



National Center for Science and
Engineering Statistics

Survey of Doctorate Recipients: 2023

Data Tables | NSF 25-321 | January 23, 2025

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General Notes

This report presents data from the 2023 Survey of Doctorate Recipients (SDR). The SDR is a biennial survey that collects data on demographic and general employment characteristics of individuals who have earned a research doctorate in a science, engineering, or health (SEH) field from a U.S. academic institution. The SDR uses a fixed panel design with a sample of new doctoral graduates added to the panel each survey cycle. The 2023 SDR questionnaire included new content to capture information about the retirement experiences of U.S.-trained SEH doctorate holders.

The National Center for Science and Engineering Statistics within the U.S. 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 doctoral scientists and engineers by field of doctorate and occupation; by demographic characteristics, such as sex, race, ethnicity, citizenship, and age; by employment-related characteristics, such as sector of employment, median annual salary, and labor-force rates; and by residency within or outside of the United States.

NCSES has reviewed this product for unauthorized disclosure of confidential information and approved its release (NCSES-DRN24-056).

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U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2023

(Number and SE)

Field of study	Total		Employed						Unemployed ^a		Retired		Not employed and 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	1,058,950	1,925	908,700	2,300	803,700	2,550	104,950	1,600	11,250	550	122,450	1,250	16,600	675
Science	787,000	1,825	667,950	2,050	582,450	2,200	85,500	1,375	7,950	450	97,650	1,225	13,450	675
Biological, agricultural, and environmental life sciences	274,850	950	235,050	1,175	212,750	1,225	22,300	850	3,100	300	31,450	675	5,250	450
Agricultural and food sciences	21,150	350	17,050	400	14,800	375	2,250	225	100	50	3,650	275	350	100
Agricultural sciences	1,200	50	900	75	750	50	150	50	*	*	250	50	*	*
Animal sciences	5,400	175	4,650	200	4,100	200	550	150	S	S	700	125	50	50
Food sciences and technology	4,400	200	3,600	200	3,100	200	500	150	D	D	750	150	100	50
Plant sciences	7,550	225	5,850	250	5,050	250	800	150	D	D	1,500	200	150	75
Soil sciences	2,600	100	2,050	100	1,850	100	250	75	D	D	450	75	50	25
Biochemistry and biophysics	35,500	450	29,700	475	26,850	475	2,850	325	700	175	4,500	350	550	150
Biochemistry	29,150	425	24,150	475	21,700	475	2,450	300	600	150	3,950	325	450	125
Biophysics	6,350	150	5,600	175	5,150	175	450	100	150	50	500	100	150	50
Cell, cellular biology, and molecular biology	36,950	375	32,400	525	29,550	575	2,850	350	400	125	3,200	350	950	225
Microbiological sciences and immunology	29,700	300	25,400	425	23,300	450	2,100	275	400	125	3,400	300	550	125
Immunology	10,900	175	9,800	225	9,000	250	800	175	D	D	850	125	150	100
Microbiological sciences	18,800	275	15,600	350	14,350	375	1,250	225	300	125	2,550	275	350	100
Natural resources and conservation	11,450	225	9,150	275	8,150	250	1,000	125	S	S	1,900	175	200	50
Fish, fisheries, wildlife, and wildlands science and management	2,650	100	1,950	100	1,750	100	200	75	D	D	650	100	50	25
Forestry	3,300	125	2,600	150	2,250	150	350	100	*	*	650	125	50	25
Natural resource conservation, research, management, and policy	5,450	175	4,600	200	4,150	200	450	100	S	S	600	100	100	50
Zoology	8,950	175	6,400	225	5,650	225	750	125	150	75	2,350	200	50	25
Other biological sciences	131,150	675	114,900	750	104,400	750	10,500	450	1,150	150	12,500	450	2,600	275
Biomathematics, bioinformatics, and computational biology	7,650	150	7,150	150	6,650	150	500	100	50	25	300	75	150	50
Botany and plant biology	8,400	200	6,300	225	5,650	225	650	100	150	75	1,750	175	150	75
Epidemiology, ecology, and population biology	21,050	275	18,600	325	16,650	375	1,950	275	100	50	1,950	225	400	100
Genetics	10,700	200	9,550	225	8,650	250	850	125	150	50	800	150	250	125
Neurobiology and neuroscience	21,700	300	20,300	350	19,300	350	1,000	150	300	100	550	125	550	150
Nutrition sciences	5,000	150	4,200	150	3,500	175	700	125	50	50	650	100	100	50
Pharmacology and toxicology	15,300	150	13,350	250	11,850	300	1,550	200	50	50	1,700	200	200	75
Physiology, pathology, and related sciences	18,450	275	15,600	325	14,100	375	1,500	200	100	50	2,350	200	400	100
Biological and biomedical sciences, general	16,950	250	14,950	325	13,700	350	1,300	200	150	50	1,450	225	350	100
Biological and biomedical sciences, other	5,950	175	4,900	200	4,400	225	500	100	S	S	950	125	50	25
Computer and information sciences	40,300	450	36,350	550	33,400	525	2,950	325	350	125	2,900	250	650	175
Computer science	34,250	475	31,050	525	28,650	500	2,400	300	250	100	2,400	225	550	175

TABLE 1-1

U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2023

(Number and SE)

Field of study	Total		Employed						Unemployed ^a		Retired		Not employed and not seeking work ^b	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Information science, studies	3,300	100	2,750	125	2,350	125	400	75	S	S	450	100	D	D
Computer and information sciences, other	2,700	100	2,550	75	2,350	75	150	50	50	25	50	25	50	25
Mathematics and statistics	44,650	475	38,500	600	34,850	600	3,650	250	650	150	4,750	275	750	150
Applied mathematics	10,100	225	9,150	225	8,100	275	1,050	150	150	75	600	125	200	75
Mathematics	20,600	400	17,100	450	15,400	450	1,700	200	400	100	2,750	225	350	100
Statistics	9,150	225	8,100	275	7,550	300	550	100	D	D	850	125	150	75
Mathematics and statistics, other	4,750	150	4,150	150	3,800	150	350	75	50	25	550	100	50	25
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	167,650	1,025	141,800	1,125	128,300	1,075	13,450	550	1,750	250	21,550	750	2,550	275
Astronomy and astrophysics	7,250	175	6,450	175	5,850	175	600	100	100	50	600	100	100	50
Chemistry, except biochemistry	82,200	725	69,150	850	62,450	825	6,700	425	800	175	10,950	525	1,300	200
Inorganic chemistry	10,550	225	8,800	250	7,800	275	1,050	150	150	50	1,400	175	200	100
Organic chemistry	21,550	325	17,950	425	15,950	475	2,000	250	150	75	3,100	275	350	100
Chemistry, other, except biochemistry	50,100	550	42,350	625	38,700	625	3,650	325	500	150	6,500	375	750	175
Geosciences, atmospheric sciences, and ocean sciences	28,200	300	23,150	350	20,650	375	2,500	175	300	75	4,200	275	550	100
Atmospheric sciences and meteorology	5,000	100	4,450	100	4,000	100	400	50	S	S	450	50	50	25
Geological and earth sciences, geosciences	17,550	250	13,900	300	12,400	300	1,550	150	200	75	3,000	250	400	100
Ocean sciences and marine sciences	2,900	75	2,550	75	2,300	75	250	50	*	*	250	50	50	25
Oceanography, chemical and physical	2,750	100	2,250	100	1,950	100	300	75	D	D	450	75	D	D
Physics	50,050	675	43,050	775	39,350	700	3,700	375	550	175	5,800	450	600	125
Psychology	135,750	625	112,100	900	83,050	1,100	29,050	975	800	150	20,350	700	2,450	300
Clinical psychology	47,100	400	40,450	575	27,700	725	12,800	650	200	100	5,600	425	850	200
Counseling and applied psychology	17,200	175	14,500	300	9,850	350	4,650	350	100	50	2,300	250	300	125
Educational and school psychology	16,650	225	12,400	325	9,400	350	3,000	275	100	50	3,800	300	400	125
Industrial and organizational psychology	6,000	150	5,150	150	4,200	200	950	150	100	50	650	100	100	50
Research and experimental psychology	33,650	325	27,200	425	22,600	450	4,600	300	250	75	5,650	325	550	125
Psychology, general	9,200	250	7,750	300	5,950	325	1,800	250	D	D	1,250	225	S	S
Psychology, other	5,900	175	4,600	175	3,400	150	1,250	150	100	50	1,100	125	S	S
Social sciences	123,800	825	104,100	875	90,100	1,000	14,000	600	1,250	150	16,650	550	1,800	225
Economics	32,600	500	27,950	550	24,750	550	3,200	325	200	75	4,150	350	300	125
Political science and government	25,050	475	21,700	500	19,150	525	2,600	275	250	75	2,800	275	300	75
Political science and government	19,650	450	17,100	500	15,150	500	1,950	275	150	50	2,300	250	150	75
Public policy analysis	5,400	125	4,650	150	4,000	150	650	100	100	50	550	100	100	50
Sociology, demography, and population studies	19,200	350	15,950	375	13,600	400	2,350	250	50	50	2,950	250	250	100
Other social sciences	46,950	475	38,500	525	32,600	500	5,900	350	700	150	6,750	325	950	125

TABLE 1-1

U.S. residing doctoral scientists and engineers, by fine field of doctorate and employment status: 2023

(Number and SE)

Field of study	Total		Employed						Unemployed ^a		Retired		Not employed and not seeking work ^b	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Anthropology	13,700	250	11,100	325	9,200	350	1,900	225	250	100	2,050	200	300	100
Area, ethnic, cultural, gender, and group studies	5,200	125	4,450	150	3,750	150	700	100	150	75	450	75	150	50
Geography and cartography	5,850	175	4,850	200	4,300	200	600	100	100	50	800	100	100	50
International relations and national security studies	2,800	125	2,350	150	1,900	125	450	75	D	D	400	75	50	25
Linguistics	6,100	225	5,100	225	4,400	225	700	125	50	50	800	150	150	50
Urban studies, affairs	1,800	100	1,350	100	1,100	100	250	50	50	25	350	75	50	25
Social sciences, other	11,500	275	9,350	250	8,000	225	1,350	150	150	50	1,850	175	150	50
Engineering	219,400	1,125	196,750	1,300	183,150	1,400	13,600	650	2,650	300	17,650	675	2,400	275
Aerospace, aeronautical, and astronautical engineering	8,850	175	8,150	200	7,700	175	450	100	D	D	550	100	50	25
Chemical engineering	26,550	400	23,700	500	22,250	525	1,450	225	300	100	2,300	275	250	100
Civil engineering	23,600	475	21,500	475	19,850	475	1,650	225	350	150	1,500	225	250	75
Electrical and computer engineering	59,000	625	54,000	675	50,050	675	3,950	375	450	125	3,950	325	550	150
Computer engineering	8,850	175	8,150	200	7,700	200	450	125	100	75	500	100	100	50
Electrical, electronics, and communications engineering	50,150	600	45,850	650	42,350	625	3,500	350	350	125	3,450	325	450	150
Mechanical engineering	32,500	525	28,800	625	27,050	650	1,750	275	500	150	2,750	350	450	175
Metallurgical and materials engineering	20,550	425	18,300	450	17,300	450	1,050	175	250	75	1,800	250	150	75
Other engineering	48,350	475	42,300	550	38,950	575	3,300	300	650	125	4,750	325	650	125
Agricultural engineering	2,100	100	1,650	100	1,550	100	100	50	D	D	400	75	50	25
Bioengineering and biomedical engineering	17,600	275	16,350	325	15,400	350	950	175	300	100	600	150	350	100
Engineering mechanics, physics, and science	5,100	200	4,300	200	3,950	175	350	75	100	50	700	125	50	25
Industrial and manufacturing engineering	10,900	300	9,150	300	8,150	325	1,000	175	100	50	1,600	175	100	50
Nuclear engineering	3,800	125	3,400	150	3,150	150	200	50	50	50	350	75	D	D
Engineering, other	8,850	225	7,500	225	6,800	225	650	125	100	50	1,150	200	150	50
Health	52,600	475	44,000	600	38,150	600	5,900	400	650	150	7,150	350	750	150
Communication disorders sciences and services	3,900	125	2,950	150	2,350	150	600	100	D	D	800	100	100	50
Hospital and medical administration services	1,650	75	1,300	75	1,100	75	200	50	S	S	250	50	D	D
Pharmacy, pharmaceutical sciences, and administration	9,550	225	8,550	250	7,850	250	700	125	50	50	800	125	100	50
Public health	11,600	225	10,400	250	9,000	300	1,450	200	150	75	900	150	150	75
Registered nursing, nursing administration, nursing research	12,200	225	9,100	325	7,650	300	1,450	200	S	S	2,800	200	150	50
Health sciences, other	13,700	250	11,650	325	10,200	325	1,450	175	200	100	1,600	200	300	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 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 and 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 1-2

Non-U.S. residing doctoral scientists and engineers, by field of doctorate and employment status: 2023

(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	163,450	1,875	146,300	1,825	2,550	300	14,600	800
Science	114,500	1,700	102,600	1,650	1,600	250	10,300	600
Biological, agricultural, and environmental life sciences	33,350	900	29,550	875	350	75	3,450	375
Agricultural and food sciences	6,250	325	5,150	300	50	50	1,050	175
Biochemistry and biophysics	3,500	425	3,000	400	D	D	450	175
Cell, cellular biology, and molecular biology	2,800	325	2,600	350	D	D	200	75
Microbiological sciences and immunology	2,550	300	2,350	275	D	D	150	75
Natural resources and conservation	2,700	225	2,450	225	S	S	250	75
Zoology	1,200	175	1,000	150	D	D	250	100
Other biological sciences	14,300	675	13,050	625	100	50	1,150	250
Computer and information sciences	6,200	450	5,750	425	D	D	400	100
Mathematics and statistics	9,800	475	8,800	475	150	75	800	150
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	24,650	950	22,250	925	400	125	2,000	300
Astronomy and astrophysics	1,300	175	1,200	175	D	D	100	50
Chemistry, except biochemistry	8,550	700	7,500	650	D	D	950	250
Geosciences, atmospheric sciences, and ocean sciences	5,000	300	4,550	275	100	50	400	75
Physics	9,800	650	9,000	625	S	S	550	175
Psychology	7,350	450	6,500	450	D	D	750	175
Social sciences	33,250	875	29,750	925	600	200	2,900	350
Economics	14,100	525	12,850	525	S	S	1,050	225
Political science and government	4,750	450	4,250	400	D	D	300	150
Sociology, demography, and population studies	2,900	325	2,700	325	D	D	200	75
Other social sciences	11,450	450	9,950	450	200	75	1,300	225
Engineering	42,600	1,150	38,100	1,125	800	200	3,650	400
Aerospace, aeronautical, and astronautical engineering	1,150	175	1,100	175	D	D	D	D
Chemical engineering	4,200	400	3,600	400	100	75	500	175
Civil engineering	7,000	450	6,300	450	D	D	600	175
Electrical and computer engineering	10,200	625	9,100	600	150	100	950	225
Mechanical engineering	5,800	500	5,400	475	D	D	300	150
Metallurgical and materials engineering	4,300	425	3,650	400	D	D	550	175
Other engineering	9,950	475	8,950	475	200	100	800	175
Health	6,350	425	5,600	425	150	75	600	175

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 2

U.S. residing doctoral scientists and engineers, by field of doctorate, sex, and employment status: 2023

(Number and SE)

Field of study and sex	Total		Employed						Unemployed ^a		Retired		Not employed and 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	1,058,950	1,925	908,700	2,300	803,700	2,550	104,950	1,600	11,250	550	122,450	1,250	16,600	675
Male	654,750	1,675	558,900	1,850	505,100	2,100	53,800	1,200	6,850	450	83,450	1,075	5,600	450
Female	404,200	1,200	349,800	1,475	298,650	1,650	51,150	1,100	4,350	375	39,050	800	11,000	550
Science	787,000	1,825	667,950	2,050	582,450	2,200	85,500	1,375	7,950	450	97,650	1,225	13,450	675
Male	457,800	1,650	383,950	1,775	342,050	1,725	41,850	1,025	4,600	350	65,150	1,125	4,050	375
Female	329,200	1,275	284,000	1,400	240,400	1,500	43,600	975	3,300	300	32,500	725	9,400	550
Biological, agricultural, and environmental life sciences	274,850	950	235,050	1,175	212,750	1,225	22,300	850	3,100	300	31,450	675	5,250	450
Male	151,000	1,225	126,550	1,275	115,350	1,075	11,200	675	1,700	225	21,250	700	1,550	250
Female	123,850	1,100	108,500	1,075	97,400	1,125	11,100	525	1,450	175	10,200	400	3,700	350
Agricultural and food sciences	21,150	350	17,050	400	14,800	375	2,250	225	100	50	3,650	275	350	100
Male	14,450	300	11,300	350	9,700	350	1,600	225	100	50	2,950	250	S	S
Female	6,700	275	5,750	250	5,100	250	650	100	50	25	700	100	250	50
Biochemistry and biophysics	35,500	450	29,700	475	26,850	475	2,850	325	700	175	4,500	350	550	150
Male	21,100	525	17,650	475	15,950	425	1,700	250	250	100	3,050	300	200	100
Female	14,350	475	12,050	475	10,900	450	1,150	200	500	125	1,450	200	400	100
Cell, cellular biology, and molecular biology	36,950	375	32,400	525	29,550	575	2,850	350	400	125	3,200	350	950	225
Male	19,200	525	16,700	525	15,350	525	1,350	250	250	100	1,950	300	300	150
Female	17,700	475	15,750	475	14,200	475	1,500	250	150	75	1,250	175	600	175
Microbiological sciences and immunology	29,700	300	25,400	425	23,300	450	2,100	275	400	125	3,400	300	550	125
Male	15,200	450	12,700	475	11,650	475	1,050	225	250	100	2,000	275	200	100
Female	14,500	400	12,700	375	11,650	375	1,050	175	S	S	1,350	175	350	75
Natural resources and conservation	11,450	225	9,150	275	8,150	250	1,000	125	S	S	1,900	175	200	50
Male	7,250	225	5,500	200	4,900	200	650	125	S	S	1,500	175	50	25
Female	4,200	175	3,600	175	3,250	175	350	50	S	S	350	75	150	50
Zoology	8,950	175	6,400	225	5,650	225	750	125	150	75	2,350	200	50	25
Male	6,050	200	4,100	225	3,700	225	400	75	S	S	1,900	200	D	D
Female	2,900	150	2,300	150	1,950	150	350	100	D	D	450	75	50	25
Other biological sciences	131,150	675	114,900	750	104,400	750	10,500	450	1,150	150	12,500	450	2,600	275
Male	67,700	775	58,600	825	54,150	750	4,500	350	550	100	7,900	400	650	150
Female	63,450	800	56,300	750	50,250	750	6,050	325	600	100	4,600	275	1,950	250
Computer and information sciences	40,300	450	36,350	550	33,400	525	2,950	325	350	125	2,900	250	650	175
Male	32,050	500	29,250	550	27,050	575	2,200	275	300	100	2,200	225	350	150
Female	8,200	375	7,150	375	6,350	350	750	175	S	S	700	125	300	75
Mathematics and statistics	44,650	475	38,500	600	34,850	600	3,650	250	650	150	4,750	275	750	150

TABLE 2

U.S. residing doctoral scientists and engineers, by field of doctorate, sex, and employment status: 2023

(Number and SE)

Field of study and sex	Total		Employed						Unemployed ^a		Retired		Not employed and not seeking work ^b	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Male	33,300	525	28,750	575	25,900	575	2,850	225	550	125	3,650	275	300	100
Female	11,350	400	9,700	400	8,950	400	800	125	100	50	1,100	125	450	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	167,650	1,025	141,800	1,125	128,300	1,075	13,450	550	1,750	250	21,550	750	2,550	275
Male	123,800	1,025	103,750	1,100	94,000	975	9,750	550	1,200	200	17,800	725	1,050	200
Female	43,900	775	38,050	750	34,300	725	3,700	275	600	150	3,750	275	1,500	175
Astronomy and astrophysics	7,250	175	6,450	175	5,850	175	600	100	100	50	600	100	100	50
Male	5,400	175	4,800	175	4,400	175	400	100	50	50	500	100	S	S
Female	1,850	100	1,650	100	1,400	100	200	50	D	D	150	50	50	25
Chemistry, except biochemistry	82,200	725	69,150	850	62,450	825	6,700	425	800	175	10,950	525	1,300	200
Male	57,100	775	47,450	800	42,850	800	4,600	375	550	150	8,650	500	500	175
Female	25,100	625	21,700	600	19,650	550	2,100	225	250	75	2,300	225	800	150
Geosciences, atmospheric sciences, and ocean sciences	28,200	300	23,150	350	20,650	375	2,500	175	300	75	4,200	275	550	100
Male	19,000	325	15,200	375	13,600	350	1,600	150	200	75	3,400	275	200	75
Female	9,200	225	8,000	225	7,050	225	900	100	100	50	800	100	350	75
Physics	50,050	675	43,050	775	39,350	700	3,700	375	550	175	5,800	450	600	125
Male	42,300	675	36,350	750	33,150	675	3,200	375	400	125	5,250	400	300	100
Female	7,750	400	6,700	375	6,200	350	500	100	S	S	550	150	300	100
Psychology	135,750	625	112,100	900	83,050	1,100	29,050	975	800	150	20,350	700	2,450	300
Male	49,150	800	38,400	750	29,650	725	8,750	500	350	125	10,000	450	400	125
Female	86,600	800	73,700	950	53,400	975	20,350	750	450	100	10,350	475	2,050	300
Social sciences	123,800	825	104,100	875	90,100	1,000	14,000	600	1,250	150	16,650	550	1,800	225
Male	68,450	950	57,200	875	50,100	875	7,100	450	500	125	10,300	500	400	100
Female	55,350	700	46,900	675	40,000	675	6,900	375	700	125	6,350	325	1,400	200
Economics	32,600	500	27,950	550	24,750	550	3,200	325	200	75	4,150	350	300	125
Male	22,900	550	19,400	575	17,250	575	2,150	275	100	50	3,350	325	D	D
Female	9,700	400	8,550	375	7,500	350	1,050	200	D	D	800	125	250	125
Political science and government	25,050	475	21,700	500	19,150	525	2,600	275	250	75	2,800	275	300	75
Male	15,300	475	13,400	450	11,950	450	1,450	225	100	50	1,800	250	D	D
Female	9,750	325	8,350	325	7,200	325	1,150	175	150	50	1,050	175	250	75
Sociology, demography, and population studies	19,200	350	15,950	375	13,600	400	2,350	250	50	50	2,950	250	250	100
Male	8,300	275	6,800	325	5,800	300	1,000	150	D	D	1,400	175	D	D
Female	10,900	325	9,150	325	7,800	350	1,300	200	D	D	1,500	175	200	75
Other social sciences	46,950	475	38,500	525	32,600	500	5,900	350	700	150	6,750	325	950	125
Male	21,900	450	17,650	425	15,150	400	2,500	225	300	100	3,750	275	200	50

TABLE 2

U.S. residing doctoral scientists and engineers, by field of doctorate, sex, and employment status: 2023

(Number and SE)

Field of study and sex	Total		Employed						Unemployed ^a		Retired		Not employed and not seeking work ^b	
			Total		Full time		Part time							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Female	25,050	375	20,900	375	17,500	350	3,400	250	400	100	3,000	200	750	125
Engineering	219,400	1,125	196,750	1,300	183,150	1,400	13,600	650	2,650	300	17,650	675	2,400	275
Male	179,000	1,300	159,650	1,375	149,100	1,475	10,550	625	2,100	300	15,950	650	1,300	250
Female	40,400	725	37,100	725	34,050	725	3,050	250	550	125	1,700	225	1,050	150
Aerospace, aeronautical, and astronautical engineering	8,850	175	8,150	200	7,700	175	450	100	D	D	550	100	50	25
Male	7,800	175	7,150	200	6,750	200	400	100	D	D	550	100	D	D
Female	1,000	100	1,000	100	950	100	50	25	D	D	D	D	*	*
Chemical engineering	26,550	400	23,700	500	22,250	525	1,450	225	300	100	2,300	275	250	100
Male	20,600	450	18,250	525	17,150	550	1,100	225	200	100	2,000	275	S	S
Female	5,950	300	5,450	300	5,100	325	350	100	D	D	300	100	150	75
Civil engineering	23,600	475	21,500	475	19,850	475	1,650	225	350	150	1,500	225	250	75
Male	18,350	500	16,550	525	15,450	525	1,150	225	300	150	1,350	200	150	75
Female	5,250	275	4,950	275	4,400	275	500	100	D	D	S	S	100	50
Electrical and computer engineering	59,000	625	54,000	675	50,050	675	3,950	375	450	125	3,950	325	550	150
Male	51,450	625	47,000	675	43,700	650	3,300	325	350	100	3,650	325	400	125
Female	7,550	350	7,000	350	6,350	325	650	125	S	S	300	125	150	75
Mechanical engineering	32,500	525	28,800	625	27,050	650	1,750	275	500	150	2,750	350	450	175
Male	28,500	525	24,950	625	23,450	650	1,500	275	500	150	2,700	350	350	175
Female	4,000	250	3,850	250	3,600	225	250	75	D	D	S	S	100	50
Metallurgical and materials engineering	20,550	425	18,300	450	17,300	450	1,050	175	250	75	1,800	250	150	75
Male	16,150	425	14,350	450	13,550	450	750	175	200	75	1,600	225	D	D
Female	4,400	250	3,950	250	3,700	250	250	75	50	50	250	75	150	75
Other engineering	48,350	475	42,300	550	38,950	575	3,300	300	650	125	4,750	325	650	125
Male	36,150	525	31,350	550	29,000	575	2,350	225	400	100	4,150	325	200	75
Female	12,250	400	10,950	400	9,950	400	950	150	250	75	650	100	450	75
Health	52,600	475	44,000	600	38,150	600	5,900	400	650	150	7,150	350	750	150
Male	18,000	475	15,300	475	13,900	475	1,400	175	150	50	2,350	250	250	125
Female	34,600	500	28,700	525	24,200	550	4,500	325	500	150	4,850	275	500	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 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 and 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 3

U.S. residing doctoral scientists and engineers, by broad field of doctorate, employment status, ethnicity, and race: 2023

(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	1,058,950	1,925	52,400	700	2,050	150	264,150	1,675	40,200	475	682,400	1,700	17,750	550
Full time	803,700	2,550	42,650	675	1,400	150	224,550	2,000	31,650	525	488,950	2,050	14,450	500
Part time	104,950	1,600	4,750	300	300	100	16,300	925	4,400	325	77,700	1,375	1,500	175
Unemployed ^d	11,250	550	700	125	S	S	3,150	350	750	150	6,350	400	250	75
Retired	122,450	1,250	3,350	275	150	50	16,100	750	2,750	225	98,900	1,200	1,200	200
Not employed and not seeking work ^e	16,600	675	950	125	100	50	4,050	400	700	125	10,450	475	350	75
Science	787,000	1,825	41,000	600	1,650	150	160,700	1,575	30,200	475	539,250	1,825	14,150	475
Full time	582,450	2,200	33,050	550	1,150	150	134,800	1,675	23,300	475	378,550	2,100	11,600	475
Part time	85,500	1,375	4,150	300	250	75	11,150	725	3,650	325	65,000	1,250	1,250	175
Unemployed ^d	7,950	450	500	100	D	D	2,050	275	550	150	4,650	325	150	50
Retired	97,650	1,225	2,550	225	150	50	9,600	550	2,150	225	82,350	1,150	850	150
Not employed and not seeking work ^e	13,450	675	750	125	100	50	3,050	375	550	125	8,700	450	300	75
Biological, agricultural, and environmental life sciences	274,850	950	14,650	450	500	125	62,100	1,000	9,000	325	183,400	1,250	5,150	325
Full time	212,750	1,225	12,500	425	350	100	53,700	975	7,400	300	134,500	1,350	4,250	300
Part time	22,300	850	900	125	D	D	3,850	450	750	125	16,250	725	500	100
Unemployed ^d	3,100	300	250	75	D	D	800	200	50	25	1,950	225	50	50
Retired	31,450	675	600	100	S	S	2,450	300	550	100	27,600	650	250	100
Not employed and not seeking work ^e	5,250	450	400	75	D	D	1,350	250	250	75	3,100	300	150	50
Computer and information sciences	40,300	450	1,350	150	S	S	17,450	525	1,150	150	19,750	525	550	125
Full time	33,400	525	1,150	125	D	D	15,200	550	850	125	15,650	525	500	125
Part time	2,950	325	S	S	D	D	1,050	250	150	75	1,700	200	D	D
Unemployed ^d	350	125	*	*	D	D	150	75	D	D	150	75	D	D
Retired	2,900	250	150	75	D	D	650	175	50	50	2,050	200	D	D
Not employed and not seeking work ^e	650	175	D	D	D	D	450	175	D	D	200	75	D	D
Mathematics and statistics	44,650	475	1,900	150	S	S	13,500	525	1,150	125	27,450	550	550	100
Full time	34,850	600	1,650	175	D	D	11,500	500	900	100	20,350	575	450	75
Part time	3,650	250	100	50	D	D	850	175	150	50	2,550	200	D	D
Unemployed ^d	650	150	50	25	D	D	250	75	D	D	350	100	D	D
Retired	4,750	275	50	25	D	D	750	150	S	S	3,800	225	D	D
Not employed and not seeking work ^e	750	150	S	S	D	D	200	75	S	S	450	100	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	167,650	1,025	6,250	300	100	50	41,750	900	4,000	275	113,050	1,000	2,550	175
Full time	128,300	1,075	5,250	275	100	50	34,800	875	3,300	225	82,750	1,050	2,100	150

TABLE 3

U.S. residing doctoral scientists and engineers, by broad field of doctorate, employment status, ethnicity, and race: 2023

(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
Part time	13,450	550	400	75	D	D	2,350	250	300	100	10,200	500	200	75
Unemployed ^d	1,750	250	50	50	D	D	550	150	50	25	1,050	175	S	S
Retired	21,550	750	450	75	D	D	3,350	350	150	50	17,450	600	150	75
Not employed and not seeking work ^e	2,550	275	50	25	D	D	750	175	S	S	1,600	175	S	S
Psychology	135,750	625	8,550	350	550	125	9,000	475	7,450	350	107,300	725	2,950	250
Full time	83,050	1,100	5,700	300	350	100	6,250	400	5,000	300	63,450	1,000	2,350	225
Part time	29,050	975	1,800	200	100	50	1,500	250	1,500	225	23,800	850	350	75
Unemployed ^d	800	150	100	50	D	D	D	D	200	100	450	100	D	D
Retired	20,350	700	800	150	D	D	1,000	200	600	100	17,700	600	200	75
Not employed and not seeking work ^e	2,450	300	150	75	D	D	S	S	100	50	1,900	275	D	D
Social sciences	123,800	825	8,300	325	450	100	16,900	625	7,450	325	88,300	850	2,400	250
Full time	90,100	1,000	6,800	300	300	75	13,400	550	5,800	275	61,900	900	1,950	225
Part time	14,000	600	900	150	50	50	1,600	250	800	150	10,500	525	200	50
Unemployed ^d	1,250	150	50	25	D	D	300	125	150	75	700	125	D	D
Retired	16,650	550	500	100	S	S	1,450	275	650	125	13,800	550	200	75
Not employed and not seeking work ^e	1,800	225	100	50	D	D	200	75	50	25	1,400	200	S	S
Engineering	219,400	1,125	9,050	375	200	75	93,400	1,125	5,450	275	108,650	1,175	2,600	275
Full time	183,150	1,400	7,600	325	150	50	81,250	1,175	4,800	250	87,200	1,200	2,150	225
Part time	13,600	650	400	75	D	D	4,500	475	250	50	8,350	500	100	75
Unemployed ^d	2,650	300	150	75	D	D	1,000	200	150	75	1,250	200	D	D
Retired	17,650	675	700	150	D	D	5,900	500	250	75	10,500	500	250	125
Not employed and not seeking work ^e	2,400	275	150	50	D	D	800	175	D	D	1,350	200	50	25
Health	52,600	475	2,350	150	200	75	10,050	500	4,550	250	34,450	500	1,000	150
Full time	38,150	600	2,000	150	150	50	8,500	450	3,550	250	23,200	575	700	150
Part time	5,900	400	200	50	D	D	650	150	500	100	4,350	350	100	50
Unemployed ^d	650	150	D	D	D	D	100	50	50	25	450	150	D	D
Retired	7,150	350	100	50	D	D	600	150	300	75	6,050	350	100	50
Not employed and not seeking work ^e	750	150	D	D	D	D	S	S	100	50	400	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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^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 and 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 4-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Unemployment rate	
	Percent	SE
All fields	1.2	0.10
Science	1.2	0.10
Biological, agricultural, and environmental life sciences	1.3	0.15
Agricultural and food sciences	0.7	0.25
Agricultural sciences	*	*
Animal sciences	S	S
Food sciences and technology	D	D
Plant sciences	D	D
Soil sciences	D	D
Biochemistry and biophysics	2.4	0.50
Biochemistry	2.4	0.60
Biophysics	2.3	0.85
Cell, cellular biology, and molecular biology	1.2	0.35
Microbiological sciences and immunology	1.5	0.45
Immunology	D	D
Microbiological sciences	1.9	0.65
Natural resources and conservation	S	S
Fish, fisheries, wildlife, and wildlands science and management	D	D
Forestry	*	*
Natural resource conservation, research, management, and policy	S	S
Zoology	2.2	0.95
Other biological sciences	1.0	0.15
Biomathematics, bioinformatics, and computational biology	0.4	0.20
Botany and plant biology	2.4	0.80
Epidemiology, ecology, and population biology	0.6	0.25
Genetics	1.4	0.45
Neurobiology and neuroscience	1.5	0.45
Nutrition sciences	1.4	0.65
Pharmacology and toxicology	0.5	0.25
Physiology, pathology, and related sciences	0.5	0.20
Biological and biomedical sciences, general	0.9	0.35
Biological and biomedical sciences, other	S	S
Computer and information sciences	1.0	0.30
Computer science	0.8	0.30
Information science, studies	S	S
Computer and information sciences, other	1.7	0.65
Mathematics and statistics	1.6	0.35
Applied mathematics	1.9	0.75
Mathematics	2.2	0.60
Statistics	D	D
Mathematics and statistics, other	0.8	0.40
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	1.2	0.20
Astronomy and astrophysics	1.5	0.50
Chemistry, except biochemistry	1.2	0.25
Inorganic chemistry	1.7	0.55
Organic chemistry	0.9	0.35
Chemistry, other, except biochemistry	1.1	0.35
Geosciences, atmospheric sciences, and ocean sciences	1.3	0.30
Atmospheric sciences and meteorology	S	S
Geological and earth sciences, geosciences	1.4	0.40

