900	675	6,450	450	1,250	175	1,450	175	3,700	325	2,750	275	2,350	200	3,700	325	4,150	325	4,800	350
Alabama	8,250	450	4,550	325	1,650	225	400	100	400	100	950	175	600	150	600	125	1,200	200	1,150	175	1,350	225
Kentucky	6,700	475	3,950	300	1,350	175	150	75	300	75	800	200	750	150	650	125	600	150	1,000	200	1,100	200
Mississippi	4,100	400	2,450	300	1,100	200	150	75	200	100	400	100	350	125	250	75	600	150	550	125	500	125
Tennessee	11,500	575	6,950	425	2,350	250	500	100	550	125	1,550	200	1,100	175	850	125	1,300	200	1,400	175	1,850	200
West South Central	68,800	1,325	37,050	1,000	11,350	550	3,300	300	3,550	300	7,500	375	6,400	425	4,900	325	12,500	750	7,550	450	11,700	500
Arkansas	4,200	350	2,750	275	1,100	175	S	S	200	75	250	100	650	150	500	125	350	100	550	150	550	125
Louisiana	6,300	400	4,050	325	1,300	175	100	50	550	150	800	175	650	125	700	150	750	175	450	100	1,050	175
Oklahoma	5,650	375	3,200	300	1,150	200	S	S	150	50	750	125	700	175	400	100	1,000	200	750	125	700	100
Texas	52,650	1,125	27,050	775	7,850	450	3,050	300	2,650	250	5,700	325	4,450	350	3,350	275	10,400	650	5,800	400	9,400	500
Mountain	58,200	1,275	33,100	950	9,150	425	2,850	275	2,600	250	8,100	450	5,950	450	4,500	375	10,200	625	5,400	350	9,550	575
Arizona	13,100	625	6,350	400	1,700	225	500	125	600	150	1,300	175	1,150	200	1,100	200	3,000	325	1,400	225	2,300	275
Colorado	19,050	650	11,450	550	2,700	225	1,100	175	750	125	3,050	225	2,350	275	1,500	225	2,750	300	1,500	175	3,350	325
Idaho	3,450	350	1,650	200	650	125	50	25	150	75	350	100	300	100	200	75	900	175	200	50	700	175
Montana	2,600	250	1,800	225	750	150	D	D	150	75	300	75	300	100	250	100	200	75	250	100	350	75
Nevada	3,200	325	1,800	250	550	125	S	S	50	50	400	100	400	125	300	75	500	150	400	100	550	125
New Mexico	8,200	425	4,500	350	950	150	550	125	400	100	1,650	200	700	175	300	75	2,000	250	650	125	1,050	200
Utah	7,850	450	4,950	325	1,650	175	550	125	450	125	950	175	650	150	750	150	800	175	950	150	1,150	150
Wyoming	800	125	600	100	200	75	D	D	D	D	100	50	100	75	100	50	S	S	50	25	100	50
Pacific	185,950	2,075	100,700	1,525	29,200	750	24,650	900	6,500	350	15,100	525	15,000	625	10,250	500	35,400	1,075	18,850	700	31,000	925
Alaska	1,450	175	900	150	350	75	D	D	D	D	250	75	S	S	150	50	150	75	200	75	200	75
California	140,650	1,850	75,450	1,400	22,250	675	18,850	800	4,800	300	11,500	450	10,750	550	7,250	425	26,650	850	14,150	625	24,400	825
Hawaii	3,100	275	1,850	225	500	125	D	D	200	75	400	75	300	75	400	125	300	125	300	75	650	125
Oregon	16,600	700	7,550	400	1,950	200	1,400	200	350	100	1,150	150	1,650	225	1,050	150	5,300	400	1,500	225	2,200	250
Washington	24,200	825	14,900	650	4,150	350	4,250	325	1,100	150	1,800	225	2,250	250	1,400	200	3,000	300	2,700	275	3,600	325
Puerto Rico	2,600	225	1,650	200	550	125	S	S	100	50	300	75	500	125	150	75	300	100	200	75	450	75
U.S. territories and other areas	3,250	350	1,500	225	500	125	100	50	200	100	250	75	100	50	350	125	400	125	450	150	900	175

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Because survey sample design does not include geography, reliability of estimates in some states may be poor due to small sample size. Residence location is based on reported living location on 1 February 2019.

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

TABLE 47

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 2019

(Number and SE)

Characteristic	All employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations	
			Total		Biological, agricultural, and other life scientist		Computer and information scientist		Mathematical scientist		Physical scientist		Psychologist		Social scientist							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipient	857,200	1,975	492,750	2,500	156,650	1,525	63,000	1,100	41,400	750	84,550	1,275	77,600	950	69,500	1,025	120,650	1,375	92,350	1,475	151,500	1,650
Sex																						
Male	546,050	1,750	304,050	1,950	90,050	1,175	52,650	1,000	28,950	725	63,850	1,125	29,800	700	38,750	800	101,600	1,400	51,600	1,200	88,750	1,450
Female	311,200	1,200	188,700	1,400	66,650	925	10,350	475	12,450	425	20,650	500	47,850	850	30,750	625	19,000	625	40,750	850	62,750	1,100
Ethnicity																						
Hispanic or Latino[a]	37,250	550	22,750	475	7,300	300	1,700	150	1,650	150	3,250	200	4,550	225	4,300	250	4,700	275	3,700	225	6,050	300
Not Hispanic or Latino[b]																						
American Indian or Alaska Native	1,300	125	600	100	100	25	D	D	D	D	50	25	200	75	250	75	100	50	200	50	400	75
Asian	213,350	1,325	113,550	1,500	39,550	900	28,950	850	14,500	575	17,550	700	4,400	350	8,600	425	49,650	1,150	22,000	850	28,150	850
Black or African American	31,100	400	16,350	400	4,450	225	1,050	125	1,100	125	2,300	200	3,450	225	4,050	250	2,900	175	4,150	225	7,650	350
White	562,350	1,750	332,600	2,075	102,750	1,250	30,700	725	23,700	625	60,350	1,025	63,850	950	51,250	900	61,850	1,125	60,950	1,125	106,950	1,525
Other race[c]	11,950	400	6,900	300	2,500	175	650	100	450	75	1,050	125	1,150	150	1,100	125	1,400	200	1,300	125	2,350	175
Age																						
Under 35	99,050	1,050	63,200	950	22,600	550	10,100	425	7,150	325	11,350	450	6,150	375	5,850	350	19,100	650	7,600	375	9,100	475
35–39	128,800	1,375	79,050	1,125	26,900	625	12,950	575	7,450	375	12,650	500	9,550	500	9,550	425	22,150	800	12,450	600	15,150	500
40–44	117,500	1,325	71,750	1,150	25,650	800	9,000	500	6,450	375	11,400	500	9,250	450	10,000	475	16,900	725	12,150	575	16,700	600
45–49	108,400	1,450	62,100	1,200	19,400	650	7,650	425	5,050	325	9,850	450	9,900	625	10,250	500	13,850	650	11,950	500	20,450	675
50–54	100,900	1,375	52,050	1,100	15,800	575	6,700	450	3,550	250	8,900	500	8,500	450	8,550	500	13,700	625	12,900	550	22,250	675
55–59	101,950	1,400	53,850	1,175	16,150	625	7,050	425	4,450	375	10,250	550	8,300	475	7,650	450	14,200	575	12,050	550	21,900	750
60–64	88,300	1,400	48,150	1,125	15,000	725	5,250	375	3,400	300	9,550	475	8,300	425	6,650	425	10,450	475	11,400	575	18,300	725
65–75	112,350	1,625	62,600	1,275	15,200	700	4,300	325	4,000	300	10,500	475	17,650	700	11,000	550	10,200	600	11,900	550	27,700	875
Citizenship																						
U.S. citizen	732,750	2,000	418,050	2,275	132,250	1,425	44,800	875	30,800	775	72,350	1,100	75,700	975	62,150	1,025	90,550	1,350	83,500	1,400	140,700	1,600
Native-born	555,150	1,575	330,150	2,000	105,400	1,275	26,000	650	20,250	575	57,950	975	68,850	975	51,700	800	52,850	1,050	62,300	1,125	109,900	1,375
Naturalized	177,600	1,675	87,900	1,450	26,850	775	18,800	625	10,550	550	14,400	550	6,850	450	10,500	575	37,650	900	21,200	800	30,850	875
Non-U.S. citizen	124,450	1,600	74,700	1,500	24,400	775	18,200	725	10,600	475	12,200	675	1,950	250	7,350	450	30,100	900	8,850	475	10,800	650
Permanent resident	87,200	1,475	50,800	1,225	15,600	650	12,500	625	7,050	425	8,900	550	1,550	225	5,150	375	21,100	800	6,750	375	8,550	575
Temporary resident	37,300	900	23,950	750	8,800	450	5,700	375	3,550	300	3,300	325	400	125	2,200	250	9,050	475	2,100	275	2,250	250
Years since doctorate																						
≤ 5	142,500	625	90,100	900	31,200	650	14,300	500	9,100	325	13,350	500	10,250	375	11,950	400	23,750	675	13,150	475	15,450	575
6–10	154,750	1,025	92,650	1,125	31,400	750	14,200	600	8,350	375	14,750	475	11,250	475	12,700	525	24,700	750	17,300	650	20,100	600
11–15	127,000	1,150	72,550	1,125	24,200	725	9,050	450	6,750	400	11,800	500	10,750	450	9,950	475	18,750	650	14,100	475	21,600	700
16–20	108,700	825	60,950	800	18,700	525	6,650	425	4,600	350	10,650	450	10,050	525	10,300	450	13,350	500	13,300	550	21,100	700
21–25	104,250	825	54,250	900	16,050	550	7,650	425	3,850	325	9,350	425	9,300	475	8,000	475	14,850	550	12,650	575	22,500	750

TABLE 47

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 2019

(Number and SE)

Characteristic	All employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations	
			Total		Biological, agricultural, and other life scientist		Computer and information scientist		Mathematical scientist		Physical scientist		Psychologist		Social scientist							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
> 25	220,000	1,575	122,200	1,575	35,050	950	11,200	575	8,700	425	24,650	750	26,000	775	16,550	600	25,150	800	21,850	825	50,800	1,200
Place of birth																						
United States	544,400	1,525	323,750	2,000	103,600	1,250	25,450	675	19,850	575	56,450	950	68,000	975	50,450	800	51,850	1,000	61,250	1,100	107,550	1,325
Asia	217,650	1,500	113,300	1,550	38,100	875	29,350	850	14,850	550	17,600	725	4,200	325	9,200	500	54,450	1,150	21,800	850	28,150	850
Europe[d]	46,050	900	28,150	750	6,900	350	4,650	375	3,650	300	5,850	375	2,450	300	4,600	350	6,350	400	4,350	350	7,200	475
North America[e]	8,200	400	4,950	375	1,200	200	450	125	550	125	800	125	850	200	1,150	200	750	150	900	150	1,600	200
Central America[f]	5,800	325	3,350	275	1,100	125	350	125	300	75	650	125	300	75	650	125	950	125	550	100	900	125
Caribbean	4,000	250	2,450	225	550	100	200	75	150	50	400	100	700	150	400	100	350	100	400	75	800	100
South America	11,750	475	6,650	350	2,500	200	650	100	750	125	1,150	150	450	100	1,150	150	2,100	200	900	100	2,050	250
Africa	13,950	475	7,100	350	2,000	200	1,100	175	850	100	1,300	175	400	100	1,500	150	2,650	275	1,700	200	2,550	250
Oceania	1,850	225	1,150	200	350	100	D	D	150	75	250	100	100	50	200	75	300	100	150	75	250	75
Unknown	3,550	400	1,900	300	350	125	700	200	300	150	D	D	150	100	200	100	900	225	350	125	450	150

D = suppressed to avoid disclosure of confidential information.

S&E = science and engineering; SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes Russia.

[e] Excludes United States.

[f] Includes Mexico.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 48

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and broad occupation: 2019

(Number and SE)

Field of study	All employed		Science occupations						Engineering occupations						S&E-related occupations								Non-S&E occupations							
			Total		Post-secondary teachers		Other		Total		Post-secondary teachers		Other		Total		Health occupations		S&E managers		Other		Total		Non-S&E managers		Non-S&E teachers		Other	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	857,200	1,975	492,750	2,500	168,450	1,800	324,300	2,375	120,650	1,375	23,950	750	96,700	1,300	92,350	1,475	54,400	1,050	24,650	850	13,300	600	151,500	1,650	55,650	1,175	21,850	675	74,000	1,500
Science	640,300	1,900	442,500	2,125	162,500	1,750	279,950	2,075	18,000	700	2,300	275	15,700	700	59,400	1,150	33,950	800	15,800	675	9,650	500	120,450	1,475	40,550	1,050	18,650	675	61,250	1,375
Biological, agricultural, and environmental life sciences	220,700	1,100	142,900	1,225	39,900	825	103,000	1,175	2,550	275	550	150	2,000	225	38,100	1,000	26,250	775	8,300	500	3,600	350	37,150	975	12,550	675	1,900	225	22,700	725
Agricultural and food sciences	17,400	350	12,600	325	3,100	250	9,500	300	300	75	D	D	250	75	1,150	150	350	75	650	125	200	75	3,350	250	1,200	175	150	75	2,000	200
Agricultural sciences	950	50	600	50	200	50	400	50	*	*	D	D	*	*	100	50	*	*	50	25	*	*	250	50	50	25	50	25	150	50
Animal sciences	4,550	175	3,200	175	950	125	2,250	150	S	S	D	D	S	S	300	75	150	50	100	50	50	25	1,000	125	350	100	*	*	600	100
Food sciences and technology	3,750	175	2,700	175	500	100	2,200	150	100	50	D	D	100	50	250	75	150	50	50	25	D	D	750	150	300	75	D	D	350	100
Plant sciences	5,900	250	4,450	225	1,000	150	3,450	200	D	D	D	D	D	D	350	100	S	S	250	75	S	S	1,100	150	350	100	D	D	700	125
Soil sciences	2,200	125	1,650	125	450	75	1,200	100	50	25	D	D	50	25	200	100	D	D	S	S	*	*	300	75	100	50	D	D	150	50
Biochemistry and biophysics	29,450	425	19,300	550	5,400	400	13,900	550	500	150	D	D	500	150	4,500	375	2,500	275	1,350	250	650	175	5,150	350	1,800	250	300	125	3,100	300
Biochemistry	24,350	400	15,900	525	4,650	375	11,250	500	400	125	D	D	400	125	3,800	350	2,050	250	1,150	250	550	150	4,300	325	1,550	250	250	125	2,500	275
Biophysics	5,100	175	3,400	175	750	100	2,650	175	150	75	D	D	100	50	700	125	450	100	150	75	100	50	850	125	250	75	D	D	600	125
Cell, cellular biology, and molecular biology	31,200	450	18,250	550	4,850	325	13,350	525	350	125	D	D	250	100	5,850	450	4,100	350	1,150	225	600	175	6,750	475	1,900	300	150	75	4,650	375
Microbiological sciences and immunology	23,800	400	15,250	450	3,700	250	11,550	450	S	S	D	D	D	D	4,750	350	3,650	300	950	175	200	75	3,700	325	1,200	200	200	100	2,300	250
Immunology	8,950	200	5,350	275	950	150	4,400	300	D	D	D	D	D	D	2,150	225	1,800	225	300	75	D	D	1,400	225	400	100	S	S	900	175
Microbiological sciences	14,900	325	9,900	350	2,750	225	7,150	350	S	S	D	D	D	D	2,650	250	1,850	225	600	150	150	75	2,250	225	800	150	50	25	1,400	175
Natural resources and conservation	8,800	225	5,900	200	1,800	150	4,100	175	450	75	100	50	350	75	600	100	150	50	400	100	100	50	1,850	200	700	150	100	50	1,050	150
Fish, fisheries, wildlife and wildlands science and management	2,200	150	1,650	125	400	75	1,250	100	D	D	D	D	D	D	150	50	D	D	100	50	D	D	350	100	200	100	D	D	150	50
Forestry	2,600	150	1,600	125	500	75	1,100	100	150	25	*	*	100	25	150	50	50	25	50	25	50	25	700	150	S	S	50	25	450	125
Natural resource conservation, research, management, and policy	4,000	150	2,650	150	900	125	1,750	125	300	75	S	S	250	75	300	100	50	25	200	75	50	25	750	100	300	75	50	25	400	75
Zoology	7,200	225	5,650	250	2,500	175	3,150	225	D	D	D	D	D	D	700	125	250	75	350	100	100	50	800	125	250	75	D	D	500	100
Other biological sciences	102,800	675	65,950	800	18,500	575	47,450	725	750	150	200	75	600	125	20,500	650	15,250	550	3,550	275	1,700	200	15,650	625	5,500	375	1,000	175	9,150	475
Biomathematics, bioinformatics, and computational biology	5,150	100	4,200	125	850	100	3,350	125	50	25	D	D	50	25	500	75	200	75	150	50	150	50	450	75	250	75	50	25	100	50
Botany and plant biology	6,150	225	4,750	200	1,800	200	2,950	175	D	D	D	D	D	D	300	75	100	50	150	50	50	50	1,100	150	400	100	100	50	600	100
Epidemiology, ecology, and population biology	15,950	275	11,850	350	4,400	325	7,450	350	150	75	D	D	S	S	2,400	250	1,450	200	600	125	300	100	1,600	200	800	150	150	75	650	125
Genetics	8,750	250	5,850	250	1,700	200	4,200	275	D	D	D	D	D	D	1,550	175	1,000	175	400	100	150	75	1,300	150	500	125	100	50	700	100
Neurobiology and neuroscience	16,800	275	10,400	400	2,250	225	8,150	350	200	75	D	D	150	75	3,850	325	3,150	300	350	100	350	100	2,350	250	650	125	S	S	1,650	225
Nutrition sciences	4,150	125	1,800	125	400	75	1,400	125	D	D	D	D	D	D	1,600	125	1,400	125	100	50	50	25	750	100	250	75	50	50	450	75
Pharmacology and toxicology	12,700	300	7,650	375	1,200	175	6,450	375	S	S	D	D	S	S	3,050	300	2,300	275	550	125	250	100	2,000	225	700	150	50	50	1,200	175
Physiology, pathology, and related sciences	15,400	300	8,400	325	2,300	225	6,100	300	D	D	D	D	D	D	4,050	300	3,350	250	600	125	100	50	2,900	250	1,100	200	150	75	1,650	200
Biological and biomedical sciences, general	12,750	300	8,000	300	2,550	225	5,450	275	150	75	D	D	100	50	2,350	250	1,650	225	450	100	200	75	2,250	250	500	125	150	75	1,650	225
Biological and biomedical sciences, other	4,950	200	3,000	200	1,100	150	1,900	175	100	50	*	*	100	50	900	150	600	125	200	75	100	50	950	125	400	100	100	50	450	100
Computer and information sciences	31,100	400	24,400	500	6,700	400	17,700	500	1,100	200	250	100	850	175	1,750	225	150	50	1,150	175	500	125	3,850	275	1,600	200	750	100	1,500	200
Computer science	26,750	400	21,700	475	5,800	400	15,850	500	950	200	250	100	750	175	1,450	225	D	D	1,000	175	450	125	2,600	250	1,350	200	200	75	1,100	200

TABLE 48

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and broad occupation: 2019

(Number and SE)

Field of study	All employed		Science occupations						Engineering occupations						S&E-related occupations								Non-S&E occupations							
			Total		Post-secondary teachers		Other		Total		Post-secondary teachers		Other		Total		Health occupations		S&E managers		Other		Total		Non-S&E managers		Non-S&E teachers		Other	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Information science, studies	2,600	75	1,350	100	500	75	850	100	100	50	S	S	100	50	200	50	100	25	100	50	50	25	950	100	200	50	450	75	300	50
Computer and information sciences, other	1,800	50	1,400	75	400	50	1,000	50	50	25	D	D	50	25	100	25	50	25	50	25	*	*	250	50	50	25	100	25	100	25
Mathematics and statistics	36,650	450	29,950	525	17,550	525	12,400	475	800	150	50	25	750	150	1,600	175	300	75	350	100	950	150	4,300	350	1,500	175	1,050	125	1,800	250
Applied mathematics	8,500	200	6,900	225	3,750	225	3,100	225	450	125	D	D	400	125	400	100	D	D	150	75	200	75	750	150	200	50	S	S	450	125
Mathematics	16,500	375	13,900	375	9,600	375	4,300	325	250	100	D	D	250	100	850	125	50	50	150	75	600	125	1,500	225	500	125	150	75	900	175
Statistics	7,450	225	6,450	250	2,700	250	3,750	250	D	D	D	D	D	D	150	75	100	75	D	D	50	25	850	125	550	100	D	D	250	75
Mathematics and statistics, other	4,200	125	2,700	125	1,450	125	1,250	125	50	50	50	25	S	S	200	50	50	25	50	25	100	50	1,200	125	250	75	800	100	200	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	133,750	950	92,150	1,100	31,450	800	60,700	1,025	12,750	600	1,350	200	11,400	625	9,600	550	2,000	275	3,900	350	3,700	350	19,250	675	7,300	450	450	100	11,500	500
Astronomy and astrophysics	5,850	175	4,400	200	2,100	175	2,300	175	350	75	D	D	350	75	500	125	150	75	150	75	200	50	600	100	250	50	D	D	350	75
Chemistry, except biochemistry	65,300	700	44,600	775	14,900	600	29,700	750	4,100	325	300	100	3,800	325	5,400	450	1,250	225	2,400	275	1,750	275	11,250	475	3,900	325	200	75	7,150	400
Inorganic chemistry	8,750	225	5,800	250	2,700	225	3,050	225	600	125	D	D	600	125	850	175	250	100	300	100	300	100	1,500	175	550	125	D	D	900	150
Organic chemistry	17,600	375	13,000	425	4,450	325	8,550	400	300	100	D	D	250	100	1,100	200	150	75	700	150	200	75	3,150	275	1,050	175	D	D	2,100	225
Chemistry, other, except biochemistry	39,000	575	25,800	600	7,750	400	18,050	600	3,150	275	250	100	2,950	250	3,450	325	850	175	1,400	200	1,250	200	6,550	375	2,250	225	150	75	4,100	325
Geosciences, atmospheric sciences, and ocean sciences	22,050	300	17,700	325	5,350	225	12,300	325	900	100	150	50	700	100	850	100	100	50	450	50	350	75	2,650	150	1,050	100	150	50	1,450	125
Atmospheric sciences and meteorology	3,900	75	3,250	100	600	75	2,650	100	150	50	D	D	150	50	200	50	D	D	100	25	100	25	300	50	100	50	*	*	150	50
Geological and earth sciences, geosciences	13,550	275	10,900	275	3,700	225	7,200	275	650	100	150	50	500	75	400	75	50	25	150	50	200	50	1,700	150	700	100	50	25	950	125
Ocean sciences and marine sciences	2,150	75	1,650	75	500	50	1,150	75	50	25	*	*	50	25	150	50	D	D	100	25	50	25	300	50	100	50	50	25	150	25
Oceanography, chemical and physical	2,450	125	1,900	100	600	100	1,300	125	50	25	D	D	50	25	150	50	D	D	100	25	50	25	350	75	150	50	D	D	150	50
Physics	40,550	575	25,500	675	9,100	550	16,400	625	7,450	500	900	175	6,500	500	2,850	300	550	125	950	175	1,350	225	4,800	375	2,100	250	S	S	2,600	275
Psychology	115,350	825	85,200	925	22,050	675	63,150	1,075	450	150	D	D	450	150	5,100	375	3,250	275	1,650	200	250	75	24,550	700	8,200	475	4,450	300	11,900	575
Clinical psychology	41,100	525	35,950	625	5,150	425	30,800	700	D	D	D	D	D	D	1,250	225	600	150	650	150	D	D	3,950	375	1,600	250	200	75	2,150	300
Counseling and applied psychology	14,850	275	10,900	350	2,150	200	8,750	375	D	D	D	D	D	D	550	125	350	100	200	100	D	D	3,350	300	1,100	200	350	100	1,950	225
Educational and school psychology	14,100	275	8,000	350	1,750	175	6,250	350	D	D	D	D	D	D	950	175	550	150	250	100	100	75	5,100	325	1,200	175	1,950	225	1,950	200
Industrial and organizational psychology	4,850	150	2,100	150	700	125	1,400	125	D	D	D	D	D	D	50	25	D	D	D	D	D	D	2,650	150	750	125	450	100	1,450	125
Research and experimental psychology	27,800	400	19,700	450	9,500	350	10,150	400	100	50	D	D	100	50	1,700	200	1,250	175	350	75	150	50	6,300	350	2,400	225	950	125	2,950	250
Psychology, general	7,900	250	5,750	275	1,650	225	4,050	250	D	D	D	D	D	D	300	100	250	100	S	S	D	D	1,650	200	600	150	350	125	700	125
Psychology, other	4,750	175	2,800	200	1,100	150	1,700	150	S	S	D	D	S	S	350	75	200	75	100	50	D	D	1,550	175	550	100	250	100	750	125
Social sciences	102,700	900	67,850	900	44,900	825	23,000	800	300	75	100	50	250	75	3,150	275	2,050	225	450	100	700	150	31,350	775	9,450	450	10,000	475	11,900	550
Economics	26,900	550	20,350	575	10,650	475	9,650	525	D	D	D	D	D	D	350	125	200	100	50	50	S	S	6,200	375	2,250	225	1,550	275	2,350	250
Political science and government	22,450	425	15,000	500	11,450	450	3,600	325	100	50	D	D	100	50	550	125	300	50	S	S	150	100	6,750	425	2,400	275	1,300	225	3,050	350
Political science and government	18,350	400	13,000	475	10,550	425	2,450	275	D	D	D	D	D	D	250	100	D	D	D	D	150	75	5,050	425	1,800	225	900	200	2,400	350
Public policy analysis	4,100	175	2,000	150	850	100	1,150	125	S	S	D	D	D	D	350	75	250	50	S	S	D	D	1,700	150	650	100	400	125	650	100
Sociology, demography, and population studies	15,200	325	11,200	375	8,400	325	2,800	250	D	D	D	D	D	D	450	125	350	125	S	S	D	D	3,550	275	1,350	175	700	150	1,450	200
Other social sciences	38,150	500	21,300	450	14,350	425	6,950	275	200	75	50	50	150	50	1,800	175	1,200	150	200	75	400	100	14,900	450	3,400	250	6,450	300	5,050	325

TABLE 48

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and broad occupation: 2019

(Number and SE)

Field of study	All employed		Science occupations						Engineering occupations						S&E-related occupations								Non-S&E occupations							
			Total		Post-secondary teachers		Other		Total		Post-secondary teachers		Other		Total		Health occupations		S&E managers		Other		Total		Non-S&E managers		Non-S&E teachers		Other	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Anthropology	11,400	300	8,050	325	5,550	300	2,500	225	D	D	D	D	D	D	550	100	400	100	D	D	D	D	2,750	225	1,000	175	550	100	1,200	175
Area, ethnic, cultural, gender, and group studies	3,900	125	800	100	600	100	200	50	D	D	D	D	D	D	100	50	50	50	D	D	D	D	2,950	150	400	75	1,750	125	850	100
Geography and cartography	4,750	175	3,650	175	2,450	150	1,200	125	50	25	D	D	D	D	200	75	100	50	D	D	100	50	850	100	250	75	200	75	350	75
International relations and national security studies	2,350	150	1,500	125	1,200	100	300	50	D	D	D	D	D	D	D	D	D	D	D	D	D	D	850	100	350	75	150	50	350	75
Linguistics	4,950	250	1,750	175	1,250	150	500	100	D	D	D	D	D	D	250	100	150	75	D	D	D	D	2,900	225	300	75	1,950	200	700	125
Urban studies, affairs	1,600	100	800	75	450	50	350	50	D	D	D	D	D	D	100	50	50	25	D	D	D	D	650	75	200	50	200	50	300	50
Social sciences, other	9,250	250	4,750	225	2,850	200	1,900	150	D	D	D	D	D	D	550	100	450	100	50	25	100	25	3,900	225	850	125	1,700	150	1,350	125
Engineering	176,700	1,175	38,300	1,100	4,100	400	34,200	1,025	102,150	1,100	21,550	700	80,600	1,050	12,750	550	1,600	200	7,650	475	3,500	350	23,500	775	11,850	500	1,550	200	10,100	600
Aerospace, aeronautical, and astronautical engineering	7,050	225	850	125	50	25	800	125	5,000	250	950	150	4,050	250	500	125	D	D	450	125	50	50	700	150	300	75	D	D	400	125
Chemical engineering	20,800	500	4,000	350	200	100	3,800	350	11,600	550	1,750	250	9,850	500	1,650	250	D	D	1,200	200	350	125	3,500	350	1,750	250	D	D	1,600	250
Civil engineering	19,250	400	2,250	275	500	150	1,800	225	13,450	450	4,200	300	9,250	450	1,400	250	D	D	1,250	250	150	75	2,150	250	1,300	200	100	50	750	150
Electrical and computer engineering	48,550	650	13,500	575	1,550	200	11,950	575	26,400	600	4,400	375	22,000	575	3,050	250	150	75	1,450	200	1,450	200	5,600	350	3,250	300	150	75	2,150	325
Computer engineering	7,000	175	4,400	225	700	125	3,750	225	1,700	175	600	125	1,100	150	350	75	D	D	200	50	150	50	550	100	400	100	D	D	150	50
Electrical, electronics, and communications engineering	41,550	625	9,100	525	900	200	8,200	550	24,750	575	3,800	350	20,900	550	2,700	250	150	75	1,250	200	1,300	200	5,000	350	2,850	275	150	75	2,000	325
Mechanical engineering	26,550	425	4,050	400	450	175	3,550	375	18,700	525	4,350	375	14,350	525	1,250	200	S	S	650	150	500	150	2,550	300	1,150	200	D	D	1,300	225
Metallurgical and materials engineering	16,450	350	2,950	275	200	100	2,800	275	9,800	425	1,150	175	8,650	400	1,350	200	D	D	950	175	350	125	2,350	275	1,000	175	D	D	1,300	225
Other engineering	38,050	450	10,700	400	1,200	150	9,500	400	17,200	500	4,700	325	12,500	450	3,500	250	1,200	175	1,650	175	650	100	6,650	350	3,100	250	1,050	150	2,500	225
Agricultural engineering	1,900	75	450	75	100	25	350	75	1,150	100	450	75	750	75	100	50	D	D	50	50	*	*	200	50	100	50	D	D	100	25
Bioengineering and biomedical engineering	13,200	250	4,150	275	250	75	3,900	275	5,300	325	1,400	200	3,900	325	1,550	175	900	150	500	100	150	75	2,200	225	1,100	150	D	D	1,050	175
Engineering mechanics, physics, and science	4,400	150	900	125	150	75	750	100	2,550	150	650	100	1,900	150	400	75	S	S	150	50	150	50	550	100	300	75	D	D	200	50
Industrial and manufacturing engineering	8,800	275	2,950	200	300	100	2,650	200	3,050	225	1,350	200	1,750	175	600	125	50	50	350	100	200	50	2,150	200	800	125	750	125	650	125
Nuclear engineering	3,100	125	700	75	100	50	650	75	1,600	125	250	75	1,350	125	350	75	100	50	150	50	50	25	450	100	300	75	D	D	150	50
Engineering, other	6,600	200	1,550	150	300	75	1,250	150	3,500	225	700	125	2,850	225	500	100	D	D	400	100	S	S	1,050	150	450	100	200	100	400	100
Health	40,200	475	11,950	350	1,800	175	10,150	350	450	125	50	50	400	125	20,200	550	18,850	550	1,200	175	150	75	7,600	350	3,250	275	1,650	175	2,700	250
Communication disorders sciences and services	3,100	125	350	75	100	50	250	50	D	D	D	D	D	D	2,100	125	2,050	125	50	25	D	D	650	100	200	75	150	50	250	75
Hospital and medical administration services	1,550	100	400	75	50	25	350	50	D	D	D	D	D	D	700	75	600	75	100	50	D	D	450	75	200	50	100	50	150	50
Pharmacy, pharmaceutical sciences, and administration	8,050	175	5,000	250	600	100	4,400	250	S	S	D	D	S	S	1,700	200	1,400	200	250	75	D	D	1,150	150	650	150	50	50	450	100
Public health	8,400	225	3,000	225	300	75	2,650	225	100	50	D	D	100	50	3,700	275	3,350	275	350	100	D	D	1,600	175	600	100	200	75	800	150
Registered nursing, nursing administration, nursing research	9,000	250	400	100	100	50	250	100	D	D	D	D	D	D	6,950	300	6,650	300	300	125	D	D	1,650	200	950	150	400	125	300	100
Health sciences, other	10,150	225	2,850	200	650	100	2,200	175	150	50	D	D	100	50	5,050	250	4,800	250	200	75	50	25	2,100	175	600	125	750	125	750	150

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 49

U.S. residing employed doctoral scientists and engineers working in science occupations, by field of doctorate and broad occupation: 2019

(Number and SE)

Field of study	All employed		Biological, agricultural, and other life scientist						Computer and information scientist						Mathematical scientist						Physical scientist						Psychologist						Social scientist					
			Total		Post-secondary teachers		Other		Total		Post-secondary teachers		Other		Total		Post-secondary		Other		Total		Post-secondary		Other		Total		Post-secondary		Other		Total		Post-secondary		Other	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	492,750	2,500	156,650	1,525	37,950	850	118,700	1,325	63,000	1,100	9,550	525	53,450	1,075	41,400	750	19,600	575	21,800	650	84,550	1,275	34,850	850	49,650	1,050	77,600	950	20,100	625	57,500	1,000	69,500	1,025	46,350	900	23,150	850
Science	442,500	2,125	142,900	1,475	36,700	825	106,200	1,350	42,500	800	7,850	450	34,650	775	36,750	675	18,950	575	17,800	575	76,200	1,150	33,450	825	42,750	900	77,250	925	19,950	625	57,300	1,000	66,850	1,000	45,600	900	21,250	800
Biological, agricultural, and environmental life sciences	142,900	1,225	126,550	1,300	34,200	825	92,350	1,225	4,000	300	150	50	3,800	300	4,500	250	950	125	3,550	250	5,650	300	3,550	250	2,100	200	650	125	450	100	200	75	1,550	175	600	125	950	150
Agricultural and food sciences	12,600	325	11,200	325	2,650	225	8,550	300	250	75	D	D	250	75	250	75	50	50	200	50	750	100	300	75	450	75	D	D	D	D	D	D	150	50	100	50	50	25
Biochemistry and biophysics	19,300	550	16,500	575	3,700	300	12,800	550	600	125	D	D	550	125	50	50	D	D	50	50	2,000	225	1,550	200	450	125	D	D	D	D	D	D	D	D	D	D	D	D
Cell, cellular biology, and molecular biology	18,250	550	17,500	550	4,750	325	12,800	500	300	100	D	D	300	100	S	S	D	D	S	S	200	75	150	75	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Microbiological sciences and immunology	15,250	450	14,850	425	3,550	250	11,250	425	200	100	D	D	200	100	D	D	D	D	D	D	S	S	S	S	D	D	D	D	D	D	D	D	S	S	D	D	S	S
Natural resources and conservation	5,900	200	3,800	175	950	100	2,900	150	150	50	D	D	150	50	200	50	D	D	200	50	1,200	125	600	100	600	100	D	D	D	D	D	D	550	75	250	75	250	50
Zoology	5,650	250	5,350	250	2,350	175	3,000	225	100	50	D	D	100	50	D	D	D	D	D	D	150	50	100	50	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Other biological sciences	65,950	800	57,300	825	16,250	575	41,050	725	2,400	225	100	50	2,300	225	3,700	200	900	125	2,800	175	1,250	175	750	150	500	125	600	125	400	100	200	75	700	125	150	75	550	125
Computer and information sciences	24,400	500	100	75	D	D	100	75	23,300	500	6,400	400	16,900	525	700	175	100	50	600	150	D	D	D	D	D	D	D	D	D	D	D	D	200	50	100	50	S	S
Mathematics and statistics	29,950	525	400	100	D	D	400	100	4,250	325	750	175	3,500	275	24,900	500	16,650	525	8,300	450	150	75	D	D	100	50	D	D	D	D	D	D	200	75	D	D	150	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	92,150	1,100	11,800	500	1,600	175	10,200	450	8,000	500	200	100	7,800	500	2,750	300	500	125	2,250	250	69,000	1,075	28,900	825	40,100	875	D	D	D	D	D	D	550	125	200	75	350	100
Astronomy and astrophysics	4,400	200	300	75	250	75	D	D	600	100	D	D	550	100	250	75	D	D	200	75	3,250	200	1,750	175	1,500	150	D	D	D	D	D	D	S	S	D	D	D	D
Chemistry, except biochemistry	44,600	775	8,200	450	550	125	7,650	425	2,300	275	D	D	2,200	275	450	150	D	D	450	150	33,450	750	14,250	600	19,250	675	D	D	D	D	D	D	150	75	D	D	150	75
Geosciences, atmospheric sciences, and ocean sciences	17,700	325	1,750	100	600	75	1,150	100	900	125	D	D	900	125	350	75	50	25	300	75	14,500	325	4,550	225	9,950	300	D	D	D	D	D	D	200	75	150	75	50	25
Physics	25,500	675	1,550	175	150	75	1,450	175	4,250	375	S	S	4,150	375	1,700	225	400	125	1,300	200	17,800	600	8,350	525	9,450	500	D	D	D	D	D	D	150	75	D	D	D	D
Psychology	85,200	925	2,200	225	250	75	1,950	200	1,250	175	100	50	1,150	175	1,200	150	250	75	950	125	S	S	D	D	D	D	75,950	900	19,200	625	56,750	1,000	4,550	300	2,200	225	2,350	200
Social sciences	67,850	900	1,800	200	650	125	1,150	150	1,700	225	200	75	1,500	225	2,700	250	500	125	2,200	225	1,300	175	900	150	400	100	550	100	250	75	300	75	59,850	900	42,450	850	17,400	725
Economics	20,350	575	250	75	100	50	150	75	350	150	D	D	300	150	1,100	175	D	D	1,050	175	S	S	S	S	D	D	D	D	D	D	D	D	18,600	575	10,500	475	8,150	475
Political science and government	15,000	500	100	50	D	D	50	50	300	100	D	D	250	75	200	75	D	D	150	75	D	D	D	D	D	D	D	D	D	D	D	D	14,400	475	11,300	425	3,050	275
Sociology, demography, and population studies	11,200	375	200	100	D	D	150	75	100	75	D	D	100	50	350	150	D	D	150	50	D	D	D	D	D	D	D	D	D	D	D	D	10,450	375	8,150	325	2,300	225
Other social sciences	21,300	450	1,250	150	450	100	800	125	950	150	100	75	800	125	1,100	125	300	75	800	125	1,250	150	850	125	400	100	450	100	200	75	250	75	16,350	450	12,450	400	3,900	225
Engineering	38,300	1,100	6,100	425	650	150	5,450	400	20,200	750	1,700	250	18,500	700	4,350	325	600	125	3,750	300	7,000	375	950	175	6,050	400	S	S	D	D	S	S	550	150	200	100	400	100
Aerospace, aeronautical, and astronautical engineering	850	125	D	D	D	D	D	D	400	100	D	D	400	100	150	75	D	D	150	75	250	75	D	D	200	75	D	D	D	D	D	D	D	D	D	D	D	D
Chemical engineering	4,000	350	1,550	225	D	D	1,500	225	950	200	D	D	950	200	150	75	D	D	150	75	1,200	175	S	S	1,100	150	D	D	D	D	D	D	D	D	D	D	D	D
Civil engineering	2,250	275	150	75	D	D	100	50	700	150	D	D	650	150	450	125	D	D	400	125	750	125	250	75	550	100	D	D	D	D	D	D	200	100	S	S	S	S
Electrical and computer engineering	13,500	575	350	125	D	D	300	100	11,750	550	1,300	200	10,450	525	600	125	50	50	500	125	750	150	100	50	600	150	D	D	D	D	D	D	S	S	D	D	D	D
Mechanical engineering	4,050	400	350	150	S	S	S	S	2,500	325	S	S	2,350	300	650	175	D	D	600	150	550	175	D	D	450	150	D	D	D	D	D	D	D	D	D	D	D	D
Metallurgical and materials engineering	2,950	275	150	75	D	D	150	75	500	125	D	D	500	125	S	S	D	D	S	S	2,150	250	200	100	2,000	250	D	D	D	D	D	D	D	D	D	D	D	D
Other engineering	10,700	400	3,500	250	300	75	3,200	250	3,400	250	250	75	3,200	250	2,150	175	450	100	1,750	150	1,300	125	200	50	1,100	125	D	D	D	D	D	D	250	75	D	D	200	75
Health	11,950	350	7,650	325	600	100	7,050	325	300	100	D	D	300	100	300	75	50	50	250	75	1,350	150	500	100	850	100	250	75	100	50	150	75	2,050	200	550	100	1,500	175

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2019.