TABLE 4-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Unemployment rate	
	Percent	SE
Ocean sciences and marine sciences	*	*
Oceanography, chemical and physical	D	D
Physics	1.3	0.35
Psychology	0.7	0.15
Clinical psychology	0.5	0.25
Counseling and applied psychology	0.7	0.30
Educational and school psychology	0.6	0.30
Industrial and organizational psychology	2.2	0.80
Research and experimental psychology	0.8	0.25
Psychology, general	D	D
Psychology, other	1.7	0.70
Social sciences	1.2	0.15
Economics	0.7	0.25
Political science and government	1.1	0.30
Political science and government	0.8	0.25
Public policy analysis	2.2	0.90
Sociology, demography, and population studies	0.4	0.20
Other social sciences	1.8	0.35
Anthropology	2.0	0.85
Area, ethnic, cultural, gender, and group studies	3.0	1.45
Geography and cartography	1.9	0.80
International relations and national security studies	D	D
Linguistics	1.3	0.60
Urban studies, affairs	3.2	1.50
Social sciences, other	1.4	0.35
Engineering	1.3	0.15
Aerospace, aeronautical, and astronautical engineering	D	D
Chemical engineering	1.2	0.40
Civil engineering	1.6	0.60
Electrical and computer engineering	0.8	0.25
Computer engineering	1.4	0.70
Electrical, electronics, and communications engineering	0.7	0.25
Mechanical engineering	1.7	0.45
Metallurgical and materials engineering	1.4	0.45
Other engineering	1.5	0.30
Agricultural engineering	D	D
Bioengineering and biomedical engineering	1.7	0.60
Engineering mechanics, physics, and science	1.8	0.95
Industrial and manufacturing engineering	1.0	0.40
Nuclear engineering	2.1	0.95
Engineering, other	1.4	0.55
Health	1.5	0.35
Communication disorders sciences and services	D	D
Hospital and medical administration services	S	S
Pharmacy, pharmaceutical sciences, and administration	0.7	0.35
Public health	1.3	0.55
Registered nursing, nursing administration, nursing research	S	S
Health sciences, other	1.7	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):

Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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. Unemployment rate (UR) = $U / (E + U)$. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 4-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Involuntarily out-of-field rate	
	Percent	SE
All fields	2.7	0.10
Science	2.8	0.15
Biological, agricultural, and environmental life sciences	2.9	0.20
Agricultural and food sciences	3.5	0.75
Agricultural sciences	*	*
Animal sciences	2.8	0.90
Food sciences and technology	1.9	0.65
Plant sciences	4.0	0.95
Soil sciences	S	S
Biochemistry and biophysics	3.1	0.55
Biochemistry	3.0	0.65
Biophysics	3.9	1.05
Cell, cellular biology, and molecular biology	3.1	0.65
Microbiological sciences and immunology	2.0	0.55
Immunology	2.4	1.20
Microbiological sciences	1.7	0.50
Natural resources and conservation	3.6	0.75
Fish, fisheries, wildlife, and wildlands science and management	1.8	0.65
Forestry	3.7	1.00
Natural resource conservation, research, management, and policy	4.2	1.25
Zoology	3.1	0.80
Other biological sciences	2.7	0.25
Biomathematics, bioinformatics, and computational biology	0.8	0.40
Botany and plant biology	3.6	0.80
Epidemiology, ecology, and population biology	3.1	0.65
Genetics	2.8	0.70
Neurobiology and neuroscience	3.8	0.75
Nutrition sciences	2.4	0.70
Pharmacology and toxicology	2.1	0.80
Physiology, pathology, and related sciences	3.0	0.85
Biological and biomedical sciences, general	1.5	0.50
Biological and biomedical sciences, other	2.8	0.85
Computer and information sciences	0.7	0.30
Computer science	S	S
Information science, studies	1.3	0.60
Computer and information sciences, other	*	*
Mathematics and statistics	3.0	0.40
Applied mathematics	2.8	0.75
Mathematics	4.6	0.70
Statistics	D	D
Mathematics and statistics, other	1.6	0.70
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4.2	0.30
Astronomy and astrophysics	4.4	0.85
Chemistry, except biochemistry	3.7	0.40
Inorganic chemistry	4.3	0.90
Organic chemistry	3.6	0.90
Chemistry, other, except biochemistry	3.6	0.50
Geosciences, atmospheric sciences, and ocean sciences	3.8	0.45
Atmospheric sciences and meteorology	3.7	0.85
Geological and earth sciences, geosciences	3.7	0.65

TABLE 4-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Involuntarily out-of-field rate	
	Percent	SE
Ocean sciences and marine sciences	3.4	0.85
Oceanography, chemical and physical	5.3	1.50
Physics	5.3	0.65
Psychology	1.3	0.20
Clinical psychology	D	D
Counseling and applied psychology	1.0	0.50
Educational and school psychology	1.4	0.50
Industrial and organizational psychology	0.9	0.40
Research and experimental psychology	2.7	0.70
Psychology, general	2.2	1.00
Psychology, other	1.2	0.55
Social sciences	3.2	0.30
Economics	1.4	0.45
Political science and government	4.0	0.70
Political science and government	4.1	0.85
Public policy analysis	3.5	1.10
Sociology, demography, and population studies	1.5	0.45
Other social sciences	4.7	0.45
Anthropology	3.9	0.90
Area, ethnic, cultural, gender, and group studies	9.4	1.75
Geography and cartography	2.9	0.85
International relations and national security studies	4.4	1.60
Linguistics	6.2	1.45
Urban studies, affairs	2.1	0.85
Social sciences, other	4.0	0.80
Engineering	2.5	0.20
Aerospace, aeronautical, and astronautical engineering	2.5	0.75
Chemical engineering	3.9	0.95
Civil engineering	1.8	0.55
Electrical and computer engineering	1.3	0.30
Computer engineering	1.6	0.60
Electrical, electronics, and communications engineering	1.3	0.35
Mechanical engineering	3.3	0.65
Metallurgical and materials engineering	3.3	0.70
Other engineering	2.6	0.35
Agricultural engineering	2.1	1.00
Bioengineering and biomedical engineering	3.2	0.75
Engineering mechanics, physics, and science	3.2	0.80
Industrial and manufacturing engineering	1.2	0.50
Nuclear engineering	3.6	1.20
Engineering, other	2.3	0.80
Health	1.8	0.30
Communication disorders sciences and services	1.5	0.65
Hospital and medical administration services	D	D
Pharmacy, pharmaceutical sciences, and administration	4.1	1.15
Public health	1.3	0.40
Registered nursing, nursing administration, nursing research	S	S
Health sciences, other	1.5	0.50

* = 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.

Note(s):

Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 4-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
All fields	86.9	0.15
Science	85.9	0.20
Biological, agricultural, and environmental life sciences	86.7	0.30
Agricultural and food sciences	81.1	1.25
Agricultural sciences	76.8	2.90
Animal sciences	86.3	2.00
Food sciences and technology	81.8	2.90
Plant sciences	78.0	2.45
Soil sciences	80.4	2.30
Biochemistry and biophysics	85.8	1.00
Biochemistry	84.9	1.10
Biophysics	89.8	1.65
Cell, cellular biology, and molecular biology	88.8	1.05
Microbiological sciences and immunology	86.8	1.10
Immunology	90.8	1.35
Microbiological sciences	84.6	1.45
Natural resources and conservation	81.8	1.55
Fish, fisheries, wildlife, and wildlands science and management	73.9	3.15
Forestry	79.4	3.55
Natural resource conservation, research, management, and policy	87.0	1.75
Zoology	73.2	2.00
Other biological sciences	88.5	0.40
Biomathematics, bioinformatics, and computational biology	94.1	1.15
Botany and plant biology	76.9	1.95
Epidemiology, ecology, and population biology	88.9	1.10
Genetics	90.6	1.60
Neurobiology and neuroscience	95.1	0.80
Nutrition sciences	84.8	1.80
Pharmacology and toxicology	87.6	1.30
Physiology, pathology, and related sciences	84.9	1.15
Biological and biomedical sciences, general	89.2	1.35
Biological and biomedical sciences, other	83.0	2.10
Computer and information sciences	91.2	0.70
Computer science	91.3	0.80
Information science, studies	86.0	2.45
Computer and information sciences, other	95.8	1.00
Mathematics and statistics	87.6	0.70
Applied mathematics	92.1	1.25
Mathematics	84.9	1.15
Statistics	88.8	1.55
Mathematics and statistics, other	87.7	1.80
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	85.6	0.45
Astronomy and astrophysics	90.2	1.35
Chemistry, except biochemistry	85.1	0.70
Inorganic chemistry	84.9	1.90
Organic chemistry	84.2	1.30
Chemistry, other, except biochemistry	85.5	0.80
Geosciences, atmospheric sciences, and ocean sciences	83.3	0.95
Atmospheric sciences and meteorology	89.4	0.95
Geological and earth sciences, geosciences	80.5	1.30

TABLE 4-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
Ocean sciences and marine sciences	89.2	1.50
Oceanography, chemical and physical	83.3	2.40
Physics	87.2	0.90
Psychology	83.2	0.55
Clinical psychology	86.3	0.95
Counseling and applied psychology	84.7	1.45
Educational and school psychology	74.9	1.65
Industrial and organizational psychology	87.7	1.75
Research and experimental psychology	81.6	1.00
Psychology, general	84.6	2.35
Psychology, other	79.5	2.20
Social sciences	85.1	0.50
Economics	86.3	1.10
Political science and government	87.6	1.10
Political science and government	87.6	1.25
Public policy analysis	87.8	1.55
Sociology, demography, and population studies	83.4	1.25
Other social sciences	83.6	0.75
Anthropology	82.6	1.50
Area, ethnic, cultural, gender, and group studies	87.8	1.65
Geography and cartography	85.1	1.70
International relations and national security studies	84.0	2.55
Linguistics	84.8	2.25
Urban studies, affairs	77.4	2.80
Social sciences, other	82.3	1.35
Engineering	90.9	0.35
Aerospace, aeronautical, and astronautical engineering	93.5	1.10
Chemical engineering	90.3	1.15
Civil engineering	92.6	0.90
Electrical and computer engineering	92.3	0.55
Computer engineering	93.3	1.20
Electrical, electronics, and communications engineering	92.2	0.65
Mechanical engineering	90.2	1.20
Metallurgical and materials engineering	90.4	1.15
Other engineering	88.8	0.70
Agricultural engineering	78.9	2.85
Bioengineering and biomedical engineering	94.6	0.85
Engineering mechanics, physics, and science	85.9	2.25
Industrial and manufacturing engineering	84.5	1.55
Nuclear engineering	90.4	1.55
Engineering, other	85.7	2.00
Health	84.9	0.75
Communication disorders sciences and services	76.5	2.50
Hospital and medical administration services	82.9	2.45
Pharmacy, pharmaceutical sciences, and administration	90.6	1.30
Public health	90.9	1.35
Registered nursing, nursing administration, nursing research	76.2	1.65
Health sciences, other	86.4	1.65

SE = standard error.

Note(s):

Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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 2023, 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 4-4

Labor force participation rate among non-U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
All fields	91.1	0.50
Science	91.0	0.55
Biological, agricultural, and environmental life sciences	89.6	1.10
Agricultural and food sciences	83.3	2.30
Agricultural sciences	88.8	5.00
Animal sciences	75.1	5.20
Food sciences and technology	87.4	4.05
Plant sciences	82.2	4.90
Soil sciences	90.9	3.25
Biochemistry and biophysics	87.7	4.10
Biochemistry	89.9	4.00
Biophysics	75.2	14.95
Cell, cellular biology, and molecular biology	93.3	2.75
Microbiological sciences and immunology	93.8	2.95
Immunology	D	D
Microbiological sciences	90.9	4.20
Natural resources and conservation	91.3	2.20
Fish, fisheries, wildlife, and wildlands science and management	91.9	3.90
Forestry	84.6	4.65
Natural resource conservation, research, management, and policy	96.3	1.80
Zoology	80.8	7.15
Other biological sciences	91.8	1.50
Biomathematics, bioinformatics, and computational biology	99.3	0.70
Botany and plant biology	88.8	3.05
Epidemiology, ecology, and population biology	93.5	2.45
Genetics	93.6	4.00
Neurobiology and neuroscience	99.3	0.60
Nutrition sciences	94.1	2.85
Pharmacology and toxicology	84.1	9.80
Physiology, pathology, and related sciences	91.4	4.35
Biological and biomedical sciences, general	82.1	8.25
Biological and biomedical sciences, other	84.9	11.00
Computer and information sciences	93.6	1.45
Computer science	93.7	1.70
Information science, studies	88.4	4.55
Computer and information sciences, other	97.7	2.20
Mathematics and statistics	91.8	1.50
Applied mathematics	94.1	3.10
Mathematics	93.4	1.85
Statistics	88.0	5.25
Mathematics and statistics, other	85.9	5.00
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	91.9	1.15
Astronomy and astrophysics	91.3	3.65
Chemistry, except biochemistry	88.9	2.65
Inorganic chemistry	93.2	4.90
Organic chemistry	88.1	5.25
Chemistry, other, except biochemistry	88.3	3.15
Geosciences, atmospheric sciences, and ocean sciences	92.5	1.20
Atmospheric sciences and meteorology	96.0	1.60
Geological and earth sciences, geosciences	92.7	1.70

TABLE 4-4

Labor force participation rate among non-U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
Ocean sciences and marine sciences	84.6	5.20
Oceanography, chemical and physical	91.7	3.75
Physics	94.2	1.65
Psychology	89.8	2.25
Clinical psychology	94.3	3.75
Counseling and applied psychology	88.8	6.55
Educational and school psychology	84.0	6.65
Industrial and organizational psychology	94.8	3.95
Research and experimental psychology	90.0	3.55
Psychology, general	84.5	11.30
Psychology, other	91.8	6.10
Social sciences	91.3	1.05
Economics	92.4	1.50
Political science and government	93.3	2.85
Political science and government	94.0	3.30
Public policy analysis	90.5	4.70
Sociology, demography, and population studies	92.7	2.55
Other social sciences	88.6	1.70
Anthropology	88.7	3.00
Area, ethnic, cultural, gender, and group studies	94.3	4.10
Geography and cartography	87.7	4.85
International relations and national security studies	97.7	1.90
Linguistics	90.4	3.30
Urban studies, affairs	89.0	6.40
Social sciences, other	82.7	4.70
Engineering	91.4	0.95
Aerospace, aeronautical, and astronautical engineering	99.5	0.55
Chemical engineering	88.5	3.85
Civil engineering	91.6	2.40
Electrical and computer engineering	90.8	2.15
Computer engineering	94.9	2.40
Electrical, electronics, and communications engineering	90.0	2.45
Mechanical engineering	95.1	2.20
Metallurgical and materials engineering	86.9	3.70
Other engineering	91.9	1.55
Agricultural engineering	94.4	2.95
Bioengineering and biomedical engineering	97.0	1.95
Engineering mechanics, physics, and science	84.9	8.00
Industrial and manufacturing engineering	90.6	2.60
Nuclear engineering	89.4	4.75
Engineering, other	92.9	2.15
Health	90.6	2.55
Communication disorders sciences and services	91.6	5.70
Hospital and medical administration services	94.8	3.20
Pharmacy, pharmaceutical sciences, and administration	95.6	3.35
Public health	86.5	6.00
Registered nursing, nursing administration, nursing research	89.3	6.60
Health sciences, other	90.7	4.85

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

Note(s):

Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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, not residing in the United States during the week of 1 February 2023, 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 5

Doctoral scientists and engineers, by fine field of doctorate, residence location, and sex: 2023

(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
All fields	1,058,950	1,925	654,750	1,675	404,200	1,200	163,450	1,875	116,550	1,700	46,900	1,125
Science	787,000	1,825	457,800	1,650	329,200	1,275	114,500	1,700	76,350	1,500	38,200	1,075
Biological, agricultural, and environmental life sciences	274,850	950	151,000	1,225	123,850	1,100	33,350	900	20,100	775	13,250	600
Agricultural and food sciences	21,150	350	14,450	300	6,700	275	6,250	325	4,400	325	1,850	175
Agricultural sciences	1,200	50	900	50	350	25	350	50	250	50	100	25
Animal sciences	5,400	175	3,600	175	1,800	125	1,400	175	1,100	150	300	75
Food sciences and technology	4,400	200	2,550	175	1,900	150	1,550	175	900	175	650	100
Plant sciences	7,550	225	5,650	225	1,900	150	2,200	200	1,600	200	600	125
Soil sciences	2,600	100	1,800	100	800	75	750	100	600	100	150	50
Biochemistry and biophysics	35,500	450	21,100	525	14,350	475	3,500	425	2,400	375	1,100	225
Biochemistry	29,150	425	16,850	500	12,250	450	3,000	400	2,050	350	950	225
Biophysics	6,350	150	4,250	175	2,100	175	500	150	350	125	150	75
Cell, cellular biology, and molecular biology	36,950	375	19,200	525	17,700	475	2,800	325	1,600	275	1,200	200
Microbiological sciences and immunology	29,700	300	15,200	450	14,500	400	2,550	300	1,150	225	1,350	225
Immunology	10,900	175	5,600	250	5,250	250	800	150	300	125	450	100
Microbiological sciences	18,800	275	9,600	350	9,250	300	1,750	250	850	175	900	175
Natural resources and conservation	11,450	225	7,250	225	4,200	175	2,700	225	2,000	175	750	125
Fish, fisheries, wildlife, and wildlands science and management	2,650	100	2,000	100	700	50	600	100	450	100	150	50
Forestry	3,300	125	2,350	125	950	100	950	125	750	100	150	50
Natural resource conservation, research, management, and policy	5,450	175	2,900	175	2,550	125	1,200	175	750	150	450	100
Zoology	8,950	175	6,050	200	2,900	150	1,200	175	850	175	400	100
Other biological sciences	131,150	675	67,700	775	63,450	800	14,300	675	7,750	500	6,600	475
Biomathematics, bioinformatics, and computational biology	7,650	150	4,200	150	3,450	150	700	125	450	125	250	75
Botany and plant biology	8,400	200	5,050	200	3,350	175	1,800	200	1,100	150	700	125
Epidemiology, ecology, and population biology	21,050	275	10,000	325	11,000	325	3,000	275	1,500	200	1,500	200
Genetics	10,700	200	5,450	225	5,200	200	1,250	200	750	175	450	125
Neurobiology and neuroscience	21,700	300	11,300	350	10,400	325	2,200	300	1,100	225	1,100	225
Nutrition sciences	5,000	150	1,200	125	3,800	150	850	125	200	50	650	125
Pharmacology and toxicology	15,300	150	8,350	275	6,950	275	750	150	300	100	450	125
Physiology, pathology, and related sciences	18,450	275	10,550	325	7,950	275	1,700	225	1,100	225	600	125
Biological and biomedical sciences, general	16,950	250	8,200	350	8,750	325	1,450	200	750	175	650	150
Biological and biomedical sciences, other	5,950	175	3,400	175	2,550	150	700	175	450	150	250	100
Computer and information sciences	40,300	450	32,050	500	8,200	375	6,200	450	4,850	400	1,350	225
Computer science	34,250	475	28,150	525	6,150	375	5,150	450	4,150	375	1,000	225

TABLE 5

Doctoral scientists and engineers, by fine field of doctorate, residence location, and sex: 2023

(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
Information science, studies	3,300	100	2,150	100	1,200	75	500	100	300	75	200	75
Computer and information sciences, other	2,700	100	1,800	75	900	75	550	75	400	75	150	50
Mathematics and statistics	44,650	475	33,300	525	11,350	400	9,800	475	7,450	400	2,350	275
Applied mathematics	10,100	225	7,350	225	2,750	175	1,650	200	1,300	175	350	125
Mathematics	20,600	400	16,000	375	4,650	275	5,500	375	4,150	325	1,350	200
Statistics	9,150	225	6,450	250	2,700	225	1,300	225	950	175	350	150
Mathematics and statistics, other	4,750	150	3,550	150	1,250	100	1,300	125	1,050	125	250	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	167,650	1,025	123,800	1,025	43,900	775	24,650	950	19,100	925	5,550	475
Astronomy and astrophysics	7,250	175	5,400	175	1,850	100	1,300	175	1,100	175	250	50
Chemistry, except biochemistry	82,200	725	57,100	775	25,100	625	8,550	700	6,100	625	2,450	375
Inorganic chemistry	10,550	225	7,250	225	3,350	200	1,150	200	900	175	250	100
Organic chemistry	21,550	325	16,450	400	5,100	275	2,150	325	1,850	300	300	100
Chemistry, other, except biochemistry	50,100	550	33,450	575	16,650	525	5,200	525	3,350	450	1,900	350
Geosciences, atmospheric sciences, and ocean sciences	28,200	300	19,000	325	9,200	225	5,000	300	3,600	275	1,400	150
Atmospheric sciences and meteorology	5,000	100	3,550	100	1,450	75	900	100	600	100	300	50
Geological and earth sciences, geosciences	17,550	250	12,150	300	5,350	175	2,950	250	2,300	250	650	100
Ocean sciences and marine sciences	2,900	75	1,550	75	1,350	75	400	75	200	50	200	50
Oceanography, chemical and physical	2,750	100	1,700	100	1,000	75	700	100	500	100	250	75
Physics	50,050	675	42,300	675	7,750	400	9,800	650	8,300	600	1,450	300
Psychology	135,750	625	49,150	800	86,600	800	7,350	450	2,800	325	4,550	375
Clinical psychology	47,100	400	15,750	525	31,350	575	1,450	275	150	75	1,300	275
Counseling and applied psychology	17,200	175	5,850	275	11,350	250	450	100	50	50	350	100
Educational and school psychology	16,650	225	5,200	250	11,500	275	1,000	200	350	100	650	175
Industrial and organizational psychology	6,000	150	2,700	150	3,300	150	400	125	150	50	300	100
Research and experimental psychology	33,650	325	13,600	375	20,000	350	2,850	275	1,350	200	1,550	200
Psychology, general	9,200	250	3,750	250	5,450	275	750	225	500	200	250	150
Psychology, other	5,900	175	2,300	150	3,650	150	450	150	S	S	200	75
Social sciences	123,800	825	68,450	950	55,350	700	33,250	875	22,100	800	11,150	475
Economics	32,600	500	22,900	550	9,700	400	14,100	525	10,900	525	3,250	325
Political science and government	25,050	475	15,300	475	9,750	325	4,750	450	3,150	375	1,600	200
Political science and government	19,650	450	12,700	450	6,950	325	3,850	425	2,650	375	1,200	175
Public policy analysis	5,400	125	2,650	125	2,750	125	850	125	500	100	400	100
Sociology, demography, and population studies	19,200	350	8,300	275	10,900	325	2,900	325	1,600	275	1,350	175
Other social sciences	46,950	475	21,900	450	25,050	375	11,450	450	6,450	400	5,000	300

TABLE 5

Doctoral scientists and engineers, by fine field of doctorate, residence location, and sex: 2023

(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
Anthropology	13,700	250	5,550	275	8,150	250	2,350	200	1,050	175	1,300	175
Area, ethnic, cultural, gender, and group studies	5,200	125	2,000	125	3,200	125	550	100	200	75	350	75
Geography and cartography	5,850	175	3,500	175	2,350	125	1,300	175	850	150	400	100
International relations and national security studies	2,800	125	1,650	125	1,150	100	1,000	125	700	125	300	75
Linguistics	6,100	225	2,400	175	3,700	175	3,000	225	1,550	175	1,450	175
Urban studies, affairs	1,800	100	1,100	100	700	75	500	100	400	100	100	25
Social sciences, other	11,500	275	5,650	250	5,850	225	2,800	275	1,700	225	1,100	150
Engineering	219,400	1,125	179,000	1,300	40,400	725	42,600	1,150	37,250	1,175	5,350	375
Aerospace, aeronautical, and astronautical engineering	8,850	175	7,800	175	1,000	100	1,150	175	1,000	150	100	50
Chemical engineering	26,550	400	20,600	450	5,950	300	4,200	400	3,350	375	850	175
Civil engineering	23,600	475	18,350	500	5,250	275	7,000	450	5,900	450	1,100	200
Electrical and computer engineering	59,000	625	51,450	625	7,550	350	10,200	625	9,600	600	600	125
Computer engineering	8,850	175	7,750	200	1,100	125	1,550	175	1,400	175	150	50
Electrical, electronics, and communications engineering	50,150	600	43,700	600	6,450	325	8,650	600	8,200	575	450	125
Mechanical engineering	32,500	525	28,500	525	4,000	250	5,800	500	5,300	500	450	125
Metallurgical and materials engineering	20,550	425	16,150	425	4,400	250	4,300	425	3,700	400	600	125
Other engineering	48,350	475	36,150	525	12,250	400	9,950	475	8,300	450	1,650	225
Agricultural engineering	2,100	100	1,650	75	450	50	650	100	550	100	50	25
Bioengineering and biomedical engineering	17,600	275	11,800	325	5,800	250	1,900	275	1,400	250	500	125
Engineering mechanics, physics, and science	5,100	200	4,350	175	750	75	1,050	200	950	200	100	50
Industrial and manufacturing engineering	10,900	300	8,150	275	2,800	175	3,500	300	3,100	300	450	100
Nuclear engineering	3,800	125	3,350	100	450	50	650	100	550	100	100	50
Engineering, other	8,850	225	6,800	250	2,050	150	2,200	225	1,700	225	450	125
Health	52,600	475	18,000	475	34,600	500	6,350	425	2,950	325	3,400	325
Communication disorders sciences and services	3,900	125	1,000	100	2,900	125	350	100	S	S	200	50
Hospital and medical administration services	1,650	75	700	75	950	75	300	50	150	50	100	50
Pharmacy, pharmaceutical sciences, and administration	9,550	225	5,350	275	4,150	250	1,150	200	600	150	600	175
Public health	11,600	225	3,400	200	8,200	200	1,600	225	850	175	750	175
Registered nursing, nursing administration, nursing research	12,200	225	800	75	11,450	225	850	200	50	50	800	200
Health sciences, other	13,700	250	6,800	275	6,900	250	2,100	250	1,150	200	950	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. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 6

U.S. residing doctoral scientists and engineers, by field of doctorate, ethnicity, and race: 2023

(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	1,058,950	1,925	52,400	700	2,050	150	264,150	1,675	40,200	475	682,400	1,700	17,750	550
Science	787,000	1,825	41,000	600	1,650	150	160,700	1,575	30,200	475	539,250	1,825	14,150	475
Biological, agricultural, and environmental life sciences	274,850	950	14,650	450	500	125	62,100	1,000	9,000	325	183,400	1,250	5,150	325
Agricultural and food sciences	21,150	350	1,350	150	50	50	4,550	300	1,100	125	13,900	325	250	75
Biochemistry and biophysics	35,500	450	1,450	175	D	D	10,000	500	850	100	22,700	575	500	100
Cell, cellular biology, and molecular biology	36,950	375	1,700	200	D	D	9,350	475	800	125	24,000	575	1,000	175
Microbiological sciences and immunology	29,700	300	1,900	150	D	D	6,000	350	1,050	150	20,000	350	700	125
Natural resources and conservation	11,450	225	600	75	50	25	1,700	175	550	75	8,350	250	200	50
Zoology	8,950	175	450	75	D	D	800	150	150	50	7,450	200	100	50
Other biological sciences	131,150	675	7,150	325	250	100	29,700	775	4,550	250	87,050	850	2,450	175
Computer and information sciences	40,300	450	1,350	150	S	S	17,450	525	1,150	150	19,750	525	550	125
Mathematics and statistics	44,650	475	1,900	150	S	S	13,500	525	1,150	125	27,450	550	550	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	167,650	1,025	6,250	300	100	50	41,750	900	4,000	275	113,050	1,000	2,550	175
Astronomy and astrophysics	7,250	175	300	50	D	D	1,050	125	50	25	5,750	200	100	25
Chemistry, except biochemistry	82,200	725	2,950	200	50	25	21,300	750	2,650	225	54,000	775	1,200	125
Geosciences, atmospheric sciences, and ocean sciences	28,200	300	1,200	100	50	25	4,500	225	450	75	21,600	300	450	75
Physics	50,050	675	1,800	200	D	D	14,900	600	850	175	31,700	650	750	125
Psychology	135,750	625	8,550	350	550	125	9,000	475	7,450	350	107,300	725	2,950	250
Social sciences	123,800	825	8,300	325	450	100	16,900	625	7,450	325	88,300	850	2,400	250
Economics	32,600	500	2,100	175	D	D	6,950	350	1,300	150	21,700	525	500	150
Political science and government	25,050	475	1,500	200	100	50	2,250	275	1,800	175	18,950	500	500	100
Sociology, demography, and population studies	19,200	350	1,450	150	D	D	2,250	275	1,750	175	13,300	350	450	125
Other social sciences	46,950	475	3,250	200	300	75	5,450	350	2,600	150	34,350	525	950	125
Engineering	219,400	1,125	9,050	375	200	75	93,400	1,125	5,450	275	108,650	1,175	2,600	275
Aerospace, aeronautical, and astronautical engineering	8,850	175	450	75	D	D	2,800	225	200	50	5,350	250	100	50
Chemical engineering	26,550	400	1,250	175	D	D	11,000	575	600	125	13,400	475	300	75
Civil engineering	23,600	475	1,200	125	D	D	8,850	375	750	125	12,650	450	150	50
Electrical and computer engineering	59,000	625	1,750	150	S	S	30,150	625	1,300	150	25,150	575	550	150
Mechanical engineering	32,500	525	1,150	125	D	D	14,250	650	700	125	15,950	500	450	150
Metallurgical and materials engineering	20,550	425	850	125	D	D	9,050	400	500	100	9,800	425	350	125
Other engineering	48,350	475	2,450	175	50	25	17,350	550	1,450	150	26,400	525	700	100
Health	52,600	475	2,350	150	200	75	10,050	500	4,550	250	34,450	500	1,000	150

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 7

U.S. residing doctoral scientists and engineers, by fine field of doctorate and disability status: 2023

(Number and SE)

Field of study	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
All fields	1,058,950	1,925	122,350	1,675	936,600	2,400
Science	787,000	1,825	95,150	1,500	691,800	2,200
Biological, agricultural, and environmental life sciences	274,850	950	30,650	925	244,200	1,275
Agricultural and food sciences	21,150	350	3,000	250	18,150	375
Agricultural sciences	1,200	50	150	50	1,050	50
Animal sciences	5,400	175	800	150	4,600	225
Food sciences and technology	4,400	200	500	125	3,900	200
Plant sciences	7,550	225	1,150	150	6,400	225
Soil sciences	2,600	100	400	100	2,200	125
Biochemistry and biophysics	35,500	450	3,750	375	31,750	550
Biochemistry	29,150	425	2,950	350	26,200	525
Biophysics	6,350	150	800	150	5,600	200
Cell, cellular biology, and molecular biology	36,950	375	4,100	400	32,850	500
Microbiological sciences and immunology	29,700	300	2,600	200	27,100	325
Immunology	10,900	175	950	150	9,900	200
Microbiological sciences	18,800	275	1,650	175	17,150	325
Natural resources and conservation	11,450	225	1,650	200	9,750	250
Fish, fisheries, wildlife, and wildlands science and management	2,650	100	500	100	2,150	125
Forestry	3,300	125	500	100	2,800	125
Natural resource conservation, research, management, and policy	5,450	175	650	150	4,800	175
Zoology	8,950	175	1,300	175	7,700	200
Other biological sciences	131,150	675	14,200	625	116,900	850
Biomathematics, bioinformatics, and computational biology	7,650	150	800	125	6,850	150
Botany and plant biology	8,400	200	1,250	150	7,150	225
Epidemiology, ecology, and population biology	21,050	275	2,500	300	18,550	375
Genetics	10,700	200	1,550	200	9,150	250
Neurobiology and neuroscience	21,700	300	1,750	200	19,950	325
Nutrition sciences	5,000	150	550	100	4,450	150
Pharmacology and toxicology	15,300	150	1,700	275	13,650	275
Physiology, pathology, and related sciences	18,450	275	1,550	200	16,950	325
Biological and biomedical sciences, general	16,950	250	1,850	225	15,100	325
Biological and biomedical sciences, other	5,950	175	800	150	5,150	200
Computer and information sciences	40,300	450	4,800	350	35,500	600
Computer science	34,250	475	4,000	350	30,300	600
Information science, studies	3,300	100	500	100	2,850	125

TABLE 7

U.S. residing doctoral scientists and engineers, by fine field of doctorate and disability status: 2023

(Number and SE)