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

TABLE 50

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate, ethnicity, race, and sex: 2019

(Dollars)

Field of study	All full-time employed						Hispanic or Latino[a]						Not Hispanic or Latino[b]															
													American Indian or Alaska Native						Asian				Black or African American				White				Other race[c]			
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	119,000	1,000	127,000	1,500	100,000	500	102,000	2,000	115,000	4,000	90,000	2,000	99,000	4,500	113,000	12,000	89,000	3,500	125,000	1,500	132,000	3,000	110,000	500	100,000	2,000	103,000	3,000	94,000	2,000	117,000	1,500	126,000	1,500	100,000	500	109,000	3,500	114,000	6,000	95,000	5,000
Science	110,000	500	120,000	500	99,000	1,500	100,000	500	110,000	3,000	89,000	1,500	94,000	3,000	97,000	7,000	88,000	6,000	120,000	2,000	125,000	2,000	105,000	2,500	95,000	2,000	100,000	1,500	90,000	1,500	110,000	500	120,000	500	98,000	1,500	103,000	3,500	108,000	3,000	93,000	3,000
Biological, agricultural, and environmental life sciences	110,000	1,500	120,000	1,000	99,000	2,000	96,000	4,500	114,000	6,000	85,000	3,000	94,000	6,000	93,000	12,000	87,000	14,500	110,000	1,000	120,000	4,000	100,000	3,500	100,000	2,000	104,000	5,500	91,000	5,000	110,000	500	120,000	500	99,000	2,500	96,000	6,500	100,000	9,000	93,000	11,000
Agricultural and food sciences	110,000	1,000	115,000	3,500	98,000	3,000	108,000	2,000	119,000	9,500	95,000	6,500	D	D	D	D	D	D	100,000	4,000	107,000	8,000	91,000	9,000	100,000	5,500	99,000	6,500	104,000	10,500	112,000	3,000	119,000	2,000	99,000	2,500	109,000	18,500	120,000	10,000	79,000	2,000
Biochemistry and biophysics	117,000	3,500	125,000	4,500	105,000	4,500	112,000	11,500	141,000	22,000	86,000	13,500	D	D	D	D	D	D	110,000	4,000	119,000	6,500	109,000	9,500	93,000	18,500	114,000	12,500	74,000	6,500	119,000	2,500	128,000	5,500	105,000	6,500	110,000	16,500	91,000	21,000	137,000	24,500
Cell, cellular biology, and molecular biology	111,000	4,500	119,000	1,500	99,000	3,500	107,000	12,000	141,000	20,500	78,000	7,000	D	D	D	D	D	D	110,000	8,000	118,000	2,000	95,000	8,500	90,000	7,500	98,000	22,500	84,000	6,500	115,000	5,500	120,000	4,000	102,000	8,000	102,000	17,500	95,000	15,000	114,000	22,000
Microbiological sciences and immunology	110,000	3,000	124,000	5,500	100,000	2,000	94,000	7,500	114,000	15,500	87,000	4,000	D	D	D	D	D	D	121,000	6,500	129,000	8,000	112,000	16,500	103,000	3,000	109,000	8,000	99,000	6,000	109,000	3,000	124,000	5,500	99,000	2,500	94,000	9,000	90,000	12,500	95,000	9,000
Natural resources and conservation	97,000	2,500	101,000	3,000	85,000	3,000	87,000	3,500	101,000	13,500	76,000	7,000	*	*	*	*	D	D	89,000	5,000	84,000	9,000	93,000	5,000	88,000	9,000	89,000	14,500	85,000	10,500	100,000	2,000	105,000	4,000	83,000	3,500	93,000	12,500	129,000	53,000	67,000	12,500
Zoology	96,000	4,500	103,000	4,000	77,000	3,000	80,000	12,000	80,000	10,500	85,000	16,500	D	D	D	D	D	D	84,000	14,000	84,000	16,000	73,000	14,000	109,000	16,500	105,000	30,500	D	D	99,000	3,000	104,000	2,500	76,000	3,500	57,000	17,500	D	D	D	D
Other biological sciences	107,000	2,500	119,000	500	99,000	2,500	93,000	3,000	104,000	7,500	82,000	3,500	101,000	22,000	D	D	102,000	31,000	110,000	1,500	119,000	4,500	104,000	4,500	100,000	4,000	104,000	6,500	94,000	5,500	108,000	3,000	120,000	1,000	98,000	3,000	93,000	8,000	99,000	11,000	87,000	10,000
Computer and information sciences	150,000	3,000	158,000	4,500	125,000	6,000	135,000	5,000	137,000	11,000	114,000	21,000	D	D	D	D	D	D	160,000	3,000	165,000	9,000	136,000	14,000	108,000	4,000	110,000	15,500	106,000	4,000	150,000	2,000	150,000	2,000	119,000	5,000	151,000	19,000	151,000	22,000	147,000	40,500
Mathematics and statistics	114,000	3,500	117,000	3,500	101,000	4,000	100,000	11,500	109,000	14,000	83,000	4,500	D	D	D	D	D	D	124,000	6,500	124,000	10,000	121,000	7,500	97,000	9,500	98,000	9,500	92,000	18,500	108,000	3,500	113,000	4,000	95,000	5,000	102,000	15,000	102,000	11,500	118,000	34,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	125,000	1,500	103,000	2,500	102,000	5,000	109,000	8,500	90,000	5,000	102,000	15,500	109,000	20,000	*	*	119,000	2,500	120,000	3,000	107,000	4,000	95,000	3,000	95,000	3,000	98,000	14,000	120,000	2,000	128,000	2,500	103,000	3,000	109,000	5,500	110,000	8,500	93,000	23,000
Astronomy and astrophysics	110,000	6,500	119,000	8,000	97,000	8,500	103,000	12,500	103,000	11,000	101,000	27,000	D	D	D	D	D	D	103,000	17,500	116,000	23,500	69,000	16,000	98,000	39,000	82,000	34,500	D	D	112,000	8,000	119,000	7,500	100,000	10,000	116,000	14,000	121,000	14,500	D	D
Chemistry, except biochemistry	119,000	2,000	125,000	3,500	104,000	3,500	101,000	3,000	108,000	5,000	94,000	5,500	D	D	S	S	D	D	113,000	4,000	119,000	4,000	104,000	5,000	94,000	3,000	93,000	3,500	98,000	17,500	121,000	3,000	128,000	2,500	104,000	3,500	106,000	11,500	95,000	14,500	128,000	16,000
Geosciences, atmospheric sciences, and ocean sciences	105,000	2,000	109,000	1,000	97,000	3,000	89,000	5,000	95,000	4,000	74,000	3,500	*	*	*	*	D	D	104,000	4,500	109,000	7,000	97,000	2,500	90,000	6,000	90,000	5,500	96,000	20,000	107,000	2,500	110,000	2,000	98,000	3,500	97,000	10,500	105,000	7,500	84,000	3,500
Physics	130,000	1,000	130,000	3,500	116,000	6,000	119,000	8,000	122,000	8,500	S	S	D	D	D	D	D	D	129,000	6,000	128,000	5,500	130,000	13,000	115,000	8,500	115,000	9,500	S	S	130,000	3,000	134,000	5,500	110,000	10,000	129,000	12,500	137,000	9,500	78,000	35,000
Psychology	101,000	1,500	115,000	3,000	98,000	1,000	99,000	3,000	106,000	6,500	92,000	5,500	100,000	8,000	106,000	34,500	99,000	3,000	127,000	18,500	95,000	3,500	93,000	4,000	104,000	13,500	89,000	1,000	103,000	1,500	115,000	3,500	99,000	1,000	101,000	7,000	115,000	4,500	93,000	3,000
Social sciences	101,000	2,000	110,000	1,500	92,000	2,500	95,000	4,000	100,000	8,000	88,000	3,500	83,000	10,000	94,000	13,000	74,000	7,500	110,000	3,000	115,000	7,000	104,000	4,500	92,000	2,000	94,000	5,500	89,000	3,500	103,000	2,500	114,000	5,000	90,000	2,000	96,000	7,000	100,000	8,000	86,000	7,500
Economics	135,000	4,000	140,000	5,000	124,000	6,000	135,000	11,000	139,000	12,000	102,000	15,000	D	D	D	D	D	D	129,000	2,000	137,000	13,000	120,000	10,000	103,000	7,500	100,000	6,000	124,000	10,500	140,000	2,500	144,000	7,500	125,000	5,000	165,000	16,000	182,000	74,500	164,000	10,500
Political science and government	103,000	4,000	105,000	3,000	96,000	4,500	95,000	9,000	95,000	10,000	89,000	17,500	D	D	D	D	D	D	95,000	6,000	78,000	9,000	108,000	10,500	83,000	7,000	79,000	9,000	89,000	7,500	105,000	2,500	110,000	5,000	94,000	6,000	104,000	28,000	109,000	42,500	87,000	8,000
Sociology, demography, and population studies	90,000	2,000	99,000	3,000	88,000	2,500	90,000	11,000	87,000	1,500	104,000	7,500	D	D	D	D	D	D	90,000	3,500	107,000	21,500	85,000	4,000	93,000	3,500	107,000	18,500	88,000	4,500	91,000	3,500	100,000	4,500	87,000	3,000	78,000	2,500	77,000	3,500	80,000	4,500
Other social sciences	90,000	500	95,000	500	85,000	1,500	80,000	3,000	83,000	6,000	79,000	5,000	71,000	12,000	69,000	25,000	74,000	11,000	94,000	2,500	95,000	6,000	89,000	6,000	87,000	4,000	95,000	5,000	81,000	3,500	90,000	1,000	95,000	1,500	85,000	2,000	80,000	6,500	95,000	13,000	79,000	4,000
Engineering	137,000	2,000	140,000	500	120,000	2,000	120,000	4,500	125,000	4,500	109,000	4,000	140,000	13,500	146,000	12,500	D	D	139,000	2,500	139,000	500	125,000	3,000	116,000	5,500	112,000	6,000	129,000	6,000	140,000	2,000	141,000	2,500	119,000	1,500	137,000	9,500	139,000	12,000	129,000	12,000
Aerospace, aeronautical, and astronautical engineering	137,000	4,500	139,000	7,000	128,000	3,000	112,000	10,500	118,000	17,500	108,000	10,500	D	D	D	D	D	D	130,000	8,500	130,000	8,500	129,000	15,500	115,000	17,500	105,000	28,500	*	*	145,000	5,500	148,000	4,500	128,000	2,500	151,000	26,000	D	D	D	D
Chemical engineering	139,000	4,000	140,000	1,500	127,000	4,500	124,000	5,500	127,000	13,500	112,000	10,500	D	D	D	D	D	D	139,000	6,000	139,000	3,500	128,000	8,000	137,000	15,000	127,000	34,500	137,000	16,000	137,000	3,000	140,000	3,000	123,000	7,000	162,000	16,000	168,000	23,000	D	D
Civil engineering	119,000	4,500	120,000	2,000	105,000	5,500	108,000	8,000	108,000	8,500	102,000	19,500	D	D	D	D	D	D	110,000	11,000	119,000	10,500	93,000	11,500	99,000	15,000	97,000	16,500	110,000	10,500	120,000	3,500	128,000	7,000	109,000	5,000	90,000	13,500	89,000	13,000	D	D
Electrical and computer engineering	150,000	2,000	153,000	4,500	140,000	1,000	139,000	5,000	139,000	4,500	125,000	17,000	D	D	S	S	D	D	150,000	4,500	155,000	6,500	140,000	6,500	144,000	7,500	143,000	7,500	188,000	64,500	150,000	3,500	155,000	6,000	130,000	7,000	130,000	27,500	129,000	25,500	D	D
Mechanical engineering	130,000	2,000	130,000	1,500	113,000	5,000	120,000	12,000	122,000	14,000	D	D	S	S	D	D	D	D	130,000	3,000	130,000	5,000	113,000	6,000	103,000	7,500	98,000	13,000	D	D	128,000	4,000	130,000	3,500	113,000	3,500	144,000	24,500	142,000	28,500	D	D
Metallurgical and materials engineering	134,000	3,500	138,000	3,500	119,000	3,500	123,000	6,500	125,000	8,500	120,000	9,500	D	D	D	D	D	D	129,000	6,000	138,000	7,500	110,000	10,000	122,000	18,500	124,000	19,500	D	D	138,000	3,000	140,000	4,000	126,000	10,000	119,000	6,500	117,000	9,500	D	D
Other engineering	130,000	500	133,000	3,500	119,000	3,500	109,000	7,000	119,000	7,000	99,000	4,000	156,000	16,500	*	*	D	D	129,000	2,000	130,000	1,000	120,000	4,000	111,000	6,000	111,000	4,000	116,000	13,000	133,000	3,500	139,000	3,500	119,000	5,500	129,000	9,000	142,000	13,500	110,000	14,500
Health	110,000	1,500	125,000	4,000	103,000	2,500	99,000	5,000	113,000	8,000	90,000	9,000	93,000	10,000	D	D	S	S	110,000	5,000	121,000	6,000	100,000	3,000	100,000	2,000	109,000	9,500	99,000	2,500	113,000	3,500	130,000	5,500	106,000	3,000	100,000	19,000	120,000	26,500	95,000	13,500

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race
[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.
[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 51

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and citizenship status: 2019

(Dollars)

Field of study	All full-time employed		U.S. citizen						Non-U.S. citizen					
	All		All		Native-born		Naturalized		All		Permanent resident		Temporary resident	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	119,000	1,000	120,000	500	113,000	1,500	135,000	500	110,000	2,500	115,000	1,500	92,000	2,500
Science	110,000	500	111,000	1,500	109,000	1,500	125,000	2,000	100,000	500	105,000	2,000	84,000	4,000
Biological, agricultural, and environmental life sciences	110,000	1,500	113,000	2,000	109,000	2,000	125,000	3,000	83,000	3,000	92,000	4,000	60,000	2,000
Agricultural and food sciences	110,000	1,000	114,000	2,000	112,000	3,000	119,000	3,000	84,000	4,000	87,000	7,500	79,000	2,500
Biochemistry and biophysics	117,000	3,500	120,000	5,000	116,000	4,000	140,000	5,500	78,000	6,000	80,000	6,500	59,000	8,500
Cell, cellular biology, and molecular biology	111,000	4,500	119,000	4,500	114,000	5,500	120,000	1,500	79,000	8,500	89,000	7,000	54,000	6,500
Microbiological sciences and immunology	110,000	3,000	115,000	4,000	109,000	2,500	130,000	9,000	80,000	9,000	100,000	9,500	63,000	7,000
Natural resources and conservation	97,000	2,500	100,000	2,500	98,000	3,500	100,000	3,500	75,000	6,000	96,000	6,000	59,000	2,000
Zoology	96,000	4,500	99,000	2,500	98,000	3,500	110,000	7,500	66,000	3,000	67,000	8,000	D	D
Other biological sciences	107,000	2,500	110,000	1,000	105,000	2,500	126,000	4,000	89,000	3,500	100,000	3,500	62,000	3,500
Computer and information sciences	150,000	3,000	150,000	1,500	150,000	3,000	159,000	5,500	155,000	9,000	159,000	8,000	138,000	5,000
Mathematics and statistics	114,000	3,500	111,000	3,000	105,000	4,000	129,000	6,000	118,000	4,000	120,000	4,500	116,000	11,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	124,000	2,500	120,000	500	130,000	4,500	99,000	1,500	109,000	4,500	75,000	2,500
Astronomy and astrophysics	110,000	6,500	118,000	6,500	109,000	5,000	147,000	11,500	89,000	14,000	92,000	19,500	69,000	12,500
Chemistry, except biochemistry	119,000	2,000	122,000	3,000	121,000	2,000	126,000	5,000	95,000	4,500	100,000	4,500	67,000	6,000
Geosciences, atmospheric sciences, and ocean sciences	105,000	2,000	108,000	2,500	106,000	2,000	119,000	6,000	96,000	4,500	101,000	5,500	71,000	5,500
Physics	130,000	1,000	137,000	5,000	130,000	4,000	148,000	5,500	110,000	9,000	119,000	3,500	81,000	9,000
Psychology	101,000	1,500	102,000	1,500	101,000	1,500	105,000	5,000	89,000	1,500	93,000	4,000	74,000	6,000
Social sciences	101,000	2,000	101,000	2,500	100,000	500	110,000	2,000	100,000	2,500	100,000	2,500	98,000	9,000
Economics	135,000	4,000	140,000	3,500	140,000	4,000	138,000	11,000	129,000	4,000	129,000	4,000	126,000	8,500

TABLE 51

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and citizenship status: 2019

(Dollars)

Field of study	All full-time employed		U.S. citizen						Non-U.S. citizen					
	All		All		Native-born		Naturalized		All		Permanent resident		Temporary resident	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Political science and government	103,000	4,000	105,000	3,000	105,000	3,500	103,000	5,000	84,000	8,000	85,000	8,500	76,000	12,000
Sociology, demography, and population studies	90,000	2,000	90,000	3,500	92,000	3,500	89,000	3,500	83,000	3,000	83,000	3,500	72,000	20,000
Other social sciences	90,000	500	90,000	1,000	90,000	1,000	100,000	5,000	82,000	2,500	84,000	5,000	73,000	7,500
Engineering	137,000	2,000	143,000	2,500	139,000	2,500	150,000	1,000	120,000	2,500	129,000	500	102,000	4,500
Aerospace, aeronautical, and astronautical engineering	137,000	4,500	146,000	5,000	149,000	6,500	144,000	9,000	112,000	6,500	122,000	7,500	102,000	4,500
Chemical engineering	139,000	4,000	144,000	3,500	139,000	4,000	153,000	5,500	117,000	3,500	126,000	8,500	105,000	4,500
Civil engineering	119,000	4,500	126,000	4,000	120,000	2,500	138,000	9,000	94,000	4,000	99,000	1,500	83,000	3,000
Electrical and computer engineering	150,000	2,000	159,000	2,500	153,000	5,500	160,000	3,500	140,000	3,500	149,000	1,500	129,000	4,000
Mechanical engineering	130,000	2,000	131,000	3,500	130,000	3,500	132,000	3,500	115,000	5,000	119,000	3,500	98,000	4,000
Metallurgical and materials engineering	134,000	3,500	142,000	3,500	139,000	3,500	149,000	4,500	114,000	5,500	123,000	7,500	91,000	13,000
Other engineering	130,000	500	136,000	3,500	130,000	2,500	147,000	4,500	110,000	4,000	122,000	6,000	95,000	2,500
Health	110,000	1,500	115,000	2,500	110,000	2,500	125,000	9,000	93,000	4,500	97,000	5,000	90,000	8,500

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Full time is based on working 35 or more hours per week. Standard errors are rounded up to the nearest $500. Residence location is based on reported living location on 1 February 2019.

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

TABLE 52

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and age: 2019

(Dollars)

Field of study	All full-time employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	119,000	1,000	93,000	1,500	102,000	2,000	113,000	2,000	120,000	1,500	130,000	500	135,000	1,500	133,000	3,000	130,000	1,500
Science	110,000	500	86,000	1,500	95,000	1,000	105,000	1,000	113,000	3,000	121,000	3,000	130,000	1,500	127,000	4,000	128,000	3,000
Biological, agricultural, and environmental life sciences	110,000	1,500	74,000	2,500	88,000	2,500	105,000	2,500	115,000	3,500	124,000	3,500	133,000	5,000	132,000	4,500	148,000	4,000
Agricultural and food sciences	110,000	1,000	87,000	4,000	93,000	2,500	100,000	4,500	115,000	6,500	116,000	7,500	123,000	4,000	118,000	3,000	124,000	10,500
Biochemistry and biophysics	117,000	3,500	61,000	7,000	87,000	5,000	113,000	4,500	127,000	6,500	140,000	13,500	149,000	11,500	133,000	15,500	164,000	16,000
Cell, cellular biology, and molecular biology	111,000	4,500	70,000	5,500	90,000	6,000	105,000	7,000	120,000	14,000	119,000	5,500	146,000	6,500	129,000	9,000	149,000	22,000
Microbiological sciences and immunology	110,000	3,000	71,000	3,000	88,000	5,500	112,000	4,500	118,000	12,500	130,000	7,500	153,000	14,500	157,000	5,500	141,000	14,500
Natural resources and conservation	97,000	2,500	66,000	4,000	79,000	4,000	87,000	2,500	100,000	3,000	105,000	5,000	109,000	9,000	104,000	8,000	185,000	40,500
Zoology	96,000	4,500	55,000	4,500	67,000	3,500	84,000	3,500	98,000	8,500	97,000	11,500	104,000	5,000	116,000	8,500	129,000	13,000
Other biological sciences	107,000	2,500	75,000	3,000	89,000	3,000	104,000	3,500	115,000	5,500	125,000	4,500	126,000	5,500	145,000	7,500	149,000	2,000
Computer and information sciences	150,000	3,000	149,000	9,000	148,000	8,500	155,000	8,500	152,000	9,500	156,000	6,000	155,000	8,500	150,000	6,000	124,000	13,000
Mathematics and statistics	114,000	3,500	99,000	4,500	100,000	5,000	112,000	9,000	109,000	6,000	112,000	9,500	119,000	6,000	130,000	12,500	140,000	7,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	90,000	2,000	101,000	3,500	114,000	5,000	125,000	5,000	130,000	3,500	140,000	2,000	142,000	5,500	135,000	6,000
Astronomy and astrophysics	110,000	6,500	84,000	6,500	90,000	9,000	101,000	9,000	115,000	8,500	128,000	15,500	151,000	14,000	156,000	11,000	152,000	13,000
Chemistry, except biochemistry	119,000	2,000	89,000	3,500	102,000	4,500	110,000	4,000	127,000	6,000	130,000	1,500	140,000	3,000	135,000	8,000	136,000	4,500
Geosciences, atmospheric sciences, and ocean sciences	105,000	2,000	79,000	5,000	84,000	3,500	99,000	2,000	112,000	6,000	120,000	5,000	115,000	6,500	130,000	7,500	119,000	6,000
Physics	130,000	1,000	100,000	5,500	118,000	3,500	136,000	7,500	132,000	5,500	142,000	8,500	150,000	5,500	153,000	9,000	138,000	13,000
Psychology	101,000	1,500	84,000	2,500	91,000	2,500	100,000	500	103,000	3,000	109,000	3,000	114,000	4,500	110,000	2,000	119,000	3,500
Social sciences	101,000	2,000	94,000	2,500	88,000	2,500	88,000	2,500	100,000	2,500	110,000	4,000	115,000	6,000	110,000	4,500	114,000	5,500
Economics	135,000	4,000	129,000	6,500	132,000	6,500	119,000	7,500	130,000	17,000	169,000	8,500	149,000	11,500	139,000	12,500	133,000	8,000
Political science and government	103,000	4,000	89,000	7,500	83,000	7,500	79,000	4,500	107,000	3,000	107,000	6,000	116,000	10,000	118,000	11,000	110,000	9,000
Sociology, demography, and population studies	90,000	2,000	71,000	3,500	80,000	2,500	81,000	3,000	93,000	4,500	89,000	5,500	99,000	8,000	104,000	16,500	119,000	11,500
Other social sciences	90,000	500	74,000	2,500	75,000	2,000	80,000	1,500	88,000	5,000	100,000	2,000	99,000	2,500	100,000	2,500	100,000	4,000
Engineering	137,000	2,000	110,000	1,000	125,000	1,000	135,000	3,000	150,000	2,500	159,000	2,000	150,000	2,000	159,000	4,000	149,000	3,000
Aerospace, aeronautical, and astronautical engineering	137,000	4,500	110,000	2,500	122,000	6,000	124,000	4,000	150,000	11,000	152,000	8,000	165,000	9,500	200,000	25,500	154,000	3,000
Chemical engineering	139,000	4,000	109,000	4,000	127,000	6,500	131,000	8,500	158,000	6,000	161,000	9,500	150,000	12,000	173,000	21,000	149,000	11,500
Civil engineering	119,000	4,500	88,000	1,500	96,000	2,500	107,000	5,500	110,000	9,000	141,000	8,000	139,000	12,500	161,000	13,500	164,000	21,500
Electrical and computer engineering	150,000	2,000	134,000	4,500	140,000	2,500	159,000	7,000	167,000	9,000	166,000	5,000	166,000	6,500	160,000	6,500	140,000	9,500
Mechanical engineering	130,000	2,000	100,000	2,500	118,000	5,500	134,000	9,500	138,000	5,000	156,000	6,000	130,000	4,000	130,000	9,500	129,000	8,500
Metallurgical and materials engineering	134,000	3,500	108,000	5,000	130,000	2,000	124,000	3,000	150,000	6,000	159,000	9,000	138,000	15,000	161,000	6,500	167,000	23,500
Other engineering	130,000	500	100,000	2,000	115,000	3,500	129,000	2,000	139,000	4,500	150,000	7,500	159,000	5,500	153,000	7,000	145,000	10,000
Health	110,000	2,000	84,000	4,500	96,000	3,500	109,000	4,000	120,000	3,000	114,000	5,500	125,000	6,000	118,000	8,000	132,000	4,500

SE = standard error.

Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Residence location is based on reported living location on 1 February 2019. Full time is based on working 35 or more hours per week. SE = standard error.

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

TABLE 53

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 2019

(Dollars)

Field of study	All full-time employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	119,000	1,000	90,000	1,500	105,000	2,000	117,000	2,000	129,000	2,500	139,000	3,000	148,000	3,500
Science	110,000	500	81,000	1,500	97,000	1,500	109,000	1,500	120,000	1,500	130,000	2,500	140,000	500
Biological, agricultural, and environmental life sciences	110,000	1,500	70,000	1,000	93,000	2,500	110,000	500	120,000	3,000	135,000	5,000	149,000	500
Agricultural and food sciences	110,000	1,000	80,000	2,000	95,000	3,000	109,000	6,500	113,000	4,500	120,000	4,000	130,000	5,000
Biochemistry and biophysics	117,000	3,500	65,000	5,500	90,000	4,500	114,000	6,500	130,000	8,500	137,000	12,500	166,000	7,500
Cell, cellular biology, and molecular biology	111,000	4,500	62,000	3,500	92,000	6,000	109,000	7,000	120,000	6,000	134,000	9,000	151,000	8,500
Microbiological sciences and immunology	110,000	3,000	69,000	3,000	97,000	3,000	118,000	7,000	123,000	10,500	152,000	5,000	159,000	6,500
Natural resources and conservation	97,000	2,500	65,000	3,000	88,000	3,000	95,000	4,000	115,000	8,500	115,000	9,500	144,000	11,500
Zoology	96,000	4,500	60,000	4,000	65,000	4,500	95,000	7,000	96,000	11,000	103,000	9,000	121,000	6,500
Other biological sciences	107,000	2,500	72,000	3,000	95,000	2,500	110,000	1,500	123,000	4,500	140,000	4,000	150,000	1,000
Computer and information sciences	150,000	3,000	139,000	4,500	140,000	4,000	158,000	10,500	169,000	6,000	160,000	6,000	165,000	13,500
Mathematics and statistics	114,000	3,500	96,000	5,000	98,000	4,500	110,000	9,500	105,000	3,500	124,000	4,000	135,000	5,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	82,000	2,000	103,000	3,500	116,000	3,000	129,000	2,000	140,000	5,500	147,000	4,500
Astronomy and astrophysics	110,000	6,500	75,000	6,000	90,000	6,500	109,000	7,500	105,000	12,000	148,000	13,000	157,000	3,500
Chemistry, except biochemistry	119,000	2,000	84,000	3,500	102,000	4,500	110,000	4,500	129,000	4,000	135,000	5,500	145,000	4,000
Geosciences, atmospheric sciences, and ocean sciences	105,000	2,000	75,000	1,500	90,000	3,500	109,000	3,500	120,000	4,500	114,000	4,500	135,000	7,500
Physics	130,000	1,000	96,000	6,500	119,000	2,500	128,000	9,000	138,000	4,500	149,000	2,500	152,000	6,500
Psychology	101,000	1,500	85,000	2,500	92,000	3,000	100,000	1,500	109,000	3,500	112,000	4,500	124,000	3,500
Social sciences	101,000	2,000	81,000	2,000	87,000	3,000	96,000	3,500	105,000	1,500	118,000	3,500	129,000	2,500
Economics	135,000	4,000	115,000	6,000	130,000	6,000	129,000	4,000	135,000	8,000	153,000	12,000	160,000	9,500
Political science and government	103,000	4,000	81,000	6,500	83,000	7,500	96,000	9,500	109,000	6,500	114,000	9,000	130,000	14,000

TABLE 53

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 2019

(Dollars)

Field of study	All full-time employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Sociology, demography, and population studies	90,000	2,000	71,000	3,000	76,000	4,500	88,000	3,000	95,000	5,500	107,000	12,500	126,000	5,500
Other social sciences	90,000	500	70,000	1,000	79,000	2,500	85,000	4,000	95,000	3,000	108,000	3,000	109,000	4,000
Engineering	137,000	2,000	106,000	1,500	125,000	1,000	140,000	2,500	155,000	4,000	160,000	3,500	160,000	1,500
Aerospace, aeronautical, and astronautical engineering	137,000	4,500	108,000	4,500	123,000	5,000	129,000	9,000	149,000	11,000	157,000	10,500	169,000	8,500
Chemical engineering	139,000	4,000	108,000	4,500	119,000	1,500	134,000	4,500	159,000	6,500	166,000	16,500	162,000	7,000
Civil engineering	119,000	4,500	87,000	2,000	99,000	3,000	116,000	8,000	134,000	7,000	137,000	9,500	168,000	8,500
Electrical and computer engineering	150,000	2,000	130,000	1,000	141,000	4,000	160,000	1,000	168,000	6,500	182,000	4,000	160,000	5,500
Mechanical engineering	130,000	2,000	100,000	2,000	125,000	7,000	132,000	6,500	140,000	10,000	140,000	10,000	147,000	11,000
Metallurgical and materials engineering	134,000	3,500	102,000	4,000	126,000	4,500	135,000	7,000	150,000	6,500	154,000	11,000	161,000	6,000
Other engineering	130,000	500	99,000	3,000	119,000	4,000	130,000	4,000	149,000	3,000	159,000	4,000	158,000	4,000
Health	110,000	1,500	90,000	2,000	97,000	3,500	110,000	4,500	126,000	6,500	139,000	6,500	160,000	12,500

SE = standard error.

Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Residence location is based on reported living location on 1 February 2019. Full time is based on working 35 or more hours per week. SE = standard error.

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

TABLE 54

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2019

(Dollars)

Field of study	All full-time employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	119,000	1,000	95,000	500	76,000	1,500	150,000	500	119,000	500	126,000	1,500	98,000	2,500	100,000	500	132,000	5,500
Science	110,000	500	92,000	1,000	77,000	1,500	145,000	1,000	115,000	2,500	125,000	500	94,000	2,500	100,000	1,500	128,000	4,000
Biological, agricultural, and environmental life sciences	110,000	1,500	90,000	500	73,000	3,000	137,000	3,000	111,000	4,500	120,000	2,500	85,000	4,500	96,000	9,500	109,000	9,500
Agricultural and food sciences	110,000	1,000	95,000	1,500	63,000	15,500	129,000	3,500	109,000	8,000	125,000	3,500	81,000	5,000	104,000	36,000	101,000	20,500
Biochemistry and biophysics	117,000	3,500	92,000	6,000	72,000	8,500	140,000	3,500	148,000	18,000	120,000	7,500	107,000	18,000	90,000	36,500	63,000	19,000
Cell, cellular biology, and molecular biology	111,000	4,500	88,000	4,000	84,000	12,500	135,000	3,500	110,000	9,500	137,000	11,500	107,000	41,500	218,000	95,500	70,000	27,500
Microbiological sciences and immunology	110,000	3,000	86,000	3,000	82,000	4,500	139,000	5,000	100,000	9,500	118,000	6,000	73,000	29,500	S	S	123,000	36,500
Natural resources and conservation	97,000	2,500	83,000	3,500	71,000	4,500	117,000	9,000	114,000	11,000	115,000	5,500	79,000	2,000	72,000	11,500	130,000	21,500
Zoology	96,000	4,500	90,000	5,000	63,000	7,000	121,000	7,000	69,000	10,000	119,000	7,000	68,000	11,500	67,000	26,500	S	S
Other biological sciences	107,000	2,500	90,000	500	70,000	2,500	144,000	4,500	110,000	7,000	119,000	1,500	87,000	5,500	85,000	12,500	119,000	14,500
Computer and information sciences	150,000	3,000	109,000	3,500	72,000	7,500	180,000	2,000	137,000	13,500	135,000	7,000	108,000	15,500	88,000	21,500	157,000	22,500
Mathematics and statistics	114,000	3,500	90,000	1,000	76,000	4,500	159,000	3,000	149,000	5,500	142,000	8,000	S	S	167,000	81,000	157,000	18,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	90,000	500	70,000	2,500	143,000	3,500	127,000	5,500	134,000	4,500	99,000	6,000	82,000	16,000	124,000	8,000
Astronomy and astrophysics	110,000	6,500	90,000	5,500	91,000	8,000	153,000	7,500	133,000	16,000	136,000	9,500	D	D	D	D	106,000	49,000
Chemistry, except biochemistry	119,000	2,000	84,000	2,000	70,000	1,500	136,000	4,500	119,000	11,500	130,000	4,500	86,000	14,000	92,000	23,000	118,000	21,500
Geosciences, atmospheric sciences, and ocean sciences	105,000	2,000	90,000	1,000	73,000	5,000	140,000	4,500	105,000	4,000	124,000	5,500	84,000	7,500	52,000	24,000	122,000	13,500
Physics	130,000	1,000	100,000	2,500	69,000	7,500	150,000	500	139,000	9,000	145,000	6,000	144,000	11,500	78,000	21,500	129,000	17,000
Psychology	101,000	1,500	92,000	2,000	88,000	3,000	120,000	5,000	105,000	1,500	114,000	2,000	98,000	3,000	107,000	6,000	116,000	10,000
Social sciences	101,000	2,000	95,000	500	77,000	2,000	150,000	5,500	119,000	6,000	143,000	5,500	90,000	5,000	98,000	6,500	156,000	25,000
Economics	135,000	4,000	119,000	3,000	101,000	23,500	179,000	6,000	159,000	14,000	152,000	2,500	92,000	12,000	110,000	31,000	188,000	20,500
Political science and government	103,000	4,000	95,000	3,000	80,000	18,000	148,000	9,500	133,000	7,000	141,000	6,500	87,000	20,500	119,000	50,000	111,000	24,000
Sociology, demography, and population studies	90,000	2,000	87,000	2,000	69,000	4,000	125,000	13,000	120,000	15,000	133,000	8,500	83,000	14,000	82,000	25,500	S	S
Other social sciences	90,000	500	85,000	2,000	76,000	3,000	127,000	7,000	90,000	4,500	129,000	9,000	82,000	4,500	84,000	14,000	105,000	12,500
Engineering	137,000	2,000	108,000	2,000	63,000	8,000	150,000	500	134,000	5,500	130,000	2,500	114,000	7,500	98,000	9,000	139,000	4,500
Aerospace, aeronautical, and astronautical engineering	137,000	4,500	107,000	9,500	S	S	149,000	4,500	149,000	11,500	144,000	9,000	D	D	148,000	25,500	D	D
Chemical engineering	139,000	4,000	106,000	7,500	58,000	4,500	149,000	3,500	149,000	22,500	128,000	10,000	D	D	84,000	8,000	122,000	10,000
Civil engineering	119,000	4,500	105,000	4,500	S	S	138,000	7,000	116,000	12,000	119,000	9,500	107,000	7,500	S	S	137,000	26,500
Electrical and computer engineering	150,000	2,000	110,000	6,000	94,000	5,000	160,000	4,000	149,000	6,000	126,000	5,500	108,000	21,000	78,000	4,500	171,000	12,000
Mechanical engineering	130,000	2,000	104,000	5,500	66,000	13,500	143,000	6,500	119,000	8,500	129,000	5,500	D	D	134,000	41,000	122,000	17,000
Metallurgical and materials engineering	134,000	3,500	100,000	7,000	S	S	140,000	4,000	133,000	12,000	130,000	5,500	103,000	30,000	S	S	124,000	11,000
Other engineering	130,000	500	105,000	4,000	68,000	5,500	149,000	3,000	125,000	7,000	132,000	4,000	107,000	9,500	132,000	23,500	110,000	12,000
Health	110,000	1,500	97,000	3,000	80,000	8,000	148,000	5,500	135,000	9,500	124,000	4,500	123,000	24,000	80,000	29,500	135,000	15,000

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.
[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.
[c] Includes those self-employed in an incorporated business.
[d] Self-employed or business owner in a nonincorporated business.
[e] Includes employers not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 55

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2019

(Dollars)

Employment sector and field of study	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
All sectors	119,000	1,000	127,000	1,500	100,000	500
Science	110,000	500	120,000	500	99,000	1,500
Biological, agricultural, and environmental life sciences	110,000	1,500	120,000	1,000	99,000	2,000
Computer and information sciences	150,000	3,000	158,000	4,500	125,000	6,000
Mathematics and statistics	114,000	3,500	117,000	3,500	101,000	4,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	125,000	1,500	103,000	2,500
Psychology	101,000	1,500	115,000	3,000	98,000	1,000
Social sciences	101,000	2,000	110,000	1,500	92,000	2,500
Engineering	137,000	2,000	140,000	500	120,000	2,000
Health	110,000	1,500	125,000	4,000	103,000	2,500
4-year educational institution[a]	95,000	500	100,000	500	86,000	1,500
Science	92,000	1,000	100,000	1,000	84,000	1,500
Biological, agricultural, and environmental life sciences	90,000	500	100,000	1,500	80,000	500
Computer and information sciences	109,000	3,500	110,000	2,000	100,000	2,000
Mathematics and statistics	90,000	1,000	92,000	2,500	80,000	1,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90,000	500	93,000	2,500	80,000	1,000
Psychology	92,000	2,000	100,000	1,500	88,000	1,500
Social sciences	95,000	500	100,000	2,000	86,000	2,000
Engineering	108,000	2,000	109,000	1,500	97,000	3,000
Health	97,000	3,000	100,000	6,000	94,000	3,000
Other educational institution[b]	76,000	1,500	76,000	2,000	76,000	2,000
Science	77,000	1,500	77,000	3,000	76,000	2,000
Biological, agricultural, and environmental life sciences	73,000	3,000	75,000	5,000	69,000	2,000
Computer and information sciences	72,000	7,500	68,000	9,000	93,000	25,500
Mathematics and statistics	76,000	4,500	73,000	7,000	78,000	5,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	70,000	2,500	72,000	2,500	70,000	2,000
Psychology	88,000	3,000	97,000	8,500	86,000	3,000
Social sciences	77,000	2,000	80,000	8,500	75,000	2,500
Engineering	63,000	8,000	59,000	4,500	72,000	7,500
Health	80,000	8,000	59,000	25,000	83,000	8,000
Private, for profit[c]	150,000	500	150,000	2,000	130,000	1,000
Science	145,000	1,000	150,000	2,000	128,000	3,000
Biological, agricultural, and environmental life sciences	137,000	3,000	150,000	3,000	128,000	3,000
Computer and information sciences	180,000	2,000	181,000	4,000	160,000	8,000
Mathematics and statistics	159,000	3,000	160,000	5,000	144,000	7,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	143,000	3,500	148,000	4,000	125,000	4,000
Psychology	120,000	5,000	139,000	4,500	110,000	5,500
Social sciences	150,000	5,500	170,000	8,000	128,000	2,500
Engineering	150,000	500	151,000	2,500	134,000	3,000
Health	148,000	5,500	156,000	10,500	126,000	6,500
Private, nonprofit	119,000	500	130,000	3,500	105,000	3,500
Science	115,000	2,500	128,000	4,000	104,000	2,000
Biological, agricultural, and environmental life sciences	111,000	4,500	123,000	7,500	100,000	5,500
Computer and information sciences	137,000	13,500	137,000	17,500	123,000	15,500
Mathematics and statistics	149,000	5,500	148,000	6,000	160,000	20,500

TABLE 55

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2019

(Dollars)

Employment sector and field of study	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	127,000	5,500	134,000	8,000	107,000	7,500
Psychology	105,000	1,500	115,000	6,500	103,000	1,500
Social sciences	119,000	6,000	131,000	10,000	109,000	6,500
Engineering	134,000	5,500	138,000	5,500	120,000	3,000
Health	135,000	9,500	165,000	6,500	124,000	13,000
Federal government	126,000	1,500	130,000	1,500	118,000	2,500
Science	125,000	500	130,000	1,500	116,000	2,000
Biological, agricultural, and environmental life sciences	120,000	2,500	125,000	1,500	111,000	4,000
Computer and information sciences	135,000	7,000	139,000	9,500	120,000	25,000
Mathematics and statistics	142,000	8,000	139,000	4,500	150,000	13,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	134,000	4,500	139,000	4,500	123,000	4,500
Psychology	114,000	2,000	119,000	4,000	109,000	2,000
Social sciences	143,000	5,500	149,000	6,000	138,000	5,000
Engineering	130,000	2,500	134,000	4,500	124,000	4,000
Health	124,000	4,500	123,000	5,000	123,000	7,500
State or local government	98,000	2,500	100,000	2,000	95,000	2,500
Science	94,000	2,500	94,000	3,500	93,000	2,500
Biological, agricultural, and environmental life sciences	85,000	4,500	84,000	5,000	89,000	8,500
Computer and information sciences	108,000	15,500	114,000	15,000	80,000	15,000
Mathematics and statistics	S	S	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	99,000	6,000	101,000	8,500	93,000	10,000
Psychology	98,000	3,000	96,000	5,500	98,000	3,000
Social sciences	90,000	5,000	91,000	7,500	82,000	5,500
Engineering	114,000	7,500	119,000	7,000	105,000	12,500
Health	123,000	24,000	100,000	29,000	136,000	19,500
Self-employed[d]	100,000	500	108,000	12,500	99,000	2,000
Science	100,000	1,500	116,000	8,500	99,000	2,000
Biological, agricultural, and environmental life sciences	96,000	9,500	120,000	40,500	68,000	10,500
Computer and information sciences	88,000	21,500	89,000	20,500	D	D
Mathematics and statistics	167,000	81,000	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	82,000	16,000	74,000	19,000	84,000	17,500
Psychology	107,000	6,000	125,000	15,000	100,000	1,500
Social sciences	98,000	6,500	101,000	14,000	75,000	7,500
Engineering	98,000	9,000	91,000	7,500	127,000	22,500
Health	80,000	29,500	121,000	53,500	68,000	20,000
Other sector[e]	132,000	5,500	140,000	10,500	110,000	10,500
Science	128,000	4,000	146,000	11,000	108,000	10,000
Biological, agricultural, and environmental life sciences	109,000	9,500	120,000	19,000	107,000	12,000
Computer and information sciences	157,000	22,500	177,000	23,000	D	D
Mathematics and statistics	157,000	18,500	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	124,000	8,000	127,000	6,500	101,000	16,000
Psychology	116,000	10,000	143,000	22,000	91,000	18,500
Social sciences	156,000	25,000	196,000	24,500	121,000	19,000
Engineering	139,000	4,500	139,000	8,000	119,000	23,500

TABLE 55

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2019

(Dollars)

Employment sector and field of study	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
Health	135,000	15,000	139,000	9,500	123,000	17,000

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 56

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2019

(Dollars)

Employment sector and field of study	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All sectors	119,000	1,000	102,000	2,000	99,000	4,500	125,000	1,500	100,000	2,000	117,000	1,500	109,000	3,500
Science	110,000	500	100,000	500	94,000	3,000	120,000	2,000	95,000	2,000	110,000	500	103,000	3,500
Biological, agricultural, and environmental life sciences	110,000	1,500	96,000	4,500	94,000	6,000	110,000	1,000	100,000	2,000	110,000	500	96,000	6,500
Computer and information sciences	150,000	3,000	135,000	5,000	D	D	160,000	3,000	108,000	4,000	150,000	2,000	151,000	19,000
Mathematics and statistics	114,000	3,500	100,000	11,500	D	D	124,000	6,500	97,000	9,500	108,000	3,500	102,000	15,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	102,000	5,000	102,000	15,500	119,000	2,500	95,000	3,000	120,000	2,000	109,000	5,500
Psychology	101,000	1,500	99,000	3,000	100,000	8,000	98,000	3,000	93,000	4,000	103,000	1,500	101,000	7,000
Social sciences	101,000	2,000	95,000	4,000	83,000	10,000	110,000	3,000	92,000	2,000	103,000	2,500	96,000	7,000
Engineering	137,000	2,000	120,000	4,500	140,000	13,500	139,000	2,500	116,000	5,500	140,000	2,000	137,000	9,500
Health	110,000	1,500	99,000	5,000	93,000	10,000	110,000	5,000	100,000	2,000	113,000	3,500	100,000	19,000
4-year educational institution[d]	95,000	500	88,000	1,500	89,000	4,000	90,000	500	89,000	1,500	98,000	1,000	88,000	2,000
Science	92,000	1,000	86,000	2,500	83,000	8,000	88,000	2,500	87,000	2,000	95,000	500	86,000	2,000
Biological, agricultural, and environmental life sciences	90,000	500	81,000	3,000	91,000	5,000	80,000	2,000	86,000	3,000	93,000	2,000	80,000	3,500
Computer and information sciences	109,000	3,500	100,000	15,500	D	D	100,000	5,500	91,000	14,000	111,000	3,000	141,000	44,000
Mathematics and statistics	90,000	1,000	95,000	8,000	D	D	89,000	3,000	79,000	5,500	90,000	1,000	101,000	16,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90,000	500	80,000	2,500	D	D	80,000	3,000	80,000	6,500	93,000	2,000	79,000	2,500
Psychology	92,000	2,000	86,000	4,000	D	D	85,000	3,000	88,000	2,500	95,000	2,000	88,000	4,000
Social sciences	95,000	500	89,000	1,500	73,000	11,000	95,000	2,000	88,000	3,000	97,000	2,000	91,000	7,500
Engineering	108,000	2,000	95,000	4,000	D	D	100,000	3,500	100,000	4,500	111,000	2,500	90,000	9,500
Health	97,000	3,000	83,000	4,000	D	D	89,000	5,000	90,000	4,000	100,000	3,000	92,000	9,500
Other educational institution[e]	76,000	1,500	76,000	4,000	67,000	6,500	73,000	7,500	78,000	3,500	76,000	2,000	76,000	3,500
Science	77,000	1,500	76,000	5,000	67,000	6,500	78,000	7,000	78,000	3,500	77,000	2,000	76,000	4,000
Biological, agricultural, and environmental life sciences	73,000	3,000	74,000	8,000	D	D	61,000	11,500	61,000	4,500	74,000	2,500	83,000	8,500
Computer and information sciences	72,000	7,500	D	D	D	D	D	D	*	*	70,000	5,500	D	D
Mathematics and statistics	76,000	4,500	62,000	6,000	D	D	83,000	13,000	D	D	72,000	4,500	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	70,000	2,500	73,000	9,000	D	D	67,000	5,000	62,000	6,500	72,000	2,500	D	D
Psychology	88,000	3,000	85,000	7,500	S	S	98,000	11,000	88,000	5,000	88,000	3,500	76,000	10,000
Social sciences	77,000	2,000	74,000	5,000	D	D	89,000	23,500	76,000	7,500	76,000	3,000	79,000	6,500
Engineering	63,000	8,000	77,000	24,500	D	D	60,000	14,500	61,000	13,000	60,000	9,000	D	D
Health	80,000	8,000	D	D	D	D	D	D	99,000	14,000	82,000	8,000	D	D
Private, for profit[f]	150,000	500	134,000	4,000	126,000	17,500	149,000	500	124,000	4,000	150,000	500	145,000	7,500
Science	145,000	1,000	130,000	4,000	118,000	10,000	146,000	4,000	119,000	1,500	150,000	2,500	139,000	8,000
Biological, agricultural, and environmental life sciences	137,000	3,000	128,000	6,000	D	D	132,000	3,500	119,000	1,500	144,000	4,000	135,000	11,500

TABLE 56

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2019

(Dollars)

Employment sector and field of study	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Computer and information sciences	180,000	2,000	161,000	16,500	D	D	185,000	7,500	175,000	25,500	179,000	5,000	160,000	8,500
Mathematics and statistics	159,000	3,000	146,000	7,000	D	D	154,000	5,500	140,000	22,500	169,000	9,500	154,000	74,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	143,000	3,500	130,000	4,000	106,000	15,500	135,000	3,500	124,000	6,000	149,000	4,000	135,000	6,500
Psychology	120,000	5,000	114,000	7,500	D	D	130,000	9,000	95,000	19,000	124,000	5,500	131,000	8,500
Social sciences	150,000	5,500	142,000	18,000	D	D	147,000	8,000	117,000	13,500	158,000	7,000	163,000	19,000
Engineering	150,000	500	139,000	5,000	151,000	10,500	149,000	500	136,000	5,500	154,000	3,000	150,000	8,000
Health	148,000	5,500	128,000	9,500	D	D	140,000	10,500	144,000	10,500	149,000	2,000	158,000	40,500
Private, nonprofit	119,000	500	100,000	4,000	110,000	9,000	110,000	4,500	98,000	8,500	125,000	1,500	109,000	6,500
Science	115,000	2,500	98,000	8,500	D	D	107,000	5,000	98,000	8,500	119,000	2,500	103,000	12,000
Biological, agricultural, and environmental life sciences	111,000	4,500	84,000	8,000	D	D	104,000	7,000	102,000	19,000	119,000	4,500	88,000	9,500
Computer and information sciences	137,000	13,500	D	D	D	D	99,000	24,000	*	*	152,000	9,000	D	D
Mathematics and statistics	149,000	5,500	D	D	D	D	122,000	29,000	D	D	173,000	13,500	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	127,000	5,500	130,000	32,500	D	D	106,000	11,000	S	S	137,000	7,000	139,000	12,500
Psychology	105,000	1,500	95,000	8,000	D	D	110,000	8,500	100,000	9,500	105,000	1,000	116,000	5,000
Social sciences	119,000	6,000	118,000	12,500	D	D	123,000	16,500	117,000	21,000	119,000	9,000	92,000	31,500
Engineering	134,000	5,500	119,000	6,500	D	D	129,000	8,000	S	S	138,000	6,000	114,000	19,500
Health	135,000	9,500	126,000	14,000	D	D	103,000	6,500	107,000	21,500	148,000	13,500	D	D
Federal government	126,000	1,500	120,000	2,500	121,000	2,500	130,000	4,000	114,000	3,500	128,000	2,000	114,000	4,500
Science	125,000	500	119,000	2,500	120,000	8,000	129,000	6,000	110,000	2,500	126,000	3,000	110,000	5,000
Biological, agricultural, and environmental life sciences	120,000	2,500	119,000	3,500	*	*	112,000	9,500	112,000	4,500	124,000	2,500	104,000	12,500
Computer and information sciences	135,000	7,000	D	D	D	D	S	S	102,000	9,500	145,000	3,500	S	S
Mathematics and statistics	142,000	8,000	D	D	D	D	144,000	12,500	D	D	138,000	6,500	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	134,000	4,500	117,000	9,000	D	D	138,000	14,000	97,000	9,500	136,000	4,500	109,000	6,500
Psychology	114,000	2,000	113,000	4,500	S	S	129,000	13,000	106,000	11,000	114,000	2,500	114,000	2,000
Social sciences	143,000	5,500	153,000	7,000	D	D	138,000	15,500	124,000	13,000	144,000	5,000	*	*
Engineering	130,000	2,500	127,000	9,500	D	D	130,000	9,500	129,000	5,500	133,000	4,500	135,000	16,000
Health	124,000	4,500	118,000	14,500	D	D	124,000	9,500	119,000	5,500	124,000	4,500	S	S
State or local government	98,000	2,500	85,000	8,000	D	D	100,000	2,500	90,000	6,000	98,000	3,500	92,000	15,000
Science	94,000	2,500	89,000	9,500	D	D	91,000	7,000	90,000	8,000	95,000	2,500	92,000	15,500
Biological, agricultural, and environmental life sciences	85,000	4,500	73,000	14,000	D	D	86,000	10,000	96,000	16,500	85,000	5,500	81,000	9,000
Computer and information sciences	108,000	15,500	D	D	D	D	D	D	*	*	123,000	21,500	D	D
Mathematics and statistics	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	99,000	6,000	85,000	26,500	D	D	79,000	10,000	D	D	120,000	15,000	S	S
Psychology	98,000	3,000	93,000	10,000	D	D	105,000	12,000	92,000	10,000	96,000	4,500	D	D

TABLE 56

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2019

(Dollars)

Employment sector and field of study	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Social sciences	90,000	5,000	91,000	21,000	D	D	89,000	20,000	83,000	10,500	91,000	5,000	D	D
Engineering	114,000	7,500	80,000	9,000	D	D	120,000	7,500	S	S	115,000	5,500	*	*
Health	123,000	24,000	D	D	D	D	139,000	22,000	90,000	32,000	135,000	27,000	D	D
Self-employed[g]	100,000	500	83,000	8,000	D	D	89,000	13,500	99,000	7,000	100,000	4,000	82,000	22,500
Science	100,000	1,500	77,000	14,000	D	D	109,000	13,500	94,000	7,000	100,000	3,000	81,000	26,500
Biological, agricultural, and environmental life sciences	96,000	9,500	62,000	8,500	D	D	162,000	66,000	49,000	12,500	96,000	11,000	D	D
Computer and information sciences	88,000	21,500	D	D	D	D	D	D	D	D	86,000	32,500	D	D
Mathematics and statistics	167,000	81,000	D	D	D	D	D	D	D	D	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	82,000	16,000	*	*	D	D	S	S	D	D	91,000	8,000	D	D
Psychology	107,000	6,000	86,000	12,000	D	D	D	D	99,000	33,500	108,000	6,000	85,000	15,000
Social sciences	98,000	6,500	D	D	D	D	118,000	30,500	83,000	29,000	97,000	10,500	D	D
Engineering	98,000	9,000	126,000	39,500	D	D	77,000	14,000	D	D	100,000	21,500	D	D
Health	80,000	29,500	D	D	D	D	S	S	D	D	124,000	61,500	D	D
Other sector[h]	132,000	5,500	155,000	15,500	D	D	135,000	6,000	132,000	18,000	128,000	6,000	136,000	42,500
Science	128,000	4,000	157,000	16,500	D	D	129,000	8,500	131,000	25,500	123,000	6,000	S	S
Biological, agricultural, and environmental life sciences	109,000	9,500	111,000	25,500	D	D	105,000	19,500	85,000	14,000	109,000	13,000	D	D
Computer and information sciences	157,000	22,500	D	D	D	D	D	D	D	D	D	D	D	D
Mathematics and statistics	157,000	18,500	D	D	D	D	S	S	D	D	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	124,000	8,000	D	D	D	D	72,000	17,500	D	D	129,000	6,000	D	D
Psychology	116,000	10,000	S	S	D	D	D	D	D	D	92,000	28,500	D	D
Social sciences	156,000	25,000	166,000	15,000	D	D	147,000	57,500	S	S	147,000	50,000	D	D
Engineering	139,000	4,500	136,000	17,000	D	D	140,000	19,500	S	S	138,000	9,500	D	D
Health	135,000	15,000	D	D	D	D	D	D	D	D	142,000	11,500	D	D

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[e] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[f] Includes those self-employed in an incorporated business.