Field of study	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
Computer and information sciences, other	2,700	100	350	50	2,350	100
Mathematics and statistics	44,650	475	5,650	350	39,000	550
Applied mathematics	10,100	225	1,450	175	8,650	250
Mathematics	20,600	400	2,500	250	18,100	400
Statistics	9,150	225	1,150	200	8,000	300
Mathematics and statistics, other	4,750	150	550	100	4,250	150
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	167,650	1,025	18,250	675	149,400	1,150
Astronomy and astrophysics	7,250	175	800	125	6,500	200
Chemistry, except biochemistry	82,200	725	8,700	550	73,500	850
Inorganic chemistry	10,550	225	1,400	200	9,150	275
Organic chemistry	21,550	325	2,050	275	19,500	425
Chemistry, other, except biochemistry	50,100	550	5,250	425	44,850	625
Geosciences, atmospheric sciences, and ocean sciences	28,200	300	3,700	250	24,500	350
Atmospheric sciences and meteorology	5,000	100	600	75	4,400	125
Geological and earth sciences, geosciences	17,550	250	2,400	225	15,150	300
Ocean sciences and marine sciences	2,900	75	400	50	2,500	75
Oceanography, chemical and physical	2,750	100	300	50	2,450	100
Physics	50,050	675	5,100	425	44,950	700
Psychology	135,750	625	17,800	675	117,900	825
Clinical psychology	47,100	400	5,500	400	41,650	500
Counseling and applied psychology	17,200	175	2,400	275	14,850	300
Educational and school psychology	16,650	225	2,250	250	14,400	300
Industrial and organizational psychology	6,000	150	850	100	5,150	150
Research and experimental psychology	33,650	325	4,500	300	29,150	425
Psychology, general	9,200	250	1,550	225	7,650	300
Psychology, other	5,900	175	800	100	5,150	175
Social sciences	123,800	825	18,000	625	105,800	900
Economics	32,600	500	4,350	325	28,300	525
Political science and government	25,050	475	3,250	300	21,800	525
Political science and government	19,650	450	2,550	275	17,100	500
Public policy analysis	5,400	125	700	125	4,700	150
Sociology, demography, and population studies	19,200	350	3,100	275	16,100	375
Other social sciences	46,950	475	7,300	375	39,650	500
Anthropology	13,700	250	2,150	225	11,550	275
Area, ethnic, cultural, gender, and group studies	5,200	125	850	125	4,350	150

TABLE 7

U.S. residing doctoral scientists and engineers, by fine field of doctorate and disability status: 2023

(Number and SE)

Field of study	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
Geography and cartography	5,850	175	950	125	4,900	175
International relations and national security studies	2,800	125	400	75	2,400	125
Linguistics	6,100	225	950	150	5,150	250
Urban studies, affairs	1,800	100	250	50	1,550	100
Social sciences, other	11,500	275	1,800	175	9,750	300
Engineering	219,400	1,125	21,050	825	198,350	1,200
Aerospace, aeronautical, and astronautical engineering	8,850	175	800	125	8,000	175
Chemical engineering	26,550	400	2,250	300	24,300	450
Civil engineering	23,600	475	2,600	350	21,000	550
Electrical and computer engineering	59,000	625	5,500	425	53,500	675
Computer engineering	8,850	175	850	175	7,950	200
Electrical, electronics, and communications engineering	50,150	600	4,600	400	45,500	625
Mechanical engineering	32,500	525	3,050	325	29,450	600
Metallurgical and materials engineering	20,550	425	1,800	225	18,750	425
Other engineering	48,350	475	5,100	350	43,300	525
Agricultural engineering	2,100	100	300	75	1,800	100
Bioengineering and biomedical engineering	17,600	275	1,300	225	16,300	300
Engineering mechanics, physics, and science	5,100	200	600	100	4,500	200
Industrial and manufacturing engineering	10,900	300	1,600	225	9,300	300
Nuclear engineering	3,800	125	400	75	3,450	125
Engineering, other	8,850	225	900	125	7,950	250
Health	52,600	475	6,150	325	46,450	500
Communication disorders sciences and services	3,900	125	450	100	3,400	125
Hospital and medical administration services	1,650	75	200	50	1,400	75
Pharmacy, pharmaceutical sciences, and administration	9,550	225	900	175	8,600	250
Public health	11,600	225	1,100	150	10,500	250
Registered nursing, nursing administration, nursing research	12,200	225	1,600	175	10,600	275
Health sciences, other	13,700	250	1,800	225	11,900	275

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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

* = 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2023

(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	908,700	2,300	774,700	2,225	562,450	1,725	212,250	1,775	134,000	1,550	94,750	1,575	39,250	775
Science	667,950	2,050	586,650	2,200	453,150	1,825	133,550	1,700	81,300	1,350	57,500	1,375	23,750	600
Biological, agricultural, and environmental life sciences	235,050	1,175	208,600	1,275	160,150	1,275	48,450	1,125	26,450	775	19,100	675	7,400	350
Agricultural and food sciences	17,050	400	14,650	350	10,050	325	4,550	325	2,450	200	1,700	175	700	100
Agricultural sciences	900	75	800	50	550	50	250	50	150	50	100	25	50	25
Animal sciences	4,650	200	4,100	200	3,300	200	800	150	550	100	350	75	200	75
Food sciences and technology	3,600	200	3,050	200	1,350	125	1,650	200	550	75	350	75	200	50
Plant sciences	5,850	250	4,950	250	3,700	225	1,250	175	850	150	650	125	200	50
Soil sciences	2,050	100	1,750	125	1,150	100	550	100	350	75	250	75	100	25
Biochemistry and biophysics	29,700	475	25,600	600	18,950	550	6,650	500	4,100	325	3,250	350	850	150
Biochemistry	24,150	475	21,000	575	15,850	525	5,150	425	3,150	325	2,450	325	700	150
Biophysics	5,600	175	4,600	200	3,100	200	1,500	200	950	150	800	150	200	50
Cell, cellular biology, and molecular biology	32,400	525	29,750	600	21,700	600	8,050	550	2,650	300	2,050	275	650	150
Microbiological sciences and immunology	25,400	425	23,150	450	18,350	425	4,800	425	2,250	250	1,450	200	800	150
Immunology	9,800	225	8,750	250	6,650	275	2,050	225	1,050	200	750	175	300	100
Microbiological sciences	15,600	350	14,450	375	11,650	325	2,750	300	1,150	175	700	125	450	100
Natural resources and conservation	9,150	275	8,050	275	6,700	225	1,350	125	1,100	125	800	100	300	75
Fish, fisheries, wildlife, and wildlands science and management	1,950	100	1,900	100	1,700	100	200	50	50	25	50	25	D	D
Forestry	2,600	150	2,250	150	1,750	125	500	75	350	50	250	50	100	50
Natural resource conservation, research, management, and policy	4,600	200	3,900	200	3,250	175	650	100	700	100	500	100	200	75
Zoology	6,400	225	6,000	250	5,200	225	800	125	400	100	400	100	D	D
Other biological sciences	114,900	750	101,400	800	79,200	850	22,200	750	13,500	500	9,450	475	4,050	250
Biomathematics, bioinformatics, and computational biology	7,150	150	5,000	175	3,200	150	1,800	150	2,200	150	1,500	150	650	100
Botany and plant biology	6,300	225	5,600	225	4,300	225	1,300	175	650	100	400	100	250	75
Epidemiology, ecology, and population biology	18,600	325	17,250	350	15,450	350	1,800	200	1,350	200	950	200	400	100
Genetics	9,550	225	8,400	250	6,800	225	1,650	200	1,150	150	900	150	250	75
Neurobiology and neuroscience	20,300	350	18,100	375	13,950	425	4,150	375	2,200	225	1,500	200	700	125
Nutrition sciences	4,200	150	3,650	150	2,800	175	850	100	550	100	450	100	100	50
Pharmacology and toxicology	13,350	250	12,200	300	9,300	325	2,900	275	1,150	225	900	175	250	125
Physiology, pathology, and related sciences	15,600	325	14,050	375	10,350	325	3,700	375	1,550	200	1,100	175	450	100
Biological and biomedical sciences, general	14,950	325	12,900	350	9,850	375	3,050	300	2,100	225	1,350	200	750	125
Biological and biomedical sciences, other	4,900	200	4,300	225	3,200	225	1,100	175	600	100	400	100	200	50
Computer and information sciences	36,350	550	24,700	550	13,200	450	11,500	500	11,700	450	8,350	475	3,350	250
Computer science	31,050	525	20,900	550	10,850	450	10,050	500	10,150	475	7,350	475	2,800	250

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2023

(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
Information science, studies	2,750	125	2,250	125	1,400	125	850	100	550	75	350	75	200	75
Computer and information sciences, other	2,550	75	1,550	75	950	75	600	75	1,000	75	650	75	350	50
Mathematics and statistics	38,500	600	30,250	625	19,850	575	10,450	500	8,200	400	5,350	400	2,900	250
Applied mathematics	9,150	225	6,900	250	4,450	250	2,450	225	2,250	250	1,450	225	800	125
Mathematics	17,100	450	14,100	425	10,500	375	3,600	300	3,000	250	2,000	225	1,050	150
Statistics	8,100	275	5,900	300	2,750	225	3,150	275	2,200	200	1,350	200	850	150
Mathematics and statistics, other	4,150	150	3,350	175	2,150	125	1,250	125	750	75	600	75	200	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	121,150	1,275	88,350	1,025	32,800	925	20,650	700	14,450	600	6,200	400
Astronomy and astrophysics	6,450	175	5,600	200	4,750	175	850	100	850	125	600	125	250	75
Chemistry, except biochemistry	69,150	850	59,550	925	43,900	825	15,600	625	9,600	500	6,450	400	3,150	325
Inorganic chemistry	8,800	250	7,800	250	6,400	225	1,400	175	1,000	150	800	125	200	75
Organic chemistry	17,950	425	15,850	450	11,200	450	4,650	350	2,100	275	1,450	225	650	175
Chemistry, other, except biochemistry	42,350	625	35,850	675	26,300	625	9,550	475	6,500	375	4,200	325	2,300	275
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	20,450	375	16,650	325	3,750	200	2,750	225	2,050	225	700	100
Atmospheric sciences and meteorology	4,450	100	3,750	125	2,800	100	1,000	100	650	100	450	75	200	50
Geological and earth sciences, geosciences	13,900	300	12,200	325	10,100	300	2,100	175	1,750	225	1,350	225	400	100
Ocean sciences and marine sciences	2,550	75	2,450	75	2,200	75	250	50	100	50	100	50	50	25
Oceanography, chemical and physical	2,250	100	2,050	100	1,600	100	400	75	200	50	150	50	100	50
Physics	43,050	775	35,550	775	23,000	625	12,550	625	7,500	475	5,350	425	2,150	225
Psychology	112,100	900	109,300	875	98,300	950	11,050	525	2,800	300	2,100	275	700	150
Clinical psychology	40,450	575	40,000	575	36,100	600	3,900	375	450	150	300	125	150	75
Counseling and applied psychology	14,500	300	14,250	300	13,000	350	1,250	225	250	75	200	75	D	D
Educational and school psychology	12,400	325	12,050	325	10,850	325	1,200	200	350	150	250	125	D	D
Industrial and organizational psychology	5,150	150	5,050	150	4,700	175	350	100	100	50	100	50	D	D
Research and experimental psychology	27,200	425	25,850	450	23,050	450	2,800	225	1,350	225	1,000	200	350	125
Psychology, general	7,750	300	7,650	300	6,650	300	1,000	225	100	75	100	75	D	D
Psychology, other	4,600	175	4,450	175	3,900	175	550	125	150	50	100	50	50	50
Social sciences	104,100	875	92,650	900	73,350	875	19,300	625	11,450	500	8,250	500	3,250	300
Economics	27,950	550	22,400	575	15,100	450	7,300	450	5,550	375	3,600	350	1,950	250
Political science and government	21,700	500	19,950	525	16,750	525	3,150	325	1,800	250	1,400	225	350	100
Political science and government	17,100	500	15,650	525	13,350	500	2,300	300	1,450	250	1,150	225	300	100
Public policy analysis	4,650	150	4,250	150	3,450	150	850	125	350	75	300	75	50	25
Sociology, demography, and population studies	15,950	375	14,950	400	12,350	375	2,600	275	1,000	200	750	150	250	125
Other social sciences	38,500	525	35,400	575	29,100	475	6,250	325	3,150	225	2,450	200	650	100

TABLE 9

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and citizenship status: 2023

(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
Anthropology	11,100	325	10,550	350	9,250	325	1,250	175	550	125	500	125	100	50
Area, ethnic, cultural, gender, and group studies	4,450	150	4,200	150	3,650	150	550	100	200	50	150	50	50	50
Geography and cartography	4,850	200	4,250	175	3,350	175	900	125	600	100	450	100	200	50
International relations and national security studies	2,350	150	2,000	150	1,550	125	500	75	300	75	250	75	100	50
Linguistics	5,100	225	4,400	225	3,100	200	1,300	200	700	125	550	100	100	50
Urban studies, affairs	1,350	100	1,250	100	950	100	300	75	100	50	100	50	D	D
Social sciences, other	9,350	250	8,700	250	7,300	225	1,400	150	650	100	500	100	100	50
Engineering	196,750	1,300	148,250	1,325	78,800	1,075	69,450	1,150	48,500	925	34,200	975	14,250	575
Aerospace, aeronautical, and astronautical engineering	8,150	200	6,550	225	3,950	225	2,650	225	1,550	175	1,050	150	500	100
Chemical engineering	23,700	500	18,850	550	10,950	450	7,900	575	4,850	325	3,650	350	1,250	200
Civil engineering	21,500	475	15,800	500	7,950	400	7,850	450	5,700	325	3,950	325	1,750	200
Electrical and computer engineering	54,000	675	38,100	800	15,950	550	22,200	750	15,900	550	11,600	500	4,250	275
Computer engineering	8,150	200	5,150	225	1,950	175	3,200	225	3,000	225	2,250	200	700	100
Electrical, electronics, and communications engineering	45,850	650	32,950	750	14,000	525	18,950	675	12,900	500	9,350	475	3,550	275
Mechanical engineering	28,800	625	21,450	600	11,300	475	10,100	550	7,350	525	4,650	450	2,700	275
Metallurgical and materials engineering	18,300	450	14,450	450	8,750	400	5,700	375	3,850	300	2,700	300	1,200	175
Other engineering	42,300	550	33,050	600	20,000	525	13,050	450	9,250	375	6,650	375	2,550	225
Agricultural engineering	1,650	100	1,350	100	600	50	750	100	300	50	250	50	50	25
Bioengineering and biomedical engineering	16,350	325	13,050	350	9,400	375	3,650	325	3,300	275	2,350	225	950	150
Engineering mechanics, physics, and science	4,300	200	3,500	200	1,550	150	1,900	200	800	100	600	100	250	75
Industrial and manufacturing engineering	9,150	300	6,500	275	3,300	225	3,200	250	2,600	200	1,950	200	700	100
Nuclear engineering	3,400	150	2,950	150	2,000	125	950	125	450	75	350	75	100	50
Engineering, other	7,500	225	5,750	250	3,150	225	2,600	200	1,750	150	1,250	125	500	100
Health	44,000	600	39,800	625	30,500	550	9,300	500	4,250	300	3,000	250	1,200	150
Communication disorders sciences and services	2,950	150	2,600	125	2,200	125	400	100	350	75	300	75	S	S
Hospital and medical administration services	1,300	75	1,200	75	850	75	350	75	100	50	100	50	*	*
Pharmacy, pharmaceutical sciences, and administration	8,550	250	7,200	275	3,600	250	3,600	300	1,350	150	900	150	450	100
Public health	10,400	250	9,350	250	7,650	225	1,700	200	1,050	125	800	125	250	75
Registered nursing, nursing administration, nursing research	9,100	325	8,950	325	7,750	350	1,150	200	200	75	100	50	S	S
Health sciences, other	11,650	325	10,500	325	8,400	275	2,100	250	1,150	200	850	175	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.

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 10

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and age: 2023

(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	908,700	2,300	101,900	1,100	139,700	1,525	135,200	1,425	119,100	1,425	112,200	1,400	100,500	1,625	87,550	1,500	112,550	1,375
Science	667,950	2,050	69,000	900	99,400	1,200	98,850	1,300	88,400	1,300	85,750	1,175	74,100	1,275	64,300	1,225	88,150	1,275
Biological, agricultural, and environmental life sciences	235,050	1,175	25,400	500	38,000	700	36,600	875	33,150	900	29,650	775	24,500	775	21,150	650	26,600	750
Agricultural and food sciences	17,050	400	1,750	150	1,900	150	1,950	200	1,700	150	1,850	175	2,300	250	2,200	175	3,350	275
Agricultural sciences	900	75	50	25	100	25	100	25	100	25	100	25	100	25	100	50	200	50
Animal sciences	4,650	200	600	100	500	75	450	75	500	100	500	100	450	100	750	100	900	150
Food sciences and technology	3,600	200	400	50	400	75	350	75	300	75	400	100	650	175	500	100	600	150
Plant sciences	5,850	250	600	125	700	100	850	175	500	100	600	125	900	175	600	100	1,100	175
Soil sciences	2,050	100	150	25	200	50	200	50	300	50	250	50	200	50	250	50	550	125
Biochemistry and biophysics	29,700	475	2,750	200	4,600	275	4,100	300	4,050	325	4,000	375	3,700	350	3,050	300	3,500	250
Biochemistry	24,150	475	2,150	200	3,500	250	3,200	275	3,400	300	3,250	325	2,850	325	2,800	275	2,950	250
Biophysics	5,600	175	600	75	1,100	125	900	125	650	100	750	150	850	150	250	75	550	100
Cell, cellular biology, and molecular biology	32,400	525	2,650	200	4,500	325	5,650	325	4,750	375	5,050	400	3,900	375	2,950	350	2,950	275
Microbiological sciences and immunology	25,400	425	3,100	200	4,350	225	4,350	275	4,200	325	3,050	325	2,100	275	2,000	175	2,250	225
Immunology	9,800	225	1,200	150	1,700	150	1,950	175	1,850	225	1,050	175	650	150	550	100	850	150
Microbiological sciences	15,600	350	1,950	150	2,650	175	2,350	200	2,350	250	2,000	275	1,450	250	1,500	175	1,400	200
Natural resources and conservation	9,150	275	550	75	1,400	125	1,400	125	1,450	125	1,200	125	1,100	125	850	100	1,200	125
Fish, fisheries, wildlife, and wildlands science and management	1,950	100	50	25	250	50	250	50	300	50	250	50	350	75	250	50	300	75
Forestry	2,600	150	100	50	300	50	350	75	400	50	300	50	350	75	300	50	450	100
Natural resource conservation, research, management, and policy	4,600	200	400	75	850	100	800	100	750	100	650	100	450	75	300	75	450	100
Zoology	6,400	225	400	75	550	100	600	100	750	125	1,050	150	700	125	750	125	1,550	175
Other biological sciences	114,900	750	14,150	375	20,700	550	18,550	650	16,200	575	13,450	525	10,750	575	9,350	425	11,750	575
Biomathematics, bioinformatics, and computational biology	7,150	150	1,650	125	1,700	150	1,450	150	750	100	500	75	450	100	250	50	400	100
Botany and plant biology	6,300	225	500	100	650	75	700	150	800	125	750	125	750	175	1,050	150	1,050	125
Epidemiology, ecology, and population biology	18,600	325	1,900	150	3,100	225	3,650	200	2,900	250	2,400	200	1,700	250	1,500	200	1,400	175
Genetics	9,550	225	1,050	100	1,650	125	1,750	175	1,650	175	1,300	150	800	125	600	100	750	150
Neurobiology and neuroscience	20,300	350	3,450	175	4,700	275	3,800	300	2,900	250	2,650	275	1,350	200	800	150	650	125
Nutrition sciences	4,200	150	350	50	650	100	500	100	650	100	550	100	350	75	500	100	600	100
Pharmacology and toxicology	13,350	250	1,000	125	1,700	175	1,400	175	1,950	225	1,600	225	1,950	300	1,550	225	2,250	250
Physiology, pathology, and related sciences	15,600	325	1,450	150	2,900	200	2,650	225	1,900	250	1,350	225	1,600	225	1,250	175	2,550	250
Biological and biomedical sciences, general	14,950	325	2,200	175	3,150	275	2,350	225	2,150	225	1,450	175	1,100	175	1,400	200	1,150	200
Biological and biomedical sciences, other	4,900	200	550	100	500	75	350	75	550	100	900	125	700	125	400	100	900	150
Computer and information sciences	36,350	550	4,200	250	7,400	375	6,550	400	5,350	375	4,550	350	3,100	275	2,750	275	2,450	225
Computer science	31,050	525	3,600	225	6,350	350	5,700	375	4,700	350	3,850	325	2,650	275	2,250	250	1,900	225
Information science, studies	2,750	125	150	50	400	50	400	75	350	75	400	100	300	50	400	75	450	75

TABLE 10

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and age: 2023

(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	2,550	75	450	50	650	50	450	50	350	75	300	50	150	25	150	50	100	25
Mathematics and statistics	38,500	600	5,250	250	6,800	325	5,600	350	5,000	350	4,300	325	3,800	250	3,950	275	3,800	300
Applied mathematics	9,150	225	1,350	150	1,750	150	1,600	200	1,050	150	950	150	700	125	800	150	900	125
Mathematics	17,100	450	2,400	200	2,950	250	2,650	225	2,050	200	1,900	225	1,750	175	1,850	200	1,600	175
Statistics	8,100	275	1,100	100	1,400	175	800	200	1,400	225	950	175	800	150	800	175	850	175
Mathematics and statistics, other	4,150	150	450	75	650	100	500	100	500	75	500	100	500	75	550	100	450	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	19,650	525	20,500	600	19,550	650	17,400	575	16,950	625	16,750	675	14,500	600	16,450	575
Astronomy and astrophysics	6,450	175	1,150	100	1,100	125	1,000	125	900	125	650	100	600	100	400	75	700	100
Chemistry, except biochemistry	69,150	850	10,550	425	9,200	400	9,250	475	8,900	450	8,750	500	8,050	425	6,850	425	7,600	450
Inorganic chemistry	8,800	250	1,250	125	1,300	125	1,150	125	800	125	1,200	150	1,150	125	1,000	125	900	125
Organic chemistry	17,950	425	2,150	175	1,950	200	2,450	250	3,000	300	2,450	325	1,900	225	2,150	275	2,000	250
Chemistry, other, except biochemistry	42,350	625	7,100	350	5,900	350	5,650	375	5,050	325	5,150	350	5,050	375	3,750	350	4,700	350
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	2,600	150	3,450	175	3,200	175	3,100	225	2,450	175	2,150	175	3,050	200	3,200	200
Atmospheric sciences and meteorology	4,450	100	650	75	700	75	850	75	550	75	500	75	400	75	400	50	400	50
Geological and earth sciences, geosciences	13,900	300	1,450	125	2,000	150	1,700	150	1,950	200	1,400	150	1,200	125	2,050	200	2,150	175
Ocean sciences and marine sciences	2,550	75	300	50	450	50	450	75	350	50	250	50	250	50	300	50	250	50
Oceanography, chemical and physical	2,250	100	200	50	300	50	200	50	300	50	300	75	250	75	300	75	450	75
Physics	43,050	775	5,450	325	6,800	425	6,100	475	4,500	300	5,150	400	5,950	475	4,200	350	4,900	450
Psychology	112,100	900	7,750	375	13,650	450	14,450	500	13,700	500	15,350	625	13,550	600	11,100	500	22,600	700
Clinical psychology	40,450	575	2,400	250	5,450	275	4,350	300	4,750	350	5,400	425	5,000	400	5,100	400	8,050	475
Counseling and applied psychology	14,500	300	1,050	125	1,350	150	1,700	175	1,750	225	2,050	225	1,850	250	1,250	175	3,400	325
Educational and school psychology	12,400	325	800	125	1,350	175	1,550	175	1,550	200	1,700	225	1,500	200	750	125	3,200	275
Industrial and organizational psychology	5,150	150	400	75	600	100	700	100	600	100	850	125	750	125	500	100	850	125
Research and experimental psychology	27,200	425	2,050	175	3,550	225	4,550	300	3,600	200	3,900	300	3,000	225	2,300	200	4,250	275
Psychology, general	7,750	300	600	100	850	125	950	200	900	175	850	175	950	175	800	150	1,950	250
Psychology, other	4,600	175	450	75	500	100	600	100	600	100	650	100	500	125	450	100	900	150
Social sciences	104,100	875	6,700	275	13,050	475	16,150	525	13,750	500	14,950	625	12,400	550	10,850	425	16,250	575
Economics	27,950	550	2,700	200	3,900	300	4,150	300	3,700	300	3,100	275	3,000	275	2,600	275	4,850	375
Political science and government	21,700	500	1,450	150	2,550	225	3,450	275	2,350	225	3,850	375	2,900	300	2,450	250	2,750	275
Political science and government	17,100	500	1,150	125	1,950	200	2,700	275	1,700	200	3,150	350	2,450	300	1,950	250	2,000	275
Public policy analysis	4,650	150	300	75	600	75	750	100	650	125	700	100	500	100	500	75	700	100
Sociology, demography, and population studies	15,950	375	700	100	2,000	175	2,400	225	2,400	225	2,350	225	1,850	225	1,700	200	2,600	225
Other social sciences	38,500	525	1,850	150	4,600	250	6,150	300	5,350	300	5,700	325	4,650	275	4,100	275	6,100	300
Anthropology	11,100	325	400	100	1,100	125	1,700	175	1,700	175	1,700	175	1,450	175	1,050	150	2,050	200
Area, ethnic, cultural, gender, and group studies	4,450	150	250	75	650	100	950	125	650	100	600	100	450	75	400	75	550	100

TABLE 10

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and age: 2023

(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	4,850	200	250	50	800	125	700	75	650	100	700	100	650	125	650	125	450	75
International relations and national security studies	2,350	150	100	25	250	50	350	75	300	75	350	75	300	75	300	75	400	100
Linguistics	5,100	225	400	75	650	100	850	125	600	150	850	150	650	125	450	75	600	100
Urban studies, affairs	1,350	100	*	*	50	25	100	25	100	25	250	50	200	50	150	50	450	75
Social sciences, other	9,350	250	450	75	1,100	100	1,500	150	1,300	125	1,350	125	950	125	1,150	150	1,550	175
Engineering	196,750	1,300	29,100	550	34,350	775	29,950	750	24,750	800	21,200	750	21,450	850	18,600	750	17,350	675
Aerospace, aeronautical, and astronautical engineering	8,150	200	1,250	100	1,550	150	1,250	150	700	125	850	125	900	125	950	150	650	125
Chemical engineering	23,700	500	4,450	300	3,750	275	3,600	325	2,550	325	2,950	350	2,400	350	2,100	300	1,850	300
Civil engineering	21,500	475	2,750	225	3,800	300	2,850	275	2,800	300	2,050	225	2,300	275	2,500	325	2,450	275
Electrical and computer engineering	54,000	675	6,450	325	8,800	425	8,500	425	7,550	450	6,100	350	6,900	425	4,600	350	5,050	375
Computer engineering	8,150	200	950	100	1,450	125	1,750	175	1,250	175	700	100	1,000	150	550	100	450	100
Electrical, electronics, and communications engineering	45,850	650	5,500	300	7,400	375	6,750	400	6,300	400	5,400	350	5,900	400	4,050	325	4,600	350
Mechanical engineering	28,800	625	4,500	250	5,450	350	4,400	375	3,650	375	3,150	400	2,650	375	2,900	325	2,050	275
Metallurgical and materials engineering	18,300	450	3,100	200	3,650	275	2,400	250	2,250	225	2,050	275	1,750	225	1,850	250	1,250	175
Other engineering	42,300	550	6,600	250	7,400	325	6,950	375	5,200	325	4,000	300	4,500	350	3,650	275	4,050	225
Agricultural engineering	1,650	100	100	25	200	50	150	50	200	50	200	50	250	50	250	50	300	50
Bioengineering and biomedical engineering	16,350	325	3,600	150	3,650	250	3,600	325	2,100	200	1,050	175	1,150	200	700	150	550	125
Engineering mechanics, physics, and science	4,300	200	300	50	700	100	500	125	500	100	600	100	500	125	500	100	650	100
Industrial and manufacturing engineering	9,150	300	1,050	125	1,200	150	1,300	200	1,400	175	950	150	1,200	225	1,000	175	1,000	150
Nuclear engineering	3,400	150	450	50	450	75	450	75	200	50	350	75	500	75	400	100	550	75
Engineering, other	7,500	225	1,000	125	1,200	125	950	150	800	125	900	150	900	125	800	150	900	150
Health	44,000	600	3,800	225	5,950	300	6,400	350	5,950	350	5,250	350	4,950	325	4,650	350	7,050	375
Communication disorders sciences and services	2,950	150	200	50	250	75	450	75	400	75	300	75	400	100	250	75	750	100
Hospital and medical administration services	1,300	75	50	25	100	25	150	25	150	50	200	50	200	50	150	50	300	50
Pharmacy, pharmaceutical sciences, and administration	8,550	250	1,200	125	1,100	150	1,350	175	1,200	200	1,100	200	1,000	175	900	175	750	150
Public health	10,400	250	1,050	125	2,000	175	1,650	150	1,600	200	1,300	175	950	150	700	125	1,150	125
Registered nursing, nursing administration, nursing research	9,100	325	250	75	600	125	850	150	900	175	1,000	175	1,100	150	1,650	175	2,750	275
Health sciences, other	11,650	325	1,100	150	1,900	175	1,950	175	1,650	200	1,400	200	1,300	150	1,000	200	1,400	175

* = suppressed when population estimate < 25.

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 11-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and years since doctorate: 2023

(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	908,700	2,300	143,600	575	169,900	925	146,200	925	117,750	800	105,200	1,000	226,050	1,575
Science	667,950	2,050	99,000	625	120,550	1,000	107,600	925	87,850	875	79,000	900	173,950	1,300
Biological, agricultural, and environmental life sciences	235,050	1,175	35,450	450	43,050	575	40,800	700	31,200	625	28,100	600	56,450	825
Agricultural and food sciences	17,050	400	2,250	125	2,550	150	2,150	175	2,200	175	2,150	200	5,750	275
Agricultural sciences	900	75	150	25	200	25	100	25	100	25	150	50	250	50
Animal sciences	4,650	200	650	100	600	75	500	100	600	100	500	75	1,800	175
Food sciences and technology	3,600	200	450	50	500	75	350	75	600	100	550	125	1,100	150
Plant sciences	5,850	250	700	100	1,050	100	950	125	650	125	750	150	1,750	175
Soil sciences	2,050	100	250	50	200	25	300	50	250	50	200	50	800	100
Biochemistry and biophysics	29,700	475	3,600	200	4,700	275	4,950	325	3,700	300	3,650	300	9,100	425
Biochemistry	24,150	475	2,900	175	3,550	250	3,950	300	3,100	250	2,850	250	7,800	425
Biophysics	5,600	175	700	75	1,150	100	1,050	125	600	100	800	125	1,300	150
Cell, cellular biology, and molecular biology	32,400	525	3,400	200	4,850	250	6,050	325	4,800	325	5,100	350	8,150	400
Microbiological sciences and immunology	25,400	425	3,700	175	4,800	200	4,850	275	3,850	300	2,750	250	5,400	300
Immunology	9,800	225	1,400	100	2,000	125	2,050	200	1,500	150	1,100	150	1,750	175
Microbiological sciences	15,600	350	2,300	125	2,800	150	2,800	175	2,400	250	1,650	200	3,650	250
Natural resources and conservation	9,150	275	1,500	100	2,050	150	1,700	100	1,250	125	1,050	125	1,600	125
Fish, fisheries, wildlife, and wildlands science and management	1,950	100	200	25	350	50	350	50	350	50	250	50	500	75
Forestry	2,600	150	250	25	550	75	400	50	350	50	350	50	700	100
Natural resource conservation, research, management, and policy	4,600	200	1,000	100	1,150	125	950	100	600	75	450	100	400	100
Zoology	6,400	225	700	75	750	75	800	100	850	100	1,000	125	2,300	175
Other biological sciences	114,900	750	20,300	350	23,300	425	20,350	475	14,500	475	12,400	475	24,100	625
Biomathematics, bioinformatics, and computational biology	7,150	150	2,200	125	2,250	125	1,400	100	450	75	250	50	650	100
Botany and plant biology	6,300	225	900	100	650	100	900	125	700	100	850	150	2,300	175
Epidemiology, ecology, and population biology	18,600	325	3,700	150	4,250	225	3,850	225	2,500	200	1,750	175	2,500	250
Genetics	9,550	225	1,450	100	1,750	125	1,850	150	1,450	175	1,200	125	1,800	150
Neurobiology and neuroscience	20,300	350	4,350	175	4,700	225	4,150	250	2,750	225	2,050	175	2,300	225
Nutrition sciences	4,200	150	650	75	750	75	750	75	650	100	400	75	1,050	125
Pharmacology and toxicology	13,350	250	1,200	100	1,800	150	2,050	200	2,000	200	1,700	225	4,650	275
Physiology, pathology, and related sciences	15,600	325	2,000	150	3,250	200	2,800	225	1,500	175	1,700	200	4,400	300
Biological and biomedical sciences, general	14,950	325	3,200	200	3,300	225	2,300	175	1,800	175	1,550	175	2,800	225
Biological and biomedical sciences, other	4,900	200	700	75	550	100	350	75	700	100	900	125	1,650	175
Computer and information sciences	36,350	550	7,350	275	8,600	375	7,150	400	4,450	275	3,250	275	5,600	325
Computer science	31,050	525	5,900	275	7,150	350	6,100	400	3,800	275	2,900	250	5,200	325
Information science, studies	2,750	125	450	50	650	75	650	75	400	75	250	50	350	75

TABLE 11-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and years since doctorate: 2023

(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
Computer and information sciences, other	2,550	75	950	75	800	75	400	50	300	50	50	25	D	D
Mathematics and statistics	38,500	600	6,450	225	7,150	350	5,850	325	5,150	300	4,050	300	9,800	375
Applied mathematics	9,150	225	1,850	125	1,750	150	1,400	150	1,350	150	1,000	150	1,800	175
Mathematics	17,100	450	2,650	175	3,250	225	2,550	175	2,050	175	1,650	175	4,950	275
Statistics	8,100	275	1,350	125	1,400	175	1,250	200	1,300	175	800	150	1,950	225
Mathematics and statistics, other	4,150	150	600	75	750	75	650	75	450	75	600	75	1,100	125
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	21,200	450	24,150	475	21,050	625	16,950	575	16,300	500	42,150	800
Astronomy and astrophysics	6,450	175	1,200	75	1,300	125	900	100	750	100	700	100	1,600	125
Chemistry, except biochemistry	69,150	850	9,700	350	11,500	350	9,550	425	8,850	400	8,500	400	21,050	600
Inorganic chemistry	8,800	250	1,300	100	1,500	125	1,100	125	900	125	1,250	125	2,800	175
Organic chemistry	17,950	425	2,050	125	2,400	175	2,750	225	2,450	250	2,550	250	5,800	300
Chemistry, other, except biochemistry	42,350	625	6,350	300	7,650	350	5,650	350	5,550	300	4,700	300	12,450	500
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	3,800	150	4,350	175	3,550	175	2,600	150	2,400	150	6,450	275
Atmospheric sciences and meteorology	4,450	100	700	75	950	75	850	75	600	75	500	50	850	75
Geological and earth sciences, geosciences	13,900	300	2,350	125	2,450	125	2,000	150	1,450	125	1,400	100	4,250	225
Ocean sciences and marine sciences	2,550	75	500	50	700	50	400	50	300	25	200	50	500	50
Oceanography, chemical and physical	2,250	100	250	50	250	50	300	50	250	50	350	50	800	75
Physics	43,050	775	6,550	300	6,950	375	7,050	500	4,700	375	4,700	300	13,100	525
Psychology	112,100	900	13,700	375	17,350	450	16,450	450	15,750	525	14,800	450	34,050	725
Clinical psychology	40,450	575	4,700	200	5,550	250	5,200	300	5,350	350	5,450	325	14,200	475
Counseling and applied psychology	14,500	300	1,950	150	2,400	150	1,900	175	2,150	250	2,000	200	4,100	350
Educational and school psychology	12,400	325	1,700	125	2,000	175	2,100	225	1,950	175	1,600	175	3,050	225
Industrial and organizational psychology	5,150	150	600	75	800	75	1,050	125	650	75	650	75	1,400	125
Research and experimental psychology	27,200	425	2,900	175	4,650	225	4,600	225	4,150	225	3,650	200	7,300	350
Psychology, general	7,750	300	1,000	125	1,100	150	1,050	200	1,000	200	800	175	2,850	250
Psychology, other	4,600	175	850	75	850	75	600	100	550	75	650	100	1,150	175
Social sciences	104,100	875	14,900	325	20,250	425	16,250	500	14,350	500	12,450	450	25,900	550
Economics	27,950	550	3,700	225	4,950	275	3,950	300	3,450	275	3,100	225	8,750	400
Political science and government	21,700	500	3,150	175	4,300	225	3,500	250	3,200	275	2,550	250	5,050	350
Political science and government	17,100	500	2,150	150	3,050	225	2,500	225	2,750	250	2,150	225	4,500	350
Public policy analysis	4,650	150	1,000	75	1,250	100	1,000	100	400	75	400	75	550	75
Sociology, demography, and population studies	15,950	375	2,100	150	2,900	175	2,500	175	2,300	225	2,300	200	3,800	250
Other social sciences	38,500	525	5,950	200	8,100	250	6,250	275	5,400	225	4,500	275	8,350	375
Anthropology	11,100	325	1,300	100	1,900	150	2,050	175	1,750	150	1,650	175	2,400	225
Area, ethnic, cultural, gender, and group studies	4,450	150	850	100	1,250	100	800	100	400	75	400	75	750	100

TABLE 11-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and years since doctorate: 2023

(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
Geography and cartography	4,850	200	950	75	1,200	100	800	100	600	100	450	100	900	125
International relations and national security studies	2,350	150	400	50	400	75	350	75	300	75	250	50	600	100
Linguistics	5,100	225	850	75	1,200	125	600	100	850	125	650	125	950	125
Urban studies, affairs	1,350	100	100	25	100	25	100	50	200	50	200	50	550	75
Social sciences, other	9,350	250	1,500	100	1,950	125	1,550	125	1,300	125	900	75	2,150	200
Engineering	196,750	1,300	35,100	500	39,300	675	31,550	675	23,950	675	21,650	675	45,200	900
Aerospace, aeronautical, and astronautical engineering	8,150	200	1,400	100	1,850	125	950	125	800	125	950	125	2,200	175
Chemical engineering	23,700	500	4,150	225	4,300	250	3,400	300	2,900	275	3,150	300	5,850	400
Civil engineering	21,500	475	4,100	250	4,600	275	3,350	275	2,400	250	2,000	225	5,000	350
Electrical and Computer engineering	54,000	675	8,750	275	10,100	375	8,850	400	7,100	350	5,850	325	13,350	550
Computer engineering	8,150	200	1,650	100	1,650	150	1,650	175	950	125	800	125	1,400	150
Electrical, electronics, and communications engineering	45,850	650	7,100	250	8,450	325	7,150	375	6,150	325	5,100	300	11,900	525
Mechanical engineering	28,800	625	5,700	275	5,750	300	4,750	375	3,450	350	3,550	325	5,600	425
Metallurgical and materials engineering	18,300	450	3,150	200	3,800	225	2,950	250	2,150	225	2,100	275	4,200	300
Other engineering	42,300	550	7,800	250	8,950	275	7,300	300	5,150	300	4,100	275	9,000	375
Agricultural engineering	1,650	100	150	25	300	50	200	50	200	50	250	50	600	75
Bioengineering and biomedical engineering	16,350	325	3,650	175	4,400	225	3,600	250	1,700	175	1,250	175	1,750	175
Engineering mechanics, physics, and science	4,300	200	450	75	650	75	600	125	700	100	450	75	1,450	150
Industrial and manufacturing engineering	9,150	300	1,650	150	1,800	175	1,350	150	1,350	175	900	175	2,100	200
Nuclear engineering	3,400	150	500	50	500	50	550	75	250	50	350	50	1,200	125
Engineering, other	7,500	225	1,400	125	1,350	125	1,050	125	950	150	900	125	1,900	175
Health	44,000	600	9,500	300	10,050	350	7,100	350	5,950	350	4,550	350	6,850	350
Communication disorders sciences and services	2,950	150	400	50	400	75	500	75	500	75	400	75	800	100
Hospital and medical administration services	1,300	75	100	25	250	50	300	50	250	50	100	25	300	50
Pharmacy, pharmaceutical sciences, and administration	8,550	250	1,450	125	1,400	175	1,200	175	1,250	175	1,050	175	2,250	225
Public health	10,400	250	2,900	150	3,200	175	1,500	125	1,150	150	850	125	850	125
Registered nursing, nursing administration, nursing research	9,100	325	1,950	150	2,300	200	1,750	175	1,200	150	900	150	1,050	150
Health sciences, other	11,650	325	2,700	150	2,500	150	1,900	150	1,650	200	1,250	200	1,600	200

D = suppressed to avoid disclosure of confidential information.

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 11-2

Non-U.S. residing employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 2023

(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	146,300	1,825	19,050	450	25,450	875	24,950	800	21,600	700	16,400	750	38,850	1,100
Science	102,600	1,650	13,200	425	17,350	775	18,000	650	15,700	600	11,750	675	26,600	900
Biological, agricultural, and environmental life sciences	29,550	875	3,000	225	5,100	400	5,000	375	4,750	400	3,850	350	7,850	525
Agricultural and food sciences	5,150	300	550	100	700	125	700	125	700	100	900	175	1,600	200
Biochemistry and biophysics	3,000	400	100	75	550	175	600	200	450	175	250	125	1,100	250
Cell, cellular biology, and molecular biology	2,600	350	200	75	400	150	350	150	350	100	350	150	950	225
Microbiological sciences and immunology	2,350	275	250	75	450	125	400	125	300	100	250	125	650	175
Natural resources and conservation	2,450	225	150	50	600	125	500	125	400	75	250	50	550	125
Zoology	1,000	150	100	50	S	S	150	50	200	75	200	75	300	100
Other biological sciences	13,050	625	1,700	175	2,400	250	2,250	250	2,400	300	1,650	275	2,700	275
Computer and information sciences	5,750	425	1,250	150	900	175	1,150	225	1,000	225	400	150	1,000	200
Mathematics and statistics	8,800	475	1,400	175	1,700	250	1,700	250	1,050	175	950	175	2,000	225
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	22,250	925	2,450	250	3,850	425	4,100	450	3,200	350	2,400	350	6,200	475
Astronomy and astrophysics	1,200	175	250	75	250	75	150	75	D	D	250	125	250	100
Chemistry, except biochemistry	7,500	650	650	150	1,150	250	1,400	300	1,350	225	1,000	275	1,900	275
Geosciences, atmospheric sciences, and ocean sciences	4,550	275	750	125	800	125	750	100	550	75	450	100	1,250	200
Physics	9,000	625	800	150	1,600	300	1,800	325	1,250	250	750	175	2,800	300
Psychology	6,500	450	900	175	1,100	200	1,100	150	800	175	850	200	1,750	300
Social sciences	29,750	925	4,150	275	4,650	400	4,900	400	4,900	400	3,350	350	7,800	525
Economics	12,850	525	1,500	175	1,900	275	1,950	225	2,350	275	1,450	225	3,650	375
Political science and government	4,250	400	600	125	850	200	800	200	600	150	650	200	700	200
Sociology, demography, and population studies	2,700	325	400	125	300	100	400	125	500	150	250	100	800	200
Other social sciences	9,950	450	1,600	175	1,550	150	1,750	200	1,450	200	950	150	2,700	275
Engineering	38,100	1,125	4,850	350	7,000	500	6,050	525	5,050	400	3,750	375	11,400	675
Aerospace, aeronautical, and astronautical engineering	1,100	175	200	75	250	100	50	50	150	50	S	S	400	150
Chemical engineering	3,600	400	350	125	500	175	500	175	500	150	300	100	1,450	275
Civil engineering	6,300	450	750	150	900	175	1,300	225	1,050	200	850	225	1,550	300
Electrical and computer engineering	9,100	600	1,150	200	1,350	250	1,600	250	1,600	250	950	175	2,450	350
Mechanical engineering	5,400	475	600	150	1,350	275	1,050	250	450	150	250	100	1,700	275
Metallurgical and materials engineering	3,650	400	350	125	650	200	550	150	250	100	550	175	1,350	225
Other engineering	8,950	475	1,450	200	2,050	275	1,000	175	1,100	200	800	150	2,500	325
Health	5,600	425	1,050	175	1,150	200	900	200	850	175	850	175	850	200

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 12-1

U.S. residing employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2023

(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	908,700	2,300	341,350	2,475	26,750	875	354,100	2,775	64,300	1,175	58,600	1,250	18,700	725	42,350	1,150	2,450	275
Science	667,950	2,050	272,100	2,250	24,200	800	222,800	2,250	51,550	1,025	45,050	1,150	14,400	600	35,800	1,050	2,100	250
Biological, agricultural, and environmental life sciences	235,050	1,175	94,000	1,250	6,650	425	80,500	1,300	20,900	800	18,800	600	5,450	325	8,300	475	450	100
Agricultural and food sciences	17,050	400	7,200	325	350	75	6,550	350	550	100	1,150	125	400	75	850	150	*	*
Biochemistry and biophysics	29,700	475	10,550	550	1,300	250	12,650	575	2,250	250	1,650	225	350	100	900	200	D	D
Cell, cellular biology, and molecular biology	32,400	525	12,200	575	900	175	12,400	575	3,400	375	2,200	300	350	150	950	200	D	D
Microbiological sciences and immunology	25,400	425	8,900	450	700	150	9,750	475	2,500	275	2,150	225	500	150	850	150	D	D
Natural resources and conservation	9,150	275	3,350	175	300	75	1,800	175	700	100	1,400	125	1,000	125	400	100	100	50
Zoology	6,400	225	3,150	225	350	100	1,000	150	400	75	850	150	300	75	350	75	D	D
Other biological sciences	114,900	750	48,650	850	2,800	225	36,300	750	11,050	575	9,300	525	2,600	250	4,000	350	200	75
Computer and information sciences	36,350	550	12,400	550	250	75	20,800	675	1,250	200	750	150	150	50	750	175	D	D
Mathematics and statistics	38,500	600	19,900	725	1,450	200	13,050	550	1,750	200	1,200	175	250	100	850	175	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	46,050	950	4,850	350	64,600	1,125	8,550	475	11,050	525	2,700	275	3,800	350	150	75
Astronomy and astrophysics	6,450	175	2,900	200	200	75	1,750	150	800	125	600	125	100	50	100	50	D	D
Chemistry, except biochemistry	69,150	850	19,800	725	2,700	275	37,000	875	2,950	300	3,900	350	900	150	1,900	225	D	D
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	10,100	275	700	75	5,700	300	1,750	150	3,250	200	950	100	700	100	D	D
Physics	43,050	775	13,250	625	1,250	200	20,150	750	3,100	350	3,300	325	800	175	1,150	225	D	D
Psychology	112,100	900	38,600	850	6,200	400	27,500	875	11,400	550	6,900	475	3,150	350	18,150	725	150	75
Social sciences	104,100	875	61,150	1,025	4,800	400	16,300	675	7,650	375	6,350	400	2,650	250	3,900	325	1,300	200
Economics	27,950	550	13,950	600	450	125	6,700	450	1,900	225	2,400	250	600	125	1,000	200	950	175
Political science and government	21,700	500	13,200	525	1,100	200	3,100	350	1,600	200	1,200	150	700	150	650	125	150	75
Sociology, demography, and population studies	15,950	375	10,600	400	1,050	175	1,650	200	1,150	150	600	125	300	75	450	125	100	50
Other social sciences	38,500	525	23,400	550	2,150	225	4,850	250	3,000	225	2,150	225	1,100	125	1,750	200	150	50
Engineering	196,750	1,300	47,200	1,100	1,700	275	119,950	1,425	8,200	475	11,250	575	3,200	325	4,950	400	250	100
Aerospace, aeronautical, and astronautical engineering	8,150	200	2,350	225	D	D	4,100	250	450	100	1,050	125	*	*	150	50	D	D
Chemical engineering	23,700	500	3,400	300	200	75	17,100	575	750	200	1,200	200	350	150	700	175	D	D
Civil engineering	21,500	475	6,900	425	200	75	9,850	425	950	200	1,400	250	1,750	250	450	175	50	50
Electrical and computer engineering	54,000	675	10,750	575	300	125	37,300	750	1,800	250	1,950	300	500	150	1,250	200	D	D
Mechanical engineering	28,800	625	7,900	550	350	125	16,500	650	1,000	225	2,000	275	200	100	850	200	D	D
Metallurgical and materials engineering	18,300	450	2,800	300	S	S	12,700	500	750	200	1,200	175	50	50	600	175	D	D
Other engineering	42,300	550	13,100	550	400	125	22,450	550	2,500	250	2,500	250	350	75	950	125	S	S
Health	44,000	600	22,100	575	900	150	11,350	450	4,550	325	2,350	225	1,100	150	1,600	225	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 Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^c Private, for profit includes those self-employed in an incorporated business.

^d Self-employed or business owner in a nonincorporated business.

^e Other sector 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 12-2

Non-U.S. residing employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2023

(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	146,300	1,825	91,500	1,500	38,100	1,275	16,750	875
Science	102,600	1,650	64,950	1,375	24,950	975	12,700	700
Biological, agricultural, and environmental life sciences	29,550	875	16,000	625	9,000	575	4,500	375
Agricultural and food sciences	5,150	300	2,800	225	1,400	175	900	175
Biochemistry and biophysics	3,000	400	1,450	275	1,100	250	450	150
Cell, cellular biology, and molecular biology	2,600	350	1,200	250	1,050	225	350	150
Microbiological sciences and immunology	2,350	275	1,450	250	650	175	250	100
Natural resources and conservation	2,450	225	1,300	150	750	125	400	100
Zoology	1,000	150	600	125	200	75	200	75
Other biological sciences	13,050	625	7,200	475	3,900	350	1,900	275
Computer and information sciences	5,750	425	3,700	375	1,800	275	300	125
Mathematics and statistics	8,800	475	6,600	425	1,750	250	450	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	22,250	925	12,550	750	6,200	450	3,450	400
Astronomy and astrophysics	1,200	175	650	150	300	100	250	125
Chemistry, except biochemistry	7,500	650	4,200	525	2,500	325	800	200
Geosciences, atmospheric sciences, and ocean sciences	4,550	275	2,600	225	1,000	175	900	150
Physics	9,000	625	5,100	475	2,400	325	1,500	300
Psychology	6,500	450	4,400	400	1,500	250	600	175
Social sciences	29,750	925	21,700	850	4,700	325	3,400	375
Economics	12,850	525	8,650	500	2,200	275	2,000	300
Political science and government	4,250	400	2,900	350	700	150	600	175
Sociology, demography, and population studies	2,700	325	2,150	275	450	125	100	50
Other social sciences	9,950	450	8,000	425	1,350	175	650	100
Engineering	38,100	1,125	22,700	925	11,850	725	3,600	425
Aerospace, aeronautical, and astronautical engineering	1,100	175	500	125	400	125	200	100
Chemical engineering	3,600	400	2,000	300	1,400	275	200	100
Civil engineering	6,300	450	3,950	375	1,450	225	900	225
Electrical and computer engineering	9,100	600	5,450	475	2,800	350	850	225
Mechanical engineering	5,400	475	3,300	375	1,800	325	350	150
Metallurgical and materials engineering	3,650	400	2,000	325	1,350	250	300	125
Other engineering	8,950	475	5,500	400	2,700	275	750	150
Health	5,600	425	3,800	375	1,300	225	500	125

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 nonprofit, 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 12-3

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and sector of employment: 2023

(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	908,700	2,300	368,100	2,450	462,250	2,800	78,350	1,450
Science	667,950	2,050	296,250	2,200	311,400	2,375	60,250	1,300
Biological, agricultural, and environmental life sciences	235,050	1,175	100,650	1,225	110,000	1,250	24,400	700
Agricultural and food sciences	17,050	400	7,500	350	7,950	375	1,600	125
Agricultural sciences	900	75	450	50	350	50	100	25
Animal sciences	4,650	200	2,200	200	2,200	150	250	75
Food sciences and technology	3,600	200	1,250	150	2,050	200	300	75
Plant sciences	5,850	250	2,750	225	2,650	225	450	75
Soil sciences	2,050	100	900	100	700	100	500	75
Biochemistry and biophysics	29,700	475	11,850	600	15,850	550	2,050	250
Biochemistry	24,150	475	9,400	525	13,050	500	1,700	225
Biophysics	5,600	175	2,450	200	2,800	175	350	100
Cell, cellular biology, and molecular biology	32,400	525	13,100	575	16,800	600	2,500	350
Microbiological sciences and immunology	25,400	425	9,550	450	13,150	500	2,650	275
Immunology	9,800	225	3,450	250	5,850	250	500	100
Microbiological sciences	15,600	350	6,100	350	7,300	375	2,150	275
Natural resources and conservation	9,150	275	3,700	200	3,000	225	2,450	150
Fish, fisheries, wildlife, and wildlands science and management	1,950	100	600	75	500	75	900	100
Forestry	2,600	150	1,150	100	950	125	500	75
Natural resource conservation, research, management, and policy	4,600	200	1,950	175	1,550	150	1,100	125
Zoology	6,400	225	3,450	225	1,750	175	1,150	150
Other biological sciences	114,900	750	51,450	850	51,450	825	12,000	550
Biomathematics, bioinformatics, and computational biology	7,150	150	2,200	150	4,450	175	500	100
Botany and plant biology	6,300	225	3,050	200	2,550	200	650	125
Epidemiology, ecology, and population biology	18,600	325	10,100	425	4,950	325	3,550	275
Genetics	9,550	225	4,600	275	4,250	300	700	150
Neurobiology and neuroscience	20,300	350	10,050	400	8,750	400	1,500	225
Nutrition sciences	4,200	150	2,050	175	1,900	150	250	75
Pharmacology and toxicology	13,350	250	4,100	300	7,300	350	1,900	275
Physiology, pathology, and related sciences	15,600	325	6,650	350	7,700	375	1,250	200
Biological and biomedical sciences, general	14,950	325	6,100	350	7,600	350	1,300	225
Biological and biomedical sciences, other	4,900	200	2,550	200	1,950	175	400	100
Computer and information sciences	36,350	550	12,650	550	22,850	675	850	150
Computer science	31,050	525	10,050	525	20,350	650	650	150
Information science, studies	2,750	125	1,650	125	1,000	100	150	50

TABLE 12-3

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and sector of employment: 2023

(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
Computer and information sciences, other	2,550	75	950	75	1,450	100	100	25
Mathematics and statistics	38,500	600	21,300	725	15,750	550	1,450	200
Applied mathematics	9,150	225	4,850	275	3,800	250	500	125
Mathematics	17,100	450	10,950	450	5,700	350	450	125
Statistics	8,100	275	2,950	250	4,750	300	350	100
Mathematics and statistics, other	4,150	150	2,550	150	1,450	125	150	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	50,900	975	77,100	1,100	13,800	600
Astronomy and astrophysics	6,450	175	3,100	200	2,650	175	700	150
Chemistry, except biochemistry	69,150	850	22,500	750	41,800	850	4,800	400
Inorganic chemistry	8,800	250	2,950	225	5,300	225	550	125
Organic chemistry	17,950	425	5,750	425	11,350	425	850	175
Chemistry, other, except biochemistry	42,350	625	13,800	550	25,150	650	3,400	325
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	10,800	275	8,150	325	4,200	225
Atmospheric sciences and meteorology	4,450	100	1,900	125	1,500	100	1,000	75
Geological and earth sciences, geosciences	13,900	300	6,750	275	5,150	325	2,000	175
Ocean sciences and marine sciences	2,550	75	1,150	75	750	75	650	75
Oceanography, chemical and physical	2,250	100	1,050	100	750	75	500	75
Physics	43,050	775	14,500	675	24,450	775	4,100	350
Psychology	112,100	900	44,800	900	57,200	1,125	10,100	600
Clinical psychology	40,450	575	9,950	525	25,350	750	5,150	400
Counseling and applied psychology	14,500	300	4,850	350	8,200	400	1,450	225
Educational and school psychology	12,400	325	7,350	325	4,600	300	450	125
Industrial and organizational psychology	5,150	150	1,700	150	3,200	175	250	75
Research and experimental psychology	27,200	425	15,750	475	9,950	500	1,500	200
Psychology, general	7,750	300	3,150	275	3,700	300	900	225
Psychology, other	4,600	175	2,050	175	2,250	200	300	75
Social sciences	104,100	875	65,950	1,025	28,550	750	9,650	475
Economics	27,950	550	14,400	575	10,050	475	3,500	300
Political science and government	21,700	500	14,300	550	5,500	400	1,900	225
Political science and government	17,100	500	12,150	525	3,750	350	1,150	200
Public policy analysis	4,650	150	2,200	150	1,700	175	750	100
Sociology, demography, and population studies	15,950	375	11,650	400	3,300	250	950	150
Other social sciences	38,500	525	25,550	550	9,700	375	3,300	275
Anthropology	11,100	325	7,800	350	2,450	200	850	175
Area, ethnic, cultural, gender, and group studies	4,450	150	3,200	150	1,100	100	150	50

TABLE 12-3

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and sector of employment: 2023

(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
Geography and cartography	4,850	200	3,100	200	1,150	125	600	100
International relations and national security studies	2,350	150	1,450	125	650	100	250	50
Linguistics	5,100	225	3,600	225	1,250	175	250	100
Urban studies, affairs	1,350	100	700	75	450	75	200	50
Social sciences, other	9,350	250	5,700	225	2,650	200	1,000	100
Engineering	196,750	1,300	48,900	1,100	133,250	1,425	14,600	650
Aerospace, aeronautical, and astronautical engineering	8,150	200	2,400	225	4,700	250	1,050	125
Chemical engineering	23,700	500	3,600	300	18,550	550	1,550	225
Civil engineering	21,500	475	7,100	450	11,250	450	3,150	325
Electrical and computer engineering	54,000	675	11,050	575	40,450	775	2,500	325
Computer engineering	8,150	200	2,000	200	5,900	250	250	75
Electrical, electronics, and communications engineering	45,850	650	9,100	550	34,550	750	2,250	325
Mechanical engineering	28,800	625	8,250	550	18,350	625	2,200	300
Metallurgical and materials engineering	18,300	450	3,000	325	14,050	475	1,250	200
Other engineering	42,300	550	13,500	550	25,900	575	2,850	250
Agricultural engineering	1,650	100	700	75	750	75	200	50
Bioengineering and biomedical engineering	16,350	325	5,200	375	10,350	375	800	150
Engineering mechanics, physics, and science	4,300	200	1,250	150	2,750	200	300	75
Industrial and manufacturing engineering	9,150	300	3,200	300	5,550	325	350	75
Nuclear engineering	3,400	150	650	100	2,250	150	500	75
Engineering, other	7,500	225	2,500	225	4,300	250	700	150
Health	44,000	600	22,950	575	17,550	600	3,500	275
Communication disorders sciences and services	2,950	150	1,900	150	850	125	150	50
Hospital and medical administration services	1,300	75	700	75	500	75	150	50
Pharmacy, pharmaceutical sciences, and administration	8,550	250	2,100	250	5,900	300	550	150
Public health	10,400	250	5,050	275	4,150	275	1,200	150
Registered nursing, nursing administration, nursing research	9,100	325	6,050	350	2,550	250	550	125
Health sciences, other	11,650	325	7,200	325	3,600	275	850	150

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 nonprofit, 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 13

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2023

(Number and SE)

Employment sector and field of study	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
All sectors	908,700	2,300	558,900	1,850	349,800	1,475
Science	667,950	2,050	383,950	1,775	284,000	1,400
Biological, agricultural, and environmental life sciences	235,050	1,175	126,550	1,275	108,500	1,075
Computer and information sciences	36,350	550	29,250	550	7,150	375
Mathematics and statistics	38,500	600	28,750	575	9,700	400
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	103,750	1,100	38,050	750
Psychology	112,100	900	38,400	750	73,700	950
Social sciences	104,100	875	57,200	875	46,900	675
Engineering	196,750	1,300	159,650	1,375	37,100	725
Health	44,000	600	15,300	475	28,700	525
4-year educational institution ^a	341,350	2,475	199,700	2,000	141,650	1,600
Science	272,100	2,250	156,000	1,775	116,100	1,475
Biological, agricultural, and environmental life sciences	94,000	1,250	51,000	1,050	43,000	900
Computer and information sciences	12,400	550	9,100	500	3,300	250
Mathematics and statistics	19,900	725	14,450	550	5,450	350
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	46,050	950	32,650	950	13,400	450
Psychology	38,600	850	14,550	475	24,050	700
Social sciences	61,150	1,025	34,200	800	26,900	725
Engineering	47,200	1,100	36,750	925	10,400	525
Health	22,100	575	6,950	400	15,150	475
Other educational institution ^b	26,750	875	11,850	625	14,900	600
Science	24,200	800	10,450	550	13,700	575
Biological, agricultural, and environmental life sciences	6,650	425	2,500	300	4,150	325
Computer and information sciences	250	75	200	75	50	25
Mathematics and statistics	1,450	200	900	175	500	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4,850	350	2,900	300	2,000	200
Psychology	6,200	400	1,650	200	4,550	350
Social sciences	4,800	400	2,300	250	2,500	250
Engineering	1,700	275	1,200	250	500	100
Health	900	150	200	100	650	125
Private, for profit ^c	354,100	2,775	246,450	2,300	107,700	1,300
Science	222,800	2,250	141,750	1,825	81,050	1,275
Biological, agricultural, and environmental life sciences	80,500	1,300	44,750	1,125	35,800	825
Computer and information sciences	20,800	675	17,800	650	3,050	275
Mathematics and statistics	13,050	550	10,300	550	2,750	225

TABLE 13

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2023

(Number and SE)

Employment sector and field of study	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	64,600	1,125	49,500	1,025	15,050	500
Psychology	27,500	875	10,150	475	17,350	700
Social sciences	16,300	675	9,200	550	7,100	425
Engineering	119,950	1,425	99,550	1,375	20,450	500
Health	11,350	450	5,200	325	6,200	375
Private, nonprofit	64,300	1,175	33,800	1,025	30,550	825
Science	51,550	1,025	26,050	875	25,500	725
Biological, agricultural, and environmental life sciences	20,900	800	10,950	625	9,950	450
Computer and information sciences	1,250	200	800	175	450	125
Mathematics and statistics	1,750	200	1,300	200	450	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	8,550	475	6,000	400	2,600	225
Psychology	11,400	550	3,400	350	8,000	475
Social sciences	7,650	375	3,600	275	4,050	300
Engineering	8,200	475	6,400	450	1,800	200
Health	4,550	325	1,300	175	3,250	275
Federal government	58,600	1,250	34,950	950	23,700	700
Science	45,050	1,150	25,200	875	19,850	650
Biological, agricultural, and environmental life sciences	18,800	600	10,150	500	8,650	425
Computer and information sciences	750	150	600	125	150	50
Mathematics and statistics	1,200	175	900	175	300	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	11,050	525	7,950	475	3,100	225
Psychology	6,900	475	2,250	275	4,700	350
Social sciences	6,350	400	3,350	275	3,000	250
Engineering	11,250	575	8,850	525	2,350	225
Health	2,350	225	900	175	1,450	200
State or local government	18,700	725	10,200	550	8,550	400
Science	14,400	600	7,350	450	7,000	350
Biological, agricultural, and environmental life sciences	5,450	325	2,550	275	2,950	225
Computer and information sciences	150	50	100	50	50	25
Mathematics and statistics	250	100	200	75	S	S
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	2,700	275	2,000	225	750	100
Psychology	3,150	350	1,100	250	2,100	275
Social sciences	2,650	250	1,500	200	1,150	150
Engineering	3,200	325	2,450	325	750	125
Health	1,100	150	350	75	800	125

TABLE 13

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2023

(Number and SE)

Employment sector and field of study	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
Self-employed ^d	42,350	1,150	20,700	875	21,650	875
Science	35,800	1,050	16,100	800	19,700	800
Biological, agricultural, and environmental life sciences	8,300	475	4,500	400	3,800	300
Computer and information sciences	750	175	650	175	100	50
Mathematics and statistics	850	175	700	150	150	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	3,800	350	2,750	300	1,100	200
Psychology	18,150	725	5,300	425	12,900	650
Social sciences	3,900	325	2,250	275	1,650	175
Engineering	4,950	400	4,200	400	750	125
Health	1,600	225	400	75	1,200	200
Other sector ^e	2,450	275	1,300	200	1,200	225
Science	2,100	250	1,050	175	1,050	200
Biological, agricultural, and environmental life sciences	450	100	200	75	250	75
Computer and information sciences	D	D	D	D	D	D
Mathematics and statistics	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	150	75	D	D	S	S
Psychology	150	75	D	D	S	S
Social sciences	1,300	200	800	150	550	150
Engineering	250	100	200	75	D	D
Health	100	50	D	D	50	50

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

SE = standard error.