[g] Self-employed or business owner in a nonincorporated business.

[h] Includes employers not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 57-1

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and primary or secondary work activity: 2019

(Dollars)

Field of study	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	119,000	1,000	139,000	2,500	130,000	1,000	120,000	500	120,000	500	90,000	500	105,000	2,000
Science	110,000	500	134,000	2,000	125,000	500	117,000	2,500	113,000	1,500	89,000	1,000	100,000	500
Biological, agricultural, and environmental life sciences	110,000	1,500	112,000	4,500	122,000	3,000	149,000	4,000	108,000	2,000	88,000	2,000	100,000	2,000
Agricultural and food sciences	110,000	1,000	110,000	5,000	122,000	3,500	98,000	6,500	109,000	3,000	89,000	2,500	99,000	9,000
Biochemistry and biophysics	117,000	3,500	110,000	8,000	134,000	6,000	175,000	14,000	114,000	3,500	90,000	4,500	114,000	13,500
Cell, cellular biology, and molecular biology	111,000	4,500	118,000	22,000	129,000	5,000	177,000	28,000	109,000	4,000	89,000	4,000	94,000	11,000
Microbiological sciences and immunology	110,000	3,000	S	S	120,000	5,000	154,000	9,500	109,000	3,500	93,000	5,000	95,000	7,000
Natural resources and conservation	97,000	2,500	93,000	8,000	104,000	3,500	102,000	10,000	96,000	2,500	79,000	1,500	94,000	5,500
Zoology	96,000	4,500	102,000	17,000	108,000	3,500	75,000	12,000	100,000	4,000	80,000	5,500	88,000	7,500
Other biological sciences	107,000	2,500	115,000	4,000	120,000	1,000	145,000	8,000	106,000	3,000	88,000	2,500	104,000	4,000
Computer and information sciences	150,000	3,000	160,000	4,500	175,000	5,000	141,000	15,000	150,000	3,000	100,000	2,000	120,000	15,000
Mathematics and statistics	114,000	3,500	140,000	2,500	135,000	6,000	157,000	26,500	120,000	4,000	85,000	2,000	90,000	3,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	125,000	4,500	138,000	3,500	143,000	10,500	120,000	1,000	84,000	1,500	109,000	3,000
Astronomy and astrophysics	110,000	6,500	120,000	7,500	139,000	8,500	194,000	41,500	114,000	8,500	88,000	5,000	104,000	9,500
Chemistry, except biochemistry	119,000	2,000	120,000	7,500	135,000	3,500	142,000	14,500	120,000	500	79,000	2,500	105,000	5,500
Geosciences, atmospheric sciences, and ocean sciences	105,000	2,000	104,000	4,500	119,000	2,500	108,000	9,500	106,000	3,000	87,000	2,500	100,000	4,000
Physics	130,000	1,000	139,000	5,500	153,000	5,500	164,000	15,500	130,000	1,000	91,000	2,500	119,000	5,000
Psychology	101,000	1,500	120,000	10,000	108,000	3,000	102,000	1,500	104,000	2,000	89,000	1,500	99,000	2,000
Social sciences	101,000	2,000	120,000	6,000	125,000	3,500	129,000	5,500	105,000	1,000	90,000	1,000	90,000	2,500
Economics	135,000	4,000	130,000	5,000	169,000	6,000	180,000	9,000	134,000	5,000	109,000	2,500	118,000	17,500
Political science and government	103,000	4,000	101,000	13,000	124,000	6,000	110,000	22,000	105,000	3,000	90,000	4,000	84,000	6,000
Sociology, demography, and population studies	90,000	2,000	101,000	16,000	114,000	10,000	92,000	7,000	93,000	4,000	85,000	2,500	82,000	6,000
Other social sciences	90,000	500	118,000	7,000	99,000	1,500	103,000	5,500	90,000	2,500	81,000	1,500	84,000	4,000
Engineering	137,000	2,000	145,000	4,000	150,000	500	148,000	5,000	135,000	1,000	104,000	1,500	130,000	4,000
Aerospace, aeronautical, and astronautical engineering	137,000	4,500	135,000	5,500	157,000	9,500	148,000	10,500	135,000	4,000	105,000	8,000	135,000	27,500
Chemical engineering	139,000	4,000	131,000	12,500	150,000	1,500	145,000	17,500	135,000	4,000	104,000	4,000	133,000	7,500
Civil engineering	119,000	4,500	110,000	10,000	138,000	7,500	115,000	6,000	110,000	3,000	100,000	2,500	120,000	7,500
Electrical and computer engineering	150,000	2,000	159,000	5,500	175,000	6,000	182,000	4,000	150,000	500	107,000	2,500	136,000	3,500
Mechanical engineering	130,000	2,000	134,000	4,500	143,000	5,500	151,000	25,000	130,000	1,000	99,000	6,500	133,000	10,500
Metallurgical and materials engineering	134,000	3,500	145,000	9,000	147,000	5,000	150,000	27,000	130,000	4,500	108,000	8,000	125,000	6,000
Other engineering	130,000	500	130,000	3,000	145,000	4,500	153,000	10,500	128,000	3,000	103,000	3,500	129,000	4,500
Health	110,000	1,500	109,000	10,000	130,000	3,000	120,000	4,000	109,000	2,000	93,000	3,000	102,000	4,500

S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] R&D includes applied and basic research, design, and development.

[c] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" If respondent reported more than one category of activity as primary or secondary work activity, respondent's salary appears in both categories. Residence location is based on reported living location on 1 February 2019.

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

TABLE 57-2

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and primary work activity: 2019

(Dollars)

Field of study	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	119,000	1,000	142,000	4,000	145,000	2,500	119,000	500	120,000	500	81,000	1,500	111,000	3,000
Science	110,000	500	140,000	1,500	140,000	2,000	116,000	3,000	118,000	1,500	80,000	500	104,000	2,000
Biological, agricultural, and environmental life sciences	110,000	1,500	117,000	5,000	132,000	3,000	159,000	8,500	108,000	2,500	75,000	1,500	103,000	4,000
Agricultural and food sciences	110,000	1,000	107,000	8,500	139,000	5,000	94,000	13,500	107,000	4,000	82,000	3,000	99,000	7,500
Biochemistry and biophysics	117,000	3,500	122,000	12,000	140,000	9,000	176,000	16,500	114,000	5,000	72,000	4,500	117,000	11,000
Cell, cellular biology, and molecular biology	111,000	4,500	125,000	10,500	134,000	3,500	180,000	18,000	106,000	5,500	75,000	5,000	94,000	12,000
Microbiological sciences and immunology	110,000	3,000	69,000	4,500	129,000	5,000	157,000	12,500	109,000	2,500	77,000	6,000	94,000	9,000
Natural resources and conservation	97,000	2,500	89,000	6,500	119,000	9,500	105,000	16,500	98,000	3,000	70,000	1,000	91,000	5,000
Zoology	96,000	4,500	116,000	28,500	120,000	5,500	75,000	6,500	99,000	6,500	76,000	3,000	89,000	16,500
Other biological sciences	107,000	2,500	118,000	6,500	130,000	2,500	160,000	13,000	107,000	3,000	75,000	2,000	110,000	5,500
Computer and information sciences	150,000	3,000	162,000	5,500	185,000	9,000	152,000	46,000	158,000	8,000	96,000	3,500	108,000	19,000
Mathematics and statistics	114,000	3,500	148,000	5,500	164,000	7,500	142,000	7,000	133,000	3,500	80,000	1,500	129,000	12,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	120,000	500	131,000	5,500	154,000	3,000	149,000	14,000	120,000	2,500	75,000	1,000	110,000	7,000
Astronomy and astrophysics	110,000	6,500	121,000	14,500	155,000	11,000	203,000	40,000	110,000	9,500	77,000	6,000	101,000	10,500
Chemistry, except biochemistry	119,000	2,000	119,000	6,500	149,000	2,000	154,000	17,500	120,000	1,500	70,000	1,500	118,000	9,000
Geosciences, atmospheric sciences, and ocean sciences	105,000	2,000	115,000	9,500	139,000	6,000	109,000	11,000	110,000	2,500	80,000	2,000	100,000	6,500
Physics	130,000	1,000	144,000	5,500	170,000	4,500	158,000	22,000	130,000	2,000	80,000	1,500	117,000	11,500
Psychology	101,000	1,500	138,000	11,000	120,000	2,000	101,000	1,500	110,000	3,500	79,000	2,000	102,000	5,500
Social sciences	101,000	2,000	115,000	7,500	135,000	4,000	130,000	10,000	120,000	2,000	81,000	2,000	99,000	2,500
Economics	135,000	4,000	114,000	19,500	176,000	9,500	180,000	14,000	149,000	3,000	97,000	2,500	120,000	25,500
Political science and government	103,000	4,000	125,000	16,000	138,000	8,000	116,000	26,000	110,000	6,000	82,000	3,000	98,000	6,500
Sociology, demography, and population studies	90,000	2,000	D	D	121,000	6,000	92,000	10,500	103,000	8,000	79,000	2,500	98,000	3,500
Other social sciences	90,000	500	109,000	7,500	107,000	4,500	108,000	10,500	96,000	2,500	78,000	1,500	90,000	4,000
Engineering	137,000	2,000	149,000	2,500	160,000	2,500	149,000	4,000	135,000	1,000	95,000	2,500	137,000	4,500
Aerospace, aeronautical, and astronautical engineering	137,000	4,500	136,000	9,000	170,000	17,500	S	S	131,000	6,000	90,000	11,500	133,000	40,500
Chemical engineering	139,000	4,000	125,000	25,000	154,000	4,500	137,000	10,000	135,000	3,500	85,000	6,500	134,000	9,000
Civil engineering	119,000	4,500	128,000	7,500	149,000	4,000	109,000	17,500	109,000	2,500	97,000	4,500	117,000	16,500
Electrical and computer engineering	150,000	2,000	160,000	4,000	190,000	7,500	184,000	4,000	150,000	500	99,000	3,000	139,000	7,000
Mechanical engineering	130,000	2,000	130,000	4,500	158,000	5,500	152,000	43,000	130,000	2,500	93,000	6,500	155,000	10,500
Metallurgical and materials engineering	134,000	3,500	145,000	16,500	154,000	6,500	188,000	30,000	130,000	3,000	82,000	8,000	117,000	3,500
Other engineering	130,000	500	138,000	5,000	155,000	7,000	154,000	10,000	125,000	3,500	94,000	4,500	144,000	5,500
Health	110,000	1,500	119,000	17,000	139,000	8,000	122,000	5,000	118,000	3,000	86,000	3,000	110,000	11,500

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.
[b] R&D includes applied and basic research, design, and development.
[c] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

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

TABLE 58

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2019

(Dollars)

Employer location	All fields		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All locations	119,000	1,000	110,000	500	110,000	1,500	150,000	3,000	114,000	3,500	120,000	500	101,000	1,500	101,000	2,000	137,000	2,000	110,000	1,500
New England	126,000	3,500	120,000	2,000	120,000	2,000	155,000	10,500	119,000	8,500	125,000	4,000	110,000	3,000	117,000	5,000	146,000	4,000	125,000	10,000
Connecticut	120,000	5,000	116,000	6,500	112,000	8,500	135,000	27,000	134,000	31,000	109,000	10,000	118,000	12,500	117,000	7,500	140,000	8,500	85,000	14,500
Maine	85,000	6,500	83,000	6,000	75,000	9,500	D	D	D	D	92,000	10,500	103,000	9,000	71,000	9,000	D	D	S	S
Massachusetts	133,000	3,000	129,000	3,000	124,000	4,000	160,000	12,500	124,000	14,500	130,000	5,500	111,000	4,500	125,000	6,000	148,000	2,000	149,000	8,500
New Hampshire	119,000	12,000	113,000	12,500	100,000	23,500	S	S	S	S	124,000	12,500	105,000	21,000	88,000	16,000	130,000	7,500	89,000	3,500
Rhode Island	106,000	4,000	107,000	4,500	102,000	6,500	D	D	106,000	23,000	109,000	6,000	107,000	24,000	111,000	17,500	100,000	22,000	110,000	2,500
Vermont	104,000	4,000	102,000	10,500	99,000	21,500	D	D	104,000	8,500	73,000	12,000	143,000	30,500	93,000	17,000	134,000	5,000	D	D
Middle Atlantic	122,000	3,000	120,000	500	119,000	2,500	160,000	6,500	140,000	7,500	120,000	4,500	104,000	2,500	109,000	3,500	133,000	5,000	126,000	9,500
New Jersey	136,000	4,500	134,000	5,000	140,000	10,000	159,000	11,500	150,000	17,500	138,000	8,500	109,000	13,000	119,000	7,000	144,000	6,000	135,000	4,000
New York	125,000	3,500	120,000	2,000	109,000	5,000	180,000	10,000	157,000	7,000	124,000	5,000	105,000	3,000	117,000	6,500	135,000	5,500	138,000	15,500
Pennsylvania	110,000	3,500	108,000	3,000	119,000	5,000	139,000	11,500	119,000	8,000	108,000	6,000	100,000	4,000	100,000	4,000	124,000	5,000	110,000	7,500
East North Central	105,000	1,500	100,000	500	100,000	2,500	115,000	7,500	95,000	6,000	105,000	4,000	100,000	2,500	92,000	2,500	123,000	3,000	100,000	4,000
Illinois	115,000	4,500	109,000	2,500	109,000	3,500	129,000	11,000	89,000	8,000	114,000	9,500	108,000	6,500	99,000	3,500	129,000	3,000	100,000	9,000
Indiana	99,000	3,000	96,000	4,000	104,000	7,500	99,000	2,500	95,000	7,000	92,000	15,000	86,000	4,500	85,000	5,500	114,000	10,500	82,000	7,000
Michigan	109,000	2,500	100,000	2,000	94,000	6,000	115,000	12,500	99,000	17,500	110,000	10,000	107,000	6,000	89,000	6,500	120,000	4,500	97,000	3,000
Ohio	105,000	3,000	100,000	1,000	101,000	3,500	114,000	15,000	104,000	13,500	101,000	4,500	99,000	3,000	87,000	6,500	120,000	5,000	108,000	12,500
Wisconsin	97,000	3,500	92,000	3,500	95,000	5,000	134,000	28,000	71,000	12,500	90,000	3,500	95,000	7,500	82,000	14,000	109,000	5,000	85,000	5,500
West North Central	100,000	1,000	95,000	1,500	100,000	3,000	113,000	10,500	89,000	5,500	99,000	3,000	93,000	3,500	85,000	3,500	119,000	3,000	100,000	3,500
Iowa	92,000	4,000	90,000	2,000	97,000	7,000	97,000	21,500	83,000	14,500	83,000	12,500	89,000	6,500	79,000	5,500	107,000	15,000	106,000	4,500
Kansas	97,000	2,500	89,000	7,000	95,000	7,500	D	D	78,000	6,500	81,000	18,000	85,000	8,000	81,000	5,500	100,000	2,000	99,000	5,500
Minnesota	110,000	3,000	102,000	4,000	99,000	2,500	122,000	19,500	93,000	5,500	118,000	9,500	102,000	5,500	89,000	2,500	136,000	7,500	106,000	8,500
Missouri	98,000	3,500	95,000	4,500	103,000	5,500	94,000	26,000	104,000	16,000	93,000	10,000	80,000	5,500	80,000	7,000	111,000	8,500	84,000	8,000
Nebraska	96,000	3,500	90,000	6,500	94,000	10,000	D	D	79,000	6,500	85,000	2,000	94,000	4,000	80,000	12,000	98,000	5,500	98,000	5,500
North Dakota	83,000	7,000	80,000	5,000	78,000	5,000	D	D	D	D	63,000	14,500	D	D	91,000	6,500	90,000	26,500	D	D
South Dakota	85,000	6,000	87,000	7,500	92,000	11,000	D	D	D	D	57,000	10,500	94,000	13,000	84,000	9,500	83,000	3,500	D	D
South Atlantic	115,000	2,000	110,000	500	109,000	3,000	125,000	7,500	109,000	4,500	118,000	4,500	100,000	2,000	118,000	3,500	125,000	1,000	114,000	4,000
Delaware	131,000	4,000	130,000	5,500	130,000	11,000	D	D	144,000	35,500	135,000	8,000	93,000	1,500	108,000	45,000	136,000	7,000	104,000	17,500
District of Columbia	139,000	2,500	140,000	2,500	120,000	5,500	148,000	18,500	130,000	11,500	129,000	5,000	129,000	8,500	150,000	1,500	130,000	7,000	119,000	15,000
Florida	100,000	1,500	95,000	2,500	89,000	4,000	105,000	11,000	86,000	12,000	96,000	8,500	99,000	4,500	94,000	7,000	111,000	6,500	104,000	6,500
Georgia	101,000	2,000	95,000	2,500	99,000	7,500	114,000	18,000	88,000	16,000	93,000	4,500	95,000	3,000	94,000	5,000	120,000	9,000	113,000	11,000
Maryland	125,000	1,000	122,000	3,500	119,000	4,000	134,000	5,500	130,000	6,500	134,000	4,500	117,000	5,000	109,000	9,500	135,000	5,000	126,000	5,500
North Carolina	109,000	2,500	105,000	4,000	110,000	5,500	129,000	6,500	103,000	11,000	100,000	8,000	97,000	4,000	100,000	6,000	123,000	4,000	101,000	6,000
South Carolina	94,000	3,500	89,000	5,000	91,000	9,000	109,000	34,500	98,000	6,000	99,000	6,000	79,000	9,500	79,000	4,000	106,000	8,500	90,000	24,000

TABLE 58

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2019

(Dollars)

Employer location	All fields		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Virginia	120,000	2,500	111,000	6,000	114,000	7,500	120,000	21,500	137,000	17,500	112,000	9,500	95,000	3,500	113,000	9,000	130,000	2,000	101,000	14,500
West Virginia	87,000	10,500	79,000	3,500	79,000	8,500	D	D	S	S	S	S	98,000	19,000	79,000	10,500	104,000	10,000	D	D
East South Central	98,000	2,500	94,000	2,500	97,000	3,500	98,000	13,500	73,000	5,000	98,000	5,500	94,000	4,500	90,000	4,500	125,000	5,000	97,000	6,000
Alabama	101,000	5,000	98,000	3,000	100,000	4,500	109,000	26,500	74,000	11,500	99,000	9,000	96,000	11,000	95,000	21,500	127,000	16,500	85,000	15,500
Kentucky	94,000	5,000	89,000	4,000	104,000	8,000	D	D	72,000	7,500	78,000	15,000	82,000	9,000	83,000	14,000	117,000	13,000	90,000	14,000
Mississippi	91,000	4,500	84,000	6,500	84,000	9,500	S	S	D	D	94,000	9,500	70,000	9,500	90,000	9,500	116,000	15,000	110,000	9,500
Tennessee	100,000	1,000	95,000	3,000	94,000	6,000	88,000	13,000	70,000	7,000	99,000	5,500	99,000	2,500	92,000	5,000	129,000	7,500	97,000	5,000
West South Central	109,000	2,500	100,000	2,000	93,000	4,500	116,000	10,000	99,000	3,500	119,000	6,500	99,000	3,000	87,000	3,500	134,000	5,000	96,000	5,000
Arkansas	88,000	5,000	84,000	5,500	79,000	4,500	S	S	D	D	85,000	8,000	92,000	27,000	72,000	11,500	133,000	26,000	95,000	4,500
Louisiana	85,000	3,500	83,000	3,500	86,000	8,000	96,000	30,000	79,000	17,500	82,000	4,500	85,000	12,000	75,000	5,500	96,000	12,000	72,000	10,000
Oklahoma	100,000	3,500	91,000	5,500	87,000	6,500	D	D	76,000	17,000	100,000	6,500	98,000	12,000	74,000	4,000	122,000	6,000	100,000	19,500
Texas	115,000	2,000	102,000	3,500	97,000	4,500	118,000	13,500	100,000	5,000	124,000	6,000	99,000	1,500	93,000	5,000	139,000	3,500	99,000	8,000
Mountain	107,000	2,000	100,000	500	94,000	3,000	131,000	9,500	96,000	4,500	111,000	5,500	100,000	4,000	90,000	4,000	130,000	1,000	99,000	5,500
Arizona	113,000	5,500	101,000	5,000	105,000	10,500	126,000	12,000	99,000	5,500	107,000	7,500	106,000	6,500	94,000	6,500	133,000	3,000	99,000	9,500
Colorado	110,000	4,000	101,000	3,500	96,000	5,000	170,000	15,000	98,000	11,500	114,000	6,500	96,000	8,000	94,000	4,500	131,000	3,500	95,000	12,000
Idaho	99,000	5,000	95,000	7,000	95,000	8,500	D	D	D	D	96,000	7,500	105,000	20,000	73,000	33,000	110,000	8,000	D	D
Montana	85,000	5,000	81,000	6,000	81,000	8,500	D	D	D	D	72,000	13,000	96,000	27,500	74,000	3,000	99,000	12,000	D	D
Nevada	101,000	5,500	102,000	6,500	123,000	24,000	S	S	S	S	100,000	27,000	105,000	17,500	95,000	4,500	94,000	17,000	110,000	25,500
New Mexico	121,000	4,000	114,000	13,000	86,000	11,500	71,000	16,000	124,000	10,500	140,000	4,500	97,000	9,500	81,000	6,500	133,000	8,500	127,000	52,000
Utah	104,000	4,000	100,000	4,500	90,000	3,500	138,000	8,500	76,000	14,000	105,000	3,000	102,000	4,500	95,000	4,500	121,000	6,500	108,000	17,000
Wyoming	78,000	5,000	77,000	4,500	76,000	3,500	D	D	D	D	74,000	17,500	D	D	D	D	*	*	D	D
Pacific	140,000	1,000	128,000	3,000	120,000	500	180,000	2,500	142,000	6,000	136,000	5,000	111,000	4,000	110,000	4,000	159,000	4,000	115,000	7,500
Alaska	100,000	5,000	100,000	6,000	103,000	5,000	D	D	D	D	97,000	8,000	80,000	6,000	81,000	4,500	104,000	24,000	D	D
California	148,000	3,500	134,000	2,500	124,000	3,500	186,000	6,500	147,000	4,500	144,000	4,000	116,000	3,500	116,000	4,500	160,000	4,000	125,000	8,000
Hawaii	97,000	6,000	96,000	7,000	105,000	23,000	D	D	105,000	45,000	99,000	10,000	105,000	15,000	86,000	8,000	96,000	13,500	S	S
Oregon	119,000	1,000	107,000	4,000	100,000	6,000	144,000	9,500	99,000	6,500	121,000	5,000	100,000	3,500	94,000	7,000	132,000	4,000	102,000	6,000
Washington	125,000	3,500	119,000	2,000	114,000	6,500	173,000	8,500	132,000	11,500	115,000	8,000	110,000	6,000	93,000	7,500	149,000	7,500	107,000	7,500
Puerto Rico	77,000	5,000	72,000	6,500	72,000	10,000	S	S	D	D	71,000	2,500	58,000	9,000	79,000	7,500	88,000	5,500	D	D
Others	98,000	9,000	96,000	10,500	97,000	22,500	S	S	D	D	91,000	15,500	D	D	97,000	33,000	95,000	46,000	D	D

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Because survey sample design does not include geography, reliability of estimates in some states may be poor due to small sample size. Residence location is based on reported living location on 1 February 2019.

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

TABLE 59

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2019

(Dollars)

Field of study and sex	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	95,000	500	130,000	1,000	95,000	1,000	82,000	1,000	65,000	1,000	72,000	7,500	65,000	1,500
Male	100,000	500	135,000	1,500	98,000	1,000	85,000	1,000	67,000	2,500	74,000	10,500	68,000	2,000
Female	86,000	1,500	120,000	3,000	91,000	1,500	80,000	500	62,000	2,000	62,000	10,500	64,000	1,500
Science	92,000	1,000	128,000	2,500	92,000	1,000	80,000	1,500	63,000	1,500	67,000	10,000	65,000	500
Male	100,000	1,000	130,000	2,000	95,000	1,500	83,000	1,500	65,000	1,000	71,000	11,500	67,000	2,000
Female	84,000	1,500	119,000	1,000	90,000	500	78,000	1,500	60,000	1,500	61,000	8,000	64,000	1,500
Biological, agricultural, and environmental life sciences	90,000	500	140,000	3,500	101,000	2,000	85,000	1,000	65,000	1,500	75,000	6,000	60,000	500
Male	100,000	1,500	148,000	4,000	105,000	3,000	89,000	1,500	69,000	3,000	80,000	14,500	60,000	500
Female	80,000	500	124,000	5,000	97,000	3,500	82,000	2,500	60,000	3,000	69,000	15,000	60,000	1,000
Agricultural and food sciences	95,000	1,500	119,000	1,500	91,000	5,000	79,000	1,500	67,000	6,500	S	S	65,000	2,000
Male	100,000	1,500	120,000	4,500	93,000	6,000	79,000	2,000	66,000	6,000	D	D	69,000	10,000
Female	80,000	3,000	109,000	7,500	89,000	7,500	80,000	4,000	88,000	34,000	D	D	60,000	4,000
Biochemistry and biophysics	92,000	6,000	159,000	8,000	101,000	5,000	80,000	3,500	64,000	2,500	S	S	59,000	1,500
Male	102,000	6,500	170,000	15,000	101,000	6,000	87,000	9,500	64,000	3,000	S	S	59,000	2,000
Female	76,000	6,000	121,000	17,000	102,000	3,500	70,000	9,000	S	S	D	D	59,000	2,000
Cell, cellular biology, and molecular biology	88,000	4,000	156,000	12,000	105,000	6,000	90,000	4,000	63,000	6,500	D	D	60,000	1,500
Male	98,000	5,000	165,000	19,000	116,000	4,500	92,000	8,000	64,000	6,500	D	D	64,000	3,000
Female	75,000	4,000	145,000	8,000	95,000	9,500	82,000	7,000	62,000	4,500	D	D	56,000	2,000
Microbiological sciences and immunology	86,000	3,000	160,000	22,000	104,000	8,000	91,000	6,500	68,000	8,500	D	D	59,000	2,000
Male	94,000	8,500	178,000	13,000	112,000	8,000	104,000	5,500	75,000	10,500	D	D	58,000	4,000
Female	82,000	3,500	115,000	10,500	91,000	9,000	85,000	5,000	61,000	9,500	D	D	59,000	2,000
Natural resources and conservation	83,000	3,500	128,000	17,000	83,000	2,500	75,000	5,000	59,000	500	D	D	67,000	7,000
Male	90,000	5,000	135,000	20,000	80,000	3,500	75,000	7,500	58,000	3,500	D	D	68,000	10,500
Female	77,000	3,500	102,000	8,500	87,000	4,500	75,000	6,500	58,000	1,500	D	D	65,000	9,000
Zoology	90,000	5,000	124,000	5,000	85,000	6,000	68,000	8,500	61,000	5,500	D	D	60,000	8,000
Male	101,000	6,000	129,000	8,500	85,000	7,000	63,000	12,500	D	D	D	D	61,000	4,000
Female	73,000	3,000	100,000	15,000	78,000	14,000	73,000	12,500	59,000	4,500	D	D	51,000	6,500
Other biological sciences	90,000	500	142,000	6,000	105,000	3,000	87,000	2,500	65,000	2,500	D	D	60,000	1,000
Male	100,000	2,500	148,000	5,500	110,000	4,500	90,000	1,500	71,000	5,000	D	D	59,000	2,000
Female	82,000	2,500	129,000	8,500	98,000	5,500	83,000	2,500	60,000	3,500	D	D	60,000	500
Computer and information sciences	109,000	3,500	138,000	7,500	104,000	6,000	99,000	3,000	82,000	12,000	D	D	104,000	12,000
Male	110,000	2,000	143,000	5,000	106,000	5,500	99,000	1,000	91,000	20,000	D	D	96,000	17,500
Female	100,000	2,000	116,000	4,000	95,000	4,000	91,000	3,000	78,000	14,500	D	D	141,000	44,500

TABLE 59

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2019

(Dollars)

Field of study and sex	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Mathematics and statistics	90,000	1,000	110,000	3,000	85,000	2,500	72,000	3,000	59,000	2,500	D	D	77,000	9,000
Male	92,000	2,500	114,000	3,500	85,000	3,500	74,000	3,500	60,000	2,500	D	D	77,000	9,500
Female	80,000	1,000	100,000	2,500	81,000	4,500	70,000	3,000	58,000	5,000	D	D	70,000	28,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90,000	500	126,000	3,000	87,000	2,500	76,000	2,500	60,000	2,000	59,000	17,500	70,000	2,000
Male	93,000	2,500	127,000	3,500	86,000	3,000	80,000	2,500	64,000	3,500	D	D	73,000	4,000
Female	80,000	1,000	124,000	6,000	89,000	4,000	71,000	3,000	57,000	2,500	S	S	62,000	3,000
Astronomy and astrophysics	90,000	5,500	140,000	8,500	89,000	10,500	78,000	5,500	58,000	3,000	D	D	73,000	4,000
Male	96,000	6,000	144,000	11,000	85,000	10,000	73,000	7,000	S	S	D	D	73,000	8,000
Female	87,000	4,500	120,000	11,000	97,000	6,000	83,000	7,000	S	S	D	D	67,000	3,500
Chemistry, except biochemistry	84,000	2,000	126,000	5,000	81,000	2,000	72,000	3,500	60,000	3,500	D	D	63,000	4,500
Male	89,000	2,000	129,000	8,500	81,000	3,000	75,000	3,500	60,000	6,500	D	D	67,000	8,500
Female	75,000	3,000	110,000	12,000	80,000	1,000	66,000	3,500	58,000	2,500	D	D	56,000	2,500
Geosciences, atmospheric sciences, and ocean sciences	90,000	1,000	121,000	4,500	88,000	3,000	75,000	1,500	62,000	4,500	D	D	73,000	3,500
Male	93,000	3,500	120,000	3,500	86,000	3,000	77,000	2,500	77,000	13,000	D	D	76,000	6,000
Female	83,000	4,000	128,000	3,500	93,000	6,000	70,000	2,500	58,000	2,000	D	D	68,000	3,500
Physics	100,000	2,500	129,000	5,500	95,000	6,000	84,000	6,000	68,000	9,500	D	D	72,000	4,500
Male	100,000	1,500	126,000	6,000	94,000	6,000	89,000	4,000	74,000	7,000	D	D	75,000	5,500
Female	89,000	5,500	150,000	22,500	103,000	15,000	78,000	2,000	48,000	12,000	D	D	65,000	5,000
Psychology	92,000	2,000	125,000	2,500	89,000	1,500	76,000	2,500	64,000	4,500	D	D	81,000	2,000
Male	100,000	1,500	129,000	3,000	89,000	2,000	77,000	3,000	60,000	5,500	D	D	94,000	9,500
Female	88,000	1,500	119,000	6,000	89,000	2,500	75,000	3,000	65,000	5,000	D	D	80,000	3,500
Social sciences	95,000	500	124,000	4,500	90,000	2,000	78,000	2,000	60,000	1,500	D	D	79,000	3,000
Male	100,000	2,000	129,000	3,500	90,000	2,500	80,000	2,500	59,000	3,500	D	D	89,000	6,500
Female	86,000	2,000	115,000	5,500	87,000	2,000	77,000	2,000	62,000	3,000	D	D	74,000	3,500
Economics	119,000	3,000	149,000	8,000	108,000	4,000	101,000	4,000	78,000	9,500	D	D	99,000	12,500
Male	123,000	6,500	152,000	10,500	109,000	5,000	109,000	8,000	85,000	28,500	D	D	99,000	15,500
Female	104,000	3,500	129,000	12,000	103,000	5,000	96,000	5,500	76,000	10,500	D	D	S	S
Political science and government	95,000	3,000	119,000	4,500	85,000	4,000	75,000	3,500	70,000	14,500	D	D	88,000	8,500
Male	99,000	4,000	122,000	7,500	82,000	3,500	74,000	4,000	64,000	15,000	D	D	95,000	18,000
Female	88,000	4,000	114,000	10,000	87,000	6,500	76,000	5,500	71,000	17,500	D	D	83,000	4,500
Sociology, demography, and population studies	87,000	2,000	126,000	4,500	82,000	3,000	75,000	2,500	54,000	4,000	D	D	69,000	6,000
Male	93,000	5,500	129,000	5,000	83,000	4,000	75,000	4,500	52,000	22,000	D	D	78,000	11,000
Female	84,000	2,500	121,000	16,500	82,000	3,500	74,000	3,500	55,000	6,000	D	D	66,000	3,000

TABLE 59

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2019

(Dollars)

Field of study and sex	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Other social sciences	85,000	2,000	110,000	3,500	85,000	1,500	72,000	2,000	60,000	1,500	D	D	75,000	3,000
Male	90,000	2,000	115,000	5,500	86,000	3,500	70,000	2,500	58,000	7,000	D	D	83,000	8,000
Female	82,000	2,500	107,000	5,000	84,000	1,500	73,000	2,000	61,000	3,500	D	D	73,000	4,500
Engineering	108,000	2,000	144,000	3,500	107,000	2,000	89,000	500	76,000	3,500	S	S	71,000	4,500
Male	109,000	1,500	144,000	3,500	107,000	2,000	90,000	500	78,000	3,500	D	D	79,000	5,500
Female	97,000	3,000	148,000	7,500	106,000	3,500	86,000	2,500	71,000	3,500	S	S	66,000	4,000
Aerospace, aeronautical, and astronautical engineering	107,000	9,500	161,000	27,000	99,000	6,500	93,000	9,000	S	S	D	D	91,000	7,500
Male	100,000	8,000	153,000	29,000	97,000	8,500	90,000	6,500	D	D	D	D	91,000	13,000
Female	124,000	5,500	D	D	115,000	17,500	D	D	D	D	D	D	D	D
Chemical engineering	106,000	7,500	147,000	16,000	107,000	7,000	99,000	9,000	D	D	D	D	57,000	4,000
Male	119,000	13,000	150,000	21,000	106,000	7,000	104,000	20,500	D	D	D	D	55,000	4,500
Female	85,000	10,500	125,000	16,000	108,000	21,500	74,000	12,500	D	D	D	D	69,000	10,500
Civil engineering	105,000	4,500	141,000	4,500	102,000	6,000	86,000	3,500	79,000	2,000	D	D	77,000	11,500
Male	106,000	4,500	142,000	5,500	100,000	5,500	89,000	5,500	78,000	2,000	D	D	82,000	13,000
Female	105,000	8,500	131,000	8,000	114,000	5,500	84,000	2,500	S	S	D	D	51,000	14,000
Electrical and computer engineering	110,000	6,000	141,000	6,500	106,000	2,000	89,000	5,500	83,000	12,000	D	D	117,000	12,500
Male	111,000	6,000	142,000	6,000	107,000	2,000	89,000	4,500	92,000	18,500	D	D	118,000	9,500
Female	108,000	8,000	140,000	6,000	101,000	4,000	70,000	24,000	D	D	D	D	84,000	28,000
Mechanical engineering	104,000	5,500	126,000	5,000	105,000	5,000	87,000	2,500	75,000	8,000	D	D	88,000	9,500
Male	108,000	5,000	125,000	5,500	107,000	5,500	88,000	2,500	80,000	9,500	D	D	86,000	15,500
Female	92,000	4,500	165,000	24,500	100,000	9,000	79,000	12,500	D	D	D	D	90,000	16,000
Metallurgical and materials engineering	100,000	7,000	165,000	21,500	113,000	5,500	89,000	5,000	D	D	D	D	62,000	8,000
Male	107,000	7,500	156,000	26,500	113,000	5,500	89,000	5,500	D	D	D	D	60,000	7,000
Female	84,000	9,500	175,000	16,500	D	D	D	D	D	D	D	D	66,000	17,500
Other engineering	105,000	4,000	153,000	5,500	111,000	5,000	90,000	2,000	69,000	7,500	D	D	65,000	2,500
Male	111,000	4,000	153,000	5,500	112,000	5,500	90,000	3,500	68,000	11,000	D	D	70,000	5,500
Female	94,000	3,000	151,000	13,000	107,000	5,500	89,000	1,500	68,000	6,500	D	D	61,000	2,500
Health	97,000	3,000	139,000	4,500	99,000	1,500	84,000	2,500	59,000	9,500	S	S	70,000	2,000
Male	100,000	6,000	154,000	10,500	100,000	7,000	82,000	3,000	S	S	D	D	63,000	8,500
Female	94,000	3,000	125,000	5,500	99,000	3,000	85,000	2,500	58,000	7,500	S	S	74,000	2,500

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 60

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, faculty rank, and years since doctorate: 2019

(Dollars)