^a Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.^c Private, for profit includes those self-employed in an incorporated business.^d Self-employed or business owner in a nonincorporated business.^e Other sector 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 14

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2023

(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	908,700	2,300	47,400	700	1,750	175	240,850	1,900	36,050	500	566,700	2,050	15,950	525
Science	667,950	2,050	37,200	575	1,400	150	145,950	1,600	26,950	450	443,550	1,975	12,850	500
Biological, agricultural, and environmental life sciences	235,050	1,175	13,400	425	450	125	57,550	1,025	8,150	300	150,750	1,300	4,750	300
Computer and information sciences	36,350	550	1,200	125	S	S	16,200	550	1,000	125	17,350	525	550	125
Mathematics and statistics	38,500	600	1,750	150	D	D	12,350	525	1,000	100	22,850	600	500	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	5,650	275	100	50	37,150	875	3,650	250	92,950	1,050	2,300	175
Psychology	112,100	900	7,500	325	400	100	7,750	450	6,550	325	87,250	875	2,650	225
Social sciences	104,100	875	7,650	325	350	75	14,950	550	6,600	300	72,400	875	2,150	225
Engineering	196,750	1,300	8,000	325	150	50	85,750	1,175	5,050	250	95,550	1,200	2,250	250
Health	44,000	600	2,200	150	150	75	9,200	475	4,050	250	27,550	550	850	150
4-year educational institution ^d	341,350	2,475	20,100	450	650	100	72,100	1,450	14,450	450	227,850	2,050	6,200	325
Science	272,100	2,250	16,550	450	500	100	51,400	1,200	11,400	425	186,850	1,850	5,350	325
Biological, agricultural, and environmental life sciences	94,000	1,250	5,700	300	50	25	19,850	625	3,050	225	63,600	1,125	1,750	175
Computer and information sciences	12,400	550	500	75	D	D	4,550	400	500	125	6,650	400	S	S
Mathematics and statistics	19,900	725	1,150	150	D	D	4,950	425	650	100	12,950	550	250	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	46,050	950	1,850	175	*	*	10,000	600	1,250	175	32,100	775	800	125
Psychology	38,600	850	2,650	225	100	50	3,600	350	2,250	200	28,750	725	1,200	150
Social sciences	61,150	1,025	4,650	300	250	75	8,500	500	3,700	275	42,800	825	1,200	150
Engineering	47,200	1,100	2,350	200	S	S	16,950	775	1,300	150	26,100	800	400	75
Health	22,100	575	1,200	125	100	50	3,750	350	1,800	175	14,900	500	400	75
Other educational institution ^e	26,750	875	2,100	200	150	75	3,250	375	2,100	200	18,500	725	600	150
Science	24,200	800	2,000	200	150	75	2,700	325	1,900	200	16,900	700	500	100
Biological, agricultural, and environmental life sciences	6,650	425	400	75	D	D	900	225	350	75	4,750	325	150	50
Computer and information sciences	250	75	D	D	D	D	S	S	50	25	100	75	D	D
Mathematics and statistics	1,450	200	100	50	D	D	250	100	50	25	950	150	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4,850	350	300	75	D	D	900	200	350	100	3,250	275	S	S
Psychology	6,200	400	700	125	D	D	150	75	600	100	4,650	350	100	50
Social sciences	4,800	400	450	100	D	D	400	125	500	125	3,200	325	200	100
Engineering	1,700	275	100	25	D	D	550	175	100	50	900	150	D	D
Health	900	150	50	25	D	D	D	D	100	50	700	150	D	D
Private, for profit ^f	354,100	2,775	15,100	450	300	75	130,650	1,775	10,750	425	191,800	2,025	5,550	375
Science	222,800	2,250	10,400	400	250	75	67,400	1,425	6,900	325	133,950	1,625	3,900	275
Biological, agricultural, and environmental life sciences	80,500	1,300	4,450	300	100	50	24,700	825	2,500	200	47,150	900	1,600	200

TABLE 14

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2023

(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
Computer and information sciences	20,800	675	600	100	D	D	10,650	550	400	100	8,900	500	250	75
Mathematics and statistics	13,050	550	300	50	D	D	6,000	450	250	75	6,350	350	150	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	64,600	1,125	2,250	175	50	25	21,000	800	1,500	175	38,700	925	1,050	125
Psychology	27,500	875	1,900	200	50	50	1,650	225	1,400	175	22,000	825	500	125
Social sciences	16,300	675	900	125	D	D	3,400	325	900	125	10,850	600	350	125
Engineering	119,950	1,425	4,200	225	50	25	59,650	1,150	2,750	200	52,000	1,025	1,350	200
Health	11,350	450	500	100	D	D	3,600	300	1,100	200	5,850	350	250	125
Private, nonprofit	64,300	1,175	3,300	250	200	100	13,800	675	2,800	250	42,900	975	1,300	150
Science	51,550	1,025	2,800	250	S	S	10,250	600	2,100	225	35,100	875	1,150	150
Biological, agricultural, and environmental life sciences	20,900	800	1,050	150	D	D	5,750	450	600	100	13,000	700	450	75
Computer and information sciences	1,250	200	50	25	D	D	500	150	D	D	700	150	D	D
Mathematics and statistics	1,750	200	100	50	D	D	500	175	S	S	1,100	150	S	S
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	8,550	475	300	50	D	D	1,800	275	150	50	6,200	350	100	50
Psychology	11,400	550	700	125	D	D	900	175	800	150	8,700	450	350	125
Social sciences	7,650	375	650	150	D	D	800	150	600	100	5,400	325	200	75
Engineering	8,200	475	300	50	D	D	2,750	350	200	75	4,850	350	100	50
Health	4,550	325	200	50	D	D	800	175	450	125	2,950	250	100	50
Federal government	58,600	1,250	3,600	225	250	75	10,700	625	3,100	250	39,800	1,025	1,150	150
Science	45,050	1,150	2,850	225	200	75	7,400	525	2,450	225	31,100	975	1,000	150
Biological, agricultural, and environmental life sciences	18,800	600	1,250	150	50	25	3,950	400	1,050	150	11,950	500	500	100
Computer and information sciences	750	150	S	S	D	D	150	75	50	25	400	125	S	S
Mathematics and statistics	1,200	175	S	S	D	D	250	75	50	25	800	150	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	11,050	525	600	150	D	D	1,900	300	400	100	8,000	450	200	50
Psychology	6,900	475	500	100	150	75	300	100	500	150	5,250	425	200	75
Social sciences	6,350	400	400	100	D	D	800	175	400	75	4,650	350	50	25
Engineering	11,250	575	650	100	D	D	2,700	325	350	100	7,400	400	150	50
Health	2,350	225	100	50	D	D	600	150	300	75	1,300	200	D	D
State or local government	18,700	725	1,000	125	50	25	4,450	400	1,400	175	11,500	575	350	75
Science	14,400	600	800	125	S	S	2,600	275	1,000	150	9,650	525	300	50
Biological, agricultural, and environmental life sciences	5,450	325	200	50	D	D	1,050	175	300	75	3,750	300	150	50
Computer and information sciences	150	50	D	D	D	D	D	D	D	D	50	25	D	D
Mathematics and statistics	250	100	D	D	D	D	S	S	D	D	100	50	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	2,700	275	150	50	D	D	700	150	50	25	1,750	225	50	25
Psychology	3,150	350	300	100	D	D	300	125	400	125	2,150	275	50	25

TABLE 14

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2023

(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
Social sciences	2,650	250	100	50	D	D	450	100	250	75	1,800	225	50	25
Engineering	3,200	325	150	50	D	D	1,650	250	200	75	1,200	175	50	50
Health	1,100	150	100	50	D	D	150	75	200	50	650	125	D	D
Self-employed ^d	42,350	1,150	1,650	150	S	S	5,350	525	1,250	175	33,200	1,025	800	150
Science	35,800	1,050	1,350	125	S	S	3,750	450	1,050	175	28,950	975	650	125
Biological, agricultural, and environmental life sciences	8,300	475	250	50	D	D	1,300	250	200	75	6,250	375	200	75
Computer and information sciences	750	175	D	D	D	D	250	125	D	D	500	150	D	D
Mathematics and statistics	850	175	S	S	D	D	S	S	D	D	550	125	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	3,800	350	150	50	D	D	750	200	D	D	2,850	300	50	50
Psychology	18,150	725	750	125	D	D	900	200	600	150	15,600	700	250	100
Social sciences	3,900	325	150	50	D	D	350	150	200	50	3,100	275	50	25
Engineering	4,950	400	250	75	D	D	1,400	250	100	50	3,100	350	S	S
Health	1,600	225	100	50	D	D	200	100	150	50	1,150	200	D	D
Other sector ^h	2,450	275	450	100	D	D	600	175	150	75	1,200	200	D	D
Science	2,100	250	400	100	D	D	450	150	100	75	1,100	200	D	D
Biological, agricultural, and environmental life sciences	450	100	50	50	D	D	D	D	50	25	250	75	D	D
Computer and information sciences	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Mathematics and statistics	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	150	75	D	D	D	D	D	D	D	D	100	50	D	D
Psychology	150	75	D	D	D	D	D	D	D	D	S	S	D	D
Social sciences	1,300	200	350	75	D	D	300	125	D	D	550	150	D	D
Engineering	250	100	D	D	D	D	D	D	D	D	100	50	D	D
Health	100	50	D	D	D	D	D	D	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.

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^d Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^e Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^f Private, for profit includes those self-employed in an incorporated business.

^g Self-employed or business owner in a nonincorporated business.

^h Other sector 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 2023

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 15-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary or secondary work activity: 2023

(Number and SE)

Field of study	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	908,700	2,300	546,250	2,475	180,050	1,925	329,150	2,575	153,200	1,875	103,750	1,500	76,700	1,600	388,200	2,375	117,050	1,775	235,900	2,325	82,600	1,475
Science	667,950	2,050	389,550	2,175	152,450	1,725	230,100	2,025	86,550	1,300	65,850	1,225	38,750	1,050	289,050	2,100	99,850	1,575	192,500	1,925	63,000	1,300
Biological, agricultural, and environmental life sciences	235,050	1,175	150,150	1,425	62,250	1,100	90,250	1,275	32,750	900	14,200	550	10,350	525	116,800	1,500	29,700	1,025	52,200	1,075	21,450	700
Agricultural and food sciences	17,050	400	11,200	375	2,550	225	8,300	375	3,250	250	750	125	700	100	8,300	300	950	125	4,250	300	1,750	200
Agricultural sciences	900	75	600	50	100	50	450	50	150	50	50	25	50	25	450	50	50	25	250	50	100	25
Animal sciences	4,650	200	2,850	175	600	100	2,100	175	750	125	200	75	150	75	2,300	150	450	100	1,400	175	500	100
Food sciences and technology	3,600	200	2,400	200	500	100	1,700	200	850	125	S	S	250	75	1,900	175	150	50	800	175	300	75
Plant sciences	5,850	250	4,100	250	850	150	3,100	250	1,300	175	250	75	200	50	2,700	225	200	75	1,250	175	600	125
Soil sciences	2,050	100	1,300	100	450	75	950	100	200	50	150	50	50	25	950	125	100	50	550	75	300	50
Biochemistry and biophysics	29,700	475	19,300	600	8,750	475	9,950	400	5,150	450	1,700	200	1,650	250	15,300	650	3,250	375	5,900	400	2,400	275
Biochemistry	24,150	475	15,350	575	6,900	400	7,800	400	4,200	425	1,050	200	1,300	250	12,750	600	2,700	350	4,950	375	2,000	250
Biophysics	5,600	175	3,950	225	1,850	175	2,150	225	900	150	650	125	400	100	2,550	200	550	125	950	150	400	100
Cell, cellular biology, and molecular biology	32,400	525	19,750	625	9,950	575	10,050	625	4,500	425	1,400	200	1,350	275	16,850	600	5,650	450	6,450	450	2,800	325
Microbiological sciences and immunology	25,400	425	16,250	475	7,000	425	9,800	400	4,150	325	500	125	900	175	13,350	475	3,550	300	5,150	325	2,350	250
Immunology	9,800	225	6,750	275	2,900	250	4,350	250	1,400	175	100	50	200	75	5,200	300	1,750	200	1,500	175	750	125
Microbiological sciences	15,600	350	9,500	375	4,100	350	5,450	325	2,750	275	400	100	700	150	8,150	400	1,800	225	3,650	300	1,600	200
Natural resources and conservation	9,150	275	5,600	225	1,100	100	4,550	225	850	100	800	125	600	100	4,550	250	650	125	2,400	175	1,000	125
Fish, fisheries, wildlife, and wildlands science and management	1,950	100	1,350	100	250	50	1,250	100	100	50	150	50	50	25	1,150	100	100	25	350	50	200	50
Forestry	2,600	150	1,600	125	300	50	1,250	125	350	75	300	75	150	50	1,150	100	250	100	700	100	350	75
Natural resource conservation, research, management, and policy	4,600	200	2,600	175	550	100	2,050	175	350	75	350	100	450	100	2,300	175	300	75	1,300	150	500	75
Zoology	6,400	225	4,050	250	1,700	200	2,450	200	700	125	300	100	300	100	2,850	175	400	75	2,300	175	900	125
Other biological sciences	114,900	750	74,000	925	31,200	800	45,200	850	14,100	600	8,750	425	4,850	325	55,600	950	15,350	725	25,800	800	10,200	525
Biomathematics, bioinformatics, and computational biology	7,150	150	5,850	175	1,350	125	4,600	175	1,300	150	2,100	150	550	100	2,400	175	350	75	850	125	250	75
Botany and plant biology	6,300	225	4,050	250	1,950	200	2,450	225	600	100	200	75	250	100	2,900	225	450	125	1,800	175	800	125
Epidemiology, ecology, and population biology	18,600	325	12,250	375	4,550	300	8,700	400	1,150	150	1,900	225	600	125	9,350	400	800	150	5,700	350	1,650	225
Genetics	9,550	225	6,300	225	3,250	225	3,200	225	1,050	175	1,050	150	400	100	4,850	275	1,100	150	1,850	225	600	125
Neurobiology and neuroscience	20,300	350	12,900	475	7,000	400	6,550	350	1,650	225	1,650	250	1,200	175	10,800	400	3,650	325	3,950	300	1,550	200
Nutrition sciences	4,200	150	2,700	125	600	100	1,950	150	850	100	50	25	S	S	2,150	150	600	125	1,200	125	300	75
Pharmacology and toxicology	13,350	250	8,500	350	3,000	300	5,300	300	2,500	275	350	100	400	100	6,600	400	2,550	275	2,150	250	1,250	200
Physiology, pathology, and related sciences	15,600	325	9,300	375	3,900	325	5,700	325	2,250	250	450	150	450	100	7,000	325	3,350	300	3,550	275	1,600	250
Biological and biomedical sciences, general	14,950	325	9,100	375	4,350	300	5,000	325	2,100	250	700	150	750	175	7,050	350	1,800	225	3,500	325	1,600	225
Biological and biomedical sciences, other	4,900	200	2,950	200	1,300	150	1,750	175	550	100	300	75	200	75	2,450	200	650	125	1,250	150	550	125
Computer and information sciences	36,350	550	22,150	650	5,250	375	14,150	600	6,950	450	14,400	600	3,850	350	12,100	525	750	175	8,850	525	2,400	275
Computer science	31,050	525	18,950	650	4,600	375	11,900	600	6,200	425	12,950	575	3,150	350	10,400	525	550	175	7,100	500	2,000	275

TABLE 15-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary or secondary work activity: 2023

(Number and SE)

Field of study	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	2,750	125	1,600	125	450	75	1,100	100	300	75	400	75	400	75	1,000	100	150	50	1,100	125	200	50
Computer and information sciences, other	2,550	75	1,600	100	250	50	1,150	75	450	75	1,050	75	250	50	750	75	50	25	650	75	150	50
Mathematics and statistics	38,500	600	22,900	575	10,650	475	12,150	450	3,750	325	9,400	450	3,550	300	10,500	400	1,000	175	17,150	625	3,300	275
Applied mathematics	9,150	225	5,550	250	2,350	225	3,250	225	950	175	2,900	225	800	150	2,250	225	150	75	3,700	225	700	125
Mathematics	17,100	450	9,200	400	5,850	300	3,250	300	1,150	175	3,500	250	1,350	175	4,700	275	350	100	9,350	425	1,850	200
Statistics	8,100	275	5,700	325	1,500	250	4,250	300	1,150	225	2,100	250	1,100	200	2,350	275	350	125	2,150	225	400	100
Mathematics and statistics, other	4,150	150	2,450	150	950	125	1,350	125	450	100	850	125	350	75	1,150	100	100	50	2,000	150	400	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	89,450	1,100	33,700	800	48,400	1,000	30,050	875	19,950	725	14,500	625	58,950	975	7,600	525	31,850	875	15,550	650
Astronomy and astrophysics	6,450	175	4,050	175	2,450	175	1,350	150	650	150	2,000	150	700	125	2,650	200	150	50	1,550	150	600	100
Chemistry, except biochemistry	69,150	850	42,350	800	13,650	550	23,800	725	17,750	650	4,900	400	5,400	425	31,850	750	4,550	375	15,250	575	8,800	500
Inorganic chemistry	8,800	250	5,450	275	1,500	175	3,050	200	2,550	225	250	75	550	100	4,200	225	450	100	2,150	200	1,300	150
Organic chemistry	17,950	425	11,500	425	3,650	325	7,150	400	4,800	325	700	200	1,350	250	7,950	425	1,150	175	4,150	325	2,000	225
Chemistry, other, except biochemistry	42,350	625	25,400	625	8,500	425	13,600	625	10,400	500	3,950	350	3,450	325	19,650	550	2,900	325	9,000	475	5,550	425
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	15,550	350	7,450	325	9,150	300	2,350	250	2,900	200	1,550	150	9,650	350	1,000	125	6,250	250	2,600	175
Atmospheric sciences and meteorology	4,450	100	3,250	125	1,500	100	1,950	100	500	75	1,150	75	400	75	1,600	100	100	25	800	75	300	50
Geological and earth sciences, geosciences	13,900	300	9,250	300	4,450	275	5,300	275	1,550	225	1,250	150	900	125	5,700	300	650	100	4,350	225	1,600	150
Ocean sciences and marine sciences	2,550	75	1,500	75	650	75	950	75	150	25	250	50	150	50	1,300	75	100	25	700	75	400	50
Oceanography, chemical and physical	2,250	100	1,500	100	850	100	900	100	150	50	300	50	100	50	1,000	100	100	25	450	75	250	75
Physics	43,050	775	27,500	775	10,100	600	14,100	525	9,300	525	10,150	575	6,850	500	14,850	625	1,900	300	8,800	600	3,550	325
Psychology	112,100	900	42,500	875	12,450	550	28,600	750	7,150	475	2,900	300	3,100	275	49,750	875	51,700	975	32,350	875	9,050	450
Clinical psychology	40,450	575	10,950	550	2,150	325	8,150	500	1,850	275	400	150	450	150	17,050	675	28,100	675	8,700	525	2,200	300
Counseling and applied psychology	14,500	300	2,950	275	600	100	1,950	250	600	125	200	100	200	75	6,700	300	9,650	375	3,750	325	1,050	175
Educational and school psychology	12,400	325	5,050	350	1,150	175	3,400	275	1,250	175	250	100	400	100	5,500	300	4,350	300	4,250	325	1,400	200
Industrial and organizational psychology	5,150	150	2,400	175	500	100	1,450	150	650	125	150	75	400	100	3,150	175	1,150	150	1,250	125	450	100
Research and experimental psychology	27,200	425	15,800	475	6,550	325	9,650	425	2,000	225	1,550	200	1,200	175	11,650	425	3,800	275	10,750	425	2,850	225
Psychology, general	7,750	300	3,200	300	1,100	175	2,350	275	400	125	250	100	250	100	3,550	300	3,050	300	2,150	275	600	150
Psychology, other	4,600	175	2,250	175	500	75	1,650	150	400	100	50	50	150	75	2,150	175	1,600	175	1,450	150	500	100
Social sciences	104,100	875	62,350	950	28,150	800	36,600	850	5,950	375	5,050	350	3,400	250	40,900	800	9,100	425	50,100	925	11,250	475
Economics	27,950	550	18,800	575	6,400	475	13,750	525	1,550	250	2,300	250	1,450	175	10,300	500	3,050	325	11,150	500	1,800	225
Political science and government	21,700	500	13,150	500	6,800	425	7,150	400	950	150	800	150	500	125	8,850	475	1,700	225	10,700	500	2,150	225
Political science and government	17,100	500	10,600	475	6,350	400	5,050	375	650	150	550	125	300	100	6,250	450	1,100	200	9,400	500	1,600	225
Public policy analysis	4,650	150	2,550	150	450	100	2,050	125	300	75	250	75	200	50	2,600	150	600	100	1,300	125	550	75
Sociology, demography, and population studies	15,950	375	9,550	425	4,950	325	4,850	325	850	150	600	125	350	100	6,000	350	1,050	175	8,300	300	2,300	275
Other social sciences	38,500	525	20,900	500	10,050	425	10,850	375	2,600	200	1,400	175	1,050	150	15,750	475	3,300	225	20,000	500	5,050	300

TABLE 15-1

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary or secondary work activity: 2023

(Number and SE)

Field of study	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental development													
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Anthropology	11,100	325	6,050	275	3,800	275	2,550	225	550	100	250	100	200	100	4,450	300	800	150	5,950	325	1,550	200
Area, ethnic, cultural, gender, and group studies	4,450	150	1,850	175	950	125	750	125	350	75	50	50	100	25	1,750	150	350	75	2,750	150	900	150
Geography and cartography	4,850	200	3,200	200	1,150	150	2,100	175	400	100	300	75	250	50	1,850	150	250	75	2,200	175	500	100
International relations and national security studies	2,350	150	1,200	100	600	100	550	75	150	50	D	D	100	50	1,000	125	250	50	1,200	100	400	75
Linguistics	5,100	225	2,600	200	1,250	175	1,100	125	600	125	350	75	200	100	1,950	200	350	75	3,150	200	350	100
Urban studies, affairs	1,350	100	700	100	200	75	600	75	50	25	100	50	50	25	650	75	200	50	450	75	150	50
Social sciences, other	9,350	250	5,250	250	2,000	150	3,250	250	500	75	350	75	200	50	4,150	225	1,150	150	4,300	225	1,150	125
Engineering	196,750	1,300	131,100	1,350	22,750	700	79,950	1,375	60,250	1,225	36,800	950	36,050	1,025	78,850	1,400	10,200	575	28,050	900	15,000	750
Aerospace, aeronautical, and astronautical engineering	8,150	200	5,600	225	1,150	150	3,300	225	2,200	200	2,000	200	1,400	150	3,600	225	150	75	1,100	200	350	100
Chemical engineering	23,700	500	15,850	575	2,400	300	9,350	500	8,800	525	2,250	300	4,450	425	11,400	575	900	150	2,400	275	2,100	275
Civil engineering	21,500	475	11,950	475	2,600	275	9,000	450	2,750	300	3,150	350	4,250	350	9,300	475	2,600	300	4,600	400	1,650	250
Electrical and computer engineering	54,000	675	38,100	800	5,500	425	20,700	650	20,050	800	15,550	600	11,300	625	16,900	675	1,400	250	6,550	500	3,550	400
Computer engineering	8,150	200	5,300	250	1,100	150	2,950	200	2,300	225	3,700	250	1,300	150	2,450	225	150	50	1,150	150	300	75
Electrical, electronics, and communications engineering	45,850	650	32,850	750	4,400	375	17,750	600	17,700	750	11,850	575	10,000	600	14,450	625	1,250	250	5,400	450	3,300	400
Mechanical engineering	28,800	625	20,150	700	3,600	425	11,700	700	9,500	600	4,750	375	6,300	475	10,550	550	1,000	175	5,000	400	1,950	300
Metallurgical and materials engineering	18,300	450	12,150	450	2,500	300	6,950	425	6,800	425	1,950	300	2,500	300	8,550	450	900	200	1,450	250	2,400	275
Other engineering	42,300	550	27,300	625	4,950	325	18,900	625	10,150	475	7,200	375	5,800	325	18,550	600	3,200	250	6,950	375	3,000	250
Agricultural engineering	1,650	100	1,050	100	100	50	750	100	350	75	300	75	250	75	650	75	100	50	400	50	200	50
Bioengineering and biomedical engineering	16,350	325	10,900	425	2,250	250	7,350	375	4,450	300	1,800	225	2,000	225	8,200	350	1,750	225	1,700	200	1,200	200
Engineering mechanics, physics, and science	4,300	200	2,850	200	600	100	1,750	175	1,200	175	650	100	600	100	1,900	175	250	50	650	125	200	50
Industrial and manufacturing engineering	9,150	300	5,350	300	950	150	3,900	300	1,650	225	2,250	200	1,200	150	3,600	275	550	100	2,250	225	550	100
Nuclear engineering	3,400	150	2,350	125	350	75	1,750	125	850	100	650	75	550	75	1,400	125	150	50	350	50	250	50
Engineering, other	7,500	225	4,750	275	700	125	3,400	250	1,650	150	1,550	200	1,150	125	2,750	225	400	100	1,600	200	650	125
Health	44,000	600	25,600	625	4,850	350	19,100	575	6,400	400	1,100	200	1,900	225	20,250	550	7,000	375	15,350	500	4,550	350
Communication disorders sciences and services	2,950	150	1,550	125	350	75	1,200	125	300	75	100	50	50	25	1,250	125	700	100	1,250	125	300	75
Hospital and medical administration services	1,300	75	750	75	100	50	650	75	150	50	50	25	50	25	750	75	200	50	400	50	150	50
Pharmacy, pharmaceutical sciences, and administration	8,550	250	6,300	325	1,050	175	3,850	275	3,250	275	250	100	700	150	3,650	250	800	150	1,150	175	1,000	175
Public health	10,400	250	6,750	275	1,050	150	5,850	300	1,000	125	450	75	450	75	5,350	275	1,400	150	2,750	250	1,050	200
Registered nursing, nursing administration, nursing research	9,100	325	4,050	300	650	125	2,950	275	750	150	D	D	350	125	3,900	300	1,800	225	4,650	275	1,050	200
Health sciences, other	11,650	325	6,200	325	1,650	200	4,650	325	950	150	150	75	350	75	5,400	275	2,100	200	5,150	300	1,000	125

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 Other work activities include 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 as respondents may provide both a primary and a secondary work activity. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(Number and SE)

Field of study	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	908,700	2,300	355,450	2,700	91,150	1,400	187,350	2,350	76,950	1,400	53,200	1,225	28,350	1,000	185,550	1,975	90,900	1,650	153,800	1,875	41,400	1,025
Science	667,950	2,050	251,550	2,250	78,950	1,250	132,100	1,800	40,500	1,075	33,750	1,000	11,650	575	134,250	1,800	79,050	1,475	126,400	1,675	31,250	900
Biological, agricultural, and environmental life sciences	235,050	1,175	106,750	1,400	36,200	800	54,750	1,125	15,800	675	5,600	375	2,550	275	53,350	1,250	22,450	900	32,200	775	12,150	525
Agricultural and food sciences	17,050	400	7,950	375	1,000	125	5,400	350	1,550	175	350	75	150	50	4,400	275	650	100	2,700	250	900	100
Agricultural sciences	900	75	400	50	50	25	250	50	100	25	50	25	D	D	250	50	50	25	150	25	50	25
Animal sciences	4,650	200	1,950	175	250	75	1,200	125	500	125	50	50	D	D	1,050	125	350	75	950	150	200	50
Food sciences and technology	3,600	200	1,800	200	300	100	1,100	175	450	75	D	D	100	50	1,050	125	100	50	350	125	150	50
Plant sciences	5,850	250	2,900	275	250	75	2,200	250	400	75	100	25	50	25	1,550	175	100	50	850	175	300	100
Soil sciences	2,050	100	900	75	150	50	600	75	100	50	100	50	*	*	500	100	50	25	300	75	200	50
Biochemistry and biophysics	29,700	475	13,900	525	5,700	375	5,500	350	2,750	350	950	175	350	100	7,000	450	2,450	325	3,650	350	1,450	225
Biochemistry	24,150	475	10,850	525	4,450	350	4,150	325	2,200	325	700	175	200	100	6,100	450	2,000	300	3,150	325	1,150	200
Biophysics	5,600	175	3,050	250	1,250	150	1,300	200	550	125	250	75	100	50	900	150	450	100	500	125	300	75
Cell, cellular biology, and molecular biology	32,400	525	13,800	625	6,250	475	5,200	425	2,400	300	600	150	300	125	7,600	500	4,400	375	4,150	350	1,550	250
Microbiological sciences and immunology	25,400	425	12,200	475	4,150	375	6,050	375	1,950	275	150	75	150	50	6,000	375	2,800	300	2,900	250	1,200	175
Immunology	9,800	225	5,150	275	1,600	200	2,900	250	650	150	D	D	D	D	2,100	250	1,400	175	650	125	450	100
Microbiological sciences	15,600	350	7,050	375	2,600	300	3,150	275	1,300	225	150	75	100	50	3,900	275	1,450	225	2,200	250	750	125
Natural resources and conservation	9,150	275	3,400	175	400	75	2,650	175	350	75	350	75	200	75	2,400	175	400	100	1,800	175	600	100
Fish, fisheries, wildlife, and wildlands science and management	1,950	100	950	75	50	25	850	75	50	25	D	D	D	D	600	75	50	25	250	50	100	50
Forestry	2,600	150	1,000	100	150	50	700	100	150	50	150	50	50	25	550	75	200	75	500	100	200	75
Natural resource conservation, research, management, and policy	4,600	200	1,450	150	200	75	1,100	150	150	50	200	75	150	50	1,250	150	200	50	1,050	125	300	75
Zoology	6,400	225	2,650	175	650	125	1,700	175	300	75	150	50	150	75	1,150	125	250	75	1,650	175	400	100
Other biological sciences	114,900	750	52,900	950	18,050	625	28,300	775	6,550	375	3,100	275	1,300	175	24,750	825	11,400	600	15,400	600	6,050	400
Biomathematics, bioinformatics, and computational biology	7,150	150	4,450	200	600	75	3,150	200	700	125	800	100	200	75	1,000	125	250	75	350	75	100	50
Botany and plant biology	6,300	225	2,650	225	850	150	1,450	150	300	75	100	50	D	D	1,550	175	350	100	1,250	150	400	100
Epidemiology, ecology, and population biology	18,600	325	8,800	400	1,850	175	6,500	400	450	100	550	100	250	100	3,800	350	600	125	3,900	325	700	150
Genetics	9,550	225	4,500	250	2,100	200	2,000	200	400	75	400	100	50	50	2,400	225	800	150	1,000	150	400	100
Neurobiology and neuroscience	20,300	350	9,650	475	4,800	350	4,150	325	750	150	550	150	250	75	4,100	325	2,800	250	1,900	225	950	175
Nutrition sciences	4,200	150	1,800	125	350	75	1,100	125	300	75	D	D	D	D	1,050	125	450	100	700	100	200	50
Pharmacology and toxicology	13,350	250	6,300	350	1,600	250	3,450	275	1,250	200	100	50	S	S	2,900	275	2,000	275	1,200	175	850	150
Physiology, pathology, and related sciences	15,600	325	6,400	375	2,300	275	3,000	275	1,100	225	250	125	150	75	3,250	250	2,350	250	2,100	200	1,150	225
Biological and biomedical sciences, general	14,950	325	6,300	400	2,750	250	2,550	250	1,000	175	250	75	200	75	3,500	325	1,450	200	2,250	275	1,050	200
Biological and biomedical sciences, other	4,900	200	2,050	200	800	125	950	150	300	75	100	50	100	50	1,150	150	450	125	800	125	300	75
Computer and information sciences	36,350	550	12,700	625	2,600	250	7,300	500	2,800	350	9,250	550	1,100	200	6,100	450	250	100	5,950	450	950	175
Computer science	31,050	525	10,850	625	2,250	250	6,100	500	2,500	325	8,550	550	900	200	5,150	450	S	S	4,700	425	750	175

TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(Number and SE)

Field of study	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	2,750	125	850	125	200	50	500	100	150	75	200	50	150	75	600	75	50	25	800	100	100	50
Computer and information sciences, other	2,550	75	1,000	75	150	50	700	75	150	50	550	75	50	25	400	50	*	*	450	75	100	25
Mathematics and statistics	38,500	600	13,000	550	5,050	350	6,300	425	1,600	250	5,100	375	1,200	175	5,000	300	450	100	12,600	525	1,150	150
Applied mathematics	9,150	225	3,250	275	1,250	200	1,600	200	400	100	1,550	200	250	100	900	125	100	50	2,800	225	300	100
Mathematics	17,100	450	4,550	350	2,700	275	1,400	200	450	150	2,250	250	400	100	2,000	225	200	100	7,100	375	600	125
Statistics	8,100	275	3,900	300	600	125	2,600	300	650	200	850	200	350	125	1,500	200	D	D	1,300	175	150	75
Mathematics and statistics, other	4,150	150	1,300	125	500	100	700	100	100	50	450	100	200	50	650	100	50	50	1,450	125	100	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	60,700	1,125	18,050	675	27,150	775	15,450	625	10,750	575	4,800	400	30,100	800	5,200	375	22,750	800	7,500	475
Astronomy and astrophysics	6,450	175	2,400	175	1,450	125	700	100	250	100	1,100	150	200	75	1,400	150	100	50	1,000	125	250	50
Chemistry, except biochemistry	69,150	850	28,900	850	6,300	400	13,050	600	9,500	575	2,900	325	1,500	250	16,500	575	3,300	325	11,800	550	4,250	400
Inorganic chemistry	8,800	250	3,500	275	650	125	1,500	175	1,350	175	150	75	100	50	2,250	200	400	100	1,850	175	550	125
Organic chemistry	17,950	425	8,200	425	1,500	225	4,200	325	2,500	300	450	175	350	150	3,800	325	800	150	3,350	300	1,050	175
Chemistry, other, except biochemistry	42,350	625	17,200	625	4,200	325	7,350	525	5,700	425	2,300	300	1,000	200	10,450	475	2,150	275	6,600	425	2,650	300
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	10,350	325	4,100	225	5,350	250	900	125	1,300	150	650	100	4,650	250	650	100	4,250	250	1,300	125
Atmospheric sciences and meteorology	4,450	100	2,300	125	1,000	100	1,100	100	200	50	450	75	150	75	800	75	100	25	450	50	200	50
Geological and earth sciences, geosciences	13,900	300	5,950	275	2,250	200	3,150	225	600	125	650	125	400	75	2,700	200	450	100	3,000	225	750	100
Ocean sciences and marine sciences	2,550	75	1,000	75	300	50	650	75	50	25	100	25	50	25	600	75	50	25	550	75	250	50
Oceanography, chemical and physical	2,250	100	1,100	100	600	100	500	75	50	25	150	50	*	*	600	75	50	25	250	50	150	50
Physics	43,050	775	19,050	700	6,200	450	8,100	525	4,800	350	5,400	475	2,450	300	7,550	525	1,150	175	5,750	500	1,700	250
Psychology	112,100	900	23,200	700	4,850	375	15,850	600	2,450	300	1,000	175	850	150	19,000	650	45,250	1,025	18,600	675	4,250	350
Clinical psychology	40,450	575	5,650	425	850	225	4,200	350	600	175	D	D	200	100	5,150	375	25,050	675	3,450	325	900	200
Counseling and applied psychology	14,500	300	900	150	200	75	550	125	150	75	D	D	S	S	2,050	250	8,750	400	2,200	250	550	125
Educational and school psychology	12,400	325	2,650	275	250	100	1,900	225	450	100	D	D	D	D	2,550	250	3,600	250	2,750	300	800	150
Industrial and organizational psychology	5,150	150	1,300	175	200	75	850	150	250	75	D	D	100	50	2,000	175	700	100	750	100	250	75
Research and experimental psychology	27,200	425	9,500	400	2,700	225	6,000	350	800	150	750	150	350	100	4,900	325	3,000	250	7,400	375	1,300	175
Psychology, general	7,750	300	1,950	225	500	125	1,400	200	100	50	100	75	D	D	1,400	225	2,900	300	1,150	225	200	75
Psychology, other	4,600	175	1,250	150	150	50	950	150	150	75	D	D	D	D	950	125	1,300	175	900	125	200	75
Social sciences	104,100	875	35,200	900	12,150	600	20,650	700	2,400	250	2,050	225	1,100	150	20,650	675	5,450	325	34,300	825	5,250	375
Economics	27,950	550	12,450	500	3,600	350	8,150	425	700	200	900	125	400	125	5,350	350	1,850	250	6,200	375	750	150
Political science and government	21,700	500	7,000	450	2,900	300	3,850	325	300	100	300	100	250	75	5,000	350	1,000	175	7,100	425	1,050	175
Political science and government	17,100	500	5,500	425	2,750	300	2,550	300	200	100	250	100	150	75	3,550	325	600	150	6,350	425	700	150
Public policy analysis	4,650	150	1,550	125	150	50	1,300	125	50	50	50	25	100	50	1,450	150	400	75	750	100	300	75
Sociology, demography, and population studies	15,950	375	5,200	350	2,100	275	2,800	250	300	100	200	75	100	50	2,750	275	500	125	6,000	325	1,200	225
Other social sciences	38,500	525	10,500	425	3,550	275	5,850	300	1,100	150	650	125	350	100	7,600	350	2,150	200	15,050	475	2,250	200

TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(Number and SE)

Field of study	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental development													
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Anthropology	11,100	325	3,250	275	1,450	225	1,500	200	300	100	S	S	D	D	1,950	200	500	125	4,650	300	600	125
Area, ethnic, cultural, gender, and group studies	4,450	150	700	125	300	75	250	75	150	50	D	D	50	25	850	100	250	75	2,200	175	400	100
Geography and cartography	4,850	200	1,700	175	400	100	1,050	150	200	75	200	50	50	25	900	125	200	75	1,600	175	250	75
International relations and national security studies	2,350	150	450	75	150	50	250	50	50	25	D	D	50	25	550	100	150	50	950	100	200	50
Linguistics	5,100	225	1,150	125	400	75	550	100	150	50	250	75	D	D	800	125	200	50	2,450	225	200	75
Urban studies, affairs	1,350	100	500	75	50	25	400	75	50	25	D	D	D	D	400	75	100	25	250	50	100	50
Social sciences, other	9,350	250	2,750	225	800	100	1,800	175	200	50	100	50	50	50	2,150	200	800	125	2,950	200	550	100
Engineering	196,750	1,300	87,550	1,350	10,300	600	43,650	1,225	33,650	1,000	19,000	700	16,200	750	42,150	925	6,750	525	17,400	700	7,700	550
Aerospace, aeronautical, and astronautical engineering	8,150	200	3,750	200	550	125	1,900	175	1,300	150	700	125	650	125	2,050	200	100	50	700	175	200	75
Chemical engineering	23,700	500	10,650	550	1,050	250	4,750	375	4,850	425	1,250	200	1,800	275	7,000	450	650	125	1,350	200	1,050	200
Civil engineering	21,500	475	6,900	400	850	150	4,950	375	1,150	225	1,800	275	2,650	275	4,700	350	1,650	300	2,850	300	900	200
Electrical and computer engineering	54,000	675	25,250	775	2,550	325	10,700	600	12,000	650	8,400	475	4,700	425	8,950	450	1,100	225	4,300	400	1,350	250
Computer engineering	8,150	200	3,250	250	600	125	1,350	175	1,300	175	2,400	225	400	75	1,150	150	100	50	700	125	100	50
Electrical, electronics, and communications engineering	45,850	650	22,000	725	1,950	300	9,350	550	10,700	600	6,000	450	4,300	425	7,800	425	1,000	225	3,550	350	1,250	250
Mechanical engineering	28,800	625	13,700	650	1,850	275	6,800	575	5,050	450	2,400	325	2,750	325	5,100	400	650	150	3,200	325	1,050	250
Metallurgical and materials engineering	18,300	450	8,950	475	1,250	225	3,600	325	4,100	375	900	200	1,000	225	4,700	400	600	150	850	175	1,350	225
Other engineering	42,300	550	18,400	625	2,200	250	10,900	550	5,300	350	3,550	275	2,700	250	9,650	425	2,050	200	4,150	275	1,800	225
Agricultural engineering	1,650	100	650	75	50	25	450	75	150	50	150	50	100	50	400	75	50	25	150	50	100	50
Bioengineering and biomedical engineering	16,350	325	7,950	375	1,000	175	4,450	375	2,500	250	800	150	700	175	4,200	275	1,150	175	900	150	700	200
Engineering mechanics, physics, and science	4,300	200	1,850	175	250	75	900	125	650	150	300	75	300	100	1,050	125	200	50	450	100	100	50
Industrial and manufacturing engineering	9,150	300	3,350	300	450	125	2,100	250	850	175	1,200	150	600	125	1,900	225	300	75	1,450	175	300	75
Nuclear engineering	3,400	150	1,400	125	100	50	1,000	100	300	75	300	75	400	75	750	100	100	50	200	50	150	50
Engineering, other	7,500	225	3,150	225	350	100	2,050	225	800	125	800	150	550	100	1,300	150	250	75	1,000	175	400	125
Health	44,000	600	16,300	550	1,900	250	11,650	475	2,750	300	450	125	500	100	9,150	450	5,100	325	10,000	450	2,450	325
Communication disorders sciences and services	2,950	150	850	100	150	50	600	100	100	50	S	S	D	D	550	75	550	100	800	100	150	75
Hospital and medical administration services	1,300	75	500	75	*	*	450	75	50	25	D	D	D	D	350	75	100	25	250	50	50	25
Pharmacy, pharmaceutical sciences, and administration	8,550	250	4,350	300	500	150	2,450	250	1,400	200	S	S	150	75	2,000	225	650	125	650	125	600	150
Public health	10,400	250	4,650	250	350	75	3,850	250	450	100	200	50	100	50	2,250	200	1,100	150	1,600	200	500	125
Registered nursing, nursing administration, nursing research	9,100	325	2,250	250	150	75	1,800	225	300	125	D	D	100	50	1,800	200	1,200	175	3,100	250	700	200
Health sciences, other	11,650	325	3,700	250	700	175	2,550	200	450	125	100	50	150	50	2,200	225	1,550	200	3,600	250	400	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 Administration includes accounting, finance, contracts, and human resources.

^b Other work activities include 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 15-3

Non-U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(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	146,300	1,825	72,200	1,575	74,150	1,475
Science	102,600	1,650	51,950	1,275	50,650	1,125
Biological, agricultural, and environmental life sciences	29,550	875	15,350	725	14,150	625
Agricultural and food sciences	5,150	300	2,250	225	2,900	225
Agricultural sciences	300	50	150	50	150	25
Animal sciences	1,050	150	350	75	700	150
Food sciences and technology	1,350	175	700	150	650	125
Plant sciences	1,800	175	750	150	1,000	150
Soil sciences	650	100	350	75	350	75
Biochemistry and biophysics	3,000	400	1,900	375	1,100	250
Biochemistry	2,650	400	1,650	350	950	250
Biophysics	400	100	200	100	150	50
Cell, cellular biology, and molecular biology	2,600	350	1,650	300	950	200
Microbiological sciences and immunology	2,350	275	1,150	175	1,150	225
Immunology	800	150	400	125	400	125
Microbiological sciences	1,550	250	800	175	750	175
Natural resources and conservation	2,450	225	1,200	175	1,200	150
Fish, fisheries, wildlife, and wildlands science and management	550	100	350	100	200	50
Forestry	800	100	300	75	450	75
Natural resource conservation, research, management, and policy	1,100	175	550	125	550	125
Zoology	1,000	150	700	125	300	100
Other biological sciences	13,050	625	6,500	475	6,550	475
Biomathematics, bioinformatics, and computational biology	700	125	500	125	200	75
Botany and plant biology	1,550	200	700	125	850	175
Epidemiology, ecology, and population biology	2,800	250	1,500	200	1,250	200
Genetics	1,150	175	650	150	500	125
Neurobiology and neuroscience	2,200	300	1,100	250	1,100	225
Nutrition sciences	750	125	300	75	500	125
Pharmacology and toxicology	650	125	250	75	400	125
Physiology, pathology, and related sciences	1,550	225	650	125	850	200
Biological and biomedical sciences, general	1,150	200	550	150	600	150
Biological and biomedical sciences, other	550	150	300	125	300	100
Computer and information sciences	5,750	425	2,800	300	2,950	375
Computer science	4,800	425	2,400	300	2,400	375

TABLE 15-3

Non-U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(Number and SE)

Field of study	All employed		Primary work activity ^a			
			Any R&D ^b		Other ^c	
	Number	SE	Number	SE	Number	SE
Information science, studies	450	100	150	50	250	75
Computer and information sciences, other	550	75	250	75	300	75
Mathematics and statistics	8,800	475	4,800	400	4,000	350
Applied mathematics	1,500	200	800	175	700	150
Mathematics	5,050	375	2,750	325	2,300	250
Statistics	1,150	200	650	175	500	125
Mathematics and statistics, other	1,100	125	600	125	500	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	22,250	925	11,750	750	10,500	600
Astronomy and astrophysics	1,200	175	650	150	550	150
Chemistry, except biochemistry	7,500	650	3,900	475	3,600	400
Inorganic chemistry	1,100	200	600	175	500	150
Organic chemistry	1,850	300	1,100	225	800	225
Chemistry, other, except biochemistry	4,550	475	2,200	325	2,300	325
Geosciences, atmospheric sciences, and ocean sciences	4,550	275	2,550	225	2,000	200
Atmospheric sciences and meteorology	850	100	450	100	400	50
Geological and earth sciences, geosciences	2,700	225	1,550	200	1,150	175
Ocean sciences and marine sciences	350	75	150	50	200	50
Oceanography, chemical and physical	650	100	400	100	250	75
Physics	9,000	625	4,650	425	4,400	475
Psychology	6,500	450	2,700	350	3,800	350
Clinical psychology	1,350	275	250	100	1,150	275
Counseling and applied psychology	400	100	150	75	250	75
Educational and school psychology	800	175	400	150	400	125
Industrial and organizational psychology	400	125	200	100	200	75
Research and experimental psychology	2,550	275	1,200	200	1,350	200
Psychology, general	650	225	S	S	300	125
Psychology, other	400	150	200	100	S	S
Social sciences	29,750	925	14,550	700	15,200	800
Economics	12,850	525	6,500	500	6,350	500
Political science and government	4,250	400	2,400	325	1,800	275
Political science and government	3,450	400	2,100	300	1,350	250
Public policy analysis	800	125	350	100	450	100
Sociology, demography, and population studies	2,700	325	1,650	275	1,050	200
Other social sciences	9,950	450	4,000	325	5,950	375

TABLE 15-3

Non-U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(Number and SE)

Field of study	All employed		Primary work activity ^a			
			Any R&D ^b		Other ^c	
	Number	SE	Number	SE	Number	SE
Anthropology	2,050	200	900	150	1,150	175
Area, ethnic, cultural, gender, and group studies	500	100	100	50	350	75
Geography and cartography	1,100	150	550	125	500	125
International relations and national security studies	1,000	125	300	75	650	125
Linguistics	2,650	225	800	150	1,900	225
Urban studies, affairs	450	100	300	75	150	50
Social sciences, other	2,250	250	1,000	175	1,250	175
Engineering	38,100	1,125	17,900	925	20,200	775
Aerospace, aeronautical, and astronautical engineering	1,100	175	650	150	500	125
Chemical engineering	3,600	400	1,750	275	1,850	300
Civil engineering	6,300	450	3,050	350	3,250	350
Electrical and computer engineering	9,100	600	3,900	400	5,200	475
Computer engineering	1,450	175	650	125	850	150
Electrical, electronics, and communications engineering	7,650	550	3,250	400	4,350	475
Mechanical engineering	5,400	475	2,650	425	2,750	350
Metallurgical and materials engineering	3,650	400	2,000	300	1,650	300
Other engineering	8,950	475	3,900	400	5,000	350
Agricultural engineering	550	100	200	50	350	75
Bioengineering and biomedical engineering	1,800	250	950	200	850	200
Engineering mechanics, physics, and science	900	150	450	125	450	125
Industrial and manufacturing engineering	3,150	300	1,100	225	2,050	250
Nuclear engineering	550	100	300	75	250	75
Engineering, other	1,950	225	900	175	1,050	200
Health	5,600	425	2,350	300	3,300	350
Communication disorders sciences and services	300	100	100	50	250	100
Hospital and medical administration services	250	75	150	50	150	50
Pharmacy, pharmaceutical sciences, and administration	1,100	200	500	150	600	150
Public health	1,300	200	750	175	550	125
Registered nursing, nursing administration, nursing research	750	175	200	125	550	150
Health sciences, other	1,900	225	650	150	1,250	200

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 applied research, basic research, and experimental development.

^c Other work activities include 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 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 15-4

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(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	908,700	2,300	355,450	2,700	553,250	2,925
Science	667,950	2,050	251,550	2,250	416,400	2,525
Biological, agricultural, and environmental life sciences	235,050	1,175	106,750	1,400	128,300	1,350
Agricultural and food sciences	17,050	400	7,950	375	9,100	350
Agricultural sciences	900	75	400	50	550	50
Animal sciences	4,650	200	1,950	175	2,650	175
Food sciences and technology	3,600	200	1,800	200	1,800	175
Plant sciences	5,850	250	2,900	275	2,950	225
Soil sciences	2,050	100	900	75	1,200	125
Biochemistry and biophysics	29,700	475	13,900	525	15,800	550
Biochemistry	24,150	475	10,850	525	13,300	525
Biophysics	5,600	175	3,050	250	2,500	225
Cell, cellular biology, and molecular biology	32,400	525	13,800	625	18,600	575
Microbiological sciences and immunology	25,400	425	12,200	475	13,200	525
Immunology	9,800	225	5,150	275	4,650	300
Microbiological sciences	15,600	350	7,050	375	8,550	375
Natural resources and conservation	9,150	275	3,400	175	5,750	250
Fish, fisheries, wildlife, and wildlands science and management	1,950	100	950	75	1,000	100
Forestry	2,600	150	1,000	100	1,600	150
Natural resource conservation, research, management, and policy	4,600	200	1,450	150	3,100	200
Zoology	6,400	225	2,650	175	3,750	200
Other biological sciences	114,900	750	52,900	950	62,000	1,025
Biomathematics, bioinformatics, and computational biology	7,150	150	4,450	200	2,700	150
Botany and plant biology	6,300	225	2,650	225	3,650	225
Epidemiology, ecology, and population biology	18,600	325	8,800	400	9,800	425
Genetics	9,550	225	4,500	250	5,050	275
Neurobiology and neuroscience	20,300	350	9,650	475	10,650	450
Nutrition sciences	4,200	150	1,800	125	2,400	175
Pharmacology and toxicology	13,350	250	6,300	350	7,050	375
Physiology, pathology, and related sciences	15,600	325	6,400	375	9,200	375
Biological and biomedical sciences, general	14,950	325	6,300	400	8,650	425
Biological and biomedical sciences, other	4,900	200	2,050	200	2,850	200
Computer and information sciences	36,350	550	12,700	625	23,650	700
Computer science	31,050	525	10,850	625	20,200	675

TABLE 15-4

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(Number and SE)

Field of study	All employed		Primary work activity ^a			
			Any R&D ^b		Other ^c	
	Number	SE	Number	SE	Number	SE
Information science, studies	2,750	125	850	125	1,900	125
Computer and information sciences, other	2,550	75	1,000	75	1,500	100
Mathematics and statistics	38,500	600	13,000	550	25,500	625
Applied mathematics	9,150	225	3,250	275	5,850	275
Mathematics	17,100	450	4,550	350	12,550	450
Statistics	8,100	275	3,900	300	4,200	300
Mathematics and statistics, other	4,150	150	1,300	125	2,850	150
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	141,800	1,125	60,700	1,125	81,100	1,225
Astronomy and astrophysics	6,450	175	2,400	175	4,050	200
Chemistry, except biochemistry	69,150	850	28,900	850	40,250	900
Inorganic chemistry	8,800	250	3,500	275	5,300	250
Organic chemistry	17,950	425	8,200	425	9,750	475
Chemistry, other, except biochemistry	42,350	625	17,200	625	25,150	675
Geosciences, atmospheric sciences, and ocean sciences	23,150	350	10,350	325	12,800	350
Atmospheric sciences and meteorology	4,450	100	2,300	125	2,150	100
Geological and earth sciences, geosciences	13,900	300	5,950	275	7,950	325
Ocean sciences and marine sciences	2,550	75	1,000	75	1,550	100
Oceanography, chemical and physical	2,250	100	1,100	100	1,150	100
Physics	43,050	775	19,050	700	23,950	750
Psychology	112,100	900	23,200	700	88,900	1,025
Clinical psychology	40,450	575	5,650	425	34,800	600
Counseling and applied psychology	14,500	300	900	150	13,600	350
Educational and school psychology	12,400	325	2,650	275	9,800	375
Industrial and organizational psychology	5,150	150	1,300	175	3,850	200
Research and experimental psychology	27,200	425	9,500	400	17,700	475
Psychology, general	7,750	300	1,950	225	5,800	300
Psychology, other	4,600	175	1,250	150	3,400	200
Social sciences	104,100	875	35,200	900	68,900	925
Economics	27,950	550	12,450	500	15,500	525
Political science and government	21,700	500	7,000	450	14,700	500
Political science and government	17,100	500	5,500	425	11,600	475
Public policy analysis	4,650	150	1,550	125	3,100	150
Sociology, demography, and population studies	15,950	375	5,200	350	10,700	400
Other social sciences	38,500	525	10,500	425	28,000	575

TABLE 15-4

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2023

(Number and SE)

Field of study	All employed		Primary work activity ^a			
			Any R&D ^b		Other ^c	
	Number	SE	Number	SE	Number	SE
Anthropology	11,100	325	3,250	275	7,850	325
Area, ethnic, cultural, gender, and group studies	4,450	150	700	125	3,700	175
Geography and cartography	4,850	200	1,700	175	3,200	175
International relations and national security studies	2,350	150	450	75	1,900	125
Linguistics	5,100	225	1,150	125	3,950	225
Urban studies, affairs	1,350	100	500	75	850	100
Social sciences, other	9,350	250	2,750	225	6,600	275
Engineering	196,750	1,300	87,550	1,350	109,150	1,500
Aerospace, aeronautical, and astronautical engineering	8,150	200	3,750	200	4,400	225
Chemical engineering	23,700	500	10,650	550	13,050	600
Civil engineering	21,500	475	6,900	400	14,600	575
Electrical and computer engineering	54,000	675	25,250	775	28,750	775
Computer engineering	8,150	200	3,250	250	4,900	275
Electrical, electronics, and communications engineering	45,850	650	22,000	725	23,850	725
Mechanical engineering	28,800	625	13,700	650	15,100	625
Metallurgical and materials engineering	18,300	450	8,950	475	9,350	500
Other engineering	42,300	550	18,400	625	23,900	600
Agricultural engineering	1,650	100	650	75	1,000	100
Bioengineering and biomedical engineering	16,350	325	7,950	375	8,450	350
Engineering mechanics, physics, and science	4,300	200	1,850	175	2,450	175
Industrial and manufacturing engineering	9,150	300	3,350	300	5,750	300
Nuclear engineering	3,400	150	1,400	125	1,950	150
Engineering, other	7,500	225	3,150	225	4,300	250
Health	44,000	600	16,300	550	27,700	675
Communication disorders sciences and services	2,950	150	850	100	2,100	125
Hospital and medical administration services	1,300	75	500	75	800	75
Pharmacy, pharmaceutical sciences, and administration	8,550	250	4,350	300	4,200	250
Public health	10,400	250	4,650	250	5,750	275
Registered nursing, nursing administration, nursing research	9,100	325	2,250	250	6,900	325
Health sciences, other	11,650	325	3,700	250	7,950	350

SE = standard error.

^a Primary work activity on principal job.

^b R&D is defined as applied research, basic research, and experimental 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 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 16

U.S. residing employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2023

(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				
All locations	908,700	2,300	667,950	2,050	235,050	1,175	36,350	550	38,500	600	141,800	1,125	112,100	900	104,100	875	196,750	1,300	44,000	600		
New England	86,300	1,450	65,850	1,150	26,900	725	2,650	250	3,700	300	14,500	600	8,650	500	9,450	425	16,450	775	3,950	350		
Connecticut	14,250	675	10,450	575	3,650	350	300	100	600	150	2,300	250	1,950	250	1,650	225	3,050	325	750	150		
Maine	2,800	250	2,450	250	600	125	D	D	150	50	500	125	650	175	500	100	250	125	50	50		
Massachusetts	59,700	1,425	45,150	1,100	20,200	675	2,050	225	2,500	300	10,400	575	4,450	375	5,550	400	11,700	725	2,850	300		
New Hampshire	3,800	350	3,050	325	1,150	175	150	75	100	50	500	125	700	175	500	125	550	100	150	50		
Rhode Island	3,550	325	2,900	275	750	150	100	50	200	100	550	125	550	125	750	150	500	125	100	50		
Vermont	2,200	275	1,800	250	550	100	D	D	100	50	350	100	350	100	450	150	400	125	S	S		
Middle Atlantic	122,250	1,925	94,700	1,525	30,300	950	5,000	400	6,700	425	19,300	800	17,500	600	15,950	700	22,150	875	5,400	350		
New Jersey	23,350	850	16,950	750	6,100	475	700	150	1,400	225	4,450	400	2,350	250	1,900	250	4,900	400	1,500	200		
New York	61,750	1,375	50,400	1,225	14,700	675	3,100	325	3,450	300	9,200	550	10,200	525	9,800	575	9,400	575	1,950	200		
Pennsylvania	37,150	1,000	27,400	825	9,500	525	1,200	200	1,850	275	5,700	400	4,950	350	4,200	325	7,850	500	1,900	200		
East North Central	103,650	1,725	75,900	1,400	26,300	875	3,300	325	5,050	375	16,350	650	13,100	625	11,750	525	21,850	775	5,850	375		
Illinois	30,150	875	22,600	775	6,650	425	1,300	225	1,550	225	5,150	350	4,200	375	3,700	325	6,000	425	1,550	200		
Indiana	13,550	675	9,850	500	3,450	250	600	150	850	150	2,050	250	1,200	175	1,700	250	2,900	300	800	175		
Michigan	22,000	850	14,900	700	5,100	400	700	150	750	125	2,850	300	2,950	300	2,500	250	6,000	475	1,100	175		
Ohio	25,350	950	18,550	750	6,900	475	550	150	1,250	225	4,400	375	3,300	350	2,150	250	5,150	400	1,600	200		
Wisconsin	12,600	525	10,000	450	4,200	325	150	50	600	125	1,900	250	1,450	175	1,700	225	1,850	250	800	125		
West North Central	48,650	1,000	37,450	900	15,150	625	950	175	2,000	250	6,250	450	7,250	450	5,800	400	8,400	450	2,850	250		
Iowa	6,600	450	4,950	400	2,200	275	250	125	350	100	950	200	600	125	700	125	1,300	250	350	100		
Kansas	5,000	375	4,250	350	1,450	225	150	75	300	75	450	125	1,000	150	850	175	500	125	300	75		
Minnesota	16,750	600	12,050	525	4,000	300	300	100	650	150	2,600	300	2,650	300	1,800	200	3,750	300	950	150		
Missouri	12,950	650	10,400	550	4,650	350	200	75	400	100	1,600	225	1,800	275	1,800	225	1,850	250	650	150		
Nebraska	4,100	325	3,200	275	1,700	225	50	25	150	50	250	75	650	125	400	125	500	125	350	100		
North Dakota	1,450	200	1,100	175	600	150	D	D	D	D	200	75	200	75	100	50	200	100	150	75		
South Dakota	1,850	250	1,450	225	650	175	D	D	100	50	150	75	350	125	200	75	300	100	100	50		
South Atlantic	173,350	2,050	133,100	1,950	48,150	950	5,850	425	7,300	425	25,450	875	20,550	675	25,800	725	29,800	875	10,400	475		
Delaware	4,050	325	3,250	300	1,000	200	D	D	200	75	1,150	175	500	125	350	100	600	125	200	75		
District of Columbia	19,500	625	16,100	575	3,300	325	300	75	550	125	2,600	275	1,750	225	7,650	450	2,400	250	1,000	200		
Florida	24,200	800	17,700	700	6,000	375	950	150	850	150	2,550	300	4,600	375	2,700	225	4,800	400	1,700	200		
Georgia	20,500	750	15,500	575	5,650	375	750	175	1,150	150	2,150	250	3,150	325	2,650	250	3,550	375	1,450	225		
Maryland	39,450	1,150	31,150	1,025	14,400	700	1,200	225	1,450	225	7,100	425	3,050	275	3,900	325	6,050	400	2,300	225		
North Carolina	27,700	875	21,000	775	8,950	475	950	200	1,450	175	3,450	300	3,400	350	2,850	250	4,600	350	2,050	275		
South Carolina	7,300	450	5,350	425	1,650	200	150	75	400	125	1,350	250	1,000	200	800	150	1,500	200	450	125		

TABLE 16

U.S. residing employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2023

(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		
Virginia	28,300	875	21,200	725	6,300	400	1,500	225	1,300	150	4,750	350	2,850	275	4,450	300	5,950	525	1,150	175
West Virginia	2,350	275	1,850	250	900	175	D	D	D	D	300	100	250	125	350	100	350	125	150	75
East South Central	29,150	825	21,550	650	8,050	450	850	175	1,200	150	4,100	300	4,150	325	3,200	275	5,700	450	1,900	200
Alabama	8,250	450	5,900	425	2,250	200	200	75	500	125	1,050	175	1,100	200	800	150	1,800	250	500	100
Kentucky	6,000	500	4,650	400	1,950	300	150	75	250	75	700	125	800	175	750	125	900	200	450	100
Mississippi	3,150	250	2,350	200	1,050	150	S	S	50	25	350	100	400	100	500	100	550	125	250	75
Tennessee	11,750	550	8,650	450	2,750	250	450	150	450	100	2,000	225	1,800	225	1,200	150	2,400	275	700	125
West South Central	70,500	1,600	49,500	1,300	16,700	600	1,900	200	2,750	275	10,550	575	9,950	550	7,600	450	17,050	775	3,950	300
Arkansas	4,400	375	3,650	350	1,500	225	50	25	150	75	600	200	600	125	800	150	400	100	350	100
Louisiana	6,150	400	5,050	325	1,750	225	100	75	350	100	950	150	800	150	1,050	150	850	150	250	75
Oklahoma	5,350	425	4,100	350	1,650	225	50	50	150	50	950	200	750	175	550	100	950	175	300	75
Texas	54,600	1,450	36,700	1,125	11,800	575	1,650	175	2,150	250	8,100	525	7,750	500	5,200	400	14,900	750	3,050	275
Mountain	60,950	1,225	44,100	950	13,950	600	1,450	225	2,150	225	11,400	475	8,500	425	6,550	400	14,300	675	2,550	225
Arizona	13,650	625	9,400	525	2,500	250	350	100	400	75	2,300	225	2,000	250	1,850	250	3,800	450	400	100
Colorado	20,100	800	14,850	650	4,700	375	500	125	650	125	4,250	275	2,700	300	2,050	225	4,300	375	950	150
Idaho	3,400	300	2,500	225	1,200	200	D	D	100	50	500	100	450	125	200	75	850	175	D	D
Montana	2,600	225	2,250	225	1,100	150	D	D	100	50	450	100	250	75	300	75	250	100	100	50
Nevada	2,950	275	2,250	225	700	150	D	D	100	50	600	150	500	125	300	100	550	150	100	50
New Mexico	8,450	450	5,250	350	1,150	175	150	75	300	100	2,100	250	900	200	600	125	2,950	275	250	75
Utah	8,700	500	6,500	400	2,150	225	400	100	450	100	1,150	175	1,400	225	1,050	200	1,500	225	700	125
Wyoming	1,100	200	1,000	175	300	100	D	D	D	D	150	50	300	125	200	100	S	S	D	D
Pacific	207,350	2,025	140,600	1,900	47,950	1,050	14,150	625	7,350	400	32,800	1,000	21,250	725	17,100	650	59,850	1,100	6,900	425
Alaska	1,600	200	1,450	200	650	150	D	D	D	D	350	75	200	75	150	75	150	75	S	S
California	156,900	1,825	104,700	1,750	36,300	1,050	10,650	600	5,450	375	24,850	875	15,250	600	12,200	600	47,100	975	5,100	400
Hawaii	3,200	325	2,750	275	900	175	D	D	S	S	600	100	650	150	450	100	400	150	50	50
Oregon	16,250	700	10,500	525	3,450	325	400	100	350	100	2,800	300	1,850	200	1,650	225	5,200	450	550	100
Washington	29,400	875	21,200	725	6,700	350	2,950	325	1,400	200	4,200	400	3,300	375	2,650	275	7,000	475	1,200	200
Puerto Rico	2,800	250	2,250	225	550	100	*	*	50	25	500	100	900	175	250	75	450	150	S	S
U.S. territories and other areas	3,750	400	2,900	300	1,050	200	150	75	250	100	450	150	350	125	700	150	700	225	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.