	All full-time employed				Full professor				Associate professor				Assistant professor				Instructor or lecturer				All other faculty				Rank not applicable			
	< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10	
Field of study and sex	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	72,000	500	108,000	1,000	82,000	5,500	130,000	2,000	85,000	2,000	97,000	1,500	82,000	1,000	87,000	2,500	61,000	2,000	70,000	1,500	62,000	11,500	74,000	18,500	58,000	1,000	90,000	2,500
Male	75,000	500	113,000	2,500	81,000	4,500	135,000	2,000	90,000	2,000	100,000	1,500	84,000	1,500	90,000	1,500	64,000	2,500	75,000	3,000	68,000	19,500	106,000	50,000	58,000	500	100,000	1,000
Female	70,000	500	99,000	1,500	84,000	13,500	121,000	4,000	80,000	1,500	94,000	2,000	78,000	1,500	84,000	2,000	60,000	1,000	65,000	3,500	61,000	4,500	D	D	57,000	500	83,000	3,500
Science	70,000	1,500	105,000	1,500	75,000	8,500	129,000	2,000	80,000	1,500	95,000	1,000	80,000	500	84,000	2,000	60,000	500	68,000	2,500	61,000	11,000	72,000	14,500	57,000	1,000	89,000	1,000
Male	71,000	2,000	110,000	500	80,000	10,500	130,000	3,000	82,000	2,000	96,000	1,500	82,000	1,000	89,000	3,500	60,000	2,500	70,000	4,500	58,000	20,000	74,000	33,000	58,000	1,500	98,000	3,500
Female	67,000	1,500	95,000	1,500	72,000	22,500	119,000	1,000	74,000	4,000	91,000	2,000	75,000	1,500	82,000	2,000	59,000	2,000	64,000	3,000	61,000	5,500	D	D	57,000	500	81,000	3,500
Biological, agricultural, and environmental life sciences	61,000	1,500	106,000	3,000	70,000	3,500	140,000	4,000	81,000	9,500	103,000	2,500	83,000	2,000	89,000	2,000	60,000	2,500	70,000	4,000	74,000	5,500	66,000	31,000	55,000	1,000	75,000	2,500
Male	63,000	2,000	115,000	2,000	63,000	8,000	148,000	3,500	76,000	16,500	108,000	3,000	85,000	2,500	91,000	4,500	64,000	2,500	74,000	4,500	D	D	D	D	55,000	1,000	80,000	6,000
Female	60,000	500	95,000	2,000	71,000	2,000	125,000	5,000	83,000	7,500	97,000	3,000	78,000	3,000	84,000	2,500	57,000	2,000	68,000	6,000	D	D	D	D	55,000	1,500	74,000	2,000
Computer and information sciences	96,000	4,000	120,000	4,500	S	S	139,000	6,500	95,000	6,500	106,000	5,000	98,000	4,500	100,000	6,000	95,000	13,500	68,000	7,500	D	D	D	D	78,000	13,000	129,000	25,500
Male	99,000	3,000	122,000	5,000	D	D	143,000	5,000	98,000	9,000	107,000	6,000	99,000	3,000	100,000	6,500	97,000	21,000	70,000	15,500	D	D	D	D	76,000	14,000	114,000	15,500
Female	91,000	3,000	119,000	6,500	S	S	117,000	4,500	92,000	8,500	96,000	6,500	91,000	3,000	D	D	D	D	D	D	D	D	D	D	88,000	26,000	S	S
Mathematics and statistics	68,000	2,000	100,000	1,000	D	D	110,000	3,500	73,000	7,500	87,000	4,000	72,000	4,000	70,000	4,500	56,000	3,500	63,000	4,000	D	D	D	D	64,000	4,500	98,000	11,000
Male	69,000	3,500	102,000	2,500	D	D	114,000	3,500	75,000	9,500	87,000	3,500	74,000	4,500	72,000	6,500	57,000	2,500	64,000	3,500	D	D	D	D	64,000	7,000	100,000	20,500
Female	67,000	2,000	90,000	2,000	D	D	100,000	1,500	67,000	5,000	85,000	6,500	70,000	3,500	65,000	8,000	54,000	7,000	60,000	12,000	D	D	D	D	63,000	10,000	93,000	14,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	65,000	1,000	101,000	3,000	D	D	126,000	3,000	72,000	4,000	90,000	3,000	75,000	1,500	80,000	5,000	55,000	3,000	65,000	4,000	S	S	D	D	58,000	1,000	100,000	3,500
Male	66,000	2,000	105,000	4,500	D	D	127,000	3,500	75,000	5,000	88,000	3,000	78,000	3,000	83,000	5,500	55,000	5,500	72,000	7,500	D	D	D	D	58,000	1,500	106,000	6,000
Female	63,000	2,000	96,000	4,500	D	D	124,000	5,500	69,000	5,500	90,000	5,000	70,000	3,000	74,000	5,500	55,000	2,500	58,000	3,500	S	S	D	D	57,000	2,500	84,000	3,000
Psychology	73,000	1,500	102,000	2,000	110,000	25,500	125,000	2,500	71,000	4,500	92,000	3,000	75,000	2,000	80,000	6,500	63,000	4,000	62,000	6,000	D	D	D	D	65,000	3,500	96,000	4,000
Male	75,000	2,500	111,000	4,500	D	D	129,000	3,000	82,000	6,000	92,000	3,500	75,000	1,500	88,000	11,500	59,000	5,500	61,000	13,500	D	D	D	D	59,000	4,000	109,000	14,500
Female	72,000	1,500	96,000	2,500	D	D	119,000	6,500	67,000	2,500	90,000	3,000	75,000	3,000	74,000	8,000	66,000	9,000	60,000	9,000	D	D	D	D	68,000	4,000	91,000	3,500
Social sciences	75,000	1,000	104,000	2,000	79,000	8,500	124,000	4,500	80,000	2,500	90,000	1,000	78,000	1,500	80,000	1,500	59,000	2,000	65,000	5,500	D	D	D	D	65,000	3,000	98,000	4,500
Male	79,000	1,500	108,000	2,000	D	D	129,000	3,000	82,000	5,500	92,000	3,000	81,000	2,000	70,000	6,000	54,000	4,500	60,000	6,500	D	D	D	D	69,000	4,000	100,000	8,000
Female	72,000	1,000	96,000	2,500	71,000	26,000	115,000	5,000	79,000	2,500	90,000	2,500	74,000	1,500	81,000	3,000	59,000	1,500	69,000	4,000	D	D	D	D	61,000	1,500	94,000	5,000
Engineering	84,000	1,500	125,000	3,000	106,000	12,500	145,000	3,000	107,000	4,000	107,000	2,000	89,000	1,000	92,000	5,500	69,000	3,500	88,000	6,500	S	S	D	D	60,000	1,500	116,000	7,000
Male	85,000	2,000	125,000	3,000	*	*	144,000	3,500	108,000	4,000	106,000	2,000	90,000	500	90,000	7,500	68,000	5,000	88,000	7,000	D	D	D	D	62,000	3,000	121,000	9,000
Female	76,000	4,500	120,000	6,500	S	S	148,000	7,500	102,000	4,500	108,000	3,500	85,000	2,000	94,000	6,000	66,000	4,500	80,000	25,000	D	D	D	D	57,000	5,000	94,000	7,000
Health	80,000	1,500	114,000	3,000	91,000	11,000	142,000	5,500	89,000	4,000	105,000	4,500	82,000	2,500	91,000	6,500	67,000	12,000	57,000	12,500	D	D	D	D	56,000	5,000	83,000	11,000
Male	79,000	3,500	121,000	10,500	D	D	155,000	11,000	99,000	5,500	106,000	8,000	81,000	3,500	98,000	6,500	55,000	26,500	S	S	D	D	D	D	51,000	6,000	70,000	17,500
Female	80,000	2,000	109,000	2,000	82,000	13,000	129,000	5,500	85,000	4,500	105,000	4,000	82,000	3,000	90,000	6,500	69,000	8,000	51,000	10,000	*	*	D	D	59,000	8,000	89,000	14,500

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 61

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and faculty rank: 2019

(Dollars)

Field of study, ethnicity, and race	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	95,000	500	130,000	1,000	95,000	1,000	82,000	1,000	65,000	1,000	72,000	7,500	65,000	1,500
Hispanic or Latino[a]	88,000	1,500	119,000	3,500	91,000	2,500	82,000	1,500	60,000	5,000	S	S	60,000	1,500
Not Hispanic or Latino[b]														
American Indian or Alaska Native	89,000	4,000	120,000	22,500	92,000	7,000	88,000	7,000	D	D	D	D	D	D
Asian	90,000	500	140,000	5,500	101,000	3,000	87,000	2,500	64,000	3,000	50,000	4,500	60,000	1,500
Black or African American	89,000	1,500	117,000	5,500	92,000	2,000	78,000	2,000	60,000	4,000	D	D	70,000	6,500
White	98,000	1,000	130,000	1,000	94,000	1,500	82,000	1,000	64,000	1,000	72,000	3,000	72,000	1,500
Other race[c]	88,000	2,000	130,000	10,500	97,000	5,500	82,000	3,000	74,000	7,000	D	D	68,000	5,500
Science	92,000	1,000	128,000	2,500	92,000	1,000	80,000	1,500	63,000	1,500	67,000	10,000	65,000	500
Hispanic or Latino[a]	86,000	2,500	120,000	3,500	90,000	1,500	80,000	1,500	62,000	5,000	S	S	60,000	1,500
Not Hispanic or Latino[b]														
American Indian or Alaska Native	83,000	8,000	94,000	31,500	92,000	6,500	71,000	9,500	D	D	D	D	D	D
Asian	88,000	2,500	130,000	6,500	99,000	1,500	87,000	2,500	59,000	1,500	48,000	6,500	58,000	1,500
Black or African American	87,000	2,000	116,000	4,500	90,000	1,500	76,000	3,000	58,000	4,000	D	D	68,000	5,000
White	95,000	500	129,000	2,000	90,000	1,000	80,000	1,000	64,000	1,500	68,000	8,000	70,000	2,500
Other race[c]	86,000	2,000	123,000	8,000	97,000	7,500	81,000	2,500	71,000	5,000	D	D	63,000	6,000
Biological, agricultural, and environmental life sciences	90,000	500	140,000	3,500	101,000	2,000	85,000	1,000	65,000	1,500	75,000	6,000	60,000	500
Hispanic or Latino[a]	81,000	3,000	138,000	25,000	101,000	9,500	84,000	2,500	62,000	8,000	D	D	57,000	1,500
Not Hispanic or Latino[b]														
American Indian or Alaska Native	91,000	5,000	D	D	D	D	S	S	D	D	D	D	D	D
Asian	80,000	2,000	149,000	9,000	117,000	3,500	90,000	2,000	63,000	3,000	D	D	55,000	1,500
Black or African American	86,000	3,000	120,000	13,000	100,000	5,500	84,000	4,000	59,000	5,500	D	D	57,000	2,500
White	93,000	2,000	139,000	3,500	98,000	2,000	83,000	1,500	65,000	2,500	73,000	7,500	63,000	2,000
Other race[c]	80,000	3,500	141,000	13,500	97,000	17,000	87,000	11,500	85,000	35,000	D	D	53,000	2,500

TABLE 61

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and faculty rank: 2019

(Dollars)

Field of study, ethnicity, and race	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Computer and information sciences	109,000	3,500	138,000	7,500	104,000	6,000	99,000	3,000	82,000	12,000	D	D	104,000	12,000
Hispanic or Latino[a]	100,000	15,500	178,000	47,500	116,000	13,500	77,000	2,000	D	D	D	D	S	S
Not Hispanic or Latino[b]														
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	100,000	5,500	144,000	8,500	97,000	4,500	99,000	5,000	D	D	D	D	75,000	21,000
Black or African American	91,000	14,000	D	D	106,000	8,000	81,000	6,000	D	D	D	D	D	D
White	111,000	3,000	129,000	7,000	104,000	7,500	99,000	2,000	82,000	12,500	D	D	117,000	9,500
Other race[c]	141,000	44,000	D	D	D	D	*	*	D	D	D	D	D	D
Mathematics and statistics	90,000	1,000	110,000	3,000	85,000	2,500	72,000	3,000	59,000	2,500	D	D	77,000	9,000
Hispanic or Latino[a]	95,000	8,000	134,000	14,000	84,000	6,000	73,000	9,500	D	D	D	D	D	D
Not Hispanic or Latino[b]														
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	89,000	3,000	106,000	3,500	90,000	5,000	75,000	4,000	55,000	3,000	D	D	61,000	5,000
Black or African American	79,000	5,500	116,000	19,500	79,000	10,000	67,000	7,000	D	D	D	D	D	D
White	90,000	1,000	111,000	4,000	80,000	3,000	70,000	2,500	61,000	4,000	D	D	82,000	10,000
Other race[c]	101,000	16,500	*	*	S	S	D	D	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90,000	500	126,000	3,000	87,000	2,500	76,000	2,500	60,000	2,000	59,000	17,500	70,000	2,000
Hispanic or Latino[a]	80,000	2,500	101,000	20,000	79,000	3,500	75,000	4,500	51,000	11,000	D	D	66,000	8,000
Not Hispanic or Latino[b]														

TABLE 61

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and faculty rank: 2019

(Dollars)

Field of study, ethnicity, and race	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	80,000	3,000	139,000	9,500	97,000	9,500	81,000	4,000	56,000	2,500	D	D	60,000	1,500
Black or African American	80,000	6,500	104,000	19,000	85,000	6,500	66,000	3,000	52,000	7,000	D	D	58,000	6,000
White	93,000	2,000	125,000	3,000	86,000	3,000	75,000	1,500	62,000	2,500	70,000	5,000	84,000	5,000
Other race[c]	79,000	2,500	122,000	7,000	98,000	18,500	77,000	4,500	D	D	D	D	62,000	7,000
Psychology	92,000	2,000	125,000	2,500	89,000	1,500	76,000	2,500	64,000	4,500	D	D	81,000	2,000
Hispanic or Latino[a]	86,000	4,000	108,000	4,500	85,000	5,000	76,000	6,000	79,000	7,000	D	D	75,000	11,000
Not Hispanic or Latino[b]														
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	85,000	3,000	138,000	34,500	83,000	4,000	77,000	7,000	49,000	5,500	D	D	75,000	7,500
Black or African American	88,000	2,500	123,000	11,500	89,000	6,000	76,000	3,500	S	S	D	D	87,000	15,000
White	95,000	2,000	125,000	3,500	90,000	2,000	75,000	2,500	64,000	4,500	D	D	81,000	3,500
Other race[c]	88,000	4,000	109,000	7,000	94,000	10,000	85,000	17,500	D	D	D	D	80,000	10,000
Social sciences	95,000	500	124,000	4,500	90,000	2,000	78,000	2,000	60,000	1,500	D	D	79,000	3,000
Hispanic or Latino[a]	89,000	1,500	119,000	7,500	90,000	3,000	79,000	2,000	54,000	3,500	D	D	67,000	4,500
Not Hispanic or Latino[b]														
American Indian or Alaska Native	73,000	11,000	S	S	87,000	20,000	68,000	3,500	D	D	D	D	D	D
Asian	95,000	2,000	114,000	10,500	94,000	5,000	83,000	3,000	69,000	9,500	D	D	82,000	13,000
Black or African American	88,000	3,000	108,000	10,000	92,000	3,500	73,000	3,000	59,000	5,500	D	D	79,000	1,000
White	97,000	2,000	127,000	3,500	88,000	2,500	75,000	2,500	60,000	2,000	D	D	80,000	5,000
Other race[c]	91,000	7,500	120,000	25,000	86,000	7,000	83,000	2,500	D	D	D	D	81,000	19,000
Engineering	108,000	2,000	144,000	3,500	107,000	2,000	89,000	500	76,000	3,500	S	S	71,000	4,500
Hispanic or Latino[a]	95,000	4,000	108,000	9,000	102,000	6,500	87,000	3,000	47,000	13,000	D	D	75,000	9,500
Not Hispanic or Latino[b]														

TABLE 61

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and faculty rank: 2019

(Dollars)

Field of study, ethnicity, and race	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor or lecturer		All other faculty		Rank not applicable	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
American Indian or Alaska Native	D	D	S	S	D	D	D	D	D	D	D	D	D	D
Asian	100,000	3,500	140,000	3,500	107,000	3,500	88,000	3,500	73,000	7,000	D	D	62,000	3,500
Black or African American	100,000	4,500	139,000	15,500	109,000	6,500	88,000	3,500	72,000	13,000	D	D	60,000	12,500
White	111,000	2,500	150,000	3,000	106,000	2,000	90,000	1,000	78,000	4,500	S	S	95,000	7,500
Other race[c]	90,000	9,500	130,000	21,000	115,000	21,000	89,000	3,500	D	D	D	D	79,000	5,000
Health	97,000	3,000	139,000	4,500	99,000	1,500	84,000	2,500	59,000	9,500	S	S	70,000	2,000
Hispanic or Latino[a]	83,000	4,000	112,000	19,000	97,000	14,500	80,000	2,000	D	D	D	D	50,000	1,500
Not Hispanic or Latino[b]														
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	89,000	5,000	163,000	33,000	100,000	3,000	85,000	5,000	D	D	D	D	61,000	9,500
Black or African American	90,000	4,000	125,000	9,000	97,000	8,000	76,000	11,500	D	D	D	D	79,000	9,500
White	100,000	3,000	138,000	6,000	100,000	5,000	84,000	2,500	55,000	8,500	S	S	82,000	9,000
Other race[c]	92,000	9,500	S	S	92,000	18,000	76,000	5,500	D	D	D	D	S	S

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 62

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2019

(Dollars)

Field of study and sex	All full-time employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	95,000	500	111,000	1,500	85,000	500	75,000	1,500	75,000	500
Male	100,000	500	118,000	2,000	89,000	1,500	78,000	3,000	80,000	1,500
Female	86,000	1,500	102,000	2,000	81,000	1,500	74,000	1,000	70,000	500
Science	92,000	1,000	109,000	1,500	83,000	1,000	75,000	2,000	73,000	1,500
Male	100,000	1,000	115,000	2,500	87,000	1,500	75,000	2,000	78,000	2,500
Female	84,000	1,500	100,000	500	80,000	1,000	72,000	2,000	69,000	2,000
Biological, agricultural, and environmental life sciences	90,000	500	119,000	1,000	90,000	2,000	74,000	2,500	65,000	500
Male	100,000	1,500	124,000	4,500	93,000	2,000	75,000	3,500	68,000	3,000
Female	80,000	500	106,000	3,000	87,000	2,500	70,000	3,000	62,000	1,500
Agricultural and food sciences	95,000	1,500	115,000	3,500	80,000	3,500	74,000	4,500	70,000	1,500
Male	100,000	1,500	118,000	3,000	80,000	5,000	84,000	13,000	83,000	11,000
Female	80,000	3,000	102,000	6,000	79,000	5,500	68,000	4,000	67,000	6,000
Biochemistry and biophysics	92,000	6,000	128,000	8,000	85,000	10,500	73,000	8,000	60,000	4,000
Male	102,000	6,500	140,000	14,500	99,000	11,500	81,000	8,000	59,000	3,000
Female	76,000	6,000	109,000	7,500	79,000	12,500	60,000	6,000	64,000	5,000
Cell, cellular biology, and molecular biology	88,000	4,000	119,000	4,500	100,000	14,500	76,000	5,000	63,000	2,500
Male	98,000	5,000	119,000	14,000	97,000	10,000	70,000	7,500	81,000	9,000
Female	75,000	4,000	116,000	10,500	111,000	19,500	81,000	5,500	57,000	2,500
Microbiological sciences and immunology	86,000	3,000	124,000	9,500	98,000	3,500	72,000	5,500	65,000	4,500
Male	94,000	8,500	150,000	18,000	100,000	5,000	75,000	12,500	67,000	5,500
Female	82,000	3,500	100,000	10,000	89,000	6,500	72,000	4,500	62,000	4,000
Natural resources and conservation	83,000	3,500	109,000	9,000	75,000	5,500	62,000	7,500	70,000	5,500
Male	90,000	5,000	110,000	15,500	74,000	7,000	60,000	10,500	73,000	10,000
Female	77,000	3,500	100,000	5,000	76,000	7,500	63,000	8,000	68,000	5,000
Zoology	90,000	5,000	107,000	5,500	68,000	7,500	64,000	7,500	62,000	3,500
Male	101,000	6,000	115,000	7,500	60,000	7,500	75,000	18,000	68,000	10,000
Female	73,000	3,000	90,000	11,500	84,000	12,000	62,000	5,500	59,000	6,000
Other biological sciences	90,000	500	119,000	1,500	92,000	2,500	73,000	3,500	65,000	1,000
Male	100,000	2,500	122,000	4,500	96,000	4,000	75,000	4,500	65,000	1,500
Female	82,000	2,500	108,000	4,500	89,000	4,500	70,000	2,500	65,000	2,500
Computer and information sciences	109,000	3,500	120,000	3,500	100,000	2,000	95,000	4,500	100,000	5,000
Male	110,000	2,000	124,000	5,500	100,000	3,500	99,000	3,000	96,000	6,000
Female	100,000	2,000	114,000	9,000	92,000	4,000	85,000	8,000	104,000	24,000
Mathematics and statistics	90,000	1,000	100,000	1,500	76,000	3,500	65,000	3,500	71,000	3,500
Male	92,000	2,500	104,000	2,500	77,000	4,000	66,000	3,500	70,000	5,500
Female	80,000	1,000	90,000	3,000	72,000	6,500	64,000	5,500	71,000	4,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90,000	500	109,000	2,000	79,000	2,000	68,000	2,500	74,000	2,500
Male	93,000	2,500	109,000	2,000	81,000	2,500	71,000	5,500	79,000	3,000
Female	80,000	1,000	105,000	3,500	73,000	2,500	62,000	2,500	62,000	3,000
Astronomy and astrophysics	90,000	5,500	110,000	6,500	82,000	8,000	69,000	2,000	76,000	8,000
Male	96,000	6,000	109,000	7,000	80,000	11,500	69,000	3,000	89,000	9,000

TABLE 62

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2019

(Dollars)

Field of study and sex	All full-time employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Female	87,000	4,500	115,000	6,000	84,000	7,500	68,000	3,500	64,000	6,500
Chemistry, except biochemistry	84,000	2,000	100,000	2,500	72,000	3,500	62,000	3,500	66,000	5,000
Male	89,000	2,000	102,000	5,500	75,000	3,000	64,000	7,000	78,000	5,500
Female	75,000	3,000	95,000	5,500	65,000	4,000	57,000	3,500	58,000	3,000
Geosciences, atmospheric sciences, and ocean sciences	90,000	1,000	109,000	3,000	79,000	2,500	71,000	3,000	75,000	2,500
Male	93,000	3,500	107,000	3,500	80,000	3,000	78,000	4,000	79,000	4,500
Female	83,000	4,000	110,000	5,000	75,000	4,500	62,000	3,000	72,000	3,500
Physics	100,000	2,500	119,000	6,500	85,000	6,000	75,000	6,500	75,000	3,500
Male	100,000	1,500	118,000	8,500	89,000	5,000	77,000	10,000	78,000	3,500
Female	89,000	5,500	118,000	10,000	78,000	1,500	73,000	7,000	58,000	7,500
Psychology	92,000	2,000	103,000	2,500	75,000	1,000	85,000	3,500	86,000	3,000
Male	100,000	1,500	110,000	3,500	75,000	2,500	90,000	13,500	93,000	8,500
Female	88,000	1,500	98,000	2,500	74,000	1,500	84,000	2,500	83,000	3,500
Social sciences	95,000	500	105,000	1,500	80,000	1,000	70,000	3,000	84,000	3,000
Male	100,000	2,000	109,000	2,500	84,000	4,000	68,000	7,500	95,000	5,500
Female	86,000	2,000	98,000	2,500	78,000	2,500	70,000	3,000	75,000	3,500
Economics	119,000	3,000	125,000	5,000	111,000	7,000	94,000	10,000	107,000	10,500
Male	123,000	6,500	129,000	3,000	114,000	6,500	99,000	8,000	111,000	14,500
Female	104,000	3,500	110,000	7,000	105,000	6,000	70,000	11,500	101,000	9,000
Political science and government	95,000	3,000	105,000	3,500	75,000	3,000	75,000	8,000	104,000	15,000
Male	99,000	4,000	105,000	2,500	75,000	4,500	64,000	17,500	107,000	11,500
Female	88,000	4,000	100,000	4,500	75,000	4,500	77,000	5,500	85,000	17,500
Sociology, demography, and population studies	87,000	2,000	96,000	4,500	74,000	3,000	63,000	4,000	75,000	5,000
Male	93,000	5,500	105,000	6,500	69,000	3,500	62,000	10,000	85,000	16,000
Female	84,000	2,500	90,000	3,000	75,000	5,500	63,000	3,000	69,000	4,000
Other social sciences	85,000	2,000	97,000	2,500	74,000	1,000	65,000	2,000	75,000	3,000
Male	90,000	2,000	100,000	3,000	75,000	2,000	64,000	3,500	84,000	7,000
Female	82,000	2,500	93,000	3,000	74,000	1,000	66,000	4,500	72,000	3,500
Engineering	108,000	2,000	129,000	1,500	90,000	1,500	80,000	1,500	89,000	4,000
Male	109,000	1,500	129,000	3,000	92,000	1,500	80,000	2,500	96,000	5,500
Female	97,000	3,000	130,000	6,500	87,000	3,000	74,000	6,000	71,000	5,500
Aerospace, aeronautical, and astronautical engineering	107,000	9,500	124,000	7,500	99,000	14,000	87,000	11,000	94,000	6,000
Male	100,000	8,000	123,000	11,500	90,000	13,500	84,000	13,000	93,000	5,500
Female	124,000	5,500	123,000	12,500	S	S	*	*	D	D
Chemical engineering	106,000	7,500	132,000	7,500	103,000	7,500	75,000	10,500	60,000	10,000
Male	119,000	13,000	136,000	8,000	105,000	24,000	67,000	8,500	57,000	4,500
Female	85,000	10,500	123,000	7,000	D	D	D	D	70,000	7,000
Civil engineering	105,000	4,500	122,000	6,500	87,000	3,500	79,000	2,000	92,000	9,000
Male	106,000	4,500	119,000	9,500	89,000	4,500	79,000	4,500	90,000	7,500
Female	105,000	8,500	126,000	5,000	84,000	2,000	50,000	16,500	106,000	30,000
Electrical and computer engineering	110,000	6,000	130,000	4,000	95,000	3,000	82,000	5,000	113,000	15,500
Male	111,000	6,000	129,000	6,000	94,000	3,000	83,000	5,500	120,000	13,000
Female	108,000	8,000	140,000	9,500	95,000	22,000	D	D	79,000	6,500
Mechanical engineering	104,000	5,500	120,000	2,000	88,000	2,500	80,000	5,500	93,000	8,000

TABLE 62

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2019

(Dollars)

Field of study and sex	All full-time employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Male	108,000	5,000	120,000	1,000	89,000	2,000	80,000	6,500	96,000	11,000
Female	92,000	4,500	139,000	18,500	79,000	13,000	D	D	84,000	20,000
Metallurgical and materials engineering	100,000	7,000	138,000	11,000	94,000	8,000	69,000	3,500	66,000	14,000
Male	107,000	7,500	139,000	11,000	92,000	9,000	66,000	4,000	73,000	14,500
Female	84,000	9,500	119,000	45,000	D	D	D	D	50,000	20,000
Other engineering	105,000	4,000	141,000	6,500	90,000	3,000	85,000	6,500	85,000	7,000
Male	111,000	4,000	140,000	7,500	91,000	4,000	88,000	4,500	92,000	11,000
Female	94,000	3,000	142,000	12,000	90,000	3,000	68,000	8,500	65,000	3,500
Health	97,000	3,000	114,000	4,000	85,000	3,000	88,000	3,000	90,000	2,500
Male	100,000	6,000	127,000	11,000	83,000	4,000	90,000	11,000	89,000	10,500
Female	94,000	3,000	109,000	4,000	85,000	3,000	87,000	2,500	90,000	3,000

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 63

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, tenure status, and years since doctorate: 2019

(Dollars)

	All full-time employed				Tenured				Not tenured								Tenure not applicable			
									On tenure track				Not on tenure track							
	< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10		< 10		≥ 10	
Field of study and sex	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	72,000	500	108,000	1,000	83,000	2,000	115,000	1,000	82,000	1,000	93,000	2,500	65,000	500	90,000	1,000	60,000	500	96,000	2,000
Male	75,000	500	113,000	2,500	88,000	4,500	120,000	500	86,000	2,000	94,000	3,000	65,000	500	95,000	4,000	60,000	500	105,000	3,500
Female	70,000	500	99,000	1,500	80,000	2,000	105,000	1,500	79,000	2,000	91,000	4,000	65,000	1,500	86,000	2,500	60,000	500	87,000	2,500
Science	70,000	1,500	105,000	1,500	79,000	1,500	110,000	500	80,000	1,000	90,000	2,500	62,000	1,500	90,000	3,000	60,000	1,000	93,000	2,500
Male	71,000	2,000	110,000	500	81,000	2,000	116,000	2,000	84,000	2,000	92,000	3,000	62,000	2,500	95,000	5,500	60,000	1,000	100,000	2,500
Female	67,000	1,500	95,000	1,500	74,000	4,000	101,000	1,500	76,000	2,500	87,000	3,000	62,000	1,500	84,000	1,500	59,000	1,000	85,000	2,500
Biological, agricultural, and environmental life sciences	61,000	1,500	106,000	3,000	70,000	5,500	120,000	500	85,000	2,000	99,000	2,000	60,000	2,000	90,000	3,500	55,000	1,000	88,000	4,000
Male	63,000	2,000	115,000	2,000	68,000	4,500	125,000	3,500	87,000	2,500	100,000	4,500	63,000	3,000	96,000	6,000	55,000	1,500	100,000	3,500
Female	60,000	500	95,000	2,000	79,000	9,000	108,000	3,500	82,000	4,000	95,000	4,500	60,000	500	83,000	2,500	55,000	1,000	79,000	3,500
Computer and information sciences	96,000	4,000	120,000	4,500	95,000	6,000	124,000	5,000	99,000	2,500	99,000	7,000	85,000	7,000	112,000	12,000	88,000	10,500	115,000	20,500
Male	99,000	3,000	122,000	5,000	93,000	8,500	129,000	7,000	100,000	3,500	100,000	9,500	86,000	11,500	112,000	12,000	85,000	11,000	103,000	11,000
Female	91,000	3,000	119,000	6,500	98,000	9,000	115,000	6,000	91,000	3,500	D	D	85,000	7,000	S	S	91,000	21,000	166,000	41,000
Mathematics and statistics	68,000	2,000	100,000	1,000	71,000	9,500	102,000	2,500	78,000	4,000	72,000	4,500	60,000	3,500	80,000	8,500	64,000	2,500	80,000	6,500
Male	69,000	3,500	102,000	2,500	82,000	11,000	105,000	3,000	80,000	4,000	70,000	5,000	59,000	3,000	80,000	19,000	63,000	5,000	83,000	7,000
Female	67,000	2,000	90,000	2,000	65,000	3,500	95,000	3,500	71,000	8,000	73,000	4,500	61,000	5,500	76,000	18,500	66,000	5,000	74,000	6,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	65,000	1,000	101,000	3,000	77,000	7,000	110,000	2,000	78,000	3,000	84,000	3,500	58,000	2,500	89,000	4,500	58,000	1,500	90,000	2,500
Male	66,000	2,000	105,000	4,500	79,000	7,500	110,000	3,000	80,000	2,500	85,000	4,000	59,000	2,500	90,000	7,000	58,000	1,500	96,000	5,500
Female	63,000	2,000	96,000	4,500	70,000	10,500	107,000	4,000	72,000	3,000	75,000	3,000	57,000	2,500	82,000	13,000	58,000	3,000	78,000	7,500
Psychology	73,000	1,500	102,000	2,000	74,000	4,500	106,000	3,500	74,000	1,500	80,000	4,000	74,000	3,000	95,000	6,500	70,000	3,000	96,000	3,500
Male	75,000	2,500	111,000	4,500	82,000	5,500	115,000	6,000	75,000	3,000	78,000	6,000	64,000	9,000	123,000	22,500	70,000	5,500	110,000	10,000
Female	72,000	1,500	96,000	2,500	68,000	4,000	100,000	1,500	73,000	1,500	84,000	7,500	78,000	6,000	88,000	5,500	70,000	3,000	92,000	3,000
Social sciences	75,000	1,000	104,000	2,000	80,000	2,000	105,000	1,500	80,000	1,500	81,000	2,000	60,000	1,500	83,000	5,500	67,000	2,500	103,000	4,500
Male	79,000	1,500	108,000	2,000	81,000	4,500	110,000	3,500	84,000	4,500	76,000	7,500	60,000	4,000	84,000	7,500	74,000	4,000	110,000	4,000
Female	72,000	1,000	96,000	2,500	79,000	5,000	100,000	1,500	77,000	2,500	81,000	1,500	60,000	1,500	80,000	4,500	64,000	2,500	94,000	5,000
Engineering	84,000	1,500	125,000	3,000	108,000	2,000	130,000	2,000	90,000	500	101,000	2,500	72,000	3,000	92,000	7,000	64,000	1,500	117,000	4,500
Male	85,000	2,000	125,000	3,000	108,000	2,000	129,000	1,500	90,000	2,000	100,000	4,000	74,000	3,000	93,000	7,500	65,000	4,000	121,000	10,500
Female	76,000	4,500	120,000	6,500	105,000	6,000	135,000	7,500	85,000	2,000	102,000	19,500	62,000	6,500	91,000	9,000	63,000	2,500	95,000	5,500
Health	80,000	1,500	114,000	3,000	87,000	3,500	119,000	2,000	80,000	2,500	96,000	6,000	78,000	3,500	115,000	11,000	74,000	6,000	108,000	5,000
Male	79,000	3,500	121,000	10,500	90,000	10,000	135,000	8,000	81,000	4,500	100,000	7,500	67,000	10,000	117,000	16,000	74,000	9,000	107,000	12,000
Female	80,000	2,000	109,000	2,000	87,000	4,500	115,000	4,000	80,000	2,500	96,000	6,500	80,000	4,000	109,000	12,000	74,000	7,000	108,000	5,500

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 64

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and tenure status: 2019

(Dollars)

Field of study, ethnicity, and race	All full-time employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All fields	95,000	500	111,000	1,500	85,000	500	75,000	1,500	75,000	500
Hispanic or Latino[a]	88,000	1,500	104,000	3,000	83,000	2,000	74,000	3,000	62,000	2,000
Not Hispanic or Latino[b]										
American Indian or Alaska Native	89,000	4,000	93,000	3,000	90,000	3,500	64,000	8,500	70,000	13,500
Asian	90,000	500	120,000	500	90,000	500	70,000	1,500	63,000	2,000
Black or African American	89,000	1,500	100,000	3,500	80,000	3,500	76,000	3,000	74,000	3,500
White	98,000	1,000	110,000	1,500	83,000	1,500	78,000	2,000	82,000	2,000
Other race[c]	88,000	2,000	109,000	4,500	80,000	3,000	85,000	5,000	70,000	4,000
Science	92,000	1,000	109,000	1,500	83,000	1,000	75,000	2,000	73,000	1,500
Hispanic or Latino[a]	86,000	2,500	104,000	3,000	82,000	2,000	73,000	3,000	62,000	2,000
Not Hispanic or Latino[b]										
American Indian or Alaska Native	83,000	8,000	92,000	5,000	84,000	10,500	D	D	62,000	11,000
Asian	88,000	2,500	113,000	4,000	89,000	1,000	68,000	3,500	60,000	1,500
Black or African American	87,000	2,000	100,000	3,500	78,000	2,500	74,000	4,000	72,000	4,500
White	95,000	500	110,000	2,000	81,000	1,500	75,000	1,500	80,000	1,500
Other race[c]	86,000	2,000	105,000	2,500	80,000	1,500	85,000	7,500	69,000	5,000
Biological, agricultural, and environmental life sciences	90,000	500	119,000	1,000	90,000	2,000	74,000	2,500	65,000	500
Hispanic or Latino[a]	81,000	3,000	112,000	8,500	89,000	4,000	72,000	5,000	58,000	2,000
Not Hispanic or Latino[b]										
American Indian or Alaska Native	91,000	5,000	S	S	S	S	D	D	D	D
Asian	80,000	2,000	129,000	7,500	97,000	3,000	66,000	4,500	58,000	2,500
Black or African American	86,000	3,000	105,000	12,000	90,000	6,000	83,000	2,500	60,000	4,500
White	93,000	2,000	119,000	2,500	89,000	2,000	74,000	2,000	70,000	1,500
Other race[c]	80,000	3,500	93,000	17,500	89,000	12,000	86,000	10,500	52,000	2,000
Computer and information sciences	109,000	3,500	120,000	3,500	100,000	2,000	95,000	4,500	100,000	5,000
Hispanic or Latino[a]	100,000	15,500	124,000	37,500	78,000	5,000	S	S	138,000	44,000
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	100,000	5,500	120,000	4,500	100,000	3,500	68,000	26,500	76,000	13,000
Black or African American	91,000	14,000	114,000	5,000	82,000	6,500	D	D	D	D
White	111,000	3,000	120,000	6,500	100,000	6,500	98,000	7,000	104,000	3,500
Other race[c]	141,000	44,000	D	D	D	D	D	D	D	D
Mathematics and statistics	90,000	1,000	100,000	1,500	76,000	3,500	65,000	3,500	71,000	3,500
Hispanic or Latino[a]	95,000	8,000	120,000	19,500	82,000	3,500	76,000	6,500	62,000	3,000
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	89,000	3,000	100,000	4,000	78,000	4,500	59,000	6,500	66,000	6,500
Black or African American	79,000	5,500	85,000	5,500	66,000	3,000	S	S	D	D
White	90,000	1,000	100,000	1,500	74,000	5,000	67,000	3,500	74,000	4,000
Other race[c]	101,000	16,500	S	S	D	D	S	S	D	D

TABLE 64

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, ethnicity, race, and tenure status: 2019

(Dollars)

Field of study, ethnicity, and race	All full-time employed		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90,000	500	109,000	2,000	79,000	2,000	68,000	2,500	74,000	2,500
Hispanic or Latino[a]	80,000	2,500	90,000	5,000	81,000	5,000	60,000	11,500	64,000	8,000
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	80,000	3,000	119,000	8,500	80,000	5,000	65,000	7,000	62,000	4,000
Black or African American	80,000	6,500	94,000	5,000	74,000	6,000	60,000	6,500	56,000	5,000
White	93,000	2,000	108,000	2,000	78,000	3,000	70,000	3,500	80,000	3,500
Other race[c]	79,000	2,500	120,000	7,500	77,000	6,000	56,000	3,500	70,000	7,000
Psychology	92,000	2,000	103,000	2,500	75,000	1,000	85,000	3,500	86,000	3,000
Hispanic or Latino[a]	86,000	4,000	99,000	3,500	74,000	3,500	87,000	9,000	81,000	3,500
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	85,000	3,000	98,000	10,000	73,000	4,000	73,000	16,000	80,000	3,000
Black or African American	88,000	2,500	100,000	8,000	78,000	5,500	73,000	12,500	87,000	8,500
White	95,000	2,000	105,000	2,500	75,000	1,500	87,000	5,000	89,000	3,500
Other race[c]	88,000	4,000	107,000	5,500	73,000	9,000	S	S	78,000	9,500
Social sciences	95,000	500	105,000	1,500	80,000	1,000	70,000	3,000	84,000	3,000
Hispanic or Latino[a]	89,000	1,500	103,000	4,500	80,000	3,000	59,000	4,000	67,000	6,000
Not Hispanic or Latino[b]										
American Indian or Alaska Native	73,000	11,000	88,000	16,500	D	D	S	S	D	D
Asian	95,000	2,000	100,000	2,500	86,000	4,500	77,000	6,000	70,000	8,500
Black or African American	88,000	3,000	98,000	5,000	74,000	3,500	66,000	10,500	79,000	2,000
White	97,000	2,000	105,000	1,000	78,000	3,500	69,000	3,500	89,000	5,500
Other race[c]	91,000	7,500	105,000	4,000	81,000	3,000	70,000	7,500	84,000	6,000
Engineering	108,000	2,000	129,000	1,500	90,000	1,500	80,000	1,500	89,000	4,000
Hispanic or Latino[a]	95,000	4,000	110,000	7,500	95,000	5,000	74,000	9,500	79,000	8,500
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	S	S	D	D	D	D	D	D
Asian	100,000	3,500	129,000	1,500	90,000	2,000	70,000	2,000	70,000	3,500
Black or African American	100,000	4,500	126,000	12,000	89,000	7,000	87,000	7,500	78,000	13,500
White	111,000	2,500	129,000	2,500	90,000	1,500	88,000	3,500	101,000	6,500
Other race[c]	90,000	9,500	120,000	17,000	100,000	12,500	81,000	6,000	82,000	7,000
Health	97,000	3,000	114,000	4,000	85,000	3,000	88,000	3,000	90,000	2,500
Hispanic or Latino[a]	83,000	4,000	98,000	21,500	79,000	3,000	89,000	12,000	80,000	14,500
Not Hispanic or Latino[b]										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	89,000	5,000	119,000	12,000	88,000	2,500	75,000	3,500	68,000	4,500
Black or African American	90,000	4,000	104,000	8,500	86,000	6,500	78,000	6,000	88,000	7,000
White	100,000	3,000	112,000	4,000	83,000	3,500	94,000	7,500	100,000	6,000
Other race[c]	92,000	9,500	154,000	41,000	69,000	8,000	80,000	5,500	S	S

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Four-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Residence location is based on reported living location on 1 February 2019.

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

TABLE 65

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2019

(Dollars)

Occupation	All full-time employed						Hispanic or Latino[a]						Not Hispanic or Latino[b]															
													American Indian or Alaska Native						Asian				Black or African American					
	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	127,000	1,500	100,000	500	102,000	2,000	115,000	4,000	90,000	2,000	99,000	4,500	113,000	12,000	89,000	3,500	125,000	1,500	132,000	3,000	110,000	500	100,000	2,000	103,000	3,000
Science occupations	106,000	1,500	116,000	1,500	96,000	1,000	97,000	3,000	108,000	4,000	88,000	3,000	91,000	8,000	97,000	18,000	89,000	5,000	117,000	3,000	124,000	4,000	101,000	2,500	92,000	2,500	95,000	3,500
Biological, agricultural, and other life scientist	100,000	500	108,000	2,500	93,000	2,000	90,000	3,000	104,000	5,500	78,000	4,000	94,000	31,000	D	D	D	D	100,000	1,000	102,000	6,500	95,000	3,500	100,000	2,000	103,000	3,000
Agricultural, food scientist	109,000	2,500	118,000	3,500	97,000	3,500	106,000	7,500	120,000	12,000	93,000	3,500	D	D	D	D	D	D	96,000	3,000	96,000	4,000	96,000	4,000	100,000	7,000	101,000	6,000
Biochemists, biophysicist	100,000	4,000	104,000	6,500	95,000	9,000	73,000	20,000	115,000	17,500	66,000	4,000	D	D	D	D	D	D	90,000	7,000	88,000	9,500	90,000	15,000	70,000	33,500	D	D
Biological scientist	90,000	2,000	95,000	3,000	80,000	3,500	70,000	7,500	78,000	8,000	64,000	5,500	D	D	D	D	D	D	86,000	5,000	89,000	4,000	76,000	7,500	101,000	4,000	101,000	8,500
Forestry, conservation scientist	98,000	5,500	100,000	5,500	81,000	4,500	89,000	10,000	88,000	14,000	D	*	D	D	D	D	D	D	60,000	19,000	59,000	3,500	D	D	*	*	D	D
Medical scientist	119,000	1,000	126,000	4,000	110,000	1,500	95,000	5,000	109,000	11,000	94,000	6,500	D	D	D	D	D	D	110,000	4,500	119,000	5,000	94,000	5,500	110,000	6,000	116,000	15,500
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	92,000	3,000	86,000	4,500	82,000	6,000	93,000	12,500	70,000	18,000	D	D	D	D	D	D	81,000	3,500	80,000	3,000	82,000	24,000	100,000	7,500	101,000	40,000
Postsecondary teachers, biological sciences	89,000	2,000	99,000	2,500	80,000	2,000	89,000	3,500	98,000	8,000	76,000	4,500	*	*	D	D	D	D	109,000	5,000	109,000	7,000	102,000	9,500	77,000	7,500	82,000	15,000
Other biological, agricultural, life scientist	109,000	2,500	119,000	6,000	101,000	3,500	99,000	12,000	126,000	13,500	73,000	9,500	D	D	D	D	D	D	102,000	6,000	108,000	10,000	100,000	4,000	102,000	4,500	99,000	19,500
Computer and information scientist	149,000	2,000	149,000	500	130,000	5,500	139,000	5,000	140,000	6,000	109,000	16,500	D	D	D	D	D	D	150,000	2,500	154,000	5,500	142,000	7,000	114,000	8,500	119,000	7,000
Computer and information scientist	153,000	2,500	157,000	3,000	141,000	4,500	140,000	11,000	147,000	12,000	118,000	16,000	D	D	D	D	D	D	159,000	1,500	160,000	1,500	149,000	2,000	120,000	12,000	130,000	5,500
Postsecondary teachers, computer science	101,000	3,500	104,000	3,000	96,000	4,000	94,000	10,000	97,000	18,500	88,000	14,000	D	D	D	D	D	D	100,000	7,000	105,000	4,000	98,000	5,500	94,000	8,000	92,000	9,000
Mathematical scientist	114,000	2,500	115,000	2,500	104,000	4,500	109,000	7,000	109,000	8,000	102,000	14,500	D	D	D	D	D	D	130,000	2,000	130,000	5,000	127,000	4,000	101,000	8,500	100,000	7,500
Mathematical scientist	140,000	3,500	149,000	2,000	130,000	2,000	136,000	16,500	138,000	18,000	133,000	13,500	D	D	D	D	D	D	142,000	6,500	149,000	2,000	134,000	4,500	114,000	6,000	112,000	6,500
Postsecondary teachers, mathematics, statistics	87,000	2,000	89,000	1,500	80,000	1,000	93,000	9,000	97,000	5,500	81,000	5,500	D	D	D	D	D	D	89,000	3,500	90,000	5,000	80,000	5,000	79,000	6,000	76,000	6,000
Physical scientist	102,000	2,500	108,000	2,000	92,000	2,500	96,000	4,500	100,000	3,500	84,000	6,500	93,000	8,500	D	D	D	D	99,000	1,500	100,000	5,000	92,000	4,000	86,000	4,500	87,000	5,000
Chemists, except biochemist	120,000	1,500	123,000	4,500	106,000	4,500	108,000	4,000	109,000	4,500	101,000	5,500	D	D	D	D	D	D	109,000	7,000	110,000	5,500	98,000	8,500	95,000	4,000	95,000	4,500
Earth, atmospheric, ocean scientist	110,000	1,500	114,000	6,000	100,000	3,000	95,000	8,000	100,000	7,000	79,000	7,000	D	D	D	D	D	D	100,000	5,500	105,000	5,500	93,000	4,000	95,000	6,000	95,000	6,000
Physicists, astronomers	130,000	1,500	131,000	2,500	118,000	6,500	130,000	5,500	130,000	7,000	154,000	38,500	D	D	D	D	D	D	107,000	13,000	104,000	13,500	115,000	14,000	S	S	S	S
Postsecondary teachers, chemistry	80,000	2,000	82,000	3,000	72,000	3,000	72,000	6,000	87,000	8,000	69,000	2,000	D	D	D	D	D	D	78,000	6,000	79,000	4,500	70,000	5,000	67,000	4,500	68,000	4,500
Postsecondary teachers, physics	92,000	3,000	93,000	3,000	89,000	5,500	82,000	4,000	82,000	4,500	S	S	D	D	D	D	D	D	103,000	14,000	100,000	13,500	114,000	26,000	79,000	16,000	78,000	15,500
Postsecondary teachers, other physical science	90,000	1,500	94,000	5,000	82,000	3,500	79,000	5,000	81,000	7,500	78,000	10,000	D	D	D	D	D	D	86,000	4,000	85,000	5,000	86,000	12,500	90,000	10,500	91,000	12,000
Other physical scientist	125,000	4,000	126,000	7,000	119,000	7,000	102,000	18,500	104,000	18,000	D	D	D	D	D	D	D	D	138,000	19,500	159,000	21,500	115,000	16,000	88,000	23,000	D	D
Psychologist	100,000	500	105,000	3,500	95,000	2,500	96,000	4,500	96,000	5,500	94,000	6,000	101,000	13,000	D	D	D	D	99,000	5,000	91,000	3,500	90,000	11,500	92,000	3,000	89,000	2,000
Psychologist	103,000	1,500	114,000	3,500	100,000	500	100,000	1,500	110,000	9,500	100,000	3,500	D	D	D	D	S	S	99,000	3,500	113,000	26,500	98,000	4,000	93,000	3,500	98,000	4,000
Postsecondary teachers, psychology	85,000	1,000	90,000	3,500	82,000	2,000	84,000	2,000	83,000	3,500	85,000	5,500	D	D	D	D	D	D	85,000	4,500	88,000	6,000	84,000	4,000	80,000	4,500	85,000	17,500
Social scientist	99,000	1,500	105,000	1,000	90,000	1,500	90,000	4,500	100,000	5,500	85,000	5,000	70,000	7,500	68,000	4,000	81,000	9,000	105,000	4,000	108,000	6,500	100,000	4,500	89,000	2,000	92,000	4,500
Economist	149,000	4,000	151,000	4,000	134,000	8,500	149,000	11,500	140,000	19,500	153,000	5,500	D	D	D	D	D	D	142,000	15,000	150,000	11,000	129,000	6,000	107,000	19,500	124,000	35,000
Political scientist	134,000	10,500	136,000	5,000	122,000	19,500	D	D	S	S	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, economics	110,000	3,500	115,000	4,000	101,000	4,500	109,000	13,500	119,000	13,500	82,000	20,000	D	D	D	D	D	D	106,000	3,000	108,000	7,000	104,000	5,000	98,000	5,000	96,000	6,500
Postsecondary teachers, political science	88,000	4,500	92,000	4,000	82,000	2,500	86,000	10,500	89,000	14,500	81,000	9,500	D	D	D	D	D	D	77,000	7,000	74,000	3,500	95,000	10,500	80,000	4,000	79,000	8,000