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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 17

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2023

(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	341,350	2,475	113,000	1,775	76,550	1,250	65,450	1,175	17,700	725	1,200	175	67,450	1,300
Male	199,700	2,000	77,350	1,525	44,050	1,125	33,900	875	8,150	525	700	150	35,500	975
Female	141,650	1,600	35,650	900	32,500	750	31,550	725	9,550	500	500	125	31,950	775
Science	272,100	2,250	90,150	1,500	60,750	1,250	50,250	1,000	15,100	675	1,050	175	54,800	1,075
Male	156,000	1,775	60,650	1,300	34,700	1,075	25,600	775	6,850	475	650	150	27,550	775
Female	116,100	1,475	29,500	850	26,050	725	24,650	675	8,250	475	400	100	27,250	725
Biological, agricultural, and environmental life sciences	94,000	1,250	26,600	800	18,150	650	18,200	625	4,550	450	450	150	26,050	700
Male	51,000	1,050	17,900	725	9,750	525	9,300	525	1,750	300	300	125	11,950	525
Female	43,000	900	8,700	425	8,400	425	8,900	400	2,800	300	150	50	14,100	575
Agricultural and food sciences	7,200	325	2,850	275	1,200	150	1,250	150	300	125	S	S	1,500	150
Male	4,750	300	2,200	250	750	125	700	100	250	125	D	D	800	125
Female	2,400	175	650	125	450	75	550	100	100	25	D	D	700	100
Biochemistry and biophysics	10,550	550	3,450	350	2,050	250	1,450	225	550	175	D	D	3,050	300
Male	6,350	425	2,500	325	1,100	200	850	175	300	125	D	D	1,600	225
Female	4,200	350	950	150	950	175	600	125	250	125	D	D	1,500	225
Cell, cellular biology, and molecular biology	12,200	575	2,850	275	2,600	300	2,150	275	600	175	D	D	4,000	325
Male	6,400	450	1,700	225	1,300	225	1,300	225	S	S	D	D	1,950	275
Female	5,850	400	1,100	175	1,300	200	850	175	500	150	D	D	2,050	250
Microbiological sciences and immunology	8,900	450	2,100	225	1,950	250	1,900	225	550	150	D	D	2,400	225
Male	4,400	400	1,300	200	1,100	225	850	175	S	S	D	D	1,000	150
Female	4,450	250	800	125	850	125	1,050	150	350	100	D	D	1,400	150
Natural resources and conservation	3,350	175	1,000	125	750	100	600	75	250	100	D	D	800	100
Male	2,050	150	700	100	400	75	300	75	150	75	D	D	400	100
Female	1,300	100	300	50	300	75	250	50	100	25	D	D	350	75
Zoology	3,150	225	1,450	175	700	125	350	75	100	50	D	D	550	100
Male	2,000	175	1,100	175	500	100	150	50	D	D	D	D	150	75
Female	1,150	125	300	75	200	75	200	75	50	50	D	D	350	75
Other biological sciences	48,650	850	13,000	600	8,950	475	10,550	500	2,200	250	200	75	13,750	425
Male	25,050	725	8,400	525	4,600	350	5,150	375	750	150	100	50	6,050	350
Female	23,650	550	4,600	325	4,350	300	5,400	325	1,450	200	100	50	7,700	350
Computer and information sciences	12,400	550	4,200	400	3,400	275	3,050	275	500	150	D	D	1,200	175
Male	9,100	500	3,350	350	2,550	250	2,050	225	350	100	D	D	800	125
Female	3,300	250	850	175	800	125	1,000	150	150	50	D	D	450	125
Mathematics and statistics	19,900	725	7,950	450	5,150	400	3,800	275	1,250	150	D	D	1,700	200
Male	14,450	550	6,450	400	3,650	325	2,450	250	850	125	D	D	1,050	150

TABLE 17

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2023

(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
Female	5,450	350	1,500	175	1,500	175	1,350	175	400	75	D	D	650	150
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	46,050	950	16,200	675	8,700	500	6,400	350	2,600	250	150	50	12,000	500
Male	32,650	950	12,700	650	6,150	425	3,850	325	1,500	225	100	50	8,400	450
Female	13,400	450	3,500	325	2,550	225	2,550	200	1,150	150	50	25	3,600	250
Astronomy and astrophysics	2,900	200	900	125	500	100	500	75	100	50	D	D	900	125
Male	2,100	175	700	125	400	75	300	75	50	50	D	D	650	125
Female	800	100	200	50	100	50	200	50	50	25	D	D	250	50
Chemistry, except biochemistry	19,800	725	6,950	450	4,100	375	2,650	250	1,350	175	D	D	4,750	375
Male	13,250	625	5,200	425	2,800	325	1,500	225	650	125	D	D	3,100	300
Female	6,550	375	1,700	250	1,300	175	1,150	150	700	125	D	D	1,700	225
Geosciences, atmospheric sciences, and ocean sciences	10,100	275	3,300	200	1,800	150	1,800	150	500	100	100	50	2,600	175
Male	6,400	250	2,450	200	1,150	125	850	125	250	75	50	50	1,600	150
Female	3,750	175	850	100	600	75	950	100	250	50	50	25	1,050	100
Physics	13,250	625	5,100	450	2,300	300	1,450	200	650	175	D	D	3,750	300
Male	10,900	600	4,300	400	1,800	275	1,250	200	500	150	D	D	3,050	300
Female	2,300	250	750	175	550	150	200	75	150	75	D	D	650	100
Psychology	38,600	850	13,100	575	8,750	475	7,350	400	2,050	225	S	S	7,250	450
Male	14,550	475	6,200	400	3,350	300	2,200	225	600	125	D	D	2,100	250
Female	24,050	700	6,850	425	5,400	350	5,150	350	1,450	175	S	S	5,150	400
Social sciences	61,150	1,025	22,100	750	16,600	525	11,450	425	4,200	350	300	75	6,550	400
Male	34,200	800	14,000	575	9,200	475	5,750	350	1,800	225	200	75	3,250	325
Female	26,900	725	8,050	475	7,400	375	5,700	300	2,350	250	100	50	3,300	225
Economics	13,950	600	5,800	425	3,750	325	2,650	250	800	200	D	D	900	175
Male	10,050	525	4,550	400	2,850	300	1,650	225	300	125	D	D	700	150
Female	3,900	275	1,250	175	900	150	1,000	150	500	175	D	D	250	75
Political science and government	13,200	525	5,250	350	3,650	325	2,550	250	600	150	D	D	1,150	175
Male	8,450	450	3,500	325	2,400	275	1,450	175	350	125	D	D	700	150
Female	4,750	275	1,700	225	1,250	175	1,100	150	200	75	D	D	450	100
Sociology, demography, and population studies	10,600	400	3,750	300	2,850	250	2,000	200	550	150	100	50	1,300	200
Male	4,750	300	1,900	225	1,100	200	900	175	250	125	D	D	500	125
Female	5,850	325	1,900	200	1,750	200	1,100	125	300	100	D	D	800	150
Other social sciences	23,400	550	7,300	400	6,350	300	4,250	250	2,250	175	100	50	3,150	250
Male	10,950	375	4,050	275	2,800	225	1,750	175	900	125	50	50	1,350	200
Female	12,400	400	3,250	275	3,550	250	2,500	175	1,350	125	S	S	1,800	175
Engineering	47,200	1,100	17,100	725	9,600	575	9,250	500	1,750	200	100	50	9,450	525

TABLE 17

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2023

(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	36,750	925	14,500	675	7,700	500	6,500	425	1,050	175	D	D	7,000	450
Female	10,400	525	2,600	225	1,900	200	2,700	275	700	125	D	D	2,450	200
Aerospace, aeronautical, and astronautical engineering	2,350	225	950	175	400	75	500	125	D	D	D	D	500	100
Male	2,050	200	900	175	300	75	450	125	D	D	D	D	400	75
Female	300	75	50	25	100	50	50	25	D	D	D	D	100	50
Chemical engineering	3,400	300	1,500	225	550	150	650	150	150	75	D	D	600	125
Male	2,450	300	1,250	250	450	150	350	100	D	D	D	D	400	100
Female	950	175	250	75	100	50	300	100	D	D	D	D	250	75
Civil engineering	6,900	425	2,500	325	1,550	225	1,500	225	200	75	D	D	1,150	200
Male	5,250	375	2,050	300	1,250	200	1,000	225	150	75	D	D	800	175
Female	1,650	175	500	125	300	75	450	100	100	50	D	D	300	75
Electrical and computer engineering	10,750	575	4,600	425	2,300	300	1,850	200	350	100	D	D	1,650	225
Male	9,050	550	3,950	400	2,100	300	1,400	175	150	75	D	D	1,450	225
Female	1,700	200	650	125	250	75	400	100	200	75	D	D	200	75
Mechanical engineering	7,900	550	2,550	350	1,950	275	1,600	275	350	100	D	D	1,500	225
Male	6,650	500	2,250	350	1,650	250	1,250	250	250	100	D	D	1,250	225
Female	1,300	175	300	100	250	75	350	125	100	50	D	D	250	75
Metallurgical and materials engineering	2,800	300	750	200	300	100	400	100	150	75	D	D	1,200	200
Male	2,150	300	600	175	200	100	250	75	S	S	D	D	950	175
Female	650	100	100	75	100	50	150	75	D	D	D	D	250	75
Other engineering	13,100	550	4,250	325	2,550	275	2,800	250	550	125	D	D	2,850	225
Male	9,200	475	3,500	300	1,750	225	1,850	200	350	100	D	D	1,750	200
Female	3,850	275	750	100	800	150	950	150	200	75	D	D	1,100	125
Health	22,100	575	5,750	350	6,200	350	5,950	300	900	175	S	S	3,250	250
Male	6,950	400	2,200	250	1,700	175	1,750	175	300	100	D	D	950	125
Female	15,150	475	3,550	275	4,500	300	4,200	275	600	125	D	D	2,250	225

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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: 2023

(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	101,800	1,275	239,550	2,100	950	150	112,050	1,775	12,300	500	64,250	1,225	44,250	950	21,200	750	6,950	425	10,750	575	350	75	850	150	37,000	800	30,450	925
Male	52,400	950	147,250	1,775	550	125	76,800	1,525	6,350	425	37,750	1,075	22,100	675	11,800	625	3,550	350	4,650	400	200	75	450	125	19,700	650	15,850	700
Female	49,400	875	92,250	1,300	400	100	35,200	875	5,950	325	26,500	725	22,150	625	9,400	400	3,400	250	6,100	400	150	50	350	100	17,300	575	14,650	550
Science	78,000	1,075	194,100	1,875	700	125	89,400	1,500	9,100	450	51,650	1,150	32,750	800	17,550	650	5,800	400	9,350	525	300	75	750	150	29,350	675	25,450	750
Male	39,300	800	116,700	1,525	400	100	60,250	1,300	4,700	400	30,000	975	16,100	600	9,500	575	2,950	325	3,900	350	200	75	450	125	14,900	525	12,650	600
Female	38,700	775	77,400	1,250	350	75	29,200	825	4,400	275	21,650	700	16,600	525	8,000	400	2,800	250	5,450	400	100	50	300	100	14,450	525	12,800	475
Biological, agricultural, and environmental life sciences	27,550	675	66,450	1,125	100	50	26,500	800	1,750	175	16,400	650	9,150	450	9,050	450	1,400	200	3,150	375	150	50	300	125	15,000	475	11,050	550
Male	13,300	525	37,700	900	S	S	17,850	725	850	150	8,950	525	4,550	325	4,750	400	700	175	1,050	225	100	50	200	125	7,100	350	4,850	425
Female	14,250	450	28,750	775	D	D	8,650	425	950	125	7,450	425	4,600	275	4,300	300	700	100	2,050	300	D	D	100	50	7,900	375	6,200	400
Computer and information sciences	4,200	300	8,200	475	100	50	4,150	400	850	200	2,500	250	2,550	225	500	150	150	75	350	100	D	D	D	D	500	100	700	150
Male	2,850	250	6,250	425	S	S	3,300	350	600	175	1,950	225	1,700	200	350	125	100	75	200	75	D	D	D	D	400	100	400	100
Female	1,350	125	1,950	225	D	D	850	175	250	100	550	100	850	125	S	S	50	25	100	50	D	D	D	D	150	50	300	125
Mathematics and statistics	5,700	325	14,150	600	D	D	7,900	450	750	125	4,450	375	3,050	250	750	150	700	125	550	100	D	D	D	D	1,200	175	550	100
Male	3,650	250	10,800	475	D	D	6,400	375	450	100	3,250	325	2,000	200	450	125	450	100	400	100	D	D	D	D	700	100	350	100
Female	2,050	225	3,350	250	D	D	1,500	175	300	75	1,200	150	1,100	175	300	75	200	75	150	50	D	D	D	D	450	125	200	75
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	12,450	450	33,600	875	S	S	16,150	675	800	125	7,900	475	4,050	275	2,350	250	900	150	1,700	200	S	S	100	50	6,600	325	5,400	350
Male	7,750	400	24,900	825	D	D	12,650	650	500	100	5,650	425	2,250	250	1,600	225	450	100	1,050	175	D	D	50	25	4,450	300	3,950	300
Female	4,700	250	8,700	400	D	D	3,500	325	300	75	2,250	225	1,800	175	750	125	500	125	650	125	D	D	50	25	2,150	200	1,450	175
Psychology	10,350	425	28,250	675	150	75	12,900	550	1,500	200	7,300	450	5,050	275	2,300	250	650	125	1,350	200	D	D	S	S	3,000	300	4,300	350
Male	3,200	250	11,300	450	D	D	6,150	400	500	125	2,850	300	1,350	175	850	175	300	100	300	100	D	D	D	D	950	175	1,150	200
Female	7,150	400	16,900	575	100	50	6,800	425	950	150	4,400	350	3,700	275	1,450	200	350	100	1,050	150	D	D	D	D	2,000	250	3,150	300
Social sciences	17,700	525	43,450	925	250	75	21,800	725	3,500	300	13,100	475	8,850	350	2,600	275	1,950	250	2,250	250	50	50	200	75	3,100	250	3,450	325
Male	8,500	400	25,700	750	100	75	13,900	575	1,800	250	7,350	450	4,250	275	1,500	250	950	200	850	150	50	25	150	75	1,300	200	1,950	275
Female	9,200	375	17,750	600	150	50	7,950	450	1,700	200	5,750	325	4,600	275	1,100	150	1,000	150	1,350	200	D	D	100	50	1,800	175	1,500	150
Engineering	14,650	600	32,500	950	100	50	17,000	725	1,500	225	8,100	550	6,700	400	2,550	300	800	150	900	150	D	D	50	50	5,500	375	3,950	325
Male	10,350	500	26,450	900	100	50	14,400	675	1,200	200	6,500	500	4,550	350	1,950	275	450	125	550	125	D	D	D	D	4,050	325	2,950	300
Female	4,350	325	6,050	350	D	D	2,550	225	350	75	1,600	175	2,150	225	550	125	350	100	350	75	D	D	D	D	1,450	175	1,000	125
Health	9,150	350	12,950	450	100	50	5,650	350	1,700	200	4,500	300	4,800	275	1,150	150	400	100	500	150	D	D	D	D	2,150	225	1,100	150
Male	2,800	200	4,150	325	D	D	2,150	250	450	100	1,250	150	1,450	150	300	100	100	50	150	100	D	D	D	D	750	100	250	75
Female	6,350	325	8,800	350	S	S	3,500	275	1,200	175	3,300	275	3,400	250	800	125	250	75	350	100	D	D	D	D	1,400	200	850	125

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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: 2023

(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	341,350	2,475	113,000	1,775	76,550	1,250	65,450	1,175	17,700	725	1,200	175	67,450	1,300
Hispanic or Latino ^a	20,100	450	5,300	275	4,300	225	4,850	275	1,100	150	100	50	4,450	250
Not Hispanic or Latino ^b														
American Indian or Alaska Native	650	100	200	75	100	50	200	50	D	D	D	D	100	50
Asian	72,100	1,450	21,200	975	14,000	725	16,300	725	2,800	300	100	50	17,700	675
Black or African American	14,450	450	3,300	250	3,850	275	3,750	250	850	125	50	25	2,700	200
White	227,850	2,050	81,600	1,500	52,900	1,100	38,950	825	12,650	625	1,000	175	40,750	950
Other race ^c	6,200	325	1,350	175	1,400	200	1,400	175	250	75	D	D	1,750	175
Science	272,100	2,250	90,150	1,500	60,750	1,250	50,250	1,000	15,100	675	1,050	175	54,800	1,075
Hispanic or Latino ^a	16,550	450	4,250	275	3,450	225	3,950	275	950	150	100	50	3,800	250
Not Hispanic or Latino ^b														
American Indian or Alaska Native	500	100	150	50	100	50	200	50	D	D	D	D	50	50
Asian	51,400	1,200	14,500	775	10,150	650	11,300	625	2,300	275	50	50	13,050	525
Black or African American	11,400	425	2,800	250	2,950	250	2,900	250	700	125	50	25	2,000	200
White	186,850	1,850	67,150	1,250	42,900	1,075	30,800	725	10,900	575	850	175	34,300	800
Other race ^c	5,350	325	1,250	175	1,200	175	1,100	150	250	50	D	D	1,550	175
Biological, agricultural, and environmental life sciences	94,000	1,250	26,600	800	18,150	650	18,200	625	4,550	450	450	150	26,050	700
Hispanic or Latino ^a	5,700	300	1,100	125	950	125	1,300	125	300	75	D	D	2,050	200
Not Hispanic or Latino ^b														
American Indian or Alaska Native	50	25	D	D	S	S	50	25	D	D	D	D	D	D
Asian	19,850	625	4,300	400	3,450	400	4,550	450	750	175	D	D	6,750	375
Black or African American	3,050	225	500	75	700	150	950	125	150	50	D	D	750	100
White	63,600	1,125	20,500	750	12,650	575	11,000	425	3,250	375	350	125	15,850	550
Other race ^c	1,750	175	250	100	400	125	350	75	100	50	D	D	600	75
Computer and information sciences	12,400	550	4,200	400	3,400	275	3,050	275	500	150	D	D	1,200	175
Hispanic or Latino ^a	500	75	100	50	150	50	100	25	50	25	D	D	50	50
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	4,550	400	1,350	250	1,300	225	1,300	175	S	S	D	D	400	125
Black or African American	500	125	150	100	250	75	100	50	D	D	D	D	D	D
White	6,650	400	2,400	300	1,700	200	1,550	175	300	75	D	D	700	125
Other race ^c	S	S	S	S	D	D	S	S	D	D	D	D	D	D
Mathematics and statistics	19,900	725	7,950	450	5,150	400	3,800	275	1,250	150	D	D	1,700	200

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: 2023

(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
Hispanic or Latino ^a	1,150	150	450	100	200	50	350	75	50	25	D	D	100	50
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	4,950	425	1,900	300	1,200	200	1,300	200	200	75	D	D	400	100
Black or African American	650	100	100	50	250	75	150	50	100	50	D	D	D	D
White	12,950	550	5,450	350	3,500	325	1,950	225	900	125	D	D	1,100	175
Other race ^c	250	50	50	25	D	D	50	25	D	D	D	D	100	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	46,050	950	16,200	675	8,700	500	6,400	350	2,600	250	150	50	12,000	500
Hispanic or Latino ^a	1,850	175	500	100	400	75	400	125	50	25	D	D	500	75
Not Hispanic or Latino ^b														
American Indian or Alaska Native	*	*	D	D	D	D	D	D	D	D	D	D	D	D
Asian	10,000	600	3,000	400	1,250	250	1,350	175	500	150	*	*	3,850	325
Black or African American	1,250	175	350	75	350	100	150	50	150	50	D	D	300	100
White	32,100	775	12,200	575	6,450	375	4,350	300	1,900	200	100	50	7,100	325
Other race ^c	800	125	150	50	200	75	100	50	50	25	D	D	250	75
Psychology	38,600	850	13,100	575	8,750	475	7,350	400	2,050	225	S	S	7,250	450
Hispanic or Latino ^a	2,650	225	650	125	650	125	700	125	100	75	D	D	550	100
Not Hispanic or Latino ^b														
American Indian or Alaska Native	100	50	D	D	D	D	50	50	D	D	D	D	D	D
Asian	3,600	350	1,250	250	800	200	550	125	200	100	D	D	800	125
Black or African American	2,250	200	650	125	450	125	500	100	150	75	D	D	500	125
White	28,750	725	10,200	475	6,550	375	5,350	375	1,500	200	S	S	5,050	425
Other race ^c	1,200	150	350	100	250	100	200	75	50	25	D	D	350	75
Social sciences	61,150	1,025	22,100	750	16,600	525	11,450	425	4,200	350	300	75	6,550	400
Hispanic or Latino ^a	4,650	300	1,450	200	1,150	150	1,150	150	350	125	D	D	550	100
Not Hispanic or Latino ^b														
American Indian or Alaska Native	250	75	100	50	50	50	100	50	D	D	D	D	D	D
Asian	8,500	500	2,700	350	2,150	300	2,250	225	550	150	D	D	850	150
Black or African American	3,700	275	1,100	150	950	150	1,050	150	150	50	D	D	450	75
White	42,800	825	16,450	575	12,000	450	6,550	350	3,050	275	250	75	4,500	325
Other race ^c	1,200	150	350	100	250	50	350	100	D	D	D	D	250	75
Engineering	47,200	1,100	17,100	725	9,600	575	9,250	500	1,750	200	100	50	9,450	525
Hispanic or Latino ^a	2,350	200	850	150	550	100	450	100	100	50	D	D	450	100

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: 2023

(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	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Asian	16,950	775	5,950	525	2,850	350	3,950	350	250	100	D	D	3,950	375
Black or African American	1,300	150	300	100	350	75	200	75	150	50	D	D	300	75
White	26,100	800	9,900	550	5,800	400	4,550	375	1,200	175	100	50	4,600	350
Other race ^c	400	75	50	25	100	50	100	50	50	25	D	D	150	50
Health	22,100	575	5,750	350	6,200	350	5,950	300	900	175	S	S	3,250	250
Hispanic or Latino ^a	1,200	125	200	50	300	75	450	75	50	25	D	D	200	75
Not Hispanic or Latino ^b														
American Indian or Alaska Native	100	50	D	D	D	D	D	D	D	D	D	D	D	D
Asian	3,750	350	750	175	1,000	175	1,050	150	200	100	D	D	700	125
Black or African American	1,800	175	200	50	550	100	600	100	S	S	D	D	350	100
White	14,900	500	4,550	300	4,200	300	3,650	250	550	125	S	S	1,900	200
Other race ^c	400	75	S	S	100	50	200	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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one 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. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 20

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2023

(Number and SE)

Field of study and sex	All employed		Tenured		Not tenured				Tenure not applicable	
	Number	SE	Number	SE	On tenure track		Not on tenure track		Number	SE
					Number	SE	Number	SE		
All fields	341,350	2,475	155,100	1,900	48,750	1,025	51,250	1,200	86,250	1,250
Male	199,700	2,000	101,850	1,725	26,300	875	26,300	925	45,300	975
Female	141,650	1,600	53,300	1,050	22,450	600	24,950	725	40,950	925
Science	272,100	2,250	124,200	1,625	37,050	875	40,750	1,075	70,100	1,075
Male	156,000	1,775	80,050	1,500	19,800	750	20,500	825	35,650	850
Female	116,100	1,475	44,150	1,000	17,250	525	20,250	675	34,450	850
Biological, agricultural, and environmental life sciences	94,000	1,250	34,100	950	13,050	550	16,650	750	30,200	675
Male	51,000	1,050	21,850	850	7,050	450	8,050	525	14,100	575
Female	43,000	900	12,200	500	6,000	375	8,650	450	16,100	550
Agricultural and food sciences	7,200	325	3,450	275	950	150	1,250	200	1,500	125
Male	4,750	300	2,500	250	550	125	900	200	800	125
Female	2,400	175	900	150	400	100	400	100	700	75
Biochemistry and biophysics	10,550	550	4,300	400	1,050	200	1,950	250	3,250	300
Male	6,350	425	2,950	325	600	175	1,150	200	1,700	250
Female	4,200	350	1,400	175	450	100	850	150	1,550	200
Cell, cellular biology, and molecular biology	12,200	575	3,700	350	1,650	275	2,250	375	4,600	325
Male	6,400	450	2,050	275	1,150	250	1,000	225	2,200	250
Female	5,850	400	1,700	200	500	125	1,250	250	2,400	275
Microbiological sciences and immunology	8,900	450	2,900	300	1,350	200	1,600	225	3,000	250
Male	4,400	400	1,750	250	700	200	750	175	1,250	175
Female	4,450	250	1,150	175	650	125	850	150	1,750	175
Natural resources and conservation	3,350	175	1,450	150	450	75	550	100	950	100
Male	2,050	150	1,000	125	200	50	300	75	500	100
Female	1,300	100	450	75	200	50	200	50	450	75
Zoology	3,150	225	1,800	175	300	75	350	100	650	125
Male	2,000	175	1,400	175	150	50	200	75	250	75
Female	1,150	125	400	75	150	75	150	75	400	75
Other biological sciences	48,650	850	16,450	650	7,300	375	8,700	475	16,200	500
Male	25,050	725	10,250	575	3,650	300	3,800	325	7,350	450
Female	23,650	550	6,200	325	3,600	275	4,950	325	8,850	375
Computer and information sciences	12,400	550	6,300	425	2,950	250	1,150	175	2,000	225
Male	9,100	500	4,900	375	2,100	250	850	150	1,300	175
Female	3,300	250	1,400	175	850	125	350	100	700	175
Mathematics and statistics	19,900	725	11,600	550	2,950	250	2,200	225	3,100	225

TABLE 20

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2023

(Number and SE)

Field of study and sex	All employed		Tenured		Not tenured				Tenure not applicable	
	Number	SE	Number	SE	On tenure track		Not on tenure track		Number	SE
					Number	SE	Number	SE		
Male	14,450	550	9,100	450	1,950	225	1,350	175	2,050	200
Female	5,450	350	2,550	200	1,000	150	850	150	1,050	125
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	46,050	950	21,150	775	4,650	350	6,500	400	13,750	525
Male	32,650	950	15,850	700	2,900	300	4,300	350	9,600	450
Female	13,400	450	5,300	375	1,750	200	2,200	200	4,150	275
Astronomy and astrophysics	2,900	200	1,250	150	350	75	550	100	750	100
Male	2,100	175	1,000	150	150	50	350	100	550	100
Female	800	100	250	50	150	50	150	50	250	50
Chemistry, except biochemistry	19,800	725	9,500	500	2,000	250	2,600	250	5,750	375
Male	13,250	625	6,700	450	1,250	225	1,600	225	3,700	300
Female	6,550	375	2,750	275	750	150	1,000	125	2,050	225
Geosciences, atmospheric sciences, and ocean sciences	10,100	275	4,350	225	1,200	125	1,700	150	2,850	175
Male	6,400	250	3,150	225	600	100	950	125	1,700	150
Female	3,750	175	1,200	100	650	100	750	75	1,150	125
Physics	13,250	625	6,100	475	1,100	175	1,750	250	4,350	325
Male	10,900	600	5,000	425	900	150	1,400	225	3,600	350
Female	2,300	250	1,100	200	200	75	300	125	700	125
Psychology	38,600	850	17,250	650	4,400	300	6,300	425	10,700	500
Male	14,550	475	7,850	425	1,250	175	1,950	250	3,550	300
Female	24,050	700	9,400	475	3,150	275	4,350	350	7,150	425
Social sciences	61,150	1,025	33,800	900	9,100	400	7,900	475	10,350	500
Male	34,200	800	20,550	725	4,600	325	4,000	375	5,050	425
Female	26,900	725	13,300	575	4,500	300	3,850	300	5,300	325
Economics	13,950	600	8,350	500	2,450	225	1,600	250	1,600	225
Male	10,050	525	6,600	475	1,600	225	800	200	1,050	200
Female	3,900	275	1,800	200	850	150	750	175	550	150
Political science and government	13,200	525	8,050	450	1,900	200	1,400	175	1,850	225
Male	8,450	450	5,400	375	1,000	150	900	150	1,150	200
Female	4,750	275	2,650	275	900	125	500	100	700	125
Sociology, demography, and population studies	10,600	400	5,900	325	1,500	150	1,100	200	2,100	225
Male	4,750	300	2,700	250	650	150	500	175	900	150
Female	5,850	325	3,250	250	850	125	550	125	1,200	175
Other social sciences	23,400	550	11,500	475	3,250	250	3,800	225	4,850	300
Male	10,950	375	5,850	325	1,350	175	1,750	175	2,000	225

TABLE 20

U.S. residing employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2023

(Number and SE)

Field of study and sex	All employed		Tenured		Not tenured				Tenure not applicable	
	Number	SE	Number	SE	On tenure track		Not on tenure track		Number	SE
					Number	SE	Number	SE		
Female	12,400	400	5,650	350	1,900	150	2,050	175	2,850	225
Engineering	47,200	1,100	22,550	850	7,650	450	6,050	450	10,950	550
Male	36,750	925	18,900	775	5,150	375	4,500	425	8,200	450
Female	10,400	525	3,650	275	2,500	250	1,550	175	2,750	225
Aerospace, aeronautical, and astronautical engineering	2,350	225	1,150	175	400	100	200	75	550	100
Male	2,050	200	1,000	175	350	100	200	75	450	100
Female	300	75	150	50	50	25	*	*	100	50
Chemical engineering	3,400	300	1,800	250	500	125	350	125	750	175
Male	2,450	300	1,500	250	250	100	250	100	500	150
Female	950	175	300	100	250	100	150	75	300	75
Civil engineering	6,900	425	3,350	325	1,200	200	1,000	175	1,300	200
Male	5,250	375	2,700	300	850	200	750	175	950	175
Female	1,650	175	700	125	400	100	250	75	350	75
Electrical and computer engineering	10,750	575	5,900	500	1,450	175	1,250	200	2,150	275
Male	9,050	550	5,200	475	1,050	150	900	175	1,900	275
Female	1,700	200	700	150	400	100	350	100	250	75
Mechanical engineering	7,900	550	4,050	400	1,250	225	1,050	250	1,600	225
Male	6,650	500	3,550	375	850	175	800	250	1,350	225
Female	1,300	175	450	125	350	125	250	75	200	75
Metallurgical and materials engineering	2,800	300	950	200	350	100	350	100	1,100	200
Male	2,150	300	750	200	250	75	300	100	900	175
Female	650	100	200	75	150	50	50	25	250	75
Other engineering	13,100	550	5,400	375	2,500	225	1,800	200	3,400	275
Male	9,200	475	4,200	350	1,550	200	1,300	150	2,150	225
Female	3,850	275	1,150	150	950	150	500	100	1,250	150
Health	22,100	575	8,350	425	4,050	275	4,450	300	5,250	375
Male	6,950	400	2,850	300	1,350	150	1,300	175	1,450	175
Female	15,150	475	5,500	300	2,700	200	3,150	250	3,800	300

* = suppressed when population estimate < 25.

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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: 2023

(Number and SE)

Field of study and sex	All employed				Tenured				Not tenured								Tenure not applicable			
	< 10		≥ 10		< 10		≥ 10		On tenure track				Not on tenure track				< 10		≥ 10	
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
All fields	101,800	1,275	239,550	2,100	8,850	475	146,250	1,875	33,900	875	14,850	600	17,750	675	33,500	1,000	41,300	750	44,950	1,025
Male	52,400	950	147,250	1,775	4,700	375	97,150	1,675	18,000	675	8,300	500	8,350	450	17,950	825	21,400	625	23,900	800
Female	49,400	875	92,250	1,300	4,200	275	49,100	1,025	15,950	525	6,500	375	9,400	475	15,550	575	19,850	575	21,100	725
Science	78,000	1,075	194,100	1,875	6,750	425	117,450	1,550	25,100	750	11,950	525	13,350	550	27,400	925	32,800	600	37,300	875
Male	39,300	800	116,700	1,525	3,450	325	76,600	1,450	13,300	575	6,500	450	6,200	400	14,300	750	16,350	500	19,300	725
Female	38,700	775	77,400	1,250	3,300	250	40,850	950	11,850	450	5,400	350	7,150	425	13,100	550	16,450	525	18,000	650
Biological, agricultural, and environmental life sciences	27,550	675	66,450	1,125	1,000	150	33,100	925	6,450	375	6,600	425	4,850	375	11,800	675	15,250	400	14,950	600
Male	13,300	525	37,700	900	450	125	21,400	825	3,600	300	3,400	350	2,050	225	5,950	500	7,200	375	6,900	425
Female	14,250	450	28,750	775	550	100	11,700	500	2,850	225	3,150	275	2,800	300	5,850	375	8,050	300	8,050	425
Computer and information sciences	4,200	300	8,200	475	700	175	5,600	400	2,450	225	500	150	400	75	800	150	650	100	1,350	225
Male	2,850	250	6,250	425	450	150	4,450	375	1,700	200	400	125	250	75	600	125	450	100	800	175
Female	1,350	125	1,950	225	250	100	1,150	150	750	100	100	50	150	50	200	100	200	50	500	175
Mathematics and statistics	5,700	325	14,150	600	600	125	11,000	525	2,450	250	500	125	1,000	150	1,200	175	1,650	150	1,450	175
Male	3,650	250	10,800	475	350	100	8,750	425	1,600	200	350	100	600	100	750	150	1,100	150	950	175
Female	2,050	225	3,350	250	300	75	2,250	200	800	150	150	75	400	125	450	100	550	100	500	100
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	12,450	450	33,600	875	550	100	20,600	775	3,100	250	1,550	225	2,050	200	4,450	325	6,800	325	6,950	375
Male	7,750	400	24,900	825	350	100	15,550	700	1,700	200	1,200	225	1,200	175	3,100	300	4,500	300	5,100	325
Female	4,700	250	8,700	400	200	50	5,100	375	1,400	175	350	100	850	125	1,350	175	2,300	175	1,850	200
Psychology	10,350	425	28,250	675	1,250	175	15,950	625	3,050	225	1,350	225	2,000	225	4,300	350	4,100	275	6,600	400
Male	3,200	250	11,300	450	450	125	7,400	425	800	150	400	125	600	125	1,350	225	1,350	175	2,200	250
Female	7,150	400	16,900	575	850	125	8,550	475	2,200	200	950	175	1,350	200	3,000	275	2,700	250	4,400	325
Social sciences	17,700	525	43,450	925	2,600	275	31,200	850	7,650	375	1,450	175	3,050	250	4,800	400	4,350	325	6,000	400
Male	8,500	400	25,700	750	1,400	200	19,100	700	3,850	300	750	150	1,500	175	2,500	325	1,750	225	3,300	350
Female	9,200	375	17,750	600	1,200	175	12,050	550	3,800	275	700	125	1,550	175	2,300	275	2,600	275	2,650	250
Engineering	14,650	600	32,500	950	1,200	225	21,350	875	5,550	375	2,100	250	2,200	250	3,850	375	5,700	375	5,250	400
Male	10,350	500	26,450	900	1,000	200	17,950	825	3,550	275	1,600	250	1,600	250	2,900	325	4,200	300	4,000	350
Female	4,350	325	6,050	350	250	75	3,400	250	2,000	225	500	100	600	125	950	150	1,500	175	1,250	150
Health	9,150	350	12,950	450	900	175	7,450	400	3,250	225	800	125	2,200	225	2,250	225	2,800	250	2,450	250
Male	2,800	200	4,150	325	300	75	2,600	275	1,150	150	200	75	550	100	750	150	850	125	600	125
Female	6,350	325	8,800	350	650	150	4,850	275	2,100	175	600	100	1,650	200	1,500	175	1,950	225	1,850	200

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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: 2023

(Number and SE)

Field of study, ethnicity, and race	All employed		Tenured		Not tenured				Tenure not applicable	
	Number	SE	Number	SE	On tenure track		Not on tenure track		Number	SE
					Number	SE	Number	SE		
All fields	341,350	2,475	155,100	1,900	48,750	1,025	51,250	1,200	86,250	1,250
Hispanic or Latino ^a	20,100	450	7,900	350	3,700	250	3,050	200	5,450	300
Not Hispanic or Latino ^b										
American Indian or Alaska Native	650	100	300	75	150	50	50	25	150	50
Asian	72,100	1,450	28,800	1,000	13,750	625	9,650	500	19,900	700
Black or African American	14,450	450	5,600	325	2,800	200	2,450	225	3,600	225
White	227,850	2,050	110,300	1,700	27,250	800	35,150	1,050	55,200	950
Other race ^c	6,200	325	2,250	225	1,100	150	800	125	2,000	175
Science	272,100	2,250	124,200	1,625	37,050	875	40,750	1,075	70,100	1,075
Hispanic or Latino ^a	16,550	450	6,450	350	3,050	225	2,450	200	4,600	275
Not Hispanic or Latino ^b										
American Indian or Alaska Native	500	100	200	75	150	50	50	25	100	50
Asian	51,400	1,200	19,750	850	9,500	550	7,550	425	14,650	550
Black or African American	11,400	425	4,600	300	2,100	175	1,950	200	2,800	200
White	186,850	1,850	91,200	1,400	21,400	700	28,100	925	46,150	800
Other race ^c	5,350	325	2,000	225	900	125	700	125	1,800	175
Biological, agricultural, and environmental life sciences	94,000	1,250	34,100	950	13,050	550	16,650	750	30,200	675
Hispanic or Latino ^a	5,700	300	1,500	150	950	125	1,050	125	2,200	200
Not Hispanic or Latino ^b										
American Indian or Alaska Native	50	25	D	D	S	S	D	D	S	S
Asian	19,850	625	5,100	450	3,750	375	3,700	350	7,300	400
Black or African American	3,050	225	900	150	550	100	550	100	1,050	125
White	63,600	1,125	26,100	825	7,500	425	11,100	625	18,950	575
Other race ^c	1,750	175	500	150	300	75	250	75	650	75
Computer and information sciences	12,400	550	6,300	425	2,950	250	1,150	175	2,000	225
Hispanic or Latino ^a	500	75	200	50	50	25	100	50	100	50
Not Hispanic or Latino ^b										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	4,550	400	2,300	300	1,300	175	250	100	700	150
Black or African American	500	125	250	75	150	50	S	S	S	S
White	6,650	400	3,450	350	1,350	175	750	150	1,050	150
Other race ^c	S	S	S	S	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: 2023

(Number and SE)