Occupation	Not Hispanic or Latino[b]																											
	Black or African American						White						Other race[c]															
	Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female			
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE		
All occupations	94,000	2,000	117,000	1,500	126,000	1,500	100,000	500	109,000	3,500	114,000	6,000	95,000	5,000														
Science occupations	89,000	1,000	105,000	500	115,000	1,000	95,000	500	102,000	5,000	106,000	4,000	92,000	4,000														
Biological, agricultural, and other life scientist	97,000	3,500	102,000	2,000	110,000	1,000	93,000	2,500	95,000	8,500	96,000	9,500	92,000	12,500														
Agricultural, food scientist	101,000	6,500	116,000	3,500	120,000	3,000	100,000	3,500	114,000	19,000	D	D	79,000	15,000														
Biochemists, biophysicist	S	S	109,000	5,000	109,000	7,000	104,000	12,000	88,000	19,500	87,000	18,500	D	D														
Biological scientist	99,000	5,000	93,000	3,000	99,000	5,000	83,000	3,500	85,000	4,000	93,000	9,500	81,000	7,500														
Forestry, conservation scientist	80,000	4,500	99,000	2,000	108,000	7,500	80,000	4,500	D	D	D	D	D	D														
Medical scientist	101,000	8,500	124,000	4,500	134,000	5,500	119,000	2,500	96,000	17,500	86,000	20,000	102,000	26,000														
Postsecondary teachers, agricultural, other natural sciences	73,000	6,500	92,000	2,500	93,000	3,500	89,000	5,500	84,000	7,000	S	S	D	D														
Postsecondary teachers, biological sciences	77,000	3,500	86,000	2,500	98,000	4,000	77,000	3,500	91,000	14,000	84,000	11,500	109,000	15,000														
Other biological, agricultural, life scientist	102,000	4,000	111,000	4,000	120,000	3,000	105,000	6,000	133,000	17,000	130,000	33,500	135,000	15,000														
Computer and information scientist	114,000	8,500	144,000	4,000	148,000	4,000	125,000	4,500	135,000	17,500	137,000	24,000	119,000	15,000														
Computer and information scientist	130,000	5,500	150,000	1,000	151,000	3,000	137,000	3,500	150,000	7,000	152,000	7,500	128,000	9,500														
Postsecondary teachers, computer science	94,000	8,000	102,000	4,000	104,000	4,500	98,000	2,500	S	S	S	S	*	*														
Mathematical scientist	101,000	8,500	105,000	2,000	110,000	2,000	95,000	2,500	120,000	9,500	121,000	23,000	116,000	18,000														
Mathematical scientist	114,000	6,000	140,000	5,000	148,000	4,500	126,000	5,000	140,000	14,500	139,000	17,500	138,000	17,500														
Postsecondary teachers, mathematics, statistics	79,000	6,000	87,000	2,000	89,000	1,500	80,000	1,500	73,000	5,000	75,000	9,000	73,000	12,000														
Physical scientist	86,000	4,500	105,000	2,000	110,000	1,000	93,000	2,500	101,000	12,500	109,000	5,500	80,000	5,000														
Chemists, except biochemist	95,000	4,000	127,000	3,000	130,000	1,500	115,000	7,000	109,000	8,000	109,000	7,500	D	D														
Earth, atmospheric, ocean scientist	95,000	6,000	114,000	6,500	120,000	3,000	102,000	4,500	109,000	16,000	108,000	18,000	S	S														
Physicists, astronomers	S	S	137,000	4,000	140,000	3,000	119,000	11,000	111,000	33,500	123,000	34,500	S	S														
Postsecondary teachers, chemistry	61,000	8,500	80,000	1,500	84,000	3,500	74,000	3,000	77,000	8,500	73,000	16,500	78,000	11,500														
Postsecondary teachers, physics	D	D	92,000	2,000	92,000	2,500	89,000	4,500	78,000	25,000	S	S	S	S														
Postsecondary teachers, other physical science	*	*	92,000	4,500	98,000	4,500	81,000	3,500	88,000	25,500	D	D	D	D														
Other physical scientist	D	D	124,000	6,000	123,000	5,500	128,000	14,500	113,000	16,000	*	*	D	D														
Psychologist	87,000	3,500	100,000	500	106,000	4,000	98,000	2,000	95,000	8,000	110,000	8,000	89,000	4,000														
Psychologist	90,000	3,500	104,000	1,000	114,000	3,500	101,000	1,500	105,000	11,000	117,000	6,500	93,000	7,000														
Postsecondary teachers, psychology	79,000	4,000	85,000	2,000	93,000	3,000	80,000	2,500	79,000	7,000	82,000	17,000	74,000	9,500														
Social scientist	88,000	4,500	100,000	1,500	106,000	1,500	90,000	1,000	95,000	5,000	98,000	13,000	94,000	2,500														
Economist	124,000	35,000	150,000	4,000	153,000	8,500	144,000	7,500	174,000	17,000	D	D	D	D														
Political scientist	D	D	134,000	8,500	138,000	6,500	112,000	16,500	D	D	D	D	D	D														
Postsecondary teachers, economics	96,000	6,500	S	S	115,000	4,000	117,000	3,500	100,000	6,000	S	S	D	D														
Postsecondary teachers, political science	79,000	8,000	90,000	4,000	95,000	4,000	82,000	3,000	99,000	7,000	S	S	D	D														

TABLE 65

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2019

(Dollars)

Occupation	All full-time employed						Hispanic or Latino[a]						Not Hispanic or Latino[b]					
													American Indian or Alaska Native					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Postsecondary teachers, sociology	83,000	2,500	87,000	3,500	80,000	2,000	86,000	7,500	87,000	6,000	74,000	18,000	D	D	D	D	D	D
Postsecondary teachers, other social sciences	84,000	2,000	87,000	2,500	80,000	1,500	80,000	4,000	88,000	6,500	79,000	5,000	69,000	2,000	S	S	72,000	7,500
Sociologist, anthropologist	89,000	6,000	81,000	4,000	93,000	3,500	95,000	30,500	D	D	122,000	38,500	D	D	D	D	D	D
Other social scientist	106,000	4,500	119,000	6,000	102,000	3,000	88,000	5,500	100,000	18,000	85,000	11,000	D	D	D	D	D	D
Engineering occupations	130,000	500	132,000	3,000	119,000	1,000	118,000	4,000	120,000	5,500	109,000	2,000	145,000	15,000	153,000	10,500	D	D
Aerospace, aeronautical, astronautical engineer	149,000	1,500	150,000	4,000	124,000	7,000	139,000	17,500	147,000	15,500	S	S	D	D	D	D	D	D
Chemical engineer	137,000	4,500	139,000	5,000	132,000	6,000	119,000	5,000	123,000	11,000	D	D	D	D	D	D	D	D
Civil, architectural, sanitary engineer	109,000	5,000	110,000	8,500	97,000	8,500	89,000	11,500	89,000	12,000	92,000	28,500	D	D	D	D	D	D
Electrical engineer	149,000	1,000	150,000	1,500	130,000	5,000	139,000	4,500	141,000	6,500	D	D	D	D	D	D	D	D
Industrial engineers	119,000	3,500	117,000	6,000	119,000	5,500	104,000	16,000	97,000	15,000	D	D	D	D	D	D	D	D
Mechanical engineer	129,000	3,500	130,000	2,500	117,000	4,000	102,000	6,000	98,000	3,500	S	S	*	*	D	D	D	D
Postsecondary teacher, engineering	108,000	2,500	108,000	1,500	99,000	3,000	100,000	2,500	100,000	3,000	95,000	15,500	D	D	D	D	D	D
Other engineer	130,000	500	132,000	3,500	119,000	1,000	126,000	6,000	132,000	8,000	109,000	9,500	*	*	*	*	D	D
S&E-related occupations	130,000	500	154,000	5,000	105,000	1,000	113,000	7,000	130,000	5,000	99,000	5,000	104,000	20,500	120,000	10,000	92,000	10,000
Health occupations, except postsecondary teachers and managers	139,000	3,500	199,000	3,500	107,000	3,500	115,000	15,000	149,000	37,000	97,000	10,500	D	D	D	D	D	D
Postsecondary teacher, health and related science	105,000	2,500	120,000	4,500	96,000	2,500	91,000	7,500	100,000	6,000	85,000	5,500	93,000	3,000	S	S	D	D
S&E managers, including health	164,000	4,000	174,000	5,000	140,000	5,000	139,000	10,000	163,000	12,000	124,000	5,000	123,000	6,500	D	D	D	D
S&E precollege teachers	63,000	2,500	62,000	5,000	63,000	3,500	68,000	11,000	68,000	12,500	60,000	22,000	D	D	D	D	D	D
S&E technicians/ technologists	129,000	3,500	134,000	3,500	110,000	4,500	114,000	16,500	108,000	16,000	S	S	D	D	D	D	D	D
Other S&E-related occupation	132,000	8,500	151,000	19,000	122,000	8,000	D	D	D	D	D	D	D	D	D	D	D	D
Non-S&E occupations	138,000	3,500	156,000	4,500	114,000	3,000	115,000	7,000	139,000	9,500	95,000	4,000	94,000	5,500	95,000	20,000	75,000	8,000
Arts, humanities-related occupation	93,000	3,500	91,000	6,000	93,000	3,000	94,000	12,000	S	S	89,000	8,500	D	D	D	D	D	D
Management-related occupation	140,000	5,500	152,000	5,000	119,000	3,500	130,000	5,500	147,000	6,000	108,000	6,000	D	D	D	D	D	D
Non-S&E managers	179,000	3,500	200,000	3,500	148,000	5,000	146,000	6,500	172,000	18,000	126,000	7,500	94,000	11,000	95,000	13,500	S	S
Non-S&E postsecondary teachers	100,000	2,000	111,000	7,500	89,000	3,500	86,000	3,000	88,000	6,500	83,000	3,000	D	D	D	D	S	S
Non-S&E precollege/ other teachers	68,000	4,000	67,000	13,500	69,000	5,000	57,000	18,500	D	D	81,000	33,000	D	D	D	D	D	D
Sales, marketing occupation	120,000	5,000	129,000	7,500	108,000	6,000	119,000	13,500	124,000	19,000	S	S	D	D	D	D	D	D
Social service-related occupation	74,000	5,000	76,000	8,500	73,000	4,000	57,000	7,000	89,000	15,000	51,000	8,500	D	D	D	D	D	D
Other non-S&E occupation	125,000	6,000	130,000	8,500	105,000	9,000	84,000	24,500	S	S	81,000	35,500	D	D	D	D	D	D

Occupation	Not Hispanic or Latino[b]																	
	Asian						Black or African American						White					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Postsecondary teachers, sociology	85,000	5,500	89,000	27,500	85,000	5,500	90,000	5,000	97,000	14,500	79,000	8,500	82,000	2,500	86,000	4,500	80,000	1,500
Postsecondary teachers, other social sciences	84,000	7,000	92,000	12,500	82,000	6,000	85,000	5,000	88,000	4,500	80,000	4,000	85,000	2,000	87,000	3,000	80,000	2,000
Sociologist, anthropologist	114,000	18,000	D	D	D	D	86,000	15,000	D	D	D	D	82,000	7,500	81,000	4,000	91,000	9,000
Other social scientist	109,000	18,000	124,000	20,000	104,000	16,500	95,000	8,500	75,000	17,000	97,000	5,500	111,000	4,500	118,000	8,000	104,000	4,500
Engineering occupations	130,000	500	130,000	2,500	119,000	500	111,000	4,500	110,000	2,000	125,000	8,000	132,000	3,000	136,000	3,000	115,000	4,500
Aerospace, aeronautical, astronautical engineer	140,000	9,500	141,000	10,500	130,000	11,500	125,000	26,500	125,000	18,500	D	D	150,000	3,000	154,000	4,000	124,000	7,500
Chemical engineer	130,000	6,500	130,000	6,500	131,000	16,500	116,000	17,500	101,000	10,000	D	D	143,000	6,500	144,000	5,000	132,000	3,500
Civil, architectural, sanitary engineer	107,000	8,500	109,000	7,500	85,000	5,500	107,000	9,500	105,000	10,000	D	D	119,000	9,000	120,000	6,000	100,000	7,000
Electrical engineer	148,000	3,500	149,000	1,500	130,000	4,500	141,000	8,000	141,000	8,000	D	D	152,000	6,500	158,000	6,000	134,000	4,500
Industrial engineers	119,000	7,500	120,000	17,500	117,000	6,500	77,000	14,000	D	D	D	D	117,000	7,000	116,000	8,000	120,000	48,500
Mechanical engineer	129,000	5,000	130,000	4,000	116,000	6,500	116,000	15,000	108,000	13,000	D	D	128,000	3,500	130,000	4,000	114,000	6,500
Postsecondary teacher, engineering	104,000	4,500	104,000	4,500	105,000	12,000	100,000	6,000	100,000	6,500	95,000	29,500	109,000	1,500	110,000	3,000	99,000	4,000
Other engineer	129,000	4,000	129,000	1,000	119,000	3,000	120,000	6,000	120,000	5,500	119,000	13,000	134,000	4,000	136,000	4,000	119,000	2,000
S&E-related occupations	140,000	5,000	159,000	8,000	110,000	5,500	101,000	5,500	122,000	5,000	94,000	4,000	130,000	1,500	157,000	5,500	104,000	2,500
Health occupations, except postsecondary teachers and managers	146,000	12,500	198,000	20,000	105,000	4,500	119,000	4,000	122,000	17,000	105,000	11,500	142,000	6,500	199,000	5,000	110,000	6,500
Postsecondary teacher, health and related science	112,000	8,500	124,000	8,000	93,000	5,000	93,000	5,500	101,000	8,000	88,000	4,000	106,000	2,500	123,000	9,000	98,000	3,500
S&E managers, including health	165,000	8,000	177,000	10,500	143,000	8,500	130,000	4,000	131,000	7,000	105,000	23,500	165,000	5,000	175,000	4,500	140,000	7,000
S&E precollege teachers	57,000	9,000	S	S	S	S	55,000	7,500	54,000	9,500	57,000	16,000	64,000	3,000	64,000	5,000	64,000	3,000
S&E technicians/ technologists	127,000	6,500	133,000	7,000	113,000	10,000	61,000	18,500	D	D	D	D	131,000	4,500	134,000	5,000	74,000	17,500
Other S&E-related occupation	128,000	4,500	125,000	13,500	127,000	7,000	D	D	D	D	D	D	155,000	13,500	162,000	23,000	S	S
Non-S&E occupations	149,000	500	158,000	5,500	125,000	7,500	109,000	6,500	119,000	9,000	101,000	4,500	139,000	3,500	160,000	2,500	114,000	3,000
Arts, humanities-related occupation	92,000	10,500	88,000	25,500	95,000	11,500	75,000	3,000	D	D	73,000	2,500	94,000	3,000	92,000	6,000	93,000	3,500
Management-related occupation	149,000	4,500	157,000	6,000	141,000	11,000	120,000	10,500	124,000	22,000	118,000	10,000	137,000	5,500	152,000	5,500	108,000	5,000
Non-S&E managers	191,000	5,000	194,000	5,500	165,000	23,000	135,000	4,500	148,000	7,000	125,000	12,000	179,000	2,500	200,000	500	149,000	3,500
Non-S&E postsecondary teachers	96,000	4,500	118,000	9,000	81,000	3,000	84,000	7,500	95,000	7,000	77,000	6,000	102,000	3,500	114,000	7,500	92,000	5,000
Non-S&E precollege/ other teachers	72,000	11,000	S	S	66,000	12,500	60,000	7,000	S	S	70,000	13,000	68,000	6,000	66,000	17,500	68,000	5,000
Sales, marketing occupation	128,000	8,500	129,000	10,500	115,000	12,000	122,000	31,500	116,000	48,000	104,000	27,500	119,000	3,500	120,000	9,500	104,000	10,500
Social service-related occupation	80,000	6,500	79,000	5,000	82,000	37,000	55,000	9,000	44,000	11,000	65,000	6,000	77,000	5,500	72,000	11,000	77,000	4,500
Other non-S&E occupation	142,000	11,500	148,000	22,000	131,000	23,000	90,000	13,000	96,000	27,500	75,000	12,000	125,000	6,000	130,000	6,500	105,000	10,000

Occupation	Not Hispanic or Latino[b]							
	White						Other race[c]	
	Female		Total		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Postsecondary teachers, sociology	86,000	4,500	80,000	1,500	76,000	3,500	D	D
Postsecondary teachers, other social sciences	87,000	3,000	80,000	2,000	87,000	7,000	86,000	7,500
Sociologist, anthropologist	91,000	9,000	D	D	D	D	D	D
Other social scientist	104,000	4,500	93,000	8,000	D	D	95,000	5,500
Engineering occupations	115,000	4,500	130,000	10,000	129,000	13,500	129,000	9,000
Aerospace, aeronautical, astronautical engineer	124,000	7,500	134,000	14,000	D	D	D	D
Chemical engineer	132,000	3,500	D	D	D	D	D	D
Civil, architectural, sanitary engineer	100,000	7,000	S	S	S	S	D	D
Electrical engineer	134,000	4,500	125,000	24,000	126,000	36,000	D	D
Industrial engineers	120,000	48,500	D	D	D	D	D	D
Mechanical engineer	114,000	6,500	158,000	14,000	S	S	D	D
Postsecondary teacher, engineering	99,000	4,000	103,000	7,000	103,000	10,500	104,000	10,000
Other engineer	119,000	2,000	120,000	10,500	119,000	11,500	127,000	10,500
S&E-related occupations	104,000	2,500	127,000	14,000	136,000	9,000	108,000	16,000
Health occupations, except postsecondary teachers and managers	110,000	6,500	99,000	19,000	138,000	27,000	91,000	21,000
Postsecondary teacher, health and related science	98,000	3,500	95,000	25,000	84,000	13,000	124,000	34,000
S&E managers, including health	140,000	7,000	150,000	10,500	149,000	11,500	154,000	28,500
S&E precollege teachers	64,000	3,000	62,000	13,500	D	D	D	D
S&E technicians/ technologists	74,000	17,500	141,000	58,000	162,000	77,500	D	D
Other S&E-related occupation	S	S	D	D	D	D	D	D
Non-S&E occupations	114,000	3,000	110,000	8,500	129,000	21,000	93,000	8,500
Arts, humanities-related occupation	84,000	4,000	D	D	83,000	16,000		
Management-related occupation	108,000	5,000	110,000	17,500	120,000	26,500	94,000	27,000
Non-S&E managers	184,000	18,000	186,000	18,000	183,000	53,000		
Non-S&E postsecondary teachers	96,000	18,000	111,000	13,500	82,000	10,500		
Non-S&E precollege/ other teachers	D	D	D	D	D	D		
Sales, marketing occupation	104,000	10,500	156,000	55,500	S	S	D	D
Social service-related occupation	72,000	11,000	77,000	4,500	D	D	D	D
Other non-S&E occupation	105,000	10,000	77,000	11,500	76,000	37,000	S	S

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 66

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and citizenship status: 2019

(Dollars)

Occupation	All full-time employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	120,000	500	113,000	1,500	135,000	500	110,000	2,500	115,000	1,500	92,000	2,500
Science occupations	106,000	1,500	108,000	1,000	103,000	1,500	122,000	3,500	100,000	500	110,000	3,500	86,000	3,500
Biological, agricultural, and other life scientist	100,000	500	105,000	1,500	102,000	2,000	119,000	500	76,000	2,500	88,000	3,000	60,000	500
Agricultural, food scientist	109,000	2,500	118,000	3,500	115,000	4,000	119,000	2,500	86,000	8,000	90,000	7,000	73,000	13,500
Biochemists, biophysicist	100,000	4,000	114,000	5,000	106,000	5,500	130,000	5,500	69,000	7,500	84,000	7,500	58,000	2,000
Biological scientist	90,000	2,000	95,000	2,500	93,000	3,000	102,000	7,500	64,000	4,000	75,000	8,500	53,000	1,500
Forestry, conservation scientist	98,000	5,500	99,000	2,500	99,000	2,500	93,000	9,000	58,000	4,000	S	S	S	S
Medical scientist	119,000	1,000	125,000	2,000	124,000	4,500	129,000	5,500	76,000	6,000	90,000	4,500	58,000	6,000
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	92,000	2,500	90,000	2,000	101,000	6,500	80,000	1,500	78,000	2,500	79,000	6,500
Postsecondary teachers, biological sciences	89,000	2,000	90,000	1,500	86,000	2,000	105,000	5,500	84,000	5,000	85,000	6,000	66,000	11,000
Other biological, agricultural, life scientist	109,000	2,500	115,000	3,500	111,000	3,500	125,000	4,000	85,000	6,500	101,000	10,500	70,000	8,000
Computer and information scientist	149,000	2,000	145,000	2,500	140,000	3,000	149,000	1,000	150,000	3,000	158,000	7,500	140,000	4,000
Computer and information scientist	153,000	2,500	150,000	1,500	149,000	1,000	155,000	5,000	159,000	1,500	162,000	8,500	148,000	5,500
Postsecondary teachers, computer science	101,000	3,500	105,000	2,500	103,000	4,500	107,000	4,500	91,000	4,000	96,000	5,500	81,000	4,000
Mathematical scientist	114,000	2,500	111,000	3,000	103,000	2,500	130,000	2,500	118,000	3,500	120,000	3,000	104,000	12,000
Mathematical scientist	140,000	3,500	145,000	3,500	134,000	4,500	159,000	3,500	139,000	4,000	139,000	3,500	130,000	8,500
Postsecondary teachers, mathematics, statistics	87,000	2,000	89,000	1,500	87,000	2,000	98,000	3,000	80,000	3,500	80,000	3,000	75,000	5,500
Physical scientist	102,000	2,500	108,000	2,000	105,000	1,500	118,000	4,000	82,000	3,000	90,000	1,500	66,000	3,000
Chemists, except biochemist	120,000	1,500	125,000	2,500	125,000	2,000	125,000	7,500	93,000	5,000	109,000	6,500	66,000	9,500

TABLE 66

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and citizenship status: 2019

(Dollars)

Occupation	All full-time employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Earth, atmospheric, ocean scientist	110,000	1,500	115,000	5,500	113,000	6,500	119,000	5,500	84,000	6,000	99,000	5,500	68,000	4,000
Physicists, astronomers	130,000	1,500	140,000	4,000	140,000	4,000	137,000	8,500	75,000	14,500	100,000	13,000	59,000	7,000
Postsecondary teachers, chemistry	80,000	2,000	80,000	1,000	80,000	1,500	85,000	5,000	70,000	4,000	72,000	4,500	58,000	8,000
Postsecondary teachers, physics	92,000	3,000	94,000	3,500	90,000	3,000	107,000	11,000	81,000	9,000	81,000	8,000	76,000	5,500
Postsecondary teachers, other physical science	90,000	1,500	92,000	4,500	90,000	4,500	99,000	9,000	80,000	5,500	83,000	4,000	73,000	13,000
Other physical scientist	125,000	4,000	126,000	6,000	124,000	5,500	149,000	15,000	100,000	12,000	102,000	15,000	D	D
Psychologist	100,000	500	100,000	500	100,000	500	99,000	4,500	90,000	3,500	95,000	2,000	73,000	5,000
Psychologist	103,000	1,500	104,000	1,500	104,000	1,500	105,000	7,500	94,000	6,000	95,000	3,000	73,000	7,000
Postsecondary teachers, psychology	85,000	1,000	85,000	1,000	85,000	1,500	79,000	7,500	89,000	3,000	91,000	6,500	D	D
Social scientist	99,000	1,500	99,000	2,000	98,000	1,500	104,000	3,000	100,000	1,500	100,000	3,500	104,000	20,500
Economist	149,000	4,000	149,000	4,000	148,000	7,000	152,000	5,000	147,000	13,500	143,000	14,000	155,000	30,000
Political scientist	134,000	10,500	135,000	8,500	135,000	9,500	103,000	23,500	D	D	D	D	D	D
Postsecondary teachers, economics	110,000	3,500	114,000	4,500	115,000	4,000	107,000	4,500	100,000	2,000	100,000	3,500	97,000	10,500
Postsecondary teachers, political science	88,000	4,500	90,000	3,500	90,000	4,000	96,000	12,000	76,000	3,500	77,000	3,500	D	D
Postsecondary teachers, sociology	83,000	2,500	85,000	2,500	83,000	2,500	86,000	3,500	71,000	5,500	76,000	7,000	S	S
Postsecondary teachers, other social sciences	84,000	2,000	85,000	2,000	84,000	2,000	92,000	4,000	79,000	2,000	80,000	2,500	74,000	7,500
Sociologist, anthropologist	89,000	6,000	89,000	6,500	88,000	6,000	82,000	26,000	D	D	D	D	D	D
Other social scientist	106,000	4,500	106,000	4,500	105,000	4,500	115,000	12,000	115,000	19,500	98,000	23,000	S	S
Engineering occupations	130,000	500	136,000	2,000	134,000	3,500	140,000	1,000	118,000	3,000	120,000	1,000	100,000	1,500
Aerospace, aeronautical, astronautical engineer	149,000	1,500	151,000	4,000	152,000	3,500	149,000	10,500	114,000	8,000	124,000	6,500	103,000	2,000
Chemical engineer	137,000	4,500	144,000	4,000	143,000	5,500	148,000	7,000	118,000	5,500	117,000	4,000	110,000	8,000

TABLE 66

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and citizenship status: 2019

(Dollars)

Occupation	All full-time employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Civil, architectural, sanitary engineer	109,000	5,000	121,000	4,500	119,000	10,000	128,000	7,000	88,000	4,000	96,000	7,500	82,000	3,500
Electrical engineer	149,000	1,000	158,000	6,000	150,000	3,500	159,000	2,500	140,000	3,000	149,000	7,500	121,000	5,000
Industrial engineers	119,000	3,500	119,000	7,000	120,000	11,000	116,000	9,000	112,000	20,000	112,000	17,500	D	D
Mechanical engineer	129,000	3,500	132,000	4,000	128,000	4,000	134,000	4,000	115,000	4,500	119,000	2,000	98,000	5,500
Postsecondary teacher, engineering	108,000	2,500	113,000	3,000	110,000	2,000	119,000	3,500	91,000	4,000	97,000	2,500	79,000	3,500
Other engineer	130,000	500	138,000	3,500	134,000	4,000	149,000	6,500	115,000	4,500	119,000	2,000	96,000	5,000
S&E-related occupations	130,000	500	132,000	3,000	125,000	3,000	150,000	5,000	109,000	4,000	120,000	6,000	90,000	13,500
Health occupations, except postsecondary teachers and managers	139,000	3,500	145,000	5,500	139,000	3,500	174,000	19,000	103,000	5,500	105,000	13,000	76,000	18,000
Postsecondary teacher, health and related science	105,000	2,500	106,000	2,500	104,000	2,500	117,000	6,500	94,000	5,000	95,000	4,500	83,000	11,000
S&E managers, including health	164,000	4,000	165,000	4,000	160,000	5,000	179,000	7,000	138,000	10,000	138,000	9,500	127,000	20,500
S&E precollege teachers	63,000	2,500	64,000	3,500	65,000	4,500	59,000	8,000	34,000	5,500	D	D	D	D
S&E technicians/ technologists	129,000	3,500	133,000	5,000	129,000	5,500	133,000	6,000	110,000	13,500	134,000	3,500	95,000	37,500
Other S&E-related occupation	132,000	8,500	141,000	8,500	153,000	21,500	138,000	9,000	121,000	12,000	122,000	12,000	D	D
Non-S&E occupations	138,000	3,500	139,000	3,500	130,000	2,000	154,000	5,000	130,000	7,500	139,000	10,000	118,000	7,000
Arts, humanities-related occupation	93,000	3,500	95,000	3,000	94,000	3,000	114,000	10,000	82,000	6,500	86,000	7,000	75,000	24,500
Management-related occupation	140,000	5,500	139,000	3,500	130,000	2,000	150,000	2,500	155,000	9,000	181,000	23,500	137,000	15,500
Non-S&E managers	179,000	3,500	180,000	2,000	175,000	5,000	198,000	2,000	150,000	17,500	150,000	20,500	143,000	25,000
Non-S&E postsecondary teachers	100,000	2,000	100,000	2,000	99,000	2,500	107,000	6,500	95,000	5,500	99,000	6,500	79,000	12,000
Non-S&E precollege/ other teachers	68,000	4,000	69,000	3,500	68,000	7,500	74,000	9,500	S	S	S	S	D	D

TABLE 66

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and citizenship status: 2019

(Dollars)

Occupation	All full-time employed		U.S. citizen						Non-U.S. citizen					
			Total		Native born		Naturalized		Total		Permanent resident		Temporary resident	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Sales, marketing occupation	120,000	5,000	120,000	6,500	119,000	6,500	143,000	14,500	106,000	20,000	113,000	21,500	D	D
Social service-related occupation	74,000	5,000	75,000	4,500	74,000	5,000	76,000	19,000	D	D	D	D	D	D
Other non-S&E occupation	125,000	6,000	125,000	5,500	117,000	9,000	135,000	17,500	125,000	24,000	124,000	24,500	S	S

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 67

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and age: 2019

(Dollars)

Occupation	All full-time employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	93,000	1,500	102,000	2,000	113,000	2,000	120,000	1,500	130,000	500	135,000	1,500	133,000	3,000	130,000	1,500
Science occupations	106,000	1,500	87,000	2,000	95,000	500	102,000	2,500	110,000	2,000	119,000	3,000	122,000	4,000	120,000	2,500	125,000	3,000
Biological, agricultural, and other life scientist	100,000	500	70,000	3,000	84,000	2,000	97,000	3,500	108,000	4,000	119,000	2,500	123,000	3,500	125,000	3,500	140,000	7,000
Agricultural, food scientist	109,000	2,500	85,000	5,000	97,000	4,500	100,000	4,500	117,000	9,000	119,000	6,500	126,000	4,500	126,000	9,000	139,000	14,500
Biochemists, biophysicist	100,000	4,000	60,000	9,000	83,000	7,500	109,000	9,000	126,000	8,000	132,000	14,500	146,000	10,000	133,000	29,000	143,000	38,500
Biological scientist	90,000	2,000	60,000	2,000	73,000	3,000	88,000	3,000	100,000	4,500	110,000	8,500	116,000	5,000	121,000	7,000	115,000	15,000
Forestry, conservation scientist	98,000	5,500	63,000	19,000	64,000	3,000	87,000	6,000	87,000	10,000	82,000	23,000	114,000	9,500	100,000	7,000	151,000	23,500
Medical scientist	119,000	1,000	71,000	4,500	92,000	4,500	110,000	4,500	143,000	9,500	138,000	9,000	149,000	1,000	162,000	7,500	178,000	10,500
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	79,000	4,500	73,000	6,500	86,000	9,000	93,000	8,000	90,000	5,000	93,000	6,000	101,000	10,000	128,000	21,500
Postsecondary teachers, biological sciences	89,000	2,000	65,000	2,000	72,000	3,000	81,000	3,500	88,000	2,500	100,000	4,500	95,000	4,500	103,000	4,000	118,000	8,000
Other biological, agricultural, life scientist	109,000	2,500	78,000	2,500	95,000	3,500	119,000	2,500	135,000	11,500	134,000	5,500	134,000	13,000	143,000	15,000	127,000	25,000
Computer and information scientist	149,000	2,000	146,000	4,000	148,000	4,500	150,000	2,500	146,000	5,000	148,000	3,500	150,000	2,000	143,000	7,000	136,000	6,000
Computer and information scientist	153,000	2,500	149,000	1,500	159,000	4,500	159,000	4,500	162,000	7,500	150,000	2,000	152,000	9,500	149,000	4,000	139,000	5,000
Postsecondary teachers, computer science	101,000	3,500	85,000	4,000	95,000	4,500	100,000	5,500	103,000	4,000	106,000	14,000	111,000	12,000	108,000	9,500	120,000	6,500
Mathematical scientist	114,000	2,500	100,000	4,000	112,000	6,500	114,000	5,500	111,000	6,500	109,000	4,500	118,000	5,500	120,000	10,500	126,000	7,000
Mathematical scientist	140,000	3,500	130,000	4,000	137,000	4,000	149,000	8,000	139,000	9,500	149,000	6,500	157,000	13,500	160,000	8,000	156,000	11,500
Postsecondary teachers, mathematics, statistics	87,000	2,000	68,000	4,000	70,000	4,000	84,000	4,500	90,000	3,500	85,000	4,500	100,000	1,500	99,000	5,500	116,000	6,500
Physical scientist	102,000	2,500	80,000	2,500	86,000	3,500	99,000	1,500	110,000	4,000	113,000	5,500	128,000	3,500	129,000	7,000	127,000	4,000
Chemists, except biochemist	120,000	1,500	89,000	2,500	103,000	7,000	121,000	4,000	135,000	8,000	132,000	8,500	139,000	3,000	140,000	6,000	135,000	4,500
Earth, atmospheric, ocean scientist	110,000	1,500	73,000	3,000	90,000	4,000	104,000	7,000	112,000	12,000	126,000	8,500	144,000	3,500	145,000	8,000	136,000	19,500
Physicists, astronomers	130,000	1,500	70,000	6,000	114,000	13,500	137,000	6,000	133,000	7,000	148,000	7,500	164,000	6,000	165,000	3,500	148,000	12,500
Postsecondary teachers, chemistry	80,000	2,000	62,000	2,500	70,000	2,000	73,000	6,000	79,000	4,000	80,000	3,500	90,000	6,500	82,000	9,500	111,000	22,000
Postsecondary teachers, physics	92,000	3,000	77,000	11,000	76,000	3,000	80,000	4,500	92,000	10,000	97,000	10,000	110,000	6,000	98,000	5,000	110,000	13,500
Postsecondary teachers, other physical science	90,000	1,500	75,000	6,500	75,000	4,500	84,000	2,500	85,000	4,000	99,000	12,000	99,000	2,500	105,000	10,500	112,000	14,500
Other physical scientist	125,000	4,000	99,000	11,000	107,000	9,500	105,000	10,500	110,000	10,500	159,000	8,000	139,000	5,000	157,000	9,000	157,000	30,500
Psychologist	100,000	500	86,000	3,000	89,000	2,500	100,000	1,500	98,000	3,000	105,000	2,000	103,000	3,000	110,000	6,000	112,000	6,000
Psychologist	103,000	1,500	92,000	2,500	97,000	3,000	104,000	3,000	100,000	6,000	110,000	5,000	110,000	6,000	110,000	3,500	114,000	7,500
Postsecondary teachers, psychology	85,000	1,000	70,000	2,000	74,000	3,500	82,000	2,000	90,000	4,000	90,000	4,000	85,000	3,500	100,000	6,000	110,000	5,500
Social scientist	99,000	1,500	93,000	3,500	85,000	2,500	88,000	3,000	100,000	2,000	106,000	3,000	104,000	5,000	105,000	2,500	110,000	6,000
Economist	149,000	4,000	128,000	3,500	144,000	6,500	141,000	10,500	160,000	5,000	173,000	22,000	161,000	12,000	160,000	18,500	143,000	22,500
Political scientist	134,000	10,500	93,000	10,500	105,000	18,000	134,000	8,500	127,000	28,500	144,000	47,500	D	D	D	D	D	D
Postsecondary teachers, economics	110,000	3,500	117,000	11,000	109,000	6,000	100,000	2,000	116,000	5,000	120,000	19,500	116,000	14,000	106,000	2,500	116,000	4,500
Postsecondary teachers, political science	88,000	4,500	71,000	3,500	74,000	3,500	71,000	4,000	94,000	10,000	99,000	4,000	100,000	7,500	91,000	9,500	104,000	7,500
Postsecondary teachers, sociology	83,000	2,500	64,000	5,000	72,000	4,500	73,000	3,500	85,000	4,000	87,000	5,500	89,000	5,500	107,000	20,500	94,000	18,500
Postsecondary teachers, other social sciences	84,000	2,000	70,000	3,500	75,000	5,000	76,000	2,500	85,000	5,500	94,000	2,000	97,000	4,500	94,000	7,500	98,000	8,500

TABLE 67

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and age: 2019

(Dollars)

Occupation	All full-time employed		Under 35		35–39		40–44		45–49		50–54		55–59		60–64		65–75	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Sociologist, anthropologist	89,000	6,000	70,000	6,500	72,000	6,500	79,000	13,000	94,000	7,000	80,000	22,000	103,000	9,500	97,000	28,000	88,000	7,500
Other social scientist	106,000	4,500	87,000	5,500	89,000	3,500	102,000	4,500	117,000	6,500	139,000	7,000	120,000	13,000	118,000	16,500	152,000	39,500
Engineering occupations	130,000	500	108,000	2,500	120,000	1,000	129,000	2,000	140,000	2,000	152,000	3,500	144,000	5,000	150,000	5,500	149,000	7,000
Aerospace, aeronautical, astronautical engineer	149,000	1,500	112,000	1,500	126,000	7,500	147,000	4,000	153,000	9,000	157,000	4,500	154,000	7,000	186,000	11,500	160,000	5,500
Chemical engineer	137,000	4,500	108,000	4,500	125,000	7,500	120,000	8,000	157,000	4,000	188,000	13,500	155,000	8,500	149,000	8,500	160,000	19,000
Civil, architectural, sanitary engineer	109,000	5,000	85,000	3,000	95,000	4,000	101,000	4,500	108,000	7,000	136,000	12,000	131,000	12,500	163,000	26,000	141,000	16,000
Electrical engineer	149,000	1,000	129,000	4,000	136,000	5,000	159,000	9,500	170,000	6,000	168,000	4,500	160,000	2,500	149,000	13,500	148,000	9,500
Industrial engineers	119,000	3,500	110,000	16,500	120,000	10,500	112,000	21,500	131,000	25,500	120,000	13,500	140,000	48,000	110,000	9,500	S	S
Mechanical engineer	129,000	3,500	100,000	3,000	116,000	4,000	130,000	6,500	133,000	14,500	150,000	18,500	143,000	9,500	130,000	9,000	154,000	19,500
Postsecondary teacher, engineering	108,000	2,500	84,000	2,500	95,000	2,000	103,000	4,000	110,000	3,500	120,000	4,000	115,000	3,500	126,000	9,500	125,000	10,000
Other engineer	130,000	500	105,000	3,000	120,000	4,000	125,000	3,500	141,000	7,000	149,000	5,500	149,000	10,500	155,000	7,500	152,000	13,000
S&E-related occupations	130,000	500	82,000	3,000	104,000	4,000	130,000	5,000	139,000	2,000	149,000	5,000	146,000	6,000	142,000	8,500	153,000	9,000
Health occupations, except postsecondary teachers and managers	139,000	3,500	68,000	3,500	98,000	5,500	139,000	8,000	169,000	31,500	193,000	19,500	181,000	8,500	169,000	18,000	188,000	17,500
Postsecondary teacher, health and related science	105,000	2,500	79,000	4,000	90,000	2,000	109,000	2,500	109,000	7,500	108,000	6,500	115,000	5,000	105,000	4,500	117,000	6,000
S&E managers, including health	164,000	4,000	116,000	5,000	130,000	4,500	149,000	5,000	168,000	8,000	175,000	4,500	178,000	7,000	191,000	9,000	197,000	2,500
S&E precollege teachers	63,000	2,500	53,000	7,000	55,000	3,500	60,000	4,000	66,000	10,000	74,000	6,500	64,000	6,000	60,000	11,000	49,000	7,000
S&E technicians/ technologists	129,000	3,500	109,000	5,500	125,000	13,500	131,000	11,500	131,000	6,500	147,000	12,500	134,000	23,500	146,000	22,000	94,000	25,500
Other S&E-related occupation	132,000	8,500	S	S	142,000	15,000	D	D	D	D	125,000	29,500	D	D	D	D	D	D
Non-S&E occupations	138,000	3,500	99,000	3,000	115,000	5,000	129,000	1,500	145,000	5,000	150,000	2,500	165,000	4,500	150,000	6,500	137,000	6,500
Arts, humanities-related occupation	93,000	3,500	90,000	4,000	93,000	2,500	89,000	6,500	93,000	6,000	116,000	17,000	121,000	12,500	90,000	9,000	50,000	19,500
Management-related occupation	140,000	5,500	113,000	4,500	125,000	6,000	148,000	6,000	145,000	6,500	152,000	7,000	159,000	9,000	148,000	7,000	129,000	15,000
Non-S&E managers	179,000	3,500	118,000	15,500	125,000	6,000	149,000	6,000	190,000	8,000	185,000	7,000	199,000	3,500	199,000	8,500	179,000	9,000
Non-S&E postsecondary teachers	100,000	2,000	80,000	7,000	83,000	6,500	88,000	6,000	98,000	7,500	99,000	3,500	109,000	9,500	104,000	8,500	113,000	8,000
Non-S&E precollege/ other teachers	68,000	4,000	60,000	11,500	60,000	16,500	71,000	20,000	70,000	12,500	78,000	5,500	68,000	2,500	70,000	26,500	S	S
Sales, marketing occupation	120,000	5,000	102,000	8,500	119,000	7,000	130,000	8,500	149,000	8,500	146,000	18,000	112,000	23,500	131,000	25,000	76,000	12,000
Social service-related occupation	74,000	5,000	68,000	14,500	61,000	7,000	57,000	13,000	70,000	13,500	61,000	14,500	83,000	8,500	73,000	6,500	88,000	9,500
Other non-S&E occupation	125,000	6,000	86,000	12,500	121,000	14,000	126,000	10,000	148,000	29,500	141,000	30,500	115,000	27,000	127,000	11,500	100,000	19,500

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 68

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and years since doctorate: 2019

(Dollars)

Occupation	All full-time employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	90,000	1,500	105,000	2,000	117,000	2,000	129,000	2,500	139,000	3,000	148,000	3,500
Science occupations	106,000	1,500	83,000	1,500	97,000	1,500	105,000	1,000	114,000	2,000	120,000	2,000	131,000	2,500
Biological, agricultural, and other life scientist	100,000	500	65,000	500	90,000	1,000	100,000	3,500	115,000	4,000	125,000	4,000	140,000	2,000
Agricultural, food scientist	109,000	2,500	75,000	5,000	96,000	3,000	115,000	7,500	119,000	4,500	130,000	10,000	137,000	5,500
Biochemists, biophysicist	100,000	4,000	59,000	3,000	94,000	10,000	107,000	10,500	128,000	6,000	141,000	12,500	158,000	6,500
Biological scientist	90,000	2,000	60,000	500	80,000	4,000	100,000	4,500	103,000	3,500	121,000	7,000	123,000	7,000
Forestry, conservation scientist	98,000	5,500	61,000	3,500	86,000	6,000	99,000	5,500	113,000	8,000	130,000	32,000	136,000	12,500
Medical scientist	119,000	1,000	67,000	3,500	103,000	4,000	119,000	3,500	140,000	9,500	146,000	3,000	176,000	6,000
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	71,000	4,500	80,000	3,000	84,000	5,500	99,000	3,500	100,000	6,000	117,000	6,500
Postsecondary teachers, biological sciences	89,000	2,000	60,000	3,500	70,000	1,500	83,000	2,500	91,000	4,500	99,000	1,500	110,000	4,500
Other biological, agricultural, life scientist	109,000	2,500	76,000	4,000	102,000	6,000	123,000	4,500	138,000	6,000	150,000	4,500	145,000	6,000
Computer and information scientist	149,000	2,000	140,000	3,000	144,000	5,500	150,000	4,500	148,000	3,000	149,000	1,000	150,000	4,500
Computer and information scientist	153,000	2,500	148,000	4,000	154,000	5,500	164,000	7,500	157,000	5,000	149,000	1,000	158,000	5,000
Postsecondary teachers, computer science	101,000	3,500	85,000	3,000	94,000	3,000	99,000	3,500	103,000	5,000	124,000	7,000	127,000	5,000
Mathematical scientist	114,000	2,500	103,000	4,000	105,000	5,500	114,000	6,000	110,000	5,500	119,000	5,500	130,000	5,000
Mathematical scientist	140,000	3,500	125,000	5,000	137,000	4,500	149,000	7,500	160,000	9,000	158,000	11,000	162,000	6,500
Postsecondary teachers, mathematics, statistics	87,000	2,000	65,000	2,500	74,000	2,500	83,000	3,500	91,000	3,500	90,000	6,500	112,000	4,500
Physical scientist	102,000	2,500	75,000	2,000	92,000	2,000	100,000	3,000	115,000	5,000	119,000	6,000	133,000	4,000
Chemists, except biochemist	120,000	1,500	85,000	3,500	111,000	2,500	128,000	4,500	135,000	7,500	139,000	3,500	142,000	4,000

TABLE 68

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and years since doctorate: 2019

(Dollars)

Occupation	All full-time employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Earth, atmospheric, ocean scientist	110,000	1,500	74,000	2,500	96,000	3,000	110,000	7,500	129,000	5,500	121,000	14,000	150,000	5,500
Physicists, astronomers	130,000	1,500	70,000	3,000	119,000	5,500	135,000	9,000	139,000	5,000	157,000	7,000	165,000	1,500
Postsecondary teachers, chemistry	80,000	2,000	61,000	2,000	67,000	3,000	75,000	5,500	80,000	2,500	84,000	3,500	99,000	5,500
Postsecondary teachers, physics	92,000	3,000	75,000	6,500	77,000	4,000	80,000	6,500	99,000	8,500	98,000	11,500	110,000	4,500
Postsecondary teachers, other physical science	90,000	1,500	71,000	3,000	76,000	2,000	85,000	7,500	95,000	7,500	100,000	6,000	115,000	8,500
Other physical scientist	125,000	4,000	81,000	7,500	106,000	8,500	119,000	3,000	125,000	12,500	137,000	5,000	161,000	8,000
Psychologist	100,000	500	85,000	2,500	88,000	3,500	100,000	1,000	103,000	4,000	102,000	4,500	117,000	4,500
Psychologist	103,000	1,500	91,000	2,000	99,000	1,500	105,000	1,500	110,000	3,000	110,000	5,500	119,000	1,500
Postsecondary teachers, psychology	85,000	1,000	67,000	2,500	76,000	2,500	85,000	4,000	89,000	2,500	92,000	7,000	106,000	5,500
Social scientist	99,000	1,500	80,000	1,500	84,000	2,000	94,000	3,000	103,000	2,000	109,000	4,000	120,000	2,000
Economist	149,000	4,000	120,000	7,500	144,000	4,000	152,000	8,000	158,000	8,000	153,000	18,500	173,000	13,000
Political scientist	134,000	10,500	93,000	12,000	131,000	14,500	133,000	9,000	142,000	41,500	D	D	140,000	10,000
Postsecondary teachers, economics	110,000	3,500	103,000	7,000	103,000	6,500	105,000	7,000	108,000	3,500	109,000	4,500	124,000	8,000
Postsecondary teachers, political science	88,000	4,500	70,000	2,500	71,000	4,000	79,000	3,500	100,000	4,500	105,000	7,500	105,000	8,500
Postsecondary teachers, sociology	83,000	2,500	64,000	3,000	70,000	2,500	80,000	5,500	86,000	3,000	99,000	11,500	118,000	12,000
Postsecondary teachers, other social sciences	84,000	2,000	70,000	1,500	74,000	1,500	88,000	4,000	94,000	3,500	100,000	6,000	105,000	5,500
Sociologist, anthropologist	89,000	6,000	70,000	2,500	71,000	8,500	110,000	12,500	116,000	10,500	96,000	27,000	91,000	8,000
Other social scientist	106,000	4,500	86,000	5,000	99,000	4,500	103,000	4,500	143,000	8,500	129,000	15,000	155,000	14,500
Engineering occupations	130,000	500	105,000	2,000	120,000	1,000	134,000	5,500	150,000	2,000	149,000	3,000	151,000	3,500
Aerospace, aeronautical, astronautical engineer	149,000	1,500	110,000	1,500	129,000	7,500	150,000	7,000	151,000	6,000	155,000	4,500	165,000	6,500
Chemical engineer	137,000	4,500	115,000	5,500	111,000	6,500	132,000	4,500	159,000	9,000	180,000	9,500	160,000	9,500

TABLE 68

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and years since doctorate: 2019

(Dollars)

Occupation	All full-time employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Civil, architectural, sanitary engineer	109,000	5,000	84,000	3,500	106,000	6,000	107,000	11,000	129,000	4,500	133,000	15,000	156,000	12,000
Electrical engineer	149,000	1,000	125,000	4,000	140,000	2,000	165,000	7,500	173,000	5,500	174,000	9,500	161,000	5,000
Industrial engineers	119,000	3,500	112,000	9,500	114,000	14,500	133,000	30,500	121,000	25,000	S	S	119,000	19,000
Mechanical engineer	129,000	3,500	100,000	2,500	120,000	4,500	130,000	6,500	150,000	16,000	150,000	17,500	150,000	5,500
Postsecondary teacher, engineering	108,000	2,500	81,000	2,000	95,000	1,500	105,000	4,000	119,000	8,500	114,000	6,500	139,000	8,000
Other engineer	130,000	500	100,000	3,000	125,000	2,500	130,000	7,000	148,000	5,000	153,000	6,500	151,000	4,500
S&E-related occupations	130,000	500	81,000	3,000	104,000	3,000	135,000	5,500	143,000	5,500	160,000	7,500	180,000	7,000
Health occupations, except postsecondary teachers and managers	139,000	3,500	74,000	2,000	99,000	4,000	152,000	12,000	174,000	16,000	199,000	8,000	217,000	13,500
Postsecondary teacher, health and related science	105,000	2,500	80,000	3,500	90,000	3,000	109,000	3,000	110,000	7,000	116,000	5,000	154,000	8,500
S&E managers, including health	164,000	4,000	119,000	5,500	130,000	2,000	150,000	1,500	170,000	6,500	178,000	3,500	200,000	500
S&E precollege teachers	63,000	2,500	54,000	4,500	60,000	6,000	66,000	8,000	67,000	8,500	69,000	5,500	68,000	7,500
S&E technicians/ technologists	129,000	3,500	100,000	9,000	131,000	7,500	131,000	13,500	133,000	8,500	137,000	14,500	168,000	25,000
Other S&E-related occupation	132,000	8,500	S	S	126,000	30,000	D	D	S	S	113,000	25,500	155,000	6,000
Non-S&E occupations	138,000	3,500	91,000	2,000	110,000	4,500	126,000	3,500	150,000	2,000	167,000	5,000	170,000	4,000
Arts, humanities-related occupation	93,000	3,500	85,000	7,000	100,000	5,500	100,000	13,000	98,000	5,500	99,000	12,500	91,000	17,500
Management-related occupation	140,000	5,500	109,000	6,000	125,000	7,000	130,000	8,000	152,000	3,500	167,000	9,500	156,000	8,000
Non-S&E managers	179,000	3,500	111,000	11,500	130,000	4,500	143,000	6,000	180,000	7,000	200,000	2,500	200,000	7,000
Non-S&E postsecondary teachers	100,000	2,000	78,000	3,500	82,000	2,500	90,000	2,000	103,000	6,000	112,000	9,000	144,000	12,000
Non-S&E precollege/ other teachers	68,000	4,000	72,000	6,000	66,000	9,500	72,000	5,000	86,000	15,000	50,000	24,000	50,000	15,000

TABLE 68

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and years since doctorate: 2019

(Dollars)

Occupation	All full-time employed		≤ 5		6–10		11–15		16–20		21–25		> 25	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Sales, marketing occupation	120,000	5,000	95,000	6,000	116,000	13,500	127,000	7,000	156,000	11,500	146,000	8,500	99,000	11,000
Social service-related occupation	74,000	5,000	62,000	4,500	59,000	10,500	70,000	5,000	77,000	12,500	62,000	15,500	92,000	5,500
Other non-S&E occupation	125,000	6,000	79,000	7,000	98,000	14,500	138,000	8,500	163,000	43,000	125,000	20,000	145,000	13,500

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 69

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and sector of employment: 2019

(Dollars)

Occupation	All full-time employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	95,000	500	76,000	1,500	150,000	500	119,000	500	126,000	1,500	98,000	2,500	100,000	500	132,000	5,500
Science occupations	106,000	1,500	89,000	1,000	76,000	2,000	140,000	2,000	110,000	2,500	121,000	2,500	90,000	2,500	101,000	9,000	130,000	3,000
Biological, agricultural, and other life scientist	100,000	500	82,000	1,500	73,000	2,500	127,000	2,500	100,000	2,500	120,000	1,500	75,000	3,500	78,000	6,500	105,000	20,500
Agricultural, food scientist	109,000	2,500	91,000	4,000	D	D	120,000	2,000	99,000	11,000	121,000	5,000	96,000	16,500	195,000	67,500	D	D
Biochemists, biophysicist	100,000	4,000	59,000	2,000	D	D	126,000	5,000	98,000	18,000	118,000	10,500	S	S	D	D	D	D
Biological scientist	90,000	2,000	70,000	4,000	73,000	3,500	115,000	3,500	89,000	5,500	111,000	6,500	72,000	4,500	58,000	19,500	85,000	11,000
Forestry, conservation scientist	98,000	5,500	74,000	7,500	D	D	111,000	6,500	87,000	17,000	111,000	6,000	68,000	7,500	D	D	*	*
Medical scientist	119,000	1,000	89,000	3,000	D	D	144,000	5,000	110,000	3,000	121,000	4,500	83,000	13,000	69,000	9,500	135,000	15,000
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	91,000	2,500	67,000	9,500	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, biological sciences	89,000	2,000	90,000	1,500	74,000	4,500	D	D	D	D	D	D	D	D	D	D	D	D
Other biological, agricultural, life scientist	109,000	2,500	60,000	1,500	D	D	125,000	2,500	95,000	4,000	120,000	5,500	84,000	8,500	92,000	36,000	87,000	42,500
Computer and information scientist	149,000	2,000	104,000	2,500	78,000	9,500	160,000	2,000	137,000	13,000	134,000	5,500	97,000	13,000	90,000	21,500	139,000	15,000
Computer and information scientist	153,000	2,500	107,000	5,000	72,000	12,000	160,000	2,000	137,000	13,000	134,000	5,500	97,000	13,000	90,000	21,500	139,000	15,000
Postsecondary teachers, computer science	101,000	3,500	103,000	3,500	83,000	14,000	D	D	D	D	D	D	D	D	D	D	D	D
Mathematical scientist	114,000	2,500	89,000	1,000	79,000	4,000	150,000	4,500	130,000	3,000	136,000	6,500	97,000	23,000	181,000	37,000	147,000	20,500
Mathematical scientist	140,000	3,500	96,000	2,500	88,000	16,000	150,000	4,500	130,000	3,000	136,000	6,500	97,000	23,000	181,000	37,000	147,000	20,500
Postsecondary teachers, mathematics, statistics	87,000	2,000	88,000	1,500	77,000	6,000	D	D	D	D	D	D	D	D	D	D	D	D
Physical scientist	102,000	2,500	85,000	1,500	70,000	3,000	133,000	2,000	128,000	4,500	130,000	1,500	100,000	6,000	133,000	23,000	121,000	7,000
Chemists, except biochemist	120,000	1,500	60,000	4,500	D	D	129,000	3,000	115,000	7,500	119,000	7,500	98,000	10,000	D	D	119,000	27,000
Earth, atmospheric, ocean scientist	110,000	1,500	84,000	3,500	79,000	3,000	142,000	6,500	107,000	9,500	129,000	6,000	99,000	8,000	119,000	29,500	120,000	24,500
Physicists, astronomers	130,000	1,500	72,000	3,500	D	D	141,000	6,500	137,000	6,500	140,000	6,000	132,000	14,000	D	D	127,000	9,500
Postsecondary teachers, chemistry	80,000	2,000	80,000	1,000	70,000	2,500	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, physics	92,000	3,000	95,000	4,500	73,000	5,000	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, other physical science	90,000	1,500	90,000	3,500	67,000	3,500	D	D	D	D	D	D	D	D	D	D	D	D
Other physical scientist	125,000	4,000	98,000	9,500	D	D	139,000	8,500	136,000	15,500	132,000	12,000	88,000	12,000	D	D	D	D
Psychologist	100,000	500	88,000	1,500	84,000	5,000	117,000	4,500	104,000	2,000	110,000	2,500	95,000	5,000	108,000	7,000	111,000	15,000
Psychologist	103,000	1,500	90,000	3,000	87,000	3,500	117,000	4,500	104,000	2,000	110,000	2,500	95,000	5,000	108,000	7,000	111,000	15,000
Postsecondary teachers, psychology	85,000	1,000	85,000	2,000	77,000	3,500	D	D	D	D	D	D	D	D	D	D	D	D

TABLE 69

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and sector of employment: 2019

(Dollars)

Occupation	All full-time employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Social scientist	99,000	1,500	93,000	1,500	76,000	2,500	154,000	6,500	120,000	9,000	139,000	5,000	91,000	2,000	90,000	12,000	159,000	24,000
Economist	149,000	4,000	127,000	6,500	D	D	172,000	8,500	136,000	5,500	150,000	3,000	93,000	5,500	D	D	180,000	17,500
Political scientist	134,000	10,500	125,000	14,000	D	D	S	S	122,000	26,000	144,000	7,000	S	S	D	D	D	D
Postsecondary teachers, economics	110,000	3,500	110,000	4,000	81,000	9,000	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, political science	88,000	4,500	89,000	4,000	75,000	5,500	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, sociology	83,000	2,500	84,000	2,000	69,000	4,000	D	D	D	D	D	D	D	D	D	D	D	D
Postsecondary teachers, other social sciences	84,000	2,000	85,000	1,500	74,000	3,000	D	D	D	D	D	D	D	D	D	D	D	D
Sociologist, anthropologist	89,000	6,000	76,000	9,000	D	D	106,000	20,000	105,000	10,500	119,000	10,000	81,000	3,000	D	D	S	S
Other social scientist	106,000	4,500	87,000	4,000	80,000	8,500	140,000	14,000	114,000	10,000	131,000	6,500	90,000	4,500	117,000	23,500	149,000	50,500
Engineering occupations	130,000	500	108,000	2,000	73,000	11,500	140,000	2,000	137,000	7,000	130,000	2,000	102,000	7,000	99,000	12,000	139,000	6,000
Aerospace, aeronautical, astronautical engineer	149,000	1,500	130,000	32,500	D	D	149,000	5,500	159,000	4,500	137,000	10,000	D	D	D	D	150,000	20,500
Chemical engineer	137,000	4,500	106,000	8,000	D	D	140,000	2,500	149,000	27,000	132,000	11,000	D	D	D	D	D	D
Civil, architectural, sanitary engineer	109,000	5,000	99,000	6,500	D	D	116,000	9,500	120,000	13,000	111,000	10,000	100,000	14,000	S	S	D	D
Electrical engineer	149,000	1,000	119,000	12,500	D	D	150,000	5,000	142,000	9,500	135,000	4,000	158,000	30,500	D	D	165,000	32,000
Industrial engineers	119,000	3,500	108,000	14,500	D	D	119,000	4,000	D	D	S	S	D	D	D	D	D	D
Mechanical engineer	129,000	3,500	110,000	5,500	D	D	131,000	3,500	118,000	12,500	125,000	6,500	S	S	S	S	109,000	12,500
Postsecondary teacher, engineering	108,000	2,500	108,000	2,000	71,000	11,500	D	D	D	D	D	D	D	D	D	D	D	D
Other engineer	130,000	500	93,000	4,500	D	D	137,000	4,000	129,000	4,000	128,000	5,500	101,000	5,500	97,000	40,500	117,000	23,500
S&E-related occupations	130,000	500	106,000	2,500	65,000	3,500	169,000	4,000	149,000	8,000	145,000	7,000	121,000	9,500	172,000	29,000	116,000	13,500
Health occupations, except postsecondary teachers and managers	139,000	3,500	101,000	9,000	92,000	15,000	180,000	15,000	150,000	14,500	131,000	6,500	117,000	31,000	183,000	28,000	108,000	7,000
Postsecondary teacher, health and related science	105,000	2,500	105,000	2,500	80,000	15,500	D	D	D	D	D	D	D	D	D	D	D	D
S&E managers, including health	164,000	4,000	139,000	8,500	D	D	180,000	3,500	147,000	19,500	150,000	4,500	126,000	7,500	D	D	110,000	27,000
S&E precollege teachers	63,000	2,500	S	S	63,000	2,500	D	D	D	D	D	D	D	D	D	D	D	D
S&E technicians/ technologists	129,000	3,500	68,000	12,000	D	D	135,000	3,500	125,000	11,500	110,000	8,500	92,000	19,500	D	D	S	S
Other S&E-related occupation	132,000	8,500	D	D	D	D	140,000	10,000	D	D	D	D	D	D	D	D	D	D
Non-S&E occupations	138,000	3,500	120,000	2,500	94,000	4,000	164,000	4,500	112,000	7,000	139,000	3,500	100,000	9,000	80,000	7,500	139,000	8,500
Arts, humanities-related occupation	93,000	3,500	88,000	14,500	S	S	98,000	4,500	89,000	4,500	124,000	20,500	S	S	40,000	14,000	S	S
Management-related occupation	140,000	5,500	93,000	5,000	105,000	8,000	158,000	4,000	101,000	4,500	138,000	8,000	98,000	9,500	95,000	9,000	125,000	16,500
Non-S&E managers	179,000	3,500	160,000	5,000	119,000	4,500	200,000	500	175,000	9,000	154,000	4,000	121,000	7,500	111,000	19,000	202,000	38,500

TABLE 69

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and sector of employment: 2019

(Dollars)

Occupation	All full-time employed		4-year educational institution[a]		Other educational institution[b]		Private, for profit[c]		Private, nonprofit		Federal government		State or local government		Self-employed[d]		Other[e]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Non-S&E postsecondary teachers	100,000	2,000	100,000	1,500	87,000	7,000	D	D	D	D	D	D	D	D	D	D	D	D
Non-S&E precollege/ other teachers	68,000	4,000	102,000	26,500	69,000	4,500	72,000	21,500	S	S	S	S	S	S	S	S	D	D
Sales, marketing occupation	120,000	5,000	S	S	D	D	130,000	6,000	84,000	19,500	D	D	D	D	39,000	11,500	D	D
Social service-related occupation	74,000	5,000	71,000	4,000	72,000	5,000	70,000	11,000	58,000	10,000	146,000	47,500	82,000	18,500	92,000	27,500	D	D
Other non-S&E occupation	125,000	6,000	75,000	12,500	43,000	15,500	150,000	12,500	78,000	6,000	125,000	4,500	76,000	13,000	S	S	48,000	13,500

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 70

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and disability status: 2019

(Dollars)

Occupation	All full-time employed		With disability		Without disability	
	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	110,000	500	120,000	500
Science occupations	106,000	1,500	100,000	2,000	107,000	1,500
Biological, agricultural, and other life scientist	100,000	500	97,000	4,500	100,000	500
Agricultural, food scientist	109,000	2,500	120,000	8,500	108,000	2,500
Biochemists, biophysicist	100,000	4,000	90,000	21,000	100,000	4,000
Biological scientist	90,000	2,000	88,000	8,500	90,000	2,000
Forestry, conservation scientist	98,000	5,500	108,000	9,500	94,000	8,000
Medical scientist	119,000	1,000	106,000	15,500	119,000	500
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	92,000	7,500	90,000	2,500
Postsecondary teachers, biological sciences	89,000	2,000	86,000	3,500	90,000	2,000
Other biological, agricultural, life scientist	109,000	2,500	108,000	13,500	109,000	2,500
Computer and information scientist	149,000	2,000	131,000	6,500	149,000	1,000
Computer and information scientist	153,000	2,500	141,000	7,000	154,000	2,500
Postsecondary teachers, computer science	101,000	3,500	104,000	4,000	100,000	3,000
Mathematical scientist	114,000	2,500	109,000	5,000	115,000	2,500
Mathematical scientist	140,000	3,500	129,000	3,500	141,000	4,500
Postsecondary teachers, mathematics, statistics	87,000	2,000	91,000	6,000	87,000	2,000
Physical scientist	102,000	2,500	100,000	4,500	103,000	2,500
Chemists, except biochemist	120,000	1,500	111,000	9,500	120,000	1,500
Earth, atmospheric, ocean scientist	110,000	1,500	112,000	5,500	110,000	2,500
Physicists, astronomers	130,000	1,500	119,000	13,000	130,000	1,500
Postsecondary teachers, chemistry	80,000	2,000	80,000	9,000	80,000	2,500
Postsecondary teachers, physics	92,000	3,000	79,000	9,500	94,000	3,500
Postsecondary teachers, other physical science	90,000	1,500	97,000	9,500	90,000	1,500
Other physical scientist	125,000	4,000	129,000	24,500	125,000	4,000
Psychologist	100,000	500	95,000	4,000	100,000	500
Psychologist	103,000	1,500	99,000	5,500	104,000	1,500
Postsecondary teachers, psychology	85,000	1,000	89,000	4,500	85,000	1,000
Social scientist	99,000	1,500	94,000	4,500	100,000	1,000
Economist	149,000	4,000	130,000	10,500	149,000	3,000
Political scientist	134,000	10,500	124,000	16,500	134,000	13,500
Postsecondary teachers, economics	110,000	3,500	109,000	2,500	110,000	5,000
Postsecondary teachers, political science	88,000	4,500	79,000	6,500	90,000	4,000
Postsecondary teachers, sociology	83,000	2,500	76,000	6,500	84,000	2,500
Postsecondary teachers, other social sciences	84,000	2,000	85,000	4,500	84,000	2,000
Sociologist, anthropologist	89,000	6,000	73,000	3,500	89,000	5,000
Other social scientist	106,000	4,500	100,000	3,000	108,000	4,500
Engineering occupations	130,000	500	130,000	4,000	130,000	500
Aerospace, aeronautical, astronautical engineer	149,000	1,500	158,000	11,000	149,000	3,000
Chemical engineer	137,000	4,500	150,000	15,500	136,000	5,000
Civil, architectural, sanitary engineer	109,000	5,000	98,000	13,500	109,000	5,000
Electrical engineer	149,000	1,000	163,000	9,000	149,000	2,000
Industrial engineers	119,000	3,500	D	D	119,000	5,500
Mechanical engineer	129,000	3,500	139,000	25,000	129,000	4,000
Postsecondary teacher, engineering	108,000	2,500	103,000	5,500	108,000	2,000
Other engineer	130,000	500	136,000	8,000	130,000	1,000
S&E-related occupations	130,000	500	120,000	7,000	130,000	500
Health occupations, except postsecondary teachers and managers	139,000	3,500	140,000	11,000	139,000	4,000
Postsecondary teacher, health and related science	105,000	2,500	100,000	6,500	105,000	2,000

TABLE 70

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and disability status: 2019

(Dollars)

Occupation	All full-time employed		With disability		Without disability	
	Median salary	SE	Median salary	SE	Median salary	SE
S&E managers, including health	164,000	4,000	165,000	10,000	164,000	4,500
S&E precollege teachers	63,000	2,500	58,000	4,000	64,000	3,000
S&E technicians/ technologists	129,000	3,500	128,000	18,000	130,000	4,000
Other S&E-related occupation	132,000	8,500	D	D	135,000	10,000
Non-S&E occupations	138,000	3,500	118,000	4,000	139,000	1,000
Arts, humanities-related occupation	93,000	3,500	86,000	7,000	93,000	3,000
Management-related occupation	140,000	5,500	128,000	15,500	142,000	4,500
Non-S&E managers	179,000	3,500	182,000	20,000	179,000	4,000
Non-S&E postsecondary teachers	100,000	2,000	97,000	5,000	100,000	2,000
Non-S&E precollege/ other teachers	68,000	4,000	66,000	10,000	69,000	5,000
Sales, marketing occupation	120,000	5,000	96,000	39,000	121,000	6,000
Social service-related occupation	74,000	5,000	80,000	12,000	74,000	5,500
Other non-S&E occupation	125,000	6,000	117,000	16,000	129,000	7,000

D = suppressed to avoid disclosure of confidential information.

S&E = science and engineering; SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Survey asks degree of difficulty—none, slight, moderate, severe, or unable to do—an individual has in seeing (with glasses), hearing (with hearing aid), walking without assistance, lifting 10 pounds, or concentrating, remembering, or making decisions. Those respondents who answered "moderate," "severe," or "unable to do" for any activity were classified as having a disability. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 71

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
All sectors	119,000	1,000	127,000	1,500	100,000	500
Science occupations	106,000	1,500	116,000	1,500	96,000	1,000
Biological, agricultural, and other life scientist	100,000	500	108,000	2,500	93,000	2,000
Computer and information scientist	149,000	2,000	149,000	500	130,000	5,500
Mathematical scientist	114,000	2,500	115,000	2,500	104,000	4,500
Physical scientist	102,000	2,500	108,000	2,000	92,000	2,500
Psychologist	100,000	500	105,000	3,500	95,000	2,500
Social scientist	99,000	1,500	105,000	1,000	90,000	1,500
Engineering occupations	130,000	500	132,000	3,000	119,000	1,000
S&E-related occupations	130,000	500	154,000	5,000	105,000	1,000
Non-S&E occupations	138,000	3,500	156,000	4,500	114,000	3,000
4-year educational institution[a]	95,000	500	100,000	500	86,000	1,500
Science occupations	89,000	1,000	93,000	1,500	80,000	1,000
Biological, agricultural, and other life scientist	82,000	1,500	90,000	500	73,000	2,000
Computer and information scientist	104,000	2,500	107,000	3,000	97,000	3,500
Mathematical scientist	89,000	1,000	90,000	2,500	81,000	3,000
Physical scientist	85,000	1,500	88,000	3,500	79,000	2,000
Psychologist	88,000	1,500	93,000	2,500	85,000	1,500
Social scientist	93,000	1,500	100,000	1,500	85,000	1,000
Engineering occupations	108,000	2,000	108,000	1,500	100,000	2,000
S&E-related occupations	106,000	2,500	125,000	6,500	94,000	2,500
Non-S&E occupations	120,000	2,500	140,000	5,500	100,000	3,500
Other educational institution[b]	76,000	1,500	76,000	2,000	76,000	2,000
Science occupations	76,000	2,000	77,000	2,000	76,000	2,500
Biological, agricultural, and other life scientist	73,000	2,500	75,000	3,500	71,000	2,500
Computer and information scientist	78,000	9,500	74,000	10,500	79,000	7,000
Mathematical scientist	79,000	4,000	77,000	16,500	81,000	3,000
Physical scientist	70,000	3,000	73,000	5,000	70,000	2,500
Psychologist	84,000	5,000	83,000	7,000	84,000	5,000
Social scientist	76,000	2,500	76,000	3,000	75,000	3,000
Engineering occupations	73,000	11,500	75,000	25,500	D	D
S&E-related occupations	65,000	3,500	66,000	5,500	65,000	4,000
Non-S&E occupations	94,000	4,000	112,000	6,000	87,000	4,000
Private, for profit[c]	150,000	500	150,000	2,000	130,000	1,000
Science occupations	140,000	2,000	150,000	500	126,000	2,500
Biological, agricultural, and other life scientist	127,000	2,500	130,000	3,500	120,000	1,500
Computer and information scientist	160,000	2,000	165,000	4,000	149,000	1,500
Mathematical scientist	150,000	4,500	159,000	1,500	139,000	3,500
Physical scientist	133,000	2,000	135,000	2,500	120,000	3,500
Psychologist	117,000	4,500	120,000	4,000	108,000	5,000
Social scientist	154,000	6,500	159,000	15,000	143,000	14,500
Engineering occupations	140,000	2,000	144,000	1,500	125,000	2,500
S&E-related occupations	169,000	4,000	180,000	3,500	138,000	5,500
Non-S&E occupations	164,000	4,500	180,000	4,000	134,000	3,500
Private, nonprofit	119,000	500	130,000	3,500	105,000	3,500
Science occupations	110,000	2,500	120,000	4,000	103,000	1,500
Biological, agricultural, and other life scientist	100,000	2,500	108,000	6,500	89,000	8,500
Computer and information scientist	137,000	13,000	144,000	10,500	118,000	8,500
Mathematical scientist	130,000	3,000	130,000	3,000	128,000	12,000

TABLE 71

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
Physical scientist	128,000	4,500	133,000	7,000	108,000	9,500
Psychologist	104,000	2,000	105,000	4,000	103,000	1,500
Social scientist	120,000	9,000	132,000	8,500	114,000	7,500
Engineering occupations	137,000	7,000	142,000	7,500	128,000	6,500
S&E-related occupations	149,000	8,000	200,000	9,000	123,000	10,000
Non-S&E occupations	112,000	7,000	128,000	17,000	104,000	6,000
Federal government	126,000	1,500	130,000	1,500	118,000	2,500
Science occupations	121,000	2,500	129,000	3,000	112,000	2,500
Biological, agricultural, and other life scientist	120,000	1,500	125,000	3,000	108,000	4,000
Computer and information scientist	134,000	5,500	139,000	7,000	117,000	14,000
Mathematical scientist	136,000	6,500	140,000	7,500	129,000	7,500
Physical scientist	130,000	1,500	131,000	4,500	119,000	3,500
Psychologist	110,000	2,500	115,000	3,500	106,000	3,000
Social scientist	139,000	5,000	145,000	6,000	132,000	5,500
Engineering occupations	130,000	2,000	131,000	5,000	124,000	6,500
S&E-related occupations	145,000	7,000	148,000	7,000	135,000	7,500
Non-S&E occupations	139,000	3,500	138,000	5,000	139,000	6,500
State or local government	98,000	2,500	100,000	2,000	95,000	2,500
Science occupations	90,000	2,500	91,000	4,000	90,000	3,000
Biological, agricultural, and other life scientist	75,000	3,500	77,000	3,500	75,000	3,000
Computer and information scientist	97,000	13,000	105,000	15,500	83,000	14,500
Mathematical scientist	97,000	23,000	97,000	22,000	92,000	16,500
Physical scientist	100,000	6,000	100,000	7,000	100,000	13,500
Psychologist	95,000	5,000	92,000	4,500	99,000	6,500
Social scientist	91,000	2,000	92,000	9,000	89,000	3,500
Engineering occupations	102,000	7,000	107,000	7,000	96,000	8,000
S&E-related occupations	121,000	9,500	120,000	11,000	121,000	14,000
Non-S&E occupations	100,000	9,000	114,000	9,000	95,000	7,000
Self-employed[d]	100,000	500	108,000	12,500	99,000	2,000
Science occupations	101,000	9,000	118,000	7,000	99,000	1,000
Biological, agricultural, and other life scientist	78,000	6,500	75,000	9,000	79,000	12,500
Computer and information scientist	90,000	21,500	90,000	22,000	D	D
Mathematical scientist	181,000	37,000	D	D	D	D
Physical scientist	133,000	23,000	138,000	13,500	D	D
Psychologist	108,000	7,000	133,000	15,500	100,000	1,500
Social scientist	90,000	12,000	99,000	16,000	75,000	9,000
Engineering occupations	99,000	12,000	98,000	12,000	134,000	13,000
S&E-related occupations	172,000	29,000	250,000	65,000	80,000	16,000
Non-S&E occupations	80,000	7,500	84,000	6,500	64,000	17,000
Other sector[e]	132,000	5,500	140,000	10,500	110,000	10,500
Science occupations	130,000	3,000	137,000	9,000	118,000	13,000
Biological, agricultural, and other life scientist	105,000	20,500	90,000	12,000	123,000	20,000
Computer and information scientist	139,000	15,000	140,000	16,500	129,000	46,000
Mathematical scientist	147,000	20,500	D	D	D	D
Physical scientist	121,000	7,000	123,000	6,000	94,000	9,500
Psychologist	111,000	15,000	D	D	D	D
Social scientist	159,000	24,000	197,000	29,500	116,000	25,500
Engineering occupations	139,000	6,000	145,000	9,500	102,000	9,000
S&E-related occupations	116,000	13,500	168,000	19,000	107,000	8,000

TABLE 71

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
Non-S&E occupations	139,000	8,500	139,000	18,500	129,000	14,000

D = suppressed to avoid disclosure of confidential information.

S&E = science and engineering; SE = standard error.

[a] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[b] Includes 2-year colleges, community colleges, technical institutes, and other precollege institutions.

[c] Includes those self-employed in an incorporated business.

[d] Self-employed or business owner in a nonincorporated business.

[e] Includes employers not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 72

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All sectors	119,000	1,000	102,000	2,000	99,000	4,500	125,000	1,500	100,000	2,000	117,000	1,500	109,000	3,500
Science occupations	106,000	1,500	97,000	3,000	91,000	8,000	117,000	3,000	92,000	2,500	105,000	500	102,000	5,000
Biological, agricultural, and other life scientist	100,000	500	90,000	3,000	94,000	31,000	100,000	1,000	100,000	2,000	102,000	2,000	95,000	8,500
Computer and information scientist	149,000	2,000	139,000	5,000	D	D	150,000	2,500	114,000	8,500	144,000	4,000	135,000	17,500
Mathematical scientist	114,000	2,500	109,000	7,000	D	D	130,000	2,000	101,000	8,500	105,000	2,000	120,000	9,500
Physical scientist	102,000	2,500	96,000	4,500	93,000	8,500	99,000	1,500	86,000	4,500	105,000	2,000	101,000	12,500
Psychologist	100,000	500	96,000	4,500	101,000	13,000	91,000	3,500	89,000	2,000	100,000	500	95,000	8,000
Social scientist	99,000	1,500	90,000	4,500	70,000	7,500	105,000	4,000	89,000	2,000	100,000	1,500	95,000	5,000
Engineering occupations	130,000	500	118,000	4,000	145,000	15,000	130,000	500	111,000	4,500	132,000	3,000	130,000	10,000
S&E-related occupations	130,000	500	113,000	7,000	104,000	20,500	140,000	5,000	101,000	5,500	130,000	1,500	127,000	14,000
Non-S&E occupations	138,000	3,500	115,000	7,000	94,000	5,500	149,000	500	109,000	6,500	139,000	3,500	110,000	8,500
4-year educational institution[d]	95,000	500	88,000	1,500	89,000	4,000	90,000	500	89,000	1,500	98,000	1,000	88,000	2,000
Science occupations	89,000	1,000	84,000	1,500	70,000	9,500	83,000	2,000	83,000	2,500	90,000	500	83,000	3,500
Biological, agricultural, and other life scientist	82,000	1,500	75,000	4,500	D	D	70,000	2,500	81,000	4,000	87,000	2,000	78,000	6,000
Computer and information scientist	104,000	2,500	97,000	15,500	D	D	100,000	4,500	89,000	7,000	106,000	4,000	101,000	8,500
Mathematical scientist	89,000	1,000	96,000	7,000	D	D	89,000	2,000	81,000	4,500	89,000	1,000	77,000	6,000
Physical scientist	85,000	1,500	80,000	2,000	*	*	78,000	3,000	75,000	3,500	88,000	2,500	78,000	4,000
Psychologist	88,000	1,500	85,000	3,500	D	D	84,000	3,000	82,000	5,500	89,000	1,500	88,000	5,000
Social scientist	93,000	1,500	88,000	2,000	69,000	6,000	95,000	2,500	88,000	4,000	94,000	2,000	93,000	6,500
Engineering occupations	108,000	2,000	99,000	4,000	D	D	101,000	3,500	98,000	5,500	110,000	2,000	102,000	9,000
S&E-related occupations	106,000	2,500	96,000	8,000	94,000	8,500	106,000	9,000	90,000	4,000	109,000	2,000	88,000	11,000
Non-S&E occupations	120,000	2,500	94,000	3,500	86,000	9,000	120,000	9,500	100,000	3,000	125,000	2,000	106,000	14,000
Other educational institution[e]	76,000	1,500	76,000	4,000	67,000	6,500	73,000	7,500	78,000	3,500	76,000	2,000	76,000	3,500

TABLE 72

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Science occupations	76,000	2,000	75,000	2,500	S	S	70,000	11,500	76,000	5,500	77,000	2,000	81,000	6,000
Biological, agricultural, and other life scientist	73,000	2,500	74,000	3,000	D	D	64,000	13,500	62,000	12,000	74,000	2,500	D	D
Computer and information scientist	78,000	9,500	D	D	D	D	S	S	D	D	73,000	10,500	D	D
Mathematical scientist	79,000	4,000	70,000	13,500	D	D	81,000	9,500	D	D	75,000	13,000	D	D
Physical scientist	70,000	3,000	70,000	12,000	D	D	67,000	4,000	64,000	5,500	72,000	3,500	D	D
Psychologist	84,000	5,000	88,000	14,500	D	D	D	D	87,000	6,000	80,000	5,500	S	S
Social scientist	76,000	2,500	74,000	1,000	D	D	D	D	73,000	9,500	76,000	3,000	D	D
Engineering occupations	73,000	11,500	D	D	D	D	D	D	D	D	93,000	18,000	D	D
S&E-related occupations	65,000	3,500	70,000	11,000	D	D	58,000	11,000	58,000	8,000	66,000	3,500	66,000	12,500
Non-S&E occupations	94,000	4,000	85,000	5,000	D	D	79,000	8,000	106,000	7,500	96,000	3,500	69,000	9,500
Private, for profit[f]	150,000	500	134,000	4,000	126,000	17,500	149,000	500	124,000	4,000	150,000	500	145,000	7,500
Science occupations	140,000	2,000	129,000	4,000	109,000	9,000	149,000	2,000	119,000	2,000	140,000	1,000	139,000	7,500
Biological, agricultural, and other life scientist	127,000	2,500	124,000	4,500	D	D	122,000	3,500	120,000	4,000	130,000	1,000	129,000	11,500
Computer and information scientist	160,000	2,000	153,000	12,000	D	D	168,000	6,500	131,000	3,500	159,000	3,000	151,000	11,500
Mathematical scientist	150,000	4,500	137,000	14,500	D	D	150,000	6,000	122,000	22,000	157,000	8,000	145,000	17,000
Physical scientist	133,000	2,000	119,000	5,000	D	D	123,000	4,500	112,000	13,500	140,000	4,500	138,000	11,000
Psychologist	117,000	4,500	113,000	8,500	D	D	120,000	11,500	90,000	15,000	118,000	5,500	S	S
Social scientist	154,000	6,500	118,000	24,000	D	D	158,000	12,000	116,000	11,500	158,000	7,000	144,000	22,000
Engineering occupations	140,000	2,000	133,000	6,500	D	D	139,000	3,000	125,000	5,500	148,000	3,000	143,000	14,500
S&E-related occupations	169,000	4,000	151,000	18,500	S	S	158,000	6,000	129,000	17,500	179,000	4,000	151,000	17,000
Non-S&E occupations	164,000	4,500	148,000	4,000	156,000	33,000	160,000	5,000	130,000	10,500	170,000	5,500	155,000	20,000
Private, nonprofit	119,000	500	100,000	4,000	110,000	9,000	110,000	4,500	98,000	8,500	125,000	1,500	109,000	6,500

TABLE 72

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Science occupations	110,000	2,500	91,000	7,000	D	D	104,000	6,000	90,000	6,500	116,000	3,000	108,000	8,500
Biological, agricultural, and other life scientist	100,000	2,500	67,000	5,000	D	D	90,000	4,500	95,000	16,500	110,000	2,500	87,000	19,500
Computer and information scientist	137,000	13,000	D	D	D	D	117,000	8,000	*	*	152,000	7,500	S	S
Mathematical scientist	130,000	3,000	99,000	10,000	D	D	131,000	11,000	S	S	130,000	7,000	D	D
Physical scientist	128,000	4,500	102,000	21,500	D	D	116,000	11,500	S	S	136,000	7,000	97,000	10,500
Psychologist	104,000	2,000	96,000	8,500	D	D	97,000	6,000	87,000	6,500	104,000	1,000	D	D
Social scientist	120,000	9,000	118,000	14,000	D	D	106,000	28,000	92,000	9,000	126,000	10,500	D	D
Engineering occupations	137,000	7,000	143,000	16,500	D	D	134,000	7,000	126,000	10,000	142,000	7,500	D	D
S&E-related occupations	149,000	8,000	111,000	29,000	D	D	147,000	47,500	129,000	14,500	150,000	17,000	135,000	34,500
Non-S&E occupations	112,000	7,000	103,000	13,500	D	D	93,000	12,000	92,000	9,500	122,000	7,500	88,000	22,000
Federal government	126,000	1,500	120,000	2,500	121,000	2,500	130,000	4,000	114,000	3,500	128,000	2,000	114,000	4,500
Science occupations	121,000	2,500	119,000	3,000	S	S	120,000	3,000	107,000	3,000	124,000	2,000	114,000	3,000
Biological, agricultural, and other life scientist	120,000	1,500	118,000	6,000	D	D	112,000	8,500	106,000	6,500	120,000	2,000	103,000	14,500
Computer and information scientist	134,000	5,500	D	D	D	D	133,000	13,500	S	S	140,000	7,000	D	D
Mathematical scientist	136,000	6,500	149,000	6,000	D	D	137,000	12,000	134,000	21,500	132,000	7,000	D	D
Physical scientist	130,000	1,500	119,000	14,000	D	D	125,000	15,500	94,000	3,000	130,000	4,500	113,000	10,500
Psychologist	110,000	2,500	111,000	4,000	D	D	106,000	21,500	105,000	10,000	110,000	2,500	D	D
Social scientist	139,000	5,000	155,000	6,000	D	D	128,000	12,500	127,000	17,000	140,000	5,000	*	*
Engineering occupations	130,000	2,000	110,000	7,000	D	D	133,000	6,500	128,000	1,500	130,000	3,000	D	D
S&E-related occupations	145,000	7,000	128,000	8,500	D	D	152,000	11,500	126,000	6,500	148,000	6,500	152,000	18,500
Non-S&E occupations	139,000	3,500	129,000	9,000	D	D	142,000	7,500	119,000	6,000	140,000	8,500	S	S
State or local government	98,000	2,500	85,000	8,000	D	D	100,000	2,500	90,000	6,000	98,000	3,500	92,000	15,000

TABLE 72

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Science occupations	90,000	2,500	84,000	10,000	D	D	89,000	8,500	89,000	8,000	92,000	2,500	91,000	28,500
Biological, agricultural, and other life scientist	75,000	3,500	60,000	12,000	D	D	74,000	2,500	78,000	24,500	77,000	3,500	S	S
Computer and information scientist	97,000	13,000	D	D	D	D	83,000	3,500	*	*	110,000	11,500	D	D
Mathematical scientist	97,000	23,000	S	S	D	D	127,000	10,000	D	D	82,000	22,500	D	D
Physical scientist	100,000	6,000	85,000	12,000	D	D	90,000	30,500	D	D	116,000	13,000	S	S
Psychologist	95,000	5,000	86,000	15,500	D	D	100,000	10,500	82,000	6,000	96,000	6,500	D	D
Social scientist	91,000	2,000	S	S	D	D	97,000	12,500	93,000	5,500	90,000	3,000	D	D
Engineering occupations	102,000	7,000	78,000	13,000	D	D	101,000	11,500	S	S	106,000	8,000	D	D
S&E-related occupations	121,000	9,500	124,000	18,500	D	D	120,000	18,000	95,000	19,000	125,000	10,500	D	D
Non-S&E occupations	100,000	9,000	119,000	13,000	D	D	126,000	12,000	87,000	15,000	100,000	6,500	75,000	13,000
Self-employed[g]	100,000	500	83,000	8,000	D	D	89,000	13,500	99,000	7,000	100,000	4,000	82,000	22,500
Science occupations	101,000	9,000	80,000	14,500	D	D	97,000	13,000	99,000	5,000	108,000	8,000	89,000	17,500
Biological, agricultural, and other life scientist	78,000	6,500	S	S	D	D	77,000	12,000	D	D	85,000	14,500	D	D
Computer and information scientist	90,000	21,500	D	D	D	D	S	S	D	D	93,000	18,000	D	D
Mathematical scientist	181,000	37,000	D	D	D	D	D	D	D	D	D	D	D	D
Physical scientist	133,000	23,000	D	D	D	D	D	D	D	D	132,000	26,000	D	D
Psychologist	108,000	7,000	85,000	11,000	D	D	D	D	98,000	27,000	109,000	8,500	D	D
Social scientist	90,000	12,000	D	D	D	D	D	D	D	D	87,000	13,500	D	D
Engineering occupations	99,000	12,000	D	D	D	D	S	S	D	D	99,000	15,000	D	D
S&E-related occupations	172,000	29,000	S	S	D	D	132,000	38,500	D	D	174,000	38,000	D	D
Non-S&E occupations	80,000	7,500	S	S	D	D	64,000	18,000	76,000	21,500	86,000	6,500	D	D
Other sector[h]	132,000	5,500	155,000	15,500	D	D	135,000	6,000	132,000	18,000	128,000	6,000	136,000	42,500
Science occupations	130,000	3,000	157,000	20,000	D	D	130,000	9,500	126,000	21,000	128,000	6,000	D	D

TABLE 72

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2019

(Dollars)

Employment sector and occupation	All full-time employed		Hispanic or Latino[a]		Not Hispanic or Latino[b]									
					American Indian or Alaska Native		Asian		Black or African American		White		Other race[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Biological, agricultural, and other life scientist	105,000	20,500	*	*	D	D	93,000	24,500	D	D	131,000	23,500	D	D
Computer and information scientist	139,000	15,000	D	D	D	D	163,000	25,000	D	D	136,000	6,500	D	D
Mathematical scientist	147,000	20,500	D	D	D	D	S	S	S	S	D	D	D	D
Physical scientist	121,000	7,000	D	D	D	D	74,000	16,500	D	D	125,000	5,000	D	D
Psychologist	111,000	15,000	D	D	D	D	D	D	D	D	111,000	25,500	D	D
Social scientist	159,000	24,000	167,000	15,000	D	D	168,000	74,000	D	D	135,000	44,500	D	D
Engineering occupations	139,000	6,000	136,000	17,000	D	D	136,000	12,000	S	S	146,000	12,500	D	D
S&E-related occupations	116,000	13,500	D	D	D	D	122,000	36,000	D	D	109,000	11,000	D	D
Non-S&E occupations	139,000	8,500	179,000	58,000	D	D	139,000	32,500	160,000	36,500	126,000	11,500	D	D

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

[e] Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

[f] Includes those self-employed in an incorporated business.

[g] Self-employed or business owner in a nonincorporated business.

[h] Includes employers not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 73-1

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	139,000	2,500	130,000	1,000	120,000	500	120,000	500	90,000	500	105,000	2,000
Science occupations	106,000	1,500	137,000	3,000	117,000	2,500	106,000	2,000	110,000	500	87,000	1,000	96,000	1,500
Biological, agricultural, and other life scientist	100,000	500	84,000	7,000	114,000	2,500	119,000	3,500	102,000	2,000	85,000	1,000	96,000	2,500
Agricultural, food scientist	109,000	2,500	94,000	26,500	115,000	4,500	109,000	15,500	108,000	3,000	94,000	3,000	100,000	4,000
Biochemists, biophysicist	100,000	4,000	68,000	10,500	119,000	5,500	93,000	7,500	100,000	4,500	89,000	13,500	85,000	5,500
Biological scientist	90,000	2,000	70,000	5,000	100,000	1,000	88,000	13,000	89,000	2,000	88,000	4,000	95,000	5,500
Forestry, conservation scientist	98,000	5,500	73,000	19,000	104,000	6,500	67,000	28,000	99,000	3,000	77,000	3,000	80,000	11,500
Medical scientist	119,000	1,000	104,000	6,500	127,000	3,500	142,000	11,000	117,000	3,000	141,000	10,000	119,000	7,500
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	S	S	90,000	5,000	94,000	12,000	97,000	4,000	85,000	4,000	82,000	7,500
Postsecondary teachers, biological sciences	89,000	2,000	108,000	4,000	99,000	2,500	120,000	54,000	99,000	2,000	82,000	2,000	71,000	4,000
Other biological, agricultural, life scientist	109,000	2,500	99,000	13,500	117,000	4,000	116,000	11,000	105,000	4,500	121,000	32,000	111,000	3,500
Computer and information scientist	149,000	2,000	149,000	500	157,000	4,500	125,000	7,000	149,000	500	102,000	4,000	133,000	7,000
Computer and information scientist	153,000	2,500	150,000	500	169,000	6,000	129,000	8,000	154,000	3,000	129,000	6,500	143,000	10,000
Postsecondary teachers, computer science	101,000	3,500	91,000	7,500	99,000	3,500	D	D	110,000	3,000	100,000	1,000	91,000	8,000
Mathematical scientist	114,000	2,500	138,000	5,500	130,000	6,500	142,000	13,000	120,000	2,500	85,000	1,500	90,000	3,000
Mathematical scientist	140,000	3,500	140,000	1,500	150,000	7,000	146,000	12,000	140,000	1,500	97,000	4,500	127,000	8,500
Postsecondary teachers, mathematics, statistics	87,000	2,000	84,000	11,000	90,000	2,500	98,000	19,000	90,000	2,500	85,000	1,000	82,000	3,000
Physical scientist	102,000	2,500	100,000	3,500	115,000	4,000	122,000	13,000	110,000	1,000	82,000	2,000	96,000	4,500

TABLE 73-1

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Chemists, except biochemist	120,000	1,500	109,000	11,000	129,000	4,000	136,000	18,000	120,000	2,000	94,000	15,000	105,000	5,000
Earth, atmospheric, ocean scientist	110,000	1,500	98,000	4,000	119,000	6,500	118,000	23,500	110,000	4,000	94,000	6,000	102,000	11,500
Physicists, astronomers	130,000	1,500	100,000	7,000	149,000	5,500	164,000	7,000	129,000	3,500	120,000	18,500	129,000	15,000
Postsecondary teachers, chemistry	80,000	2,000	D	D	84,000	2,000	D	D	85,000	2,500	75,000	2,000	67,000	2,500
Postsecondary teachers, physics	92,000	3,000	74,000	11,000	103,000	6,500	S	S	100,000	2,000	89,000	5,000	71,000	11,000
Postsecondary teachers, other physical science	90,000	1,500	83,000	12,000	105,000	4,000	D	D	90,000	3,000	85,000	4,000	70,000	4,500
Other physical scientist	125,000	4,000	128,000	19,500	125,000	10,000	98,000	24,000	126,000	4,500	103,000	26,500	129,000	17,000
Psychologist	100,000	500	70,000	8,500	100,000	1,000	102,000	2,000	100,000	2,000	86,000	2,000	98,000	3,500
Psychologist	103,000	1,500	73,000	9,000	103,000	2,000	104,000	2,000	104,000	1,500	112,000	5,500	105,000	2,500
Postsecondary teachers, psychology	85,000	1,000	D	D	86,000	3,500	84,000	9,000	90,000	2,000	82,000	1,000	80,000	3,500
Social scientist	99,000	1,500	113,000	8,500	120,000	5,000	126,000	14,500	100,000	1,500	89,000	1,500	85,000	3,000
Economist	149,000	4,000	131,000	14,000	164,000	7,000	177,000	8,000	144,000	6,500	119,000	17,500	149,000	13,500
Political scientist	134,000	10,500	D	D	144,000	7,000	D	D	134,000	10,500	D	D	124,000	17,000
Postsecondary teachers, economics	110,000	3,500	D	D	130,000	7,000	D	D	115,000	3,500	107,000	2,500	94,000	11,500
Postsecondary teachers, political science	88,000	4,500	D	D	100,000	9,500	D	D	95,000	3,000	85,000	4,000	78,000	7,000
Postsecondary teachers, sociology	83,000	2,500	D	D	94,000	9,000	D	D	85,000	2,000	80,000	2,500	73,000	7,500
Postsecondary teachers, other social sciences	84,000	2,000	D	D	92,000	4,500	75,000	7,500	85,000	2,500	82,000	1,500	78,000	4,500
Sociologist, anthropologist	89,000	6,000	D	D	93,000	6,000	86,000	18,500	89,000	6,000	92,000	15,500	82,000	9,500
Other social scientist	106,000	4,500	101,000	7,500	119,000	5,500	137,000	14,500	105,000	4,500	91,000	6,500	106,000	11,000
Engineering occupations	130,000	500	136,000	3,500	140,000	1,000	129,000	5,500	130,000	1,000	105,000	2,000	126,000	3,000

TABLE 73-1

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Aerospace, aeronautical, astronautical engineer	149,000	1,500	149,000	6,500	154,000	7,500	S	S	149,000	3,000	109,000	25,000	146,000	17,000
Chemical engineer	137,000	4,500	133,000	40,000	148,000	6,500	D	D	135,000	4,500	103,000	19,500	128,000	5,000
Civil, architectural, sanitary engineer	109,000	5,000	94,000	14,500	124,000	6,000	115,000	11,500	107,000	7,000	100,000	21,500	109,000	12,500
Electrical engineer	149,000	1,000	149,000	2,500	163,000	4,000	165,000	14,000	150,000	500	110,000	6,000	134,000	5,500
Industrial engineers	119,000	3,500	105,000	6,500	121,000	13,000	D	D	118,000	6,000	108,000	15,000	131,000	14,000
Mechanical engineer	129,000	3,500	120,000	15,000	137,000	5,500	130,000	30,500	129,000	4,000	104,000	6,500	133,000	15,000
Postsecondary teacher, engineering	108,000	2,500	99,000	7,000	113,000	6,500	105,000	15,500	109,000	1,500	104,000	2,000	105,000	11,500
Other engineer	130,000	500	126,000	6,000	138,000	4,000	130,000	4,000	130,000	500	124,000	8,000	121,000	3,000
S&E-related occupations	130,000	500	140,000	4,500	150,000	500	150,000	6,000	130,000	1,500	94,000	2,000	109,000	5,500
Health occupations, except postsecondary teachers and managers	139,000	3,500	107,000	33,500	149,000	9,000	150,000	10,000	128,000	6,000	150,000	20,000	113,000	11,000
Postsecondary teacher, health and related science	105,000	2,500	D	D	120,000	6,000	147,000	11,500	105,000	2,000	99,000	2,500	86,000	2,000
S&E managers, including health	164,000	4,000	186,000	16,000	164,000	4,000	175,000	28,500	164,000	4,000	97,000	27,000	149,000	2,000
S&E precollege teachers	63,000	2,500	S	S	64,000	4,500	D	D	73,000	5,500	63,000	2,500	69,000	6,500
S&E technicians/ technologists	129,000	3,500	132,000	7,500	135,000	7,000	95,000	14,500	130,000	4,500	132,000	54,000	85,000	28,000
Other S&E-related occupation	132,000	8,500	156,000	10,000	124,000	9,000	115,000	13,500	140,000	15,500	D	D	D	D
Non-S&E occupations	138,000	3,500	146,000	5,000	149,000	500	135,000	5,500	145,000	3,000	93,000	3,000	116,000	5,000
Arts, humanities-related occupation	93,000	3,500	D	D	97,000	6,000	90,000	4,000	98,000	5,000	79,000	12,500	90,000	7,500
Management-related occupation	140,000	5,500	150,000	13,500	142,000	5,000	149,000	5,000	149,000	3,500	118,000	18,000	119,000	9,500
Non S&E managers	179,000	3,500	148,000	8,500	180,000	2,000	173,000	9,500	185,000	6,500	132,000	5,500	170,000	8,500

TABLE 73-1

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Non S&E postsecondary teachers	100,000	2,000	132,000	22,000	100,000	3,000	100,000	27,000	107,000	3,500	95,000	2,500	80,000	6,000
Non S&E precollege/ other teachers	68,000	4,000	D	D	76,000	11,000	53,000	26,500	72,000	3,000	67,000	7,500	53,000	7,000
Sales, marketing occupation	120,000	5,000	137,000	22,000	120,000	5,500	125,000	16,500	134,000	9,000	119,000	3,500	132,000	6,000
Social service-related occupation	74,000	5,000	D	D	74,000	6,500	72,000	4,500	79,000	2,500	68,000	11,000	83,000	10,500
Other non-S&E occupation	125,000	6,000	140,000	56,500	124,000	11,000	172,000	14,000	117,000	11,000	69,000	19,500	64,000	9,500

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] R&D includes applied and basic research, design, and development.

[c] Includes production, operations, maintenance, and other activities broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Primary and secondary work activities were self-described by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" If respondent reported more than one category of activity as primary or secondary work activity, respondent's salary appears in both categories. Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 73-2

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	119,000	1,000	142,000	4,000	145,000	2,500	119,000	500	120,000	500	81,000	1,500	111,000	3,000
Science occupations	106,000	1,500	145,000	3,000	129,000	2,000	105,000	1,000	115,000	500	80,000	500	104,000	2,500
Biological, agricultural, and other life scientist	100,000	500	84,000	11,000	123,000	3,000	123,000	10,500	103,000	2,000	75,000	500	106,000	6,000
Agricultural, food scientist	109,000	2,500	D	D	130,000	6,000	100,000	20,500	107,000	3,500	94,000	3,500	101,000	9,500
Biochemists, biophysicist	100,000	4,000	59,000	10,500	129,000	7,500	D	D	95,000	5,500	D	D	108,000	29,000
Biological scientist	90,000	2,000	64,000	2,500	114,000	6,500	76,000	2,500	87,000	3,000	77,000	5,500	96,000	6,000
Forestry, conservation scientist	98,000	5,500	S	S	101,000	9,500	64,000	12,500	98,000	6,500	74,000	4,000	99,000	20,500
Medical scientist	119,000	1,000	89,000	18,000	129,000	6,000	139,000	15,500	114,000	3,500	124,000	15,500	119,000	8,000
Postsecondary teachers, agricultural, other natural sciences	90,000	2,000	D	D	121,000	22,500	D	D	99,000	5,000	81,000	2,500	117,000	2,500
Postsecondary teachers, biological sciences	89,000	2,000	D	D	119,000	4,000	179,000	8,000	115,000	5,000	72,000	1,500	95,000	8,500
Other biological, agricultural, life scientist	109,000	2,500	116,000	9,500	128,000	4,500	112,000	13,000	99,000	3,000	139,000	29,000	111,000	7,000
Computer and information scientist	149,000	2,000	150,000	500	161,000	9,000	125,000	7,000	150,000	3,500	98,000	4,000	137,000	20,000
Computer and information scientist	153,000	2,500	150,000	500	170,000	7,000	130,000	9,500	158,000	3,500	88,000	10,500	149,000	22,000
Postsecondary teachers, computer science	101,000	3,500	D	D	100,000	10,500	D	D	120,000	4,500	98,000	3,500	73,000	26,000
Mathematical scientist	114,000	2,500	138,000	6,000	146,000	9,000	146,000	20,000	130,000	1,500	80,000	1,000	126,000	17,000
Mathematical scientist	140,000	3,500	139,000	4,500	159,000	7,500	148,000	8,500	140,000	5,000	80,000	8,500	128,000	18,000
Postsecondary teachers, mathematics, statistics	87,000	2,000	D	D	109,000	7,500	D	D	107,000	5,000	80,000	1,500	93,000	11,000
Physical scientist	102,000	2,500	109,000	14,000	129,000	3,500	138,000	13,000	120,000	1,500	75,000	500	99,000	2,000

TABLE 73-2

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Chemists, except biochemist	120,000	1,500	99,000	30,500	126,000	4,500	136,000	15,000	120,000	2,000	70,000	13,500	99,000	2,500
Earth, atmospheric, ocean scientist	110,000	1,500	119,000	5,500	143,000	8,000	109,000	17,000	110,000	3,500	91,000	7,500	96,000	6,500
Physicists, astronomers	130,000	1,500	95,000	28,000	158,000	12,500	164,000	9,000	129,000	3,000	65,000	17,000	130,000	17,500
Postsecondary teachers, chemistry	80,000	2,000	D	D	104,000	9,500	D	D	99,000	1,500	70,000	1,500	66,000	29,500
Postsecondary teachers, physics	92,000	3,000	D	D	153,000	30,500	235,000	87,000	115,000	6,500	80,000	1,500	S	S
Postsecondary teachers, other physical science	90,000	1,500	D	D	114,000	13,000	D	D	107,000	4,500	78,000	2,500	78,000	20,000
Other physical scientist	125,000	4,000	*	*	132,000	11,500	D	D	126,000	7,000	74,000	19,000	115,000	16,500
Psychologist	100,000	500	S	S	104,000	6,000	102,000	1,500	104,000	3,000	75,000	2,500	100,000	7,000
Psychologist	103,000	1,500	S	S	107,000	6,000	103,000	2,000	104,000	4,000	96,000	6,000	104,000	8,500
Postsecondary teachers, psychology	85,000	1,000	D	D	98,000	7,500	81,000	10,000	104,000	3,500	75,000	1,500	79,000	6,000
Social scientist	99,000	1,500	100,000	9,000	130,000	3,000	156,000	25,000	115,000	3,500	81,000	2,000	94,000	5,000
Economist	149,000	4,000	94,000	16,500	159,000	12,500	176,000	13,000	143,000	5,500	115,000	21,000	149,000	20,000
Political scientist	134,000	10,500	D	D	147,000	9,500	D	D	134,000	16,500	D	D	122,000	22,000
Postsecondary teachers, economics	110,000	3,500	D	D	138,000	18,500	D	D	138,000	5,500	99,000	2,500	S	S
Postsecondary teachers, political science	88,000	4,500	D	D	124,000	12,500	D	D	105,000	4,500	80,000	2,000	76,000	10,000
Postsecondary teachers, sociology	83,000	2,500	D	D	119,000	11,000	D	D	98,000	5,000	74,000	2,500	84,000	4,000
Postsecondary teachers, other social sciences	84,000	2,000	D	D	105,000	5,000	D	D	90,000	2,000	80,000	500	96,000	11,000
Sociologist, anthropologist	89,000	6,000	D	D	102,000	10,500	D	D	87,000	9,500	93,000	9,500	82,000	8,000
Other social scientist	106,000	4,500	101,000	4,500	122,000	10,500	150,000	15,000	104,000	4,500	83,000	10,000	85,000	11,000
Engineering occupations	130,000	500	139,000	4,000	150,000	5,000	129,000	5,000	132,000	3,000	100,000	1,000	130,000	4,500

TABLE 73-2

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Aerospace, aeronautical, astronautical engineer	149,000	1,500	145,000	10,000	159,000	5,000	S	S	149,000	5,000	D	D	155,000	14,500
Chemical engineer	137,000	4,500	S	S	142,000	8,500	D	D	139,000	5,500	80,000	7,500	129,000	6,000
Civil, architectural, sanitary engineer	109,000	5,000	128,000	15,500	129,000	7,000	110,000	17,500	100,000	4,500	95,000	25,500	111,000	34,500
Electrical engineer	149,000	1,000	150,000	11,000	166,000	7,000	163,000	38,000	149,000	2,500	103,000	3,500	142,000	7,000
Industrial engineers	119,000	3,500	D	D	125,000	24,500	D	D	115,000	5,500	108,000	25,000	127,000	13,000
Mechanical engineer	129,000	3,500	114,000	9,000	149,000	10,500	D	D	124,000	5,000	100,000	7,000	143,000	33,000
Postsecondary teacher, engineering	108,000	2,500	S	S	128,000	4,000	D	D	118,000	5,000	99,000	2,000	D	D
Other engineer	130,000	500	126,000	5,500	140,000	7,000	130,000	6,000	129,000	2,500	112,000	10,500	121,000	4,500
S&E-related occupations	130,000	500	138,000	7,500	160,000	4,000	158,000	13,500	130,000	3,000	85,000	1,500	108,000	6,500
Health occupations, except postsecondary teachers and managers	139,000	3,500	129,000	60,500	125,000	10,500	157,000	17,000	130,000	5,000	100,000	19,500	101,000	12,500
Postsecondary teacher, health and related science	105,000	2,500	D	D	148,000	13,500	165,000	20,000	115,000	3,000	90,000	1,000	86,000	20,000
S&E managers, including health	164,000	4,000	171,000	19,000	170,000	4,000	198,000	34,500	150,000	2,500	D	D	135,000	17,500
S&E precollege teachers	63,000	2,500	D	D	50,000	11,000	D	D	D	D	63,000	2,500	D	D
S&E technicians/ technologists	129,000	3,500	129,000	5,500	151,000	15,000	S	S	130,000	6,000	S	S	71,000	20,000
Other S&E-related occupation	132,000	8,500	D	D	125,000	11,000	113,000	4,000	155,000	9,000	D	D	D	D
Non-S&E occupations	138,000	3,500	139,000	9,000	154,000	4,000	139,000	6,000	145,000	6,000	82,000	2,000	108,000	5,000
Arts, humanities-related occupation	93,000	3,500	D	D	109,000	11,500	89,000	4,000	94,000	9,000	89,000	23,000	89,000	3,500
Management-related occupation	140,000	5,500	140,000	21,500	140,000	6,000	159,000	11,500	145,000	5,500	129,000	49,000	110,000	11,500
Non S&E managers	179,000	3,500	139,000	15,500	185,000	5,000	174,000	13,500	172,000	6,500	106,000	23,500	159,000	13,500

TABLE 73-2

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary work activity: 2019

(Dollars)

Occupation	All full-time employed		Computer applications		Management, sales, or administration[a]		Professional services		Any R&D[b]		Teaching		Other[c]	
	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Non S&E postsecondary teachers	100,000	2,000	D	D	121,000	12,500	123,000	13,500	137,000	11,000	84,000	3,000	98,000	8,500
Non S&E precollege/ other teachers	68,000	4,000	D	D	93,000	17,000	D	D	70,000	10,000	60,000	8,500	S	S
Sales, marketing occupation	120,000	5,000	D	D	119,000	5,500	105,000	35,500	125,000	15,500	D	D	122,000	34,000
Social service-related occupation	74,000	5,000	D	D	78,000	7,000	70,000	2,500	79,000	4,500	69,000	10,000	77,000	12,500
Other non-S&E occupation	125,000	6,000	D	D	70,000	7,000	179,000	13,000	86,000	8,000	51,000	12,500	72,000	10,500

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

[a] Administration includes accounting, finance, contracts, and human resources.

[b] R&D includes applied and basic research, design, and development.

[c] Includes production, operations, maintenance, and other activities not broken out separately.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Primary and secondary work activities were self-described by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Full time is based on working 35 or more hours per week. Residence location is based on reported living location on 1 February 2019.

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

TABLE 74

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad occupation: 2019

(Dollars)

			Science occupations																			
	All full-time employed		Total		Biological, agricultural, and other life scientist		Computer and information scientist		Mathematical scientist		Physical scientist		Psychologist		Social scientist		Engineering occupations		S&E-related occupations		Non-S&E occupations	
Employer location	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
All locations	119,000	1,000	106,000	1,500	100,000	500	149,000	2,000	114,000	2,500	102,000	2,500	100,000	500	99,000	1,500	130,000	500	130,000	500	138,000	3,500
New England	126,000	3,500	118,000	2,500	111,000	4,000	148,000	5,500	124,000	8,000	109,000	5,500	108,000	5,500	114,000	8,000	142,000	4,000	138,000	9,500	150,000	6,000
Connecticut	120,000	5,000	109,000	6,000	109,000	7,000	143,000	18,000	136,000	17,500	97,000	2,000	104,000	8,500	116,000	9,000	140,000	7,000	110,000	13,500	148,000	12,500
Maine	85,000	6,500	80,000	5,500	81,000	14,000	D	D	D	D	91,000	15,500	95,000	10,000	65,000	7,000	D	D	116,000	15,500	93,000	12,500
Massachusetts	133,000	3,000	124,000	3,500	117,000	3,500	149,000	2,000	129,000	7,000	117,000	6,000	112,000	7,000	124,000	6,500	146,000	5,500	146,000	5,500	160,000	7,500
New Hampshire	119,000	12,000	98,000	9,000	81,000	8,500	154,000	33,000	S	S	124,000	13,500	103,000	21,000	73,000	4,000	126,000	14,000	121,000	24,000	132,000	11,500
Rhode Island	106,000	4,000	104,000	3,500	96,000	13,500	D	D	102,000	14,000	105,000	8,000	106,000	10,500	112,000	24,000	126,000	23,000	109,000	12,500	119,000	18,000
Vermont	104,000	4,000	89,000	7,500	73,000	22,500	D	D	101,000	10,000	68,000	12,000	128,000	42,000	89,000	5,000	133,000	14,500	186,000	32,500	104,000	12,000
Middle Atlantic	122,000	3,000	115,000	2,500	109,000	2,500	149,000	3,000	138,000	6,500	108,000	6,000	100,000	1,500	103,000	4,000	125,000	1,500	138,000	5,500	149,000	2,000
New Jersey	136,000	4,500	130,000	4,500	132,000	9,500	149,000	5,500	144,000	14,000	129,000	9,500	99,000	10,500	105,000	12,000	137,000	8,500	145,000	14,000	156,000	7,000
New York	125,000	3,500	114,000	3,500	100,000	4,000	160,000	11,000	151,000	11,000	102,000	8,000	104,000	3,000	104,000	5,000	123,000	4,000	139,000	7,000	149,000	6,500
Pennsylvania	110,000	3,500	104,000	2,500	107,000	4,500	118,000	10,500	119,000	4,000	100,000	2,000	94,000	4,000	101,000	4,000	120,000	2,500	125,000	11,500	144,000	11,000
East North Central	105,000	1,500	98,000	2,000	95,000	2,000	122,000	4,000	97,000	5,000	94,000	3,000	98,000	3,000	90,000	4,500	119,000	1,500	119,000	3,000	125,000	4,000
Illinois	115,000	4,500	101,000	4,000	105,000	5,000	125,000	6,500	104,000	11,500	96,000	7,500	96,000	4,500	94,000	3,500	124,000	3,500	130,000	16,500	141,000	9,000
Indiana	99,000	3,000	91,000	2,500	96,000	8,000	100,000	6,000	92,000	3,000	88,000	11,500	80,000	6,000	83,000	4,500	105,000	10,000	110,000	8,000	123,000	12,500
Michigan	109,000	2,500	100,000	1,500	90,000	6,500	124,000	4,500	100,000	16,500	100,000	6,500	100,000	5,000	90,000	4,500	119,000	1,500	113,000	5,000	122,000	9,500
Ohio	105,000	3,000	98,000	3,500	95,000	5,500	123,000	19,000	98,000	9,000	95,000	4,500	98,000	3,000	86,000	9,500	119,000	5,000	129,000	7,000	105,000	6,000
Wisconsin	97,000	3,500	90,000	4,000	89,000	5,500	114,000	12,500	71,000	20,500	88,000	7,000	97,000	13,500	74,000	4,000	109,000	5,000	99,000	8,500	120,000	12,500
West North Central	100,000	1,000	92,000	2,000	90,000	3,500	110,000	5,000	93,000	4,500	83,000	3,500	93,000	3,500	85,000	4,500	118,000	7,000	120,000	6,000	109,000	9,500
Iowa	92,000	4,000	86,000	5,000	90,000	5,000	111,000	6,500	92,000	9,000	68,000	13,500	89,000	4,500	81,000	3,000	127,000	18,000	115,000	10,000	94,000	10,500
Kansas	97,000	2,500	88,000	7,500	94,000	8,000	99,000	17,000	82,000	26,500	79,000	1,500	85,000	9,000	82,000	8,500	98,000	2,000	118,000	18,000	105,000	17,000
Minnesota	110,000	3,000	100,000	2,500	95,000	5,500	129,000	13,500	97,000	6,500	106,000	10,500	101,000	5,000	90,000	3,000	120,000	5,500	123,000	15,500	125,000	14,000
Missouri	98,000	3,500	91,000	4,000	93,000	8,000	104,000	4,000	93,000	15,500	82,000	8,000	85,000	6,500	81,000	7,000	111,000	19,500	106,000	17,500	110,000	15,000
Nebraska	96,000	3,500	85,000	4,500	82,000	7,500	D	D	69,000	7,500	85,000	4,000	90,000	4,500	79,000	14,000	98,000	2,000	140,000	20,500	95,000	7,000
North Dakota	83,000	7,000	77,000	3,500	75,000	6,500	D	D	D	D	69,000	12,000	D	D	87,000	13,000	89,000	33,500	91,000	17,000	128,000	13,500
South Dakota	85,000	6,000	84,000	6,000	86,000	9,500	D	D	D	D	59,000	12,500	D	D	D	D	84,000	1,000	102,000	49,000	95,000	26,000
South Atlantic	115,000	2,000	106,000	2,000	103,000	2,000	124,000	4,000	114,000	4,500	102,000	3,000	95,000	1,500	109,000	2,500	120,000	1,000	120,000	3,000	135,000	4,500
Delaware	131,000	4,000	123,000	6,500	120,000	7,000	D	D	159,000	12,500	136,000	5,500	93,000	1,500	94,000	11,000	135,000	4,000	109,000	29,500	153,000	9,500
District of Columbia	139,000	2,500	134,000	3,500	119,000	3,500	134,000	12,000	130,000	13,500	121,000	10,000	100,000	6,500	145,000	6,000	125,000	5,000	120,000	14,500	159,000	3,500
Florida	100,000	1,500	90,000	2,500	82,000	3,000	108,000	15,500	93,000	8,000	85,000	5,500	97,000	5,000	100,000	8,000	109,000	2,000	105,000	5,000	110,000	11,000
Georgia	101,000	2,000	94,000	2,500	94,000	6,500	118,000	8,500	93,000	6,500	89,000	7,500	95,000	6,500	81,000	6,500	112,000	9,000	113,000	5,500	121,000	10,500
Maryland	125,000	1,000	120,000	500	120,000	3,000	129,000	7,000	130,000	3,500	125,000	4,500	108,000	8,500	112,000	9,500	134,000	4,000	132,000	6,000	139,000	8,500
North Carolina	109,000	2,500	100,000	1,500	104,000	7,000	128,000	6,500	110,000	6,000	80,000	5,500	93,000	5,500	94,000	6,500	119,000	2,000	138,000	13,500	126,000	3,500
South Carolina	94,000	3,500	86,000	5,500	83,000	7,000	101,000	3,500	95,000	10,000	93,000	6,500	72,000	3,500	80,000	5,000	100,000	7,500	108,000	16,500	121,000	21,500

TABLE 74

Median annual salaries of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad occupation: 2019

(Dollars)

	All full-time employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations	
			Total		Biological, agricultural, and other life scientist		Computer and information scientist		Mathematical scientist		Physical scientist		Psychologist		Social scientist							
Employer location	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE	Median salary	SE
Virginia	120,000	2,500	110,000	4,500	99,000	10,500	129,000	7,000	134,000	8,500	100,000	3,500	94,000	5,000	104,000	4,500	120,000	8,500	110,000	11,500	139,000	7,000
West Virginia	87,000	10,500	80,000	5,500	81,000	14,500	D	D	D	D	S	S	D	D	81,000	12,000	91,000	11,500	123,000	30,000	S	S
East South Central	98,000	2,500	88,000	3,000	89,000	4,000	99,000	7,500	79,000	6,500	96,000	6,500	88,000	7,500	71,000	3,000	116,000	5,000	110,000	9,500	119,000	4,000
Alabama	101,000	5,000	90,000	3,500	88,000	5,500	109,000	17,000	69,000	5,000	107,000	12,000	79,000	13,000	70,000	5,500	109,000	14,000	109,000	13,000	137,000	11,500
Kentucky	94,000	5,000	80,000	5,500	91,000	15,000	105,000	26,500	76,000	10,000	68,000	16,000	87,000	9,500	69,000	5,000	102,000	5,000	113,000	16,500	110,000	7,000
Mississippi	91,000	4,500	83,000	7,000	90,000	14,000	68,000	33,500	D	D	93,000	9,000	64,000	7,500	75,000	12,500	125,000	21,500	89,000	10,500	92,000	7,000
Tennessee	100,000	1,000	90,000	3,000	87,000	5,500	89,000	10,000	80,000	9,500	99,000	5,500	98,000	2,500	76,000	8,500	128,000	10,000	120,000	14,000	117,000	13,000
West South Central	109,000	2,500	95,000	1,000	84,000	2,500	128,000	6,500	96,000	2,500	101,000	6,000	97,000	4,000	82,000	4,500	130,000	4,500	118,000	6,000	123,000	5,000
Arkansas	88,000	5,000	79,000	4,500	79,000	4,500	D	D	D	D	68,000	11,000	88,000	32,500	68,000	9,000	104,000	23,000	125,000	33,000	108,000	37,000
Louisiana	85,000	3,500	83,000	4,000	88,000	8,000	109,000	6,000	83,000	17,000	80,000	4,000	86,000	14,500	75,000	4,500	89,000	15,000	81,000	25,500	95,000	17,000
Oklahoma	100,000	3,500	87,000	5,500	84,000	5,500	S	S	63,000	22,000	92,000	14,500	96,000	13,000	74,000	4,000	115,000	7,500	101,000	9,500	108,000	29,500
Texas	115,000	2,000	100,000	1,000	84,000	5,000	129,000	6,000	97,000	2,500	117,000	7,500	99,000	2,500	89,000	4,500	139,000	4,500	122,000	7,000	125,000	5,500
Mountain	107,000	2,000	98,000	3,000	88,000	2,500	127,000	6,500	91,000	4,000	105,000	4,000	95,000	6,500	91,000	4,000	130,000	2,500	130,000	7,000	110,000	9,000
Arizona	113,000	5,500	100,000	5,000	103,000	12,500	117,000	14,000	106,000	17,000	85,000	6,500	97,000	10,000	97,000	8,000	130,000	3,500	133,000	7,000	111,000	13,000
Colorado	110,000	4,000	100,000	3,000	90,000	6,500	150,000	10,500	92,000	6,500	106,000	5,500	91,000	4,000	86,000	8,000	134,000	4,500	138,000	14,000	124,000	15,000
Idaho	99,000	5,000	89,000	8,000	88,000	11,000	78,000	13,500	73,000	11,500	92,000	7,000	103,000	34,000	73,000	10,500	104,000	9,500	95,000	14,500	119,000	18,500
Montana	85,000	5,000	81,000	8,000	83,000	9,500	D	D	D	D	69,000	3,000	S	S	75,000	6,500	87,000	9,000	87,000	14,000	75,000	10,500
Nevada	101,000	5,500	99,000	4,000	99,000	12,000	S	S	D	D	100,000	21,000	108,000	24,500	85,000	9,000	92,000	15,500	123,000	22,000	141,000	20,500
New Mexico	121,000	4,000	119,000	11,500	79,000	7,000	129,000	10,000	83,000	24,000	133,000	5,500	96,000	17,500	97,000	6,500	139,000	7,500	159,000	22,000	91,000	17,500
Utah	104,000	4,000	99,000	4,500	84,000	6,500	121,000	15,000	83,000	13,500	102,000	7,000	105,000	20,000	99,000	7,500	121,000	15,000	122,000	11,500	103,000	4,500
Wyoming	78,000	5,000	79,000	6,500	76,000	6,000	D	D	D	D	79,000	6,000	D	D	D	D	*	*	D	D	D	D
Pacific	140,000	1,000	125,000	1,500	110,000	1,500	170,000	4,500	144,000	7,500	119,000	2,500	105,000	2,500	103,000	2,500	149,000	5,000	150,000	1,500	159,000	8,500
Alaska	100,000	5,000	95,000	7,000	103,000	5,500	D	D	D	D	90,000	21,000	S	S	81,000	2,000	108,000	26,000	111,000	43,000	161,000	57,000
California	148,000	3,500	134,000	3,000	115,000	2,500	178,000	4,000	148,000	4,000	126,000	3,000	107,000	4,500	109,000	3,000	157,000	5,000	154,000	8,000	165,000	6,500
Hawaii	97,000	6,000	94,000	7,500	105,000	21,000	D	D	90,000	35,500	95,000	11,000	112,000	15,000	89,000	6,000	95,000	4,500	82,000	22,500	100,000	17,000
Oregon	119,000	1,000	101,000	2,000	90,000	5,500	149,000	5,000	100,000	10,000	89,000	5,000	99,000	4,500	96,000	7,500	127,000	3,500	128,000	13,500	125,000	8,500
Washington	125,000	3,500	118,000	3,500	96,000	4,500	160,000	2,500	126,000	14,000	85,000	7,000	105,000	4,500	91,000	5,500	139,000	6,000	148,000	15,000	140,000	15,000
Puerto Rico	77,000	5,000	72,000	7,000	70,000	9,000	S	S	81,000	5,000	70,000	4,000	62,000	11,500	S	S	85,000	12,500	81,000	13,000	78,000	17,500
U.S. territories and other areas	98,000	9,000	96,000	11,000	76,000	9,500	122,000	29,000	D	D	88,000	22,500	D	D	96,000	21,000	95,000	47,500	147,000	70,500	77,000	23,500

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering; SE = standard error.

Note(s):
Median annual salaries are for principal job and are rounded to nearest $1,000. Standard errors are rounded up to the nearest $500. Full time is based on working 35 or more hours per week. Because survey sample design does not include geography, reliability of estimates in some states may be poor due to small sample size. Residence location is based on reported living location on 1 February 2019.

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

TABLE 75

U.S. residing doctoral scientists and engineers employed as postdocs, by field of doctorate: 2019

(Number and SE)

Field of study	Number	SE
Total in postdoc	25,400	725
Science	21,050	700
Biological, agricultural, and environmental life sciences	13,400	550
Agricultural and food sciences	450	75
Biochemistry and biophysics	1,500	175
Cell, cellular biology, and molecular biology	1,950	225
Microbiological sciences and immunology	1,850	200
Natural resources and conservation	350	75
Zoology	200	75
Other biological sciences	7,100	375
Computer and information sciences	300	100
Mathematics and statistics	800	150
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4,900	350
Astronomy and astrophysics	300	50
Chemistry, except biochemistry	2,050	225
Geosciences, atmospheric sciences, and ocean sciences	800	100
Physics	1,750	250
Psychology	1,000	150
Social sciences	650	100
Economics	S	S
Political science and government	50	50
Sociology, demography, and population studies	100	50
Other social sciences	400	75
Engineering	3,350	300
Aerospace, aeronautical, and astronautical engineering	50	50
Chemical engineering	500	150
Civil engineering	250	75
Electrical and computer engineering	400	100
Mechanical engineering	500	125
Metallurgical and materials engineering	500	125
Other engineering	1,050	150
Health	1,050	175

S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. A postdoc is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc status is reported for principal job as of survey reference date (1 February 2019). Residence location is based on reported living location on 1 February 2019.

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

TABLE 76

Postdoc status of U.S. residing doctoral scientists and engineers, by years since doctorate and broad field of doctorate: 2019

(Number and SE)

Years since doctorate and status of postdoctoral appointment[a]	All employed		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Doctorate recipient	857,200	1,975	640,300	1,900	220,700	1,100	31,100	400	36,650	450	133,750	950	115,350	825	102,700	900	176,700	1,175	40,200	475
Postdoctoral appointment in 2019	25,400	725	21,050	700	13,400	550	300	100	800	150	4,900	350	1,000	150	650	100	3,350	300	1,050	175
≤ 5 years	142,500	625	100,000	750	35,700	600	7,350	325	6,600	300	19,800	425	14,650	375	15,900	375	33,400	700	9,100	275
Postdoctoral appointment in 2019	20,700	600	17,050	550	10,500	450	250	100	750	150	4,150	325	850	150	550	100	2,850	275	850	150
6–10 years	154,750	1,025	112,250	1,025	41,950	750	7,650	350	6,800	300	21,800	575	16,800	475	17,300	475	34,400	750	8,100	350
Postdoctoral appointment in 2019	3,900	350	3,250	325	2,500	250	D	D	D	D	550	125	50	50	50	25	450	125	200	100
11–15 years	127,000	1,150	93,350	1,150	34,050	675	5,200	300	5,350	275	17,650	575	16,300	425	14,850	475	27,250	650	6,400	300
Postdoctoral appointment in 2019	650	125	550	125	350	100	D	D	D	D	150	100	D	D	D	D	S	S	D	D
> 15 years	432,950	1,725	334,700	1,600	109,050	1,250	10,900	400	17,900	450	74,500	950	67,650	850	54,700	875	81,700	1,050	16,600	425
Postdoctoral appointment in 2019	200	75	200	75	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D

D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] A postdoc is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may not add to total because of rounding. Postdoc status is reported for principal job as of survey reference date (1 February 2019). Years since doctorate were calculated as academic years since doctorate attainment. Residence location is based on reported living location on 1 February 2019.

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

TABLE 77

U.S. residing doctoral scientists and engineers on postdoctoral appointments, by selected demographic characteristics and broad field of doctorate: 2019

(Number and SE)

Characteristic	All employed		Science														Engineering		Health	
			Total		Biological, agricultural, and environmental life sciences		Computer and information sciences		Mathematics and statistics		Physical sciences		Psychology		Social sciences					
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
On postdoc in February 2019	25,400	725	21,050	700	13,400	550	300	100	800	150	4,900	350	1,000	150	650	100	3,350	300	1,050	175
Years since doctorate																				
≤ 5 years	20,700	600	17,050	550	10,500	450	250	100	750	150	4,150	325	850	150	550	100	2,850	275	850	150
6–10 years	3,900	350	3,250	325	2,500	250	D	D	D	D	550	125	50	50	50	25	450	125	200	100
11–15 years	650	125	550	125	350	100	D	D	D	D	150	100	D	D	D	D	S	S	D	D
> 15 years	200	75	200	75	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Sex																				
Male	14,650	625	11,700	575	6,650	400	250	100	700	125	3,500	300	450	100	200	50	2,450	250	450	125
Female	10,800	475	9,350	425	6,700	375	*	*	150	75	1,400	175	600	125	450	75	900	150	550	125
Ethnicity																				
Hispanic or Latino[a]	1,300	125	1,100	125	800	100	D	D	*	*	150	50	50	50	50	25	150	50	50	25
Not Hispanic or Latino[b]																				
American Indian or Alaska Native	50	25	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	11,150	525	8,650	475	5,350	375	S	S	450	125	2,400	300	200	75	100	50	2,050	275	450	100
Black or African American	1,000	150	750	125	400	75	D	D	D	D	200	100	50	50	50	25	100	50	S	S
White	11,450	400	10,050	400	6,450	350	100	50	350	100	2,000	175	700	125	450	75	1,000	150	350	100
Other race[c]	500	100	450	100	350	75	D	D	D	D	100	50	D	D	D	D	50	25	D	D
Age																				
Under 35	14,450	525	12,000	475	7,100	375	200	100	650	150	3,350	300	550	125	150	50	2,000	225	450	100
35–44	9,650	500	8,000	475	5,700	425	S	S	150	75	1,300	200	350	100	400	75	1,200	200	450	100
45–75	1,350	175	1,000	150	600	125	D	D	D	D	250	100	S	S	50	50	150	75	S	S
Citizenship																				
U.S. citizen	13,800	425	12,050	425	8,000	375	100	50	350	100	2,300	200	800	150	500	75	1,200	150	550	125
Non-U.S. citizen	11,650	575	9,000	525	5,400	400	200	100	500	125	2,600	300	200	75	100	50	2,100	275	500	125
Sector of employment																				
Educational institution[d]	18,700	600	15,750	575	9,950	425	200	75	700	125	3,600	300	800	150	500	100	2,300	250	650	125
Business/ industry[e]	4,050	350	3,100	300	2,150	250	D	D	D	D	700	150	S	S	D	D	750	175	200	75
Government[f]	2,700	225	2,150	200	1,300	175	D	D	D	D	600	150	150	75	100	50	350	75	200	100

* = suppressed when population estimate < 25. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

SE = standard error.

[a] Hispanic or Latino may be of any race.

[b] American Indian or Alaska Native, Asian, Black or African American, and White are single race.

[c] Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

[d] Educational institution includes 4-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), university-affiliated research institutes, 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

[e] Business or industry includes private for profit, private not for profit, self-employed or business owners in incorporated or nonincorporated business, non-U.S. governments, and employers not broken out separately.

[f] Government includes U.S. federal, state, and local government.

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. A postdoc is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc status is reported for the principal job as of the survey reference date (1 February 2019). Years since doctorate were calculated as academic years since doctorate attainment. Residence location is based on reported living location on 1 February 2019.

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

Technical Notes

Survey Overview

Purpose. The Survey of Doctorate Recipients (SDR), conducted by the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF), provides data on the characteristics of science, engineering, and health (SEH) doctorate degree holders. A research doctorate is a doctoral degree that (1) requires the completion of an original intellectual contribution in the form of a dissertation or an equivalent culminating project (e.g., a published manuscript) and (2) is not primarily intended as a degree for the practice of a profession. The most common research doctorate degree is the PhD. The SDR samples individuals who have earned an SEH research doctorate from a U.S. academic institution and are less than 76 years of age. The SDR provides data useful in assessing the supply and characteristics of the nation's SEH doctorates employed in educational institutions, private industry, and professional organizations, as well as federal, state, and local governments.

The SDR is designed to provide demographic, education, and career history information about individuals who earned a research doctorate in an SEH field from a U.S. academic institution and to complement another survey of scientists and engineers conducted by NCSES: The National Survey of College Graduates (NSCG, **https://www.nsf.gov/statistics/srvygrads/**). These two surveys share a common reference date, and they use similar questionnaires and data processing guidelines.

Some of the education and demographic information in the SDR come from the Survey of Earned Doctorates (SED, **https://www.nsf.gov/statistics/srvydoctorates/**), an annual census of research doctorates earned in the United States. The SED provides the sampling frame for the SDR through its annual update of the longstanding Doctorate Records File (DRF), a cumulative listing of all U.S.-earned doctorate recipients dating back to 1920.

These technical notes provide an overview of the 2019 SDR. Complete details are provided in the 2019 SDR methodology report, available upon request from the SDR Survey Manager.

Data collection authority. The information collected in the SDR is solicited under the authority of the National Science Foundation Act of 1950, as amended, the America COMPETES Reauthorization Act of 2010, and the Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA). The Office of Management and Budget (OMB) control number is 3145-0020 and expires on 31 August 2022.

Survey contractor. Westat, Rockville, MD.

Survey sponsor. The SDR is sponsored by NCSES with support from the National Institutes of Health.

Major changes to the recent cycle. No major changes were made to the substantive content in the 2019 SDR. However, the 6-month data collection period included a starting phase that emphasized participation with a Web-based response.

Key Survey Information

Frequency. Biennial.

Initial survey year. 1973.

Reference period. The week of 1 February 2019.

Response unit. Individuals with an SEH research doctorate from a U.S. academic institution.

Sample or census. Sample.

Population size. Approximately 1,148,800 individuals; 1,008,900 residing in the United States and 139,900 residing outside the United States.

Sample size. 120,000 individuals.

Key variables.

- Demographics (e.g., age, race, sex, ethnicity, and citizenship)
- Educational history
- Employment status
- Field of degree
- Occupation

Survey Design

Target population. The SDR target population includes individuals that meet the following criteria:

- Earned an SEH research doctorate from a U.S. academic institution prior to 1 July 2017.
- Are not institutionalized or terminally ill on 1 February 2019.
- Are less than 76 years of age as of 1 February 2019.

Sampling frame. The SDR uses the DRF, constructed from the annual SED, as its sampling frame. Based on the information available in the DRF, individuals who did not meet the age criterion were dropped from the frame. For those individuals who completed more than one SEH research doctorate, only the information on the first degree earned was used for sampling eligibility.

Sample design. The SDR uses a fixed panel design with a sample of new doctoral graduates added to the panel in each biennial survey cycle. For the 2019 SDR, all 2015 and 2017 sampled members who remained age eligible were retained for the 2019 cycle. The 2015 sampled members who did not respond in both the 2015 and 2017 surveys were dropped from the 2019 sample. As with prior survey cycles, a sample of 10,000 new graduates who had earned their degrees from 1 July 2015 to 30 June 2017 was added. An additional sample of 14,564 SEH doctoral degree holders eligible for the 2015 sample but not previously selected was also added to support a revised sample stratification design. The revised stratification cells defined by detailed fields of study, gender, and underrepresented minority indicator were implemented to strengthen reporting for small fields and minority groups. The new graduate sample and the supplemental sample both were selected under the revised design.

The resulting 2019 SDR sample of 120,000 cases consisted of 95,436 age-eligible cases from the 2017 SDR, 14,564 from the 2015 supplemental sample, and 10,000 cases from the DRF's new cohort of graduates from academic years 2016 and 2017. The overall sampling rate was about 1 in 10 (11.1%), although sampling rates varied across strata.

Data Collection and Processing Methods

Data collection. The data collection period lasted approximately 6 months. The SDR used a trimodal data collection approach: self-administered online survey (Web), self-administered paper questionnaire (via mail), and computer-assisted telephone interview (CATI). Individuals in the sample generally were started in the Web mode depending on available contact information. After an initial survey invitation via postal mail and e-mail, the data collection protocol included sequential contacts by postal mail, telephone, and e-mail that ran throughout the data collection period. At any time during data collection, sample members could choose to complete the survey using any of the three modes. Nonrespondents to the initial survey invitation received follow-up with alternate survey modes.

Quality assurance procedures were in place at each data collection step (address updating, printing, package assembly and mailing, questionnaire receipt, data entry, coding, CATI, and post-data collection processing). Active data collection ended in March 2020. The online survey closed 3 April 2020 and receipting of hard-copy questionnaires ended on 20 April 2020.

Mode. About 93% of the participants completed the survey through the Web, 5% through mail, and 2% through CATI. Web participation increased from 84% in the 2017 cycle because of an emphasis on Web-based participation in the starting phase of data collection.

Response rates. Response rates were calculated on complete responses, that is, from instruments with responses to all critical items. Critical items are those containing information needed to report labor force participation, including employment status, job title, and job description, as well as location of residency on the reference date. The overall unweighted response rate was 68%; the weighted response rate was 69%. These response rates are comparable to those achieved in the 2017 SDR.

Of the 120,000 persons in the 2019 SDR sample, 80,882 completed the survey. Among those who completed the survey, 73,083 respondents were residing in the United States on the survey reference date and contributed to the U.S. SEH doctoral population estimates. An additional 7,799 persons completed the survey, but they were residing outside of the United States on the survey reference date. This group contributed to the estimates of the internationally residing U.S.-trained SEH doctoral population.

Data editing. Complete 2019 response data had initial editing rules applied relative to the specific mode of capture to check internal consistency and valid range of response. The Web and CATI instruments included automated internal editing controls where appropriate. Mail questionnaire data were scanned, and data were captured via Optical Mark Recognition (OMR) and Optical Characters Recognition (OCR). The OMR and OCR technology also applied editing controls that flagged unclear responses or responses that did not fit the expected response type (e.g., multiple responses in a select-one type question). Additionally, the system flagged any paper questionnaires that were missing critical items (working status, job title, duties and responsibilities, and residency in the United States or elsewhere). Telephone callbacks were used to obtain additional information for incomplete mail responses. Responses from the three separate modes were merged into a single database and fully harmonized prior to subsequent coding, editing, and cleaning necessary to create an analytical database.

Following established NCSES guidelines for coding SDR and NSCG survey data, including verbatim responses, staff were trained in conducting a standardized review and coding of occupation and education information, “other/specify” verbatim responses, state and country geographical information, and postsecondary institution information. For standardized coding of occupation (including autocoding), the respondent's reported job title, duties and responsibilities, and other work-related information from the questionnaire were reviewed by specially trained coders who corrected known respondent self-reporting errors to obtain the best occupation codes. The education code for the field of study of a newly earned degree or for the first bachelor's degree earned if not reported previously was assigned solely based on the verbatim response for that degree field.

Imputation. Item nonresponse for key employment items—such as employment status, sector of employment, and primary work activity—ranged from 0.0% to 2.7%. Nonresponse to questions about income was higher: nonresponse to salary was 13.3%, and nonresponse to earned income was 15.4%. Personal demographic data, such as sex, marital status, citizenship, ethnicity, and race, had variable item nonresponse rates, with sex at 0.0%, birth year at 0.1%, marital status at 9.4%, citizenship at 5.7%, ethnicity at 0.5%, and race at 0.9%. Item nonresponse was addressed using random imputation and hot- deck imputation methods.[1]

Logical imputation often was accomplished as a part of editing. In the editing phase, the answer to a question with missing data was sometimes determined by the answer to another question. In some circumstances, editing procedures found inconsistent data that were blanked out and therefore subject to statistical imputation. During sample frame construction for the SDR, some missing demographic variables, such as race and ethnicity, were imputed before sample selection by using other existing information from the sampling frame. All sample members with imputed values for race or ethnicity were given the opportunity to report these data if they responded in the Web or CATI modes.

Respondents with missing race or ethnicity data who did not take the opportunity to report these data were assigned values for race or ethnicity through hot-deck procedures during post-data processing.

Most SDR variables were subjected to hot-deck imputation, with each variable having its own class and sort variables chosen by regression modeling to identify nearest neighbors for imputed information.

However, imputation was not performed on critical items or on verbatim-based variables. For some variables, there was no set of class and sort variables that was reliably related to or suitable for predicting the missing value, such as day of birth. In these instances, random imputation was used, so that the distribution of imputed values was similar to the distribution of reported values without using class or sort variables.

Weighting. Because the SDR is based on a complex sampling design and subject to nonresponse bias, sampling weights were created for each respondent to support unbiased population estimates. The final analysis weights account for the following:

- Differential sampling rates
- Adjustments for unknown eligibility
- Adjustments for nonresponse among eligible sample members
- Adjustments to align the sample distribution with the DRF distribution with respect to gender, race and ethnicity, degree year, degree field, and residency location

The final sample weights enable data users to derive survey-based estimates of the SDR target population. The variable name on the SDR public use data files for the SDR final sample weight is WTSURVY.

Detailed information on weighting is contained in the 2019 SDR Methodology Report, available upon request from the SDR Survey Manager.

Variance estimation. The successive difference replication method (SDRM) was used to develop replicate weights for variance estimation. The theoretical basis for the SDRM is described in Wolter (1984) and in Fay and Train (1995). As with any replication method, successive difference replication involves constructing a number of subsamples (replicates) from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around their corresponding full sample estimate provides an estimate of the sampling variance of the statistic of interest. The 2019 SDR produced 104 sets of replicate weights. Please contact the SDR Survey Manager to obtain the SDR replicate weights and the replicate weight user guide.

Disclosure protection. To protect against the disclosure of confidential information provided by SDR respondents, the estimates presented in SDR data tables are rounded to the nearest 50, although calculations of percentages are based on unrounded estimates.

Data table cell values based on counts of respondents that fall below a predetermined threshold are deemed to be sensitive to potential disclosure, and the letter “D” indicates this type of suppression in a table cell.

Survey Quality Measures

Sampling error. SDR estimates are subject to sampling errors. Estimates of sampling errors associated with this survey were calculated using replicate weights and are included in each table of estimates. Data table estimates with coefficient of variation (that is, the estimate divided by the standard error) that exceed a predetermined threshold are deemed unreliable and are suppressed. The letter "S" indicates this type of suppression in a table cell.

Coverage error. Coverage error occurs in sample estimates when the sampling frame does not accurately represent the target population and is a type of nonsampling error. The initial SDR sampling frame is the DRF which is derived from the SED, a census survey of research doctorates awarded annually in the United States. To the extent that the DRF does not include all awarded research doctorates, the SDR would suffer from undercoverage. Reporting errors in the SED could lead to incorrect classification of doctorates as not having earned an SEH research doctorate, which could result in further undercoverage.

Nonresponse error. The weighted response rate for the 2019 SDR was 69%; the unweighted response rate was 68%. Results from the research and analysis of SDR nonresponse trends have been used in the development of the nonresponse weighting adjustments to minimize the potential for nonresponse bias in the SDR estimates. In addition, as noted above, most item nonresponse was addressed using hot-deck imputation methods and random imputation for a few items when applicable.

Measurement error. The SDR is subject to reporting errors from differences in interpretation of questions and by modality (Web, mail, and CATI).

Data Comparability and Changes

Data comparability. Year-to-year comparisons can be made among the 1993 to 2019 survey cycles because many of the core questions remained the same. Small but notable differences exist across some survey cycles, however, such as the collection of occupation data being based on the different versions of the occupation taxonomy. Also, due to variation in the month of the reference date in some survey cycles, seasonal differences may occur when making comparisons across cycles and decades. Thus, use caution when interpreting cross-cycle and cross-decade comparisons. In addition, the definition of the SDR survey target population has experienced the following changes over time:

- The 2015 SDR sample design improved population coverage in the 2015, 2017, and 2019 survey cycles to include all SEH doctorates awarded by U.S. institutions regardless of the academic year of award or the graduate's post-graduation residency location.
- In 2010 and 2013, coverage of SEH doctorates residing outside of the United States only included those having graduated since 2001.
- Surveys conducted prior to 2010 did not cover SEH doctorates residing outside of the United States.
- From 1999 to 2008, estimates of industrial engineers were mislabeled as estimates of "Materials/metallurgical engineers." For these years, data in this mislabeled category included only industrial engineers, and estimates of Materials/metallurgical engineers were included in the estimate of "Other engineers."
- Surveys conducted before 1991 included individuals who received research doctorates in fields other than SEH and individuals who received their doctorates from non-U.S. institutions.

Caution is recommended when considering any analysis of trends that span pre- and post-1991 surveys, pre- and post-2010 surveys, and pre-and post-2015 surveys because of the changes in the survey design and target population.

Overlap in sample cases across survey cycles allows for longitudinal analysis using SDR data. To link cases on the SDR public use data files across survey cycles, use the unique identification variable REFID.

Changes in survey coverage and population.

- 2015. Beginning with the 2015 SDR and continuing with the 2017 and 2019 cycles, the SDR maintains a consistent target population that includes doctorate recipients residing outside the United States. The 2015 cycle introduced a fresh sample selected from the DRF and sampling strata defined by fine field of degree. Through these changes introduced in the 2015 SDR survey cycle, the 2015 sample represents all U.S.-trained doctorate holders with a first SEH degree regardless of their citizenship or plans to leave the United States upon graduation, which were eligibility delimiters in past cycles of the SDR. To analyze U.S.-residing cases only, use the variable FNINUS, which indicates living or working in the United States on the survey reference date.
- 2010 and 2013. Beginning with the 2010 SDR and continuing with the 2013 cycle, the sampling and weighting procedures integrated the U.S.-residing national (NSDR) and the non-U.S.- residing international (ISDR) sample components. Complete surveys from respondents located in the United States on the survey reference date were included in the SESTAT (Scientists and Engineers Statistical Data System) analysis dataset regardless of the initial sample component.
- 2006. In all cycles of the SDR except 2006, the new cohort consisted of graduates from the 2 academic years immediately preceding the survey year. In 2006, the SDR new cohort sample covered graduates in the 3 previous academic years.
- 2003. Beginning with 2003, the new cohort frame includes all SEH doctorate recipients except those who earned an SEH doctorate in a prior year. The SDR frame is based on the first U.S. research doctorate earned in an SEH field.
- 2001 and prior. Recipients of two doctorates whose first degree was in a non-SEH field were not included in the SDR frame, even if their second doctorate was in an SEH field. Based on information collected annually by the SED on the number and characteristics of those earning two doctorates, this exclusion resulted in a slight undercoverage bias. Between 1983 and 2000, for example, the total number of double doctorate recipients with a non-SEH first doctorate and an SEH second doctorate was 154, representing 0.05% of the total number of SEH doctorates awarded in that period.

Changes in data processing.

- 2019: Updates to improve the accuracy of post-collection processing resulted in shifts to two estimates. Specifically, as a result of an update to an edit, the estimate of the proportion of the population employed on the reference day in both the current cycle and in the prior cycle (WRKGP) increased relative to 2017 and 2015. In 2019, the edit for missing responses to this item was updated to evaluate current cycle working status as well as refer to the working status reported in the prior cycle. Previously, the edits do not refer to prior cycle response data. As a result of modification to an item specific imputation approach, the distribution of changes in employer and type of job (EMSMI) between the 2019 cycle and the previous cycle shifted for those working in both cycles. The modification removed a constraint that limited the eligible donor pool and resulted in differences in the distribution between non-imputed and imputed responses. The modified imputation approach applied in 2019 increased the similarity between the imputed response distribution and the non-imputed responses.

Changes in questionnaire.

- 2019. The 2019 questionnaire eliminated the question that asked respondents to provide their preferred mode of response. This question reflected an operational rather than analytic purpose. However, prior research showed that once respondents complete the survey online they are more likely to complete online in the future, regardless of stated preference. Similarly, respondents given the Web-start mode are more likely to complete on Web, regardless of past mode of completion.

- 2017. The 2017 questionnaire changed the order of responses 9 and 10 to questionnaire item A13 (type of principal employer). Response 9 is "in a non-U.S. government at any level," and response 10 is "Other—Specify type of employer"; these were in the reverse order in the 2015 questionnaire. For questionnaire item E9, "Were you a non-U.S. citizen…," all 2017 survey forms included a third response option, "Who no longer held a U.S. Resident Visa." The second response option in questionnaire item E18 (the future survey mode preference questions) was changed to "An online questionnaire" from "A web questionnaire on the Internet."
- 2015. The 2015 questionnaire differed from the 2013 questionnaire by adding "National Aeronautics and Space Administration (NASA)" as response category 6 to questionnaire item A43 (Federal agencies or departments supporting your work). "National Science Foundation (NSF)" became response category 7, "Other" became response category 8, and "Don't know source agency" became response category 9. In addition, a new questionnaire item was added (E12) that included three questions to help verify information about the individual's doctorate: (1) the institution granting the doctorate, (2) the field of study of the doctorate, and (3) the month and year it was granted.
- 2013. The 2013 questionnaire differed from the 2010 questionnaire by splitting the first response category for the indicator of sample member location on the survey reference date into two categories. "United States, Puerto Rico, or another U.S. territory" became "United States or Puerto Rico" and "Another U.S. territory."
- 2010. The 2010 questionnaire differed from the 2008 questionnaire as follows. The module questions were dropped on respondents' second jobs, patents, and publications. At the same time, the SDR reinstated from previous rounds' questionnaires a module on enrollment and course taking at a college or university and also questionnaire items on components of job satisfaction, whether employer is a new business, importance of job benefits, membership in professional associations, attendance at professional conferences, and federal agencies supporting research work. Three new questionnaire items were added: year of tenure, year of retirement, and degree of difficulty concentrating, remembering, or making decisions.
- 2008. The 2008 questionnaire included a module that gathered information on individual's second job, as well as two sets of questions reinstated from the 2003 questionnaire: (1) questions measuring technical expertise required for the respondent's and the respondent's spouse's primary job, and (2) questions measuring respondent's research productivity (authorships or co- authorships of papers, articles, books, or monographs; number and type of patents earned). The 2006 modules on postdoctoral appointments and international collaboration were not included.
- 2006. The 2006 questionnaire included a module on the history of postdoctoral appointments, awarded primarily for gaining additional education and training in research, as a follow-up to a similar module included in the 1995 SDR, in addition to a new module on international collaboration among doctorate recipients.

Changes in reporting procedures or classification.

- 2017. The 2017 survey microdata includes both the former SDR field of study aggregations as well as the 77 new field of study aggregations based on the NCSES Taxonomy of Disciplines (ToD). The ToD has few minor differences in broader field aggregations compared to the traditional taxonomy used in past data tables.
- 2015. Data tables reporting at the SED fine field of degree level have been added. Data tables that report on the non-U.S. residing population have been added consistent with the updated sample design that provides full coverage of the non-U.S. residing population.
- 2010. Due to the inclusion and exclusion of certain module questions in the 2010 questionnaire compared to the 2008 questionnaire, there are some differences in 2010 data table availability compared with 2008.
- 2003. Data on employed doctorate recipients were further classified to include a new category for science and engineering (S&E)-related occupations. This category includes health-related occupations, S&E managers, S&E precollege teachers, and S&E technicians and technologists.

- 2002 and prior. Data on employed doctorate recipients were classified into two categories: employment in an S&E occupation, and employment in a non-S&E occupation.

Definitions

Employer location. Survey question A9 includes the location of the principal employer, and data were based primarily on responses to this question. Individuals not reporting place of employment were classified by their last mailing address.

Field of doctorate. The doctoral field is as specified by the respondent in the SED at the time of degree conferral. The more than 200 SED coded fields were subsequently recoded to the 77 field-of-study codes used in the SDR questionnaire. (See technical table A-1 for a list and cross-classification of the 77 SDR detailed fields of degree based on the ToD with over 200 fine fields of degree reported in the SED sampling frame.)

Full-time and part-time employment. Full-time (working 35 hours or more per week) and part-time (working less than 35 hours per week) employment status is for the principal job only and not for all jobs held in the labor force. For example, an individual could work part time in his or her principal job but full time in the labor force. Full-time and part-time employment status is not comparable to data reported before 2006, when no distinction was made between the principal job and the other jobs held by the individual.

Involuntarily out-of-field rate. Involuntarily out-of-field rate is the percentage of employed individuals who reported, for their principal job, working in an area not related to the first doctoral degree at least partially because a job in their doctoral field was not available.

Labor-force participation rate. The labor-force participation rate is the ratio (E + U) / P, where E (employed) + U (unemployed; not-employed and actively seeking work) = the total labor force, and P = population, defined as all noninstitutionalized SEH doctorate holders less than 76 years of age during the week of 1 February 2019 and who earned their doctorate from a U.S. institution.

Occupation data. The occupational classification of the respondent was based on his or her principal job (including job title) held during the reference week—or on his or her last job held, if not employed in the reference week (survey questions A5 and A6 as well as A19 and A20). Also used in the occupational classification was a respondent-selected job code (survey questions A7 and A21). (See technical table A-2 for a list and classification of occupations reported in the SDR.)

Race and ethnicity. Ethnicity is defined as Hispanic or Latino or not Hispanic or Latino. Values for those selecting a single race include American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. Those persons who report more than one race and who are not of Hispanic or Latino ethnicity also have a separate value. Race and ethnicity data are from the SED and prior rounds of the SDR. The most recently reported race and ethnicity data are given precedence.

Salary. Median annual salaries are reported for the principal job, rounded to the nearest $1,000, and computed for full-time employed scientists and engineers. For individuals employed by educational institutions, no accommodation was made to convert academic year salaries to calendar year salaries. Users are advised that, due to changes in the salary question after 1993, salary data for 1995–2019 are not strictly comparable with 1993 salary data.

Sector of employment. Employment sector is a derived variable based on responses to questionnaire items A13, A14, and A15. Questionnaire item A13 (type of principal employer) includes a separate response “In a non-U.S. government at any level” as of the 2015 survey. In the data tables, the category 4-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. Other educational institutions include 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions (which respondents reported verbatim in the survey

questionnaire). Users should note that prior to 2008 these other educational institutions that were written as verbatim by respondents were grouped with 4-year educational institutions rather than with 2-year colleges. Private, for-profit includes respondents who were self-employed in an incorporated business. Self-employed includes respondents who were self-employed or were a business owner in a non-incorporated business.

Unemployment rate. The unemployment rate (RU) is the ratio U / (E + U), where U = unemployed (not- employed and actively seeking work), and E (employed) + U = the total labor force.

References

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Wolter K. 1984. An investigation of some estimators of variance for systematic sampling. *Journal of the American Statistical Association* 79(388):781–90.

Note

1 Item nonresponse rates reflect data missing after logical imputation or editing, but before hot-deck imputation, for all variables except sex, predicted respondent location, ethnicity, race, and citizenship at birth. Demographic and location variables completed by logical imputation during frame construction were also counted as nonresponse, as well as those filled in by hot-deck imputation.

Technical Tables

Table	Title
A-1	Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines
A-2	Crosswalk of occupations used in the SDR data tables

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
Science	1	Biological, agricultural, and environmental life sciences	11	Agricultural and food sciences	1101	Agricultural sciences	098	Agriculture, general	1958	Present
							099	Agricultural science, other	1958	Present
					1102	Animal sciences	005	Agricultural animal breeding	1983	2013
							007	Animal husbandry	1958	1982
							010	Animal nutrition	1969	Present
							012	Dairy science	1988	2003
							014	Animal science, poultry (or avian)	1988	Present
							019	Animal science, other	1983	Present
					1103	Food sciences and technology	040	Food sciences	1969	1989
							043	Food science	1988	Present
							044	Food science and technology, other	1988	Present
					1104	Plant sciences	020	Agronomy and crop science	1958	Present
							025	Agricultural and horticultural plant breeding/ genetics	1983	Present
							032	Plant protection/ pest management	1988	1991
							039	Plant sciences, other	1983	Present
							050	Horticulture science	1958	Present
					1105	Soil sciences	045	Soil sciences	1968	1988
							046	Soil chemistry/ microbiology	1988	Present
							049	Soil sciences, other	1988	Present
			12	Biochemistry and biophysics	1201	Biochemistry	100	Biochemistry	1958	Present
					1202	Biophysics	105	Biophysics	1958	Present
							155	Structural biology	2010	Present
			13	Cell, cellular biology, and molecular biology	1301	Cell, cellular biology, and molecular biology	130	Anatomy	1958	Present
							136	Cell/ cellular biology and histology	1959	Present
							142	Developmental biology/ embryology	1960	Present
							154	Molecular biology	1965	Present
							159	Molecular medicine	2016	Present
			14	Microbiological sciences and Immunology	1401	Immunology	151	Immunology	1972	Present
					1402	Microbiological sciences	110	Bacteriology	1983	Present
							156	Microbiology/ bacteriology	1958	1982
							157	Microbiology	1983	Present
							166	Parasitology	1973	Present
							168	Virology	2010	Present
			15	Natural resources and conservation	1501	Fish, fisheries, wildlife and wildlands science and management	054	Fish and wildlife science	1958	1982

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
							055	Fishing and fisheries sciences/ management	1983	Present
							060	Wildlife	1983	1988
							080	Wildlife/ range management	1988	Present
					1502	Forestry	065	Forestry science	1958	1988
							066	Forest sciences and biology	1988	Present
							070	Forest/ resources management	1988	Present
							072	Wood science and pulp/ paper technology	1988	Present
							079	Forestry and related science, other	1988	Present
					1503	Natural resource conservation, research, management, and policy	074	Natural resources/ conservation	1988	Present
							081	Environmental science	1972	Present
							685	Natural resource and environmental policy	2014	Present
			16	Zoology	1601	Zoology, animal biology	148	Entomology	1958	Present
							188	Wildlife biology	2014	Present
							189	Zoology, other	1958	Present
			17	Other biological sciences	1701	Biomathematics, bioinformatics, and computational biology	102	Bioinformatics	2007	Present
							104	Computational biology	2010	Present
							133	Biometrics and biostatistics	1958	Present
					1702	Botany and plant biology	030	Plant pathology/ phytopathology	1958	Present
							120	Plant pathology/ phytopathology	1983	Present
							125	Plant physiology	1958	Present
							129	Botany/ plant biology	1958	Present
					1703	Epidemiology, ecology, and population biology	134	Epidemiology	2014	Present
							137	Evolutionary biology	2002	Present
							139	Ecology	1958	Present
							140	Hydrobiology	1958	1979
							220	Epidemiology	1983	2013
					1704	Genetics	115	Plant genetics	1983	Present
							170	Genetics/ genomics, human and animal	1983	Present
							171	Genetics	1958	1982
					1705	Neurobiology and neuroscience	160	Neurosciences	1982	Present
							626	Cognitive neuroscience	2016	Present
					1706	Nutrition sciences	163	Nutrition sciences	1958	Present
					1707	Pharmacology and toxicology	167	Environmental toxicology	2010	Present
							169	Toxicology	1966	Present

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
							180	Pharmacology, human and animal	1958	Present
							211	Environmental toxicology	2004	2009
					1708	Physiology, pathology, and related sciences	145	Endocrinology	1983	Present
							158	Cancer biology	2007	Present
							175	Pathology, human and animal	1958	Present
							185	Physiology, human and animal	1960	Present
					1709	Biological and biomedical sciences, general	103	Biomedical sciences	1995	Present
							198	Biology/ biomedical sciences, general	1958	Present
					1710	Biological and biomedical sciences, other	107	Biotechnology	1993	Present
							199	Biology/ biomedical sciences, other	1958	Present
	2	Computer and information sciences	21	Computer and information sciences	2101	Computer science	400	Computer science	1973	Present
					2102	Information science, studies	410	Information science/ systems	1983	Present
					2103	Computer and information sciences, other	418	Computer and information sciences, general	2014	Present
							419	Computer/ information sciences, other	1999	Present
	3	Mathematics and statistics	31	Mathematics and statistics	3101	Applied mathematics	420	Applied mathematics	1958	Present
					3102	Mathematics	425	Algebra	1958	Present
							430	Analysis and functional analysis	1958	Present
							435	Geometry/ geometric analysis	1958	Present
							440	Logic	1958	Present
							445	Number theory	1958	Present
							455	Topology/ foundations	1958	Present
							460	Computing theory and practice	1960	Present
							498	Mathematics/ statistics, general	1958	Present
					3103	Statistics	450	Statistics	1958	Present
					3104	Mathematics and statistics, other	465	Operations research (mathematics)	1973	Present
							499	Mathematics/ statistics, other	1958	Present
							930	Operations research (business management/ administration)	1983	Present
	4	Physical sciences, geosciences, atmospheric, and ocean sciences	41	Astronomy and astrophysics	4101	Astronomy and astrophysics	500	Astronomy	1969	Present
							505	Astrophysics	1969	Present
							506	Astronomy and astrophysics	1958	1969
							509	Astronomy, other	2010	Present
			42	Chemistry, except biochemistry	4201	Inorganic chemistry	522	Inorganic chemistry	1958	Present
					4202	Organic chemistry	526	Organic chemistry	1958	Present
					4203	Chemistry, other, except biochemistry	520	Analytical chemistry	1958	Present

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
							521	Agricultural/ food	1958	1979
							524	Nuclear chemistry	1960	2003
							527	Chemical biology	2016	Present
							530	Physical chemistry	1958	Present
							532	Polymer chemistry	1973	Present
							534	Theoretical chemistry	1960	Present
							538	Chemistry, general	1958	Present
							539	Chemistry, other	1958	Present
			43	Geosciences, atmospheric, and ocean sciences	4301	Atmospheric sciences and meteorology	510	Atmospheric chemistry and climatology	1976	Present
							512	Atmospheric physics and dynamics	1976	Present
							514	Meteorology	1958	Present
							518	Atmospheric science/ meteorology, general	1983	Present
							519	Atmospheric science/ meteorology, other	1976	Present
					4302	Geological and earth sciences, geosciences	540	Geology	1958	Present
							542	Geochemistry	1968	Present
							544	Geophysics and seismology	1976	Present
							545	Geophysics, solid earth	1958	1976
							546	Paleontology	1958	Present
							548	Mineralogy and petrology	1969	Present
							549	Mineralogy/ petrology/ geological chemistry	1958	1969
							550	Stratigraphy and sedimentation	1958	Present
							552	Geomorphology and glacial geology	1958	Present
							554	Applied geology	1969	1991
							555	Applied geology/ geological engineering	1958	1969
							558	Geological and earth sciences, general	1959	Present
							559	Geological and earth sciences, other	1958	Present
							585	Hydrology and water resources	1959	Present
					4303	Ocean sciences and marine sciences	152	Marine biology and biological oceanography	2012	Present
							595	Marine sciences	1983	Present
							599	Ocean/ marine, other	1977	Present
					4304	Oceanography, chemical and physical	590	Oceanography, chemical and physical	1958	Present
			44	Physics	4401	Physics	560	Acoustics	1958	Present
							561	Atomic/ molecular/ chemical physics	1958	Present
							562	Electron physics	1983	1991

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
							563	Electromagnetism	1958	1979
							564	Particle (elementary) physics	1958	Present
							565	Biophysics	2004	Present
							566	Fluids	1959	2003
							567	Mechanics	1958	1976
							568	Nuclear physics	1958	Present
							569	Optics/ photonics	1958	Present
							570	Plasma/ fusion physics	1967	Present
							572	Polymer physics	1983	Present
							573	Thermal physics	1960	1981
							574	Condensed matter/ low temperature physics	1958	Present
							576	Applied physics	2004	Present
							578	Physics, general	1958	Present
							579	Physics, other	1958	Present
	5	Psychology	51	Psychology	5101	Clinical psychology	600	Clinical psychology	1958	Present
					5102	Counseling and applied psychology	602	Behavioral analysis	2012	Present
							609	Counseling	1958	Present
							614	Health and medical psychology	2012	Present
							620	Family psychology	1995	Present
							642	Community psychology	2016	Present
					5103	Educational and school psychology	618	Educational psychology	1958	Present
							636	School psychology	1960	Present
							822	Educational psychology	1958	Present
					5104	Industrial and organizational psychology	621	Industrial and organizational	1958	Present
					5105	Research and experimental psychology	603	Cognitive psychology and psycholinguistics	1983	Present
							606	Comparative psychology	1962	2009
							612	Developmental and child psychology	1958	Present
							613	Human development and family studies	1994	Present
							615	Experimental psychology	1958	Present
							624	Personality psychology	1958	Present
							627	Physiological/ psychobiology psychology	1961	Present
							630	Psychometrics	1958	2003
							633	Psychometrics and quantitative psychology	1983	Present
							639	Social psychology	1958	Present

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
					5106	Psychology, general	648	Psychology, general	1958	Present
					5107	Psychology, other	649	Psychology, other	1958	Present
	6	Social sciences	61	Economics	6101	Economics	000	Agricultural economics	1969	Present
							003	Natural resource/ environmental economics (agricultural sciences)	2012	Present
							665	Natural resource/ environmental economics (social sciences)	2012	Present
							667	Economics	1958	Present
							668	Econometrics	1958	Present
			62	Political science and government	6201	Political science and government	678	Political science and government	1974	Present
							679	Political science/ public administration	1958	1976
					6202	Public policy analysis	217	Health policy analysis	2012	Present
							682	Public policy analysis	1983	Present
			63	Sociology, demography, and population studies	6301	Sociology, demography, and population studies	662	Demography/ population studies	1983	Present
							686	Sociology	1958	Present
			64	Other social sciences	6401	Anthropology	650	Anthropology	1958	Present
							655	Anthropology, cultural	2014	Present
							656	Anthropology, physical and biological	2014	Present
					6402	Area, ethnic, cultural, gender, and group studies	651	Gender and women's studies	2014	Present
							652	Area/ ethnic/ cultural/ gender studies	1958	Present
							770	American/ U.S. studies	1975	Present
					6403	Geography and cartography	670	Geography	1958	Present
					6404	International relations and national security studies	674	International relations/ affairs	1958	Present
					6405	Linguistics	675	Applied linguistics	2016	Present
							676	Linguistics	1958	Present
					6406	Urban studies, affairs	694	Urban affairs/ studies	1959	Present
					6407	Social sciences, other	658	Criminology	1980	Present
							684	Gerontology	2010	Present
							690	Statistics	1967	Present
							698	Social sciences, general	1958	Present
							699	Social sciences, other	1958	Present
							710	History, science and technology and society	1971	Present
							773	Archaeology	1958	Present
Engineering	7	Engineering	71	Aerospace, aeronautical, and astronautical engineering	7101	Aerospace, aeronautical, and astronautical engineering	300	Aerospace, aeronautical and astronautical engineering	1958	Present
			72	Chemical engineering	7201	Chemical engineering	312	Chemical engineering	1958	Present
							369	Polymer and plastics engineering	1983	Present

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
			73	Civil engineering	7301	Civil engineering	315	Civil engineering	1958	Present
							316	Structural engineering	2010	Present
							336	Environmental health engineering	1958	Present
							337	Geotechnical and geoenvironmental engineering	2012	Present
							373	Transportation and highway engineering	2012	Present
							376	Engineering management and administration	2007	Present
			74	Electrical and computer engineering	7401	Computer engineering	321	Computer engineering	1975	Present
					7402	Electrical, electronics, and communications engineering	318	Communications engineering	1983	Present
							322	Electrical engineering	1958	1985
							323	Electronics engineering	1958	1983
							324	Electrical, electronics and communications engineering	1983	Present
			75	Mechanical engineering	7501	Mechanical engineering and robotics	345	Mechanical engineering	1958	Present
							415	Robotics	2010	Present
			76	Metallurgical and materials engineering	7601	Metallurgical and materials engineering	309	Ceramic sciences engineering	1958	2013
							342	Materials science engineering	1969	Present
							348	Metallurgical engineering	1958	Present
							351	Mining and mineral engineering	1969	2013
			77	Other engineering	7701	Agricultural engineering	303	Agricultural engineering	1958	Present
					7702	Bioengineering and Biomedical engineering	306	Bioengineering and biomedical engineering	1969	Present
					7703	Engineering mechanics, physics, and science	327	Engineering mechanics	1958	Present
							330	Engineering physics	1958	Present
							333	Engineering science	1983	Present
					7704	Industrial and manufacturing engineering	339	Industrial and manufacturing engineering	1958	Present
							363	Operations research (engineering)	1971	Present
							372	Systems engineering	1975	Present
					7705	Nuclear engineering	357	Nuclear engineering	1969	Present
					7706	Engineering, other	068	Forest engineering	1988	2003
							354	Naval architecture/ marine engineering	1983	1991
							360	Ocean engineering	1983	Present
							366	Petroleum engineering	1973	Present
							398	Engineering, general	1958	Present
							399	Engineering, other	1958	Present
							547	Fuel technology/ petroleum engineering	1967	1979
Health	8	Health	81	Health	8101	Communication disorders sciences and services	200	Speech-language pathology and audiology	1963	Present

TABLE A-1

Comparison of science, engineering, and health doctoral fields of study in the SDR and the SED: Field of study aligned to NCSES Taxonomy of Disciplines

(Crosswalk)

SDR field of study aggregations aligned with ToD							SED field of study information			
	Broad field (NSDRMEMTOD)		Minor field (NSDRMENTOD)		Detailed field (NSDRMEDTOD)[a]		Fine field (PHDFIELD)[a]			
SEH group	Code	Label	Code	Label	Code	Label	Code	Label	Start year	End year
					8102	Hospital and medical administration services	212	Health systems/ service administration	1993	Present
							219	Public health/ epidemiology	1958	1982
							224	Hospital administration	1958	1977
					8103	Pharmacy, pharmaceutical sciences, and administration	225	Medicine and surgery	1958	1976
							240	Pharmaceutical sciences	1958	Present
							528	Medicinal/ pharmaceutical	1958	Present
					8104	Public health	210	Environmental health	1972	Present
							213	Health services research	2016	Present
							215	Public health	1978	Present
							280	Health and behavior	2014	Present
							577	Medical physics/ radiological science	2010	Present
					8105	Registered nursing, nursing administration, nursing research	230	Nursing science	1977	Present
					8106	Health sciences, other	207	Oral biology/ oral pathology	2010	Present
							222	Kinesiology/ exercise science	1994	Present
							227	Gerontology	2010	Present
							245	Rehabilitation/ therapeutic services	1991	Present
							250	Veterinary sciences	1958	Present
							298	Health sciences, general	1962	Present
							299	Health sciences, other	1958	Present
							610	Marriage and family therapy/ counseling	2016	Present

NCSES = National Center for Science and Engineering Statistics. SDR = Survey of Doctorate Recipients. SED = Survey of Earned Doctorates. SEH = science, engineering, and health. ToD = Taxonomy of Disciplines.

[a] Fine fields (PHDFIELD and NSDRMEDTOD) are not available in the downloadable 2019 SDR Public Use File.

Note(s):
SDR is a sample survey; SED is a census. Start year and end year are defined as the earliest and latest recorded use of a field in the 2017 Doctorate Records File, respectively. Field of study reporting for the 2019 SDR uses the updated disciplines first presented in 2017, which better align with the NCSES ToD which is based on the Classification of Instructional Programs (CIP 2010) issued by the National Center for Education Statistics. This crosswalk displays the field of study aggregations aligned to the ToD.

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

TABLE A-2

Crosswalk of occupations used in the SDR data tables

(Crosswalk)

Science and engineering classification	Major occupational code and label (N2OCPRMG, N2OCMLST)		Minor occupational code and label (N2OCPRNG, N2OCNLST)		Detailed occupational code and label (N2OCPR, N2OCLST)	
Science occupations	1	Computer and mathematical scientists	11	Computer and information scientists	110510	Computer and information scientists, research
					110520	Computer network architect
					110540	Computer support specialists
					110550	Computer system analysts
					110560	Database administrators
					110570	Information security analysts
					110580	Network and computer systems administrators
					110590	Software developers -- applications and systems software
					110600	Web developers
					110610	Other computer and information science occupations
					110880	Computer engineers, software
			12	Mathematical scientists	121720	Mathematicians
					121730	Operations research analysts, including modeling
					121740	Statisticians
					121760	Other mathematical scientists
			18	Postsecondary teachers - computer and math sciences	182760	Postsecondary teachers: Computer sciences
					182860	Postsecondary teachers: Mathematics and statistics
	2	Biological, agricultural and other life scientists	21	Agricultural and food scientists	210210	Agricultural and food scientists
			22	Biological and medical scientists	220220	Biochemists and biophysicists
					220230	Biological scientists
					220250	Medical scientists (excluding practitioners)
					220270	Other biological and life scientists
			23	Environmental life scientists	230240	Forestry and conservation scientists
			28	Postsecondary teachers - life and related sciences	282710	Postsecondary teachers: Agriculture
					282730	Postsecondary teachers: Biological sciences
					282970	Postsecondary teachers: Other natural sciences
	3	Physical and related scientists	31	Chemists, except biochemists	311930	Chemists, except biochemists
			32	Earth scientists, geologists and oceanographers	321920	Atmospheric and space scientists
					321940	Geologists, including earth scientists
					321950	Oceanographers
			33	Physicists and astronomers	331910	Astronomers
					331960	Physicists, except biophysicists
			34	Other physical and related scientists	341980	Other physical scientists
			38	Postsecondary teachers - physical and related sciences	382750	Postsecondary teachers: Chemistry
			38		382770	Postsecondary teachers: Earth, environmental, and marine sciences
			38		382890	Postsecondary teachers: Physics
	4	Social and related scientists	41	Economists	412320	Economists
			42	Political scientists	422350	Political scientists

TABLE A-2

Crosswalk of occupations used in the SDR data tables

(Crosswalk)

Science and engineering classification	Major occupational code and label (N2OCPRMG, N2OCMLST)		Minor occupational code and label (N2OCPRNG, N2OCNLST)		Detailed occupational code and label (N2OCPR, N2OCLST)	
			43	Psychologists	432360	Psychologists, including clinical
			44	Sociologists and anthropologists	442310	Anthropologists
					442370	Sociologists
			45	Other social and related scientists	452380	Other social scientists
			48	Postsecondary teachers - social and related sciences	482780	Postsecondary teachers: Economics
					482900	Postsecondary teachers: Political science
					482910	Postsecondary teachers: Psychology
					482930	Postsecondary teachers: Sociology
					482980	Postsecondary teachers: Other social sciences
Engineering occupations	5	Engineers	51	Aerospace, aeronautical or astronautical engineers	510820	Aeronautical, aerospace and astronautical engineers
			52	Chemical engineers	520850	Chemical engineers
			53	Civil, architectural or sanitary engineers	530860	Civil engineers, including architectural and sanitary
			54	Electrical or computer hardware engineers	540870	Computer engineers, hardware
					540890	Electrical and electronics engineers
			55	Industrial engineers	550910	Industrial engineers
			56	Mechanical engineers	560940	Mechanical engineers
			57	Other engineers	570830	Agricultural engineers
					570840	Bioengineers or biomedical engineers
					570900	Environmental engineers
					570920	Marine engineers and naval architects
					570930	Materials and metallurgical engineers
					570950	Mining and geological engineers
					570960	Nuclear engineers
					570970	Petroleum engineers
					570980	Sales engineers
					570990	Other engineers
			58	Postsecondary teachers - engineering	582800	Postsecondary teachers: Engineering
Science/ engineering related occupations	6	S&E related occupations	61	Health-related occupations	611110	Diagnosing and treating practitioners
					611120	Registered nurses, pharmacists, dieticians, therapists, physician assistants, nurse practitioners
					611130	Health technologists and technicians
					611140	Other health occupations
					612870	Postsecondary teachers, health and related sciences
			62	S&E managers	621420	Computer and information systems managers
					621430	Engineering managers
					621440	Medical and health services managers
					621450	Natural sciences managers
			63	S&E Pre-college Teachers	632530	Teachers: Secondary - computer, math or sciences
				S&E Pre-college Teachers	632540	Teachers: Secondary - social sciences
			64	S&E technicians and technologists	640260	Technologists and technicians, biological and life sciences

TABLE A-2

Crosswalk of occupations used in the SDR data tables

(Crosswalk)

Science and engineering classification	Major occupational code and label (N2OCPRMG, N2OCMLST)		Minor occupational code and label (N2OCPRNG, N2OCNLST)		Detailed occupational code and label (N2OCPR, N2OCLST)	
					640530	Computer programmers, business, scientific, and process control
					641000	Electrical, electronic, industrial, and mechanical technicians
					641010	Drafting occupations, including computer drafting
					641020	Surveying and mapping technicians
					641030	Other engineers, technologists, and technicians
					641040	Surveyors, cartographers, and photogrammetrists
					641750	Technologists and technicians, mathematical sciences
					641970	Technologists and technicians, physical sciences
			65	Other S&E-related occupations	650810	Architects
					651710	Actuaries
Non-science/ non-engineering occupations	7	Non-S&E occupations	71	Non-S&E Managers	711410	Top-level managers, executives, and administrators
					711460	Education administrators
					711470	Other mid-level managers
			72	Management-related occupations	721510	Accountants, auditors, and other financial specialists
					721520	Personnel, training, and labor relations specialists
					721530	Other management-related occupations
			73	Non-S&E precollege teachers	732510	Teachers: Pre-kindergarten and kindergarten
					732520	Teachers: Elementary
					732550	Teachers: Secondary - other subjects
					732560	Teachers: Special education - primary and secondary
					732570	Teachers: Other precollegiate area
			74	Non-S&E postsecondary teachers	742720	Postsecondary teachers: Art, drama, and music
					742740	Postsecondary teachers: Business commerce and marketing
					742790	Postsecondary teachers: Education
					742810	Postsecondary teachers: English
					742820	Postsecondary teachers: Foreign language
					742830	Postsecondary teachers: History
					742880	Postsecondary teachers: Physical education
					742990	Postsecondary teachers: Other postsecondary fields
			75	Social services and related occupations	750400	Clergy and other religious workers
					750700	Counselors, educational, vocational, mental health, and substance abuse
					752400	Social workers
			76	Sales and marketing occupations	762000	Insurance, securities, real estate, and business services

TABLE A-2

Crosswalk of occupations used in the SDR data tables

(Crosswalk)

Science and engineering classification	Major occupational code and label (N2OCPRMG, N2OCMLST)		Minor occupational code and label (N2OCPRNG, N2OCNLST)		Detailed occupational code and label (N2OCPR, N2OCLST)	
					762010	Sales occupations, commodities, except retail
					762020	Sales occupations, retail
					762030	Other marketing and sales occupations
			77	Art, humanities and related occupations	770100	Writers, editors, public relations specialists, artists, entertainers, and broadcasters
					772330	Historians
			78	Other non-S&E occupations	780310	Accounting clerks, and bookkeepers
					780320	Secretaries, receptionists, and typists
					780330	Other administrative occupations
					781100	Farmers, foresters, and fishermen
					781200	Lawyers and judges
					781300	Librarians, archivists, and curators
					782210	Food preparation and service occupations
					782220	Protective services
					782230	Other service occupations, except health
					783000	Other teachers and instructors
					784010	Construction and extraction occupations
					784020	Installation, maintenance, and repair occupations
					784030	Precision/ production occupations
					784050	Transportation and material moving occupations
					785000	Other occupations

S&E = science and engineering; SDR = Survey of Doctorate Recipients.

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

Correction(s)

Data corrections

11 August 2023: In the Survey of Doctorate Recipients 2019 data tables reporting field of doctorate, the incorrect label “Industrial engineers” was corrected to "Metallurgical and materials engineering."

The following tables have been corrected:

Table 1-1
Table 1-2
Table 2
Table 4-1
Table 4-2
Table 4-3
Table 4-4
Table 5
Table 6
Table 7
Table 8
Table 9
Table 10
Table 11-1
Table 11-2
Table 12-1
Table 12-2
Table 12-3
Table 15-1
Table 15-2
Table 15-3
Table 15-4
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Table 49
Table 50
Table 51
Table 52
Table 53
Table 54
Table 57-1
Table 57-2
Table 59
Table 62
Table 75

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