Field of study, ethnicity, and race	All employed		Tenured		Not tenured				Tenure not applicable	
	Number	SE	Number	SE	On tenure track		Not on tenure track		Number	SE
					Number	SE	Number	SE		
Mathematics and statistics	19,900	725	11,600	550	2,950	250	2,200	225	3,100	225
Hispanic or Latino ^a	1,150	150	600	100	200	75	200	50	150	50
Not Hispanic or Latino ^b										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	4,950	425	2,850	325	1,050	175	400	100	600	125
Black or African American	650	100	350	75	100	50	100	50	100	50
White	12,950	550	7,750	425	1,550	200	1,450	200	2,200	200
Other race ^c	250	50	S	S	50	25	D	D	100	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	46,050	950	21,150	775	4,650	350	6,500	400	13,750	525
Hispanic or Latino ^a	1,850	175	800	100	350	125	150	50	600	100
Not Hispanic or Latino ^b										
American Indian or Alaska Native	*	*	D	D	D	D	D	D	D	D
Asian	10,000	600	3,550	425	1,000	175	1,750	250	3,750	325
Black or African American	1,250	175	600	125	200	75	250	100	200	75
White	32,100	775	15,950	625	3,050	250	4,200	300	8,900	375
Other race ^c	800	125	300	75	50	25	150	50	300	75
Psychology	38,600	850	17,250	650	4,400	300	6,300	425	10,700	500
Hispanic or Latino ^a	2,650	225	1,000	150	500	100	450	125	700	125
Not Hispanic or Latino ^b										
American Indian or Alaska Native	100	50	D	D	50	50	D	D	D	D
Asian	3,600	350	1,650	250	300	100	500	150	1,100	175
Black or African American	2,250	200	750	150	400	100	500	125	600	125
White	28,750	725	13,300	550	3,000	300	4,700	350	7,750	425
Other race ^c	1,200	150	450	100	150	75	100	50	450	100
Social sciences	61,150	1,025	33,800	900	9,100	400	7,900	475	10,350	500
Hispanic or Latino ^a	4,650	300	2,350	250	950	150	500	75	850	150
Not Hispanic or Latino ^b										
American Indian or Alaska Native	250	75	150	75	50	25	D	D	50	50
Asian	8,500	500	4,300	400	2,100	225	950	175	1,150	175
Black or African American	3,700	275	1,800	175	750	100	450	125	750	100
White	42,800	825	24,700	725	4,950	325	5,850	375	7,250	400
Other race ^c	1,200	150	500	100	300	100	150	50	300	100

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: 2023

(Number and SE)

Field of study, ethnicity, and race	All employed		Tenured		Not tenured				Tenure not applicable	
	Number	SE	Number	SE	On tenure track		Not on tenure track		Number	SE
					Number	SE	Number	SE		
Engineering	47,200	1,100	22,550	850	7,650	450	6,050	450	10,950	550
Hispanic or Latino ^a	2,350	200	1,100	150	350	75	400	75	550	100
Not Hispanic or Latino ^b										
American Indian or Alaska Native	S	S	D	D	D	D	D	D	D	D
Asian	16,950	775	7,600	575	3,550	325	1,450	225	4,300	375
Black or African American	1,300	150	500	125	200	50	250	75	300	75
White	26,100	800	13,150	650	3,450	300	3,850	350	5,650	375
Other race ^c	400	75	100	50	50	50	100	50	150	50
Health	22,100	575	8,350	425	4,050	275	4,450	300	5,250	375
Hispanic or Latino ^a	1,200	125	350	75	300	75	250	75	300	75
Not Hispanic or Latino ^b										
American Indian or Alaska Native	100	50	D	D	D	D	D	D	D	D
Asian	3,750	350	1,450	250	650	125	650	150	1,000	150
Black or African American	1,800	175	500	100	500	100	300	50	500	100
White	14,900	500	5,950	350	2,400	225	3,200	275	3,400	300
Other race ^c	400	75	150	75	150	50	50	50	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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one 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. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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: 2023

(Number and SE)

Field of study and primary work activity	All employed		Secondary work activity													
			Computer applications		Design		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	Number	SE
All fields	341,350	2,475	11,000	550	5,500	375	85,650	1,225	123,150	1,675	62,550	1,150	25,450	825	28,050	725
Computer applications	3,600	275	na	na	200	75	400	100	2,050	200	350	125	150	75	450	125
Design	1,650	225	300	100	na	na	450	125	700	175	100	50	D	D	D	D
Management and administration	47,400	975	450	100	900	175	12,650	525	16,450	625	11,650	525	4,200	375	1,050	150
Research and development	140,000	1,700	7,600	425	3,400	300	35,650	900	36,200	1,050	45,400	1,125	5,300	400	6,400	375
Teaching	127,900	1,725	2,400	275	850	150	29,950	800	63,350	1,250	na	na	15,050	650	16,250	675
Other ^c	20,800	775	250	75	150	75	6,550	425	4,350	375	5,050	400	700	150	3,800	300
Science	272,100	2,250	8,300	500	3,600	300	69,600	1,200	96,050	1,500	49,700	1,025	21,350	750	23,400	675
Computer applications	2,650	250	na	na	100	50	300	75	1,750	200	200	75	100	50	250	100
Design	850	125	150	75	na	na	350	100	250	75	S	S	D	D	D	D
Management and administration	37,300	850	350	100	750	150	10,000	500	12,650	525	9,100	450	3,500	350	850	150
Research and development	109,950	1,550	5,600	350	2,100	225	29,150	875	26,750	900	36,200	975	4,500	350	5,600	350
Teaching	103,750	1,625	1,950	275	550	125	24,050	700	51,200	1,175	na	na	12,600	600	13,400	650
Other ^c	17,550	700	200	75	100	50	5,750	375	3,400	300	4,200	350	650	150	3,250	275
Biological, agricultural, and environmental life sciences	94,000	1,250	2,750	275	1,300	200	29,600	875	31,800	825	14,050	500	6,350	400	8,150	425
Computer applications	850	125	na	na	D	D	150	75	550	100	D	D	D	D	S	S
Design	150	50	50	50	na	na	S	S	S	S	D	D	D	D	D	D
Management and administration	14,700	575	150	75	250	125	4,050	350	5,900	375	2,900	250	1,150	200	300	75
Research and development	46,100	900	2,400	250	900	125	16,000	650	12,350	550	9,450	475	2,050	250	3,000	275
Teaching	24,700	700	100	50	100	50	6,950	425	11,150	525	na	na	2,950	300	3,450	350
Other ^c	7,450	425	D	D	D	D	2,350	225	1,800	250	1,650	225	200	75	1,400	200
Computer and information sciences	12,400	550	1,250	200	200	75	2,150	250	4,800	375	2,550	300	700	150	850	225
Computer applications	450	125	na	na	D	D	D	D	250	100	D	D	D	D	50	50
Design	D	D	D	D	na	na	D	D	D	D	D	D	D	D	D	D
Management and administration	1,500	200	D	D	S	S	200	100	500	125	550	125	200	75	D	D
Research and development	4,600	325	400	100	50	50	900	150	1,200	200	1,900	250	100	50	S	S
Teaching	5,600	450	850	175	S	S	850	175	2,850	300	na	na	400	125	650	200
Other ^c	250	75	D	D	D	D	150	75	D	D	D	D	D	D	50	50
Mathematics and statistics	19,900	725	850	150	100	50	3,300	325	7,350	400	4,350	325	1,750	200	2,150	225
Computer applications	150	50	na	na	D	D	D	D	50	50	D	D	D	D	D	D
Design	D	D	D	D	na	na	D	D	D	D	D	D	D	D	D	D
Management and administration	1,700	200	D	D	D	D	450	100	350	100	700	150	100	50	D	D
Research and development	6,450	425	400	100	D	D	700	150	1,450	225	3,550	300	S	S	200	75

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: 2023

(Number and SE)

Field of study and primary work activity	All employed		Secondary work activity													
			Computer applications		Design		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	Number	SE
Management and administration	3,550	300	D	D	S	S	1,100	175	1,150	200	950	125	250	75	100	50
Research and development	7,400	350	350	125	150	50	2,200	225	1,700	175	2,450	250	150	50	400	100
Teaching	8,950	425	D	D	D	D	2,350	250	3,950	300	na	na	1,600	200	1,050	150
Other ^c	2,000	225	D	D	D	D	500	125	450	100	600	150	D	D	400	100

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 basic research, applied research, and experimental development.

^c Other work activities include production, operations, maintenance, professional services (e.g., health care, financial services, and legal services), 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 the respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 24

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2023

(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		
Doctorate recipient	908,700	2,300	667,950	2,050	235,050	1,175	36,350	550	38,500	600	141,800	1,125	112,100	900	104,100	875	196,750	1,300	44,000	600
Sex																				
Male	558,900	1,850	383,950	1,775	126,550	1,275	29,250	550	28,750	575	103,750	1,100	38,400	750	57,200	875	159,650	1,375	15,300	475
Female	349,800	1,475	284,000	1,400	108,500	1,075	7,150	375	9,700	400	38,050	750	73,700	950	46,900	675	37,100	725	28,700	525
Ethnicity and race																				
Hispanic or Latino ^a	47,400	700	37,200	575	13,400	425	1,200	125	1,750	150	5,650	275	7,500	325	7,650	325	8,000	325	2,200	150
Not Hispanic or Latino ^b																				
American Indian or Alaska Native	1,750	175	1,400	150	450	125	S	S	D	D	100	50	400	100	350	75	150	50	150	75
Asian	240,850	1,900	145,950	1,600	57,550	1,025	16,200	550	12,350	525	37,150	875	7,750	450	14,950	550	85,750	1,175	9,200	475
Black or African American	36,050	500	26,950	450	8,150	300	1,000	125	1,000	100	3,650	250	6,550	325	6,600	300	5,050	250	4,050	250
White	566,700	2,050	443,550	1,975	150,750	1,300	17,350	525	22,850	600	92,950	1,050	87,250	875	72,400	875	95,550	1,200	27,550	550
Other race ^c	15,950	525	12,850	500	4,750	300	550	125	500	75	2,300	175	2,650	225	2,150	225	2,250	250	850	150
Age																				
Under 35	101,900	1,100	69,000	900	25,400	500	4,200	250	5,250	250	19,650	525	7,750	375	6,700	275	29,100	550	3,800	225
35–39	139,700	1,525	99,400	1,200	38,000	700	7,400	375	6,800	325	20,500	600	13,650	450	13,050	475	34,350	775	5,950	300
40–44	135,200	1,425	98,850	1,300	36,600	875	6,550	400	5,600	350	19,550	650	14,450	500	16,150	525	29,950	750	6,400	350
45–49	119,100	1,425	88,400	1,300	33,150	900	5,350	375	5,000	350	17,400	575	13,700	500	13,750	500	24,750	800	5,950	350
50–54	112,200	1,400	85,750	1,175	29,650	775	4,550	350	4,300	325	16,950	625	15,350	625	14,950	625	21,200	750	5,250	350
55–59	100,500	1,625	74,100	1,275	24,500	775	3,100	275	3,800	250	16,750	675	13,550	600	12,400	550	21,450	850	4,950	325
60–64	87,550	1,500	64,300	1,225	21,150	650	2,750	275	3,950	275	14,500	600	11,100	500	10,850	425	18,600	750	4,650	350
65–75	112,550	1,375	88,150	1,275	26,600	750	2,450	225	3,800	300	16,450	575	22,600	700	16,250	575	17,350	675	7,050	375
Citizenship																				
U.S. citizen	774,700	2,225	586,650	2,200	208,600	1,275	24,700	550	30,250	625	121,150	1,275	109,300	875	92,650	900	148,250	1,325	39,800	625
Native born	562,450	1,725	453,150	1,825	160,150	1,275	13,200	450	19,850	575	88,350	1,025	98,300	950	73,350	875	78,800	1,075	30,500	550
Naturalized	212,250	1,775	133,500	1,700	48,450	1,125	11,500	500	10,450	500	32,800	925	11,050	525	19,300	625	69,450	1,150	9,300	500
Non-U.S. citizen	134,000	1,550	81,300	1,350	26,450	775	11,700	450	8,200	400	20,650	700	2,800	300	11,450	500	48,500	925	4,250	300
Permanent resident	94,750	1,575	57,500	1,375	19,100	675	8,350	475	5,350	400	14,450	600	2,100	275	8,250	500	34,200	975	3,000	250
Temporary resident	39,250	775	23,750	600	7,400	350	3,350	250	2,900	250	6,200	400	700	150	3,250	300	14,250	575	1,200	150
Years since doctorate																				
≤ 5	143,600	575	99,000	625	35,450	450	7,350	275	6,450	225	21,200	450	13,700	375	14,900	325	35,100	500	9,500	300
6–10	169,900	925	120,550	1,000	43,050	575	8,600	375	7,150	350	24,150	475	17,350	450	20,250	425	39,300	675	10,050	350
11–15	146,200	925	107,600	925	40,800	700	7,150	400	5,850	325	21,050	625	16,450	450	16,250	500	31,550	675	7,100	350
16–20	117,750	800	87,850	875	31,200	625	4,450	275	5,150	300	16,950	575	15,750	525	14,350	500	23,950	675	5,950	350
21–25	105,200	1,000	79,000	900	28,100	600	3,250	275	4,050	300	16,300	500	14,800	450	12,450	450	21,650	675	4,550	350

TABLE 24

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2023

(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		
> 25	226,050	1,575	173,950	1,300	56,450	825	5,600	325	9,800	375	42,150	800	34,050	725	25,900	550	45,200	900	6,850	350
Place of birth																				
United States	555,700	1,700	446,950	1,725	157,600	1,225	12,900	450	19,500	525	87,250	1,025	97,250	950	72,450	825	78,550	1,100	30,200	550
Asia	245,150	1,900	142,400	1,675	52,900	1,075	17,300	575	12,550	525	38,050	900	6,550	450	15,050	550	93,550	1,200	9,200	475
Europe	53,550	975	39,750	825	11,200	550	3,500	350	3,850	325	9,300	450	3,650	350	8,250	425	12,450	575	1,350	200
North America ^d	13,700	500	10,650	500	3,500	250	700	175	550	100	2,050	225	1,650	275	2,250	250	2,400	200	650	125
Central America	2,300	225	1,650	200	600	100	50	50	100	50	200	50	350	125	350	100	600	100	50	25
Caribbean	4,150	300	3,100	275	1,100	175	100	50	100	50	450	100	750	125	650	100	600	100	450	125
South America	13,750	450	9,850	425	3,800	225	500	100	800	125	1,550	175	850	125	2,400	200	3,400	225	500	100
Africa	18,000	475	11,750	475	3,850	275	1,100	200	850	125	2,700	275	850	200	2,400	200	4,850	375	1,450	200
Oceania	2,100	225	1,650	200	400	125	150	75	200	75	250	75	250	100	350	125	350	100	100	50
Unknown ^e	S	S	D	D	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 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.^d North America excludes United States.^e Unknown includes unspecified non-U.S. locations.**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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 25

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and citizenship status: 2023

(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	908,700	2,300	774,700	2,225	562,450	1,725	212,250	1,775	134,000	1,550	94,750	1,575	39,250	775
Sex														
Male	558,900	1,850	466,450	1,925	321,700	1,525	144,750	1,650	92,450	1,250	64,600	1,375	27,850	775
Female	349,800	1,475	308,250	1,625	240,750	1,450	67,500	1,325	41,550	900	30,200	925	11,400	350
Ethnicity and race														
Hispanic or Latino ^a	47,400	700	40,550	650	26,700	575	13,850	450	6,850	300	4,300	250	2,550	175
Not Hispanic or Latino ^b														
American Indian or Alaska Native	1,750	175	1,700	175	1,650	175	50	25	50	25	S	S	D	D
Asian	240,850	1,900	145,600	1,625	21,800	675	123,750	1,525	95,300	1,400	66,150	1,350	29,150	725
Black or African American	36,050	500	32,050	500	21,350	500	10,700	425	4,000	300	2,900	275	1,100	150
White	566,700	2,050	539,750	2,075	477,950	1,775	61,800	1,175	26,950	750	20,800	775	6,200	400
Other race ^c	15,950	525	15,100	525	13,000	450	2,100	275	850	150	650	125	250	75
Age														
Under 35	101,900	1,100	65,800	875	59,500	800	6,300	350	36,100	675	15,400	675	20,700	550
35–39	139,700	1,525	97,450	1,225	80,500	1,025	17,000	700	42,250	1,100	30,300	950	11,950	525
40–44	135,200	1,425	112,000	1,300	80,950	1,150	31,100	900	23,200	700	19,900	675	3,300	300
45–49	119,100	1,425	104,950	1,325	66,500	1,075	38,450	1,050	14,100	675	12,700	625	1,450	250
50–54	112,200	1,400	103,700	1,375	69,150	1,175	34,500	925	8,550	600	7,500	550	1,050	200
55–59	100,500	1,625	95,600	1,525	61,750	1,025	33,850	1,175	4,950	525	4,400	525	500	150
60–64	87,550	1,500	84,700	1,475	58,600	1,050	26,100	850	2,850	350	2,600	350	200	75
65–75	112,550	1,375	110,500	1,375	85,550	1,425	24,950	825	2,050	250	1,950	250	S	S
Years since doctorate														
≤ 5	143,600	575	93,250	550	81,850	525	11,400	375	50,350	575	22,550	600	27,800	575
6–10	169,900	925	125,550	950	99,750	825	25,800	750	44,350	900	36,100	900	8,250	475
11–15	146,200	925	126,650	1,025	87,350	850	39,300	975	19,550	775	17,900	750	1,700	350
16–20	117,750	800	108,550	825	67,700	1,000	40,850	925	9,200	550	8,700	575	500	125
21–25	105,200	1,000	100,050	1,050	67,500	925	32,550	800	5,150	525	4,550	500	600	175
> 25	226,050	1,575	220,650	1,550	158,250	1,375	62,350	1,175	5,400	425	5,000	425	400	150
Place of birth														
United States	555,700	1,700	554,750	1,725	553,150	1,725	1,600	275	900	225	500	125	400	175
Asia	245,150	1,900	142,600	1,625	3,650	350	138,900	1,600	102,550	1,400	72,000	1,425	30,600	725
Europe	53,550	975	38,850	825	3,050	350	35,800	825	14,700	600	11,400	600	3,300	300
North America ^d	13,700	500	9,250	425	1,100	175	8,150	375	4,450	325	3,250	300	1,200	175
Central America	2,300	225	1,700	175	200	75	1,500	175	600	125	350	100	250	75

TABLE 25

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and citizenship status: 2023

(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
Caribbean	4,150	300	3,500	275	S	S	3,350	250	650	100	400	75	250	100
South America	13,750	450	9,300	350	350	100	8,950	350	4,450	250	2,850	250	1,650	150
Africa	18,000	475	13,150	475	500	125	12,600	475	4,900	275	3,550	250	1,350	175
Oceania	2,100	225	1,400	200	100	50	1,250	200	750	150	500	125	250	125
Unknown ^e	S	S	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 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.^d North America excludes United States.^e Unknown includes unspecified non-U.S. locations.**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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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: 2023

(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	908,700	2,300	341,350	2,475	26,750	875	354,100	2,775	64,300	1,175	58,600	1,250	18,700	725	42,350	1,150	2,450	275
Sex																		
Male	558,900	1,850	199,700	2,000	11,850	625	246,450	2,300	33,800	1,025	34,950	950	10,200	550	20,700	875	1,300	200
Female	349,800	1,475	141,650	1,600	14,900	600	107,700	1,300	30,550	825	23,700	700	8,550	400	21,650	875	1,200	225
Ethnicity and race																		
Hispanic or Latino ^f	47,400	700	20,100	450	2,100	200	15,100	450	3,300	250	3,600	225	1,000	125	1,650	150	450	100
Not Hispanic or Latino ^g																		
American Indian or Alaska Native	1,750	175	650	100	150	75	300	75	200	100	250	75	50	25	S	S	D	D
Asian	240,850	1,900	72,100	1,450	3,250	375	130,650	1,775	13,800	675	10,700	625	4,450	400	5,350	525	600	175
Black or African American	36,050	500	14,450	450	2,100	200	10,750	425	2,800	250	3,100	250	1,400	175	1,250	175	150	75
White	566,700	2,050	227,850	2,050	18,500	725	191,800	2,025	42,900	975	39,800	1,025	11,500	575	33,200	1,025	1,200	200
Other race ^h	15,950	525	6,200	325	600	150	5,550	375	1,300	150	1,150	150	350	75	800	150	D	D
Age																		
Under 35	101,900	1,100	33,900	800	1,150	175	51,050	925	7,850	375	5,500	325	1,550	175	800	150	100	50
35–39	139,700	1,525	48,350	1,025	2,350	250	65,500	1,075	10,100	475	8,050	400	2,500	250	2,550	275	350	100
40–44	135,200	1,425	51,250	1,000	3,750	300	55,000	1,250	10,400	525	8,750	450	2,800	275	2,950	275	350	100
45–49	119,100	1,425	47,050	1,000	4,150	325	44,200	1,025	8,550	550	8,800	500	2,400	225	3,500	325	350	150
50–54	112,200	1,400	44,450	950	4,350	375	41,600	1,150	8,000	475	7,750	475	2,400	300	3,300	350	350	100
55–59	100,500	1,625	37,900	1,000	4,150	325	37,000	1,100	6,400	525	7,600	475	2,450	275	4,750	350	300	100
60–64	87,550	1,500	34,850	1,075	3,200	275	29,100	825	5,550	350	6,350	525	2,200	275	5,950	475	300	75
65–75	112,550	1,375	43,600	1,025	3,650	375	30,700	1,025	7,450	500	5,800	400	2,450	275	18,550	750	350	125
Citizenship																		
U.S. citizen	774,700	2,225	294,250	2,350	25,800	850	281,850	2,550	57,050	1,100	56,600	1,200	16,850	650	41,000	1,125	1,300	200
Native born	562,450	1,725	223,600	1,900	21,050	750	181,900	1,900	45,050	975	43,850	1,000	12,500	525	33,700	1,025	850	150
Naturalized	212,250	1,775	70,650	1,400	4,800	400	99,950	1,900	12,000	625	12,750	650	4,350	375	7,300	575	450	125
Non-U.S. citizen	134,000	1,550	47,100	1,100	950	200	72,250	1,175	7,250	475	2,050	275	1,850	225	1,350	250	1,200	200
Permanent resident	94,750	1,575	32,850	975	700	175	52,400	1,125	4,500	375	1,100	200	1,550	200	1,200	250	450	150
Temporary resident	39,250	775	14,250	500	200	100	19,850	650	2,750	300	950	175	350	100	150	75	700	125
Years since doctorate																		
≤ 5	143,600	575	52,550	800	2,600	200	62,500	900	11,850	450	8,600	375	3,100	225	2,050	225	350	100
6–10	169,900	925	60,550	1,025	4,300	325	74,650	1,175	12,550	525	10,100	475	3,850	300	3,350	300	550	125
11–15	146,200	925	55,250	1,000	5,000	375	57,950	1,225	10,600	550	9,900	525	3,050	275	4,200	375	250	75
16–20	117,750	800	47,650	900	4,550	325	41,350	900	8,450	600	9,200	575	2,150	250	4,100	375	350	125
21–25	105,200	1,000	40,850	950	3,600	300	39,700	1,000	6,700	375	7,350	475	2,450	300	4,300	375	250	100
> 25	226,050	1,575	84,500	1,250	6,800	425	77,950	1,425	14,150	675	13,500	675	4,100	350	24,350	825	700	150

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: 2023

(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	546,250	2,475	226,950	1,950	5,050	425	214,900	2,300	37,350	950	36,550	875	9,050	450	14,850	700	1,500	200	
Basic research	180,050	1,925	128,250	1,750	1,850	250	20,050	775	13,150	575	11,400	575	2,200	225	2,750	325	400	100	
Applied research	329,150	2,575	120,100	1,750	2,250	325	133,900	1,975	25,800	725	28,900	825	7,000	425	9,900	525	1,300	200	
Experimental development	153,200	1,875	14,750	650	1,350	200	115,750	1,875	6,500	375	7,100	475	1,900	250	5,500	425	350	100	
Computer applications	103,750	1,500	14,650	650	500	100	71,500	1,350	6,450	400	5,700	350	2,300	275	2,600	300	D	D	
Design	76,700	1,600	7,200	425	550	100	55,900	1,375	4,300	325	4,600	400	1,350	225	2,750	300	S	S	
Management, sales, or administration ^j	388,200	2,375	120,400	1,475	9,850	500	168,350	1,925	32,100	850	30,350	875	10,700	500	15,250	625	1,200	175	
Professional services	117,050	1,775	18,350	750	2,950	300	46,650	1,250	14,950	650	7,550	500	3,700	375	22,350	775	550	125	
Teaching	235,900	2,325	190,400	1,850	20,200	800	9,450	625	7,000	475	2,700	325	1,000	200	4,950	450	150	75	
Other work activities ^k	82,600	1,475	27,850	950	3,400	275	28,750	850	6,650	425	7,100	400	3,000	300	5,450	475	350	125	

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

SE = standard error.

^a Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^c Private, for profit includes those self-employed in an incorporated business.

^d Self-employed or business owner in a nonincorporated business.

^e Other sector 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

ⁱ Detail may exceed total due to multiple responses as respondents may provide both a primary and a secondary work activity. 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?"

^j Administration includes accounting, finance, contracts, and human resources.

^k Other work activities include 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 due to rounding. Residence location is based on reported living location on 1 February 2023.

Source(s):
 National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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: 2023

(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	908,700	2,300	341,350	2,475	26,750	875	362,800	2,800	64,400	1,175	58,600	1,250	18,700	725	33,600	1,000	2,450	275
Any R&D	355,450	2,700	140,000	1,700	1,200	200	144,650	1,925	27,500	825	27,450	800	5,850	375	7,700	500	1,150	175
Basic research	91,150	1,400	70,700	1,350	250	75	5,550	425	7,750	450	5,300	375	850	175	600	125	150	75
Applied research	187,350	2,350	64,600	1,325	750	200	75,750	1,500	17,000	675	19,300	650	4,300	325	4,850	400	800	150
Experimental development	76,950	1,400	4,650	375	250	75	63,350	1,300	2,750	250	2,850	300	700	150	2,200	275	200	100
Computer applications	53,200	1,225	3,600	275	100	50	43,250	1,175	2,150	250	2,000	225	950	175	1,150	225	D	D
Design	28,350	1,000	1,650	225	100	25	22,200	900	1,650	250	1,350	200	600	200	850	200	D	D
Management, sales, or administration ^f	185,550	1,975	47,400	975	3,700	300	90,750	1,525	16,050	625	16,250	625	6,550	425	4,200	350	650	150
Professional services	90,900	1,650	11,400	575	2,000	250	41,850	1,175	11,800	600	6,000	450	2,650	350	14,950	675	300	100
Teaching	153,800	1,875	127,900	1,725	18,600	725	3,050	300	1,600	225	650	200	300	75	1,650	225	D	D
Other work activities ^g	41,400	1,025	9,400	525	1,050	175	17,100	675	3,650	350	4,950	325	1,850	225	3,150	325	250	125

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

^a Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.^c Private, for profit includes those self-employed in an incorporated business.^d Self-employed or business owner in a nonincorporated business.^e Other sector includes employers not broken out separately.^f Administration includes accounting, finance, contracts, and human resources.^g Other work activities include 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^d Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^e Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^f Private, for profit includes those self-employed in an incorporated business.

^g Self-employed or business owner in a nonincorporated business.

^h Other sector includes employers not broken out separately.

ⁱ Detail may exceed total due to multiple responses as respondents may provide both a primary and a secondary work activity. 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?"

^j Administration includes accounting, finance, contracts, and human resources.

^k Other work activities include 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. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 27-2

U.S. residing employed doctoral scientists and engineers, by primary work activity, ethnicity, race, and sex: 2023

(Number and SE)

Primary work activity	All employed						Hispanic or Latino ^a						Not Hispanic or Latino ^b																													
	Total		Male		Female		Total		Male		Female		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	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE										
Doctorate recipients	908,700	2,300	558,900	1,850	349,800	1,475	47,400	700	25,850	500	21,500	525	1,750	175	850	125	900	125	240,850	1,900	162,600	1,750	78,250	1,050	36,050	500	17,750	475	18,300	500	566,700	2,050	343,600	1,825	223,050	1,500	15,950	525	8,200	425	7,750	350
Any R&D	355,450	2,700	236,100	2,450	119,400	1,450	18,250	500	11,100	350	7,150	325	550	100	300	100	250	50	117,800	1,500	81,100	1,425	36,700	775	11,200	425	5,600	275	5,650	350	202,050	2,050	134,800	1,725	67,250	1,150	5,600	300	3,200	275	2,400	200
Basic research	91,150	1,400	61,250	1,450	29,900	850	5,050	225	3,300	225	1,750	150	150	75	S	S	100	50	30,050	925	19,750	850	10,350	600	2,050	200	850	125	1,200	175	52,450	1,075	36,500	1,075	15,950	550	1,350	175	800	150	550	100
Applied research	187,350	2,350	118,900	2,000	68,450	1,100	9,900	425	5,700	300	4,200	250	250	100	150	100	50	54,000	1,425	35,950	1,225	18,000	700	7,200	325	3,700	250	3,550	250	112,700	1,700	71,650	1,375	41,100	875	3,300	250	1,750	225	1,550	175	
Experimental development	76,950	1,400	55,950	1,275	21,000	750	3,350	225	2,100	175	1,250	150	100	50	50	25	50	25	33,750	1,025	25,400	925	8,350	525	1,950	175	1,050	125	900	150	36,900	1,100	26,700	950	10,200	475	950	175	650	150	300	75
Computer applications	53,200	1,225	43,950	1,150	9,300	475	1,550	150	1,300	150	200	50	D	D	D	D	D	D	25,450	950	20,350	950	5,100	400	850	125	700	100	150	50	24,650	800	20,950	775	3,700	300	750	150	650	125	150	50
Design	28,350	1,000	22,200	925	6,150	375	1,400	175	1,050	175	350	75	50	25	50	25	D	D	10,850	725	8,700	675	2,150	225	850	125	650	100	200	75	14,750	600	11,500	575	3,250	250	450	100	300	75	150	50
Management, sales, or administration ^d	185,550	1,975	109,250	1,675	76,250	1,275	9,300	375	4,750	250	4,550	300	400	100	200	50	250	100	42,000	1,200	27,050	1,075	14,950	650	8,650	375	4,050	275	4,600	250	121,700	1,600	71,700	1,375	50,000	1,000	3,450	325	1,550	200	1,900	200
Professional services	90,900	1,650	41,150	1,150	49,750	1,200	5,450	300	2,000	225	3,400	250	250	75	100	50	100	75	14,450	725	7,500	575	6,950	475	4,100	300	1,450	200	2,650	250	64,750	1,375	29,400	975	35,400	975	1,950	225	750	150	1,150	150
Teaching	153,800	1,875	84,850	1,550	69,000	1,125	9,300	375	4,750	275	4,550	275	400	75	150	75	250	75	21,550	850	12,650	750	8,950	525	7,950	350	4,200	225	3,750	250	111,700	1,600	61,750	1,275	49,950	950	2,900	250	1,350	200	1,550	175
Other work activities ^e	41,400	1,025	21,400	775	20,000	625	2,200	200	950	175	1,250	125	100	50	50	50	25	8,750	525	5,300	475	3,450	300	2,400	250	1,150	225	1,250	175	27,100	825	13,550	600	13,550	550	850	150	400	125	450	100	

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^d Administration includes accounting, finance, contracts, and human resources.

^e Other work activities include 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 28-1
U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2023

(Number and SE)

Characteristic	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	908,700	2,300	546,250	2,475	180,050	1,925	329,150	2,575	153,200	1,875	103,750	1,500	76,700	1,600	388,200	2,375	117,050	1,775	235,900	2,325	82,600	1,475
Sex																						
Male	558,900	1,850	356,450	1,950	118,100	1,875	210,000	2,125	108,550	1,625	83,300	1,375	58,150	1,475	222,250	2,200	54,400	1,325	134,100	1,900	44,200	1,075
Female	349,800	1,475	189,800	1,575	61,950	1,250	119,150	1,425	44,650	1,025	20,450	550	18,550	625	165,950	1,650	62,650	1,325	101,800	1,400	38,350	825
Ethnicity and race																						
Hispanic or Latino ^c	47,400	700	28,650	550	10,500	325	17,550	525	6,700	325	3,700	200	3,650	275	20,250	575	6,600	325	14,000	475	4,650	275
Not Hispanic or Latino ^d																						
American Indian or Alaska Native	1,750	175	900	125	300	75	550	100	200	50	50	25	100	50	850	125	300	100	600	100	250	100
Asian	240,850	1,900	167,250	1,575	51,050	1,175	98,900	1,625	61,500	1,425	44,700	1,175	27,350	1,025	84,500	1,625	19,400	875	40,300	1,175	18,200	775
Black or African American	36,050	500	19,200	475	5,950	350	12,450	400	4,500	325	2,050	200	2,200	250	16,050	475	5,400	350	11,750	425	4,600	325
White	566,700	2,050	320,950	2,175	109,200	1,475	194,000	2,000	78,250	1,325	51,850	1,150	42,200	1,050	259,050	2,025	82,950	1,475	165,000	1,875	53,150	1,200
Other race ^e	15,950	525	9,300	450	3,100	250	5,700	300	2,100	250	1,450	200	1,200	150	7,450	400	2,350	225	4,250	325	1,800	175
Age																						
Under 35	101,900	1,100	75,050	925	25,700	575	48,250	925	22,300	650	19,700	525	12,100	475	32,650	825	9,500	475	15,200	525	8,100	375
35–39	139,700	1,525	93,400	1,350	29,350	800	57,900	1,100	29,150	875	22,400	725	14,350	625	55,550	1,125	13,800	600	28,550	825	11,300	500
40–44	135,200	1,425	82,750	1,275	27,450	775	50,600	1,050	21,700	750	16,350	775	11,450	600	63,050	1,175	14,500	625	34,650	825	10,800	450
45–49	119,100	1,425	70,200	1,125	23,950	850	41,300	1,025	19,100	775	11,250	575	9,150	550	55,850	1,150	14,900	625	32,550	850	10,750	525
50–54	112,200	1,400	63,850	1,250	20,250	725	35,600	1,000	18,200	725	10,250	625	8,250	525	54,550	1,025	14,450	575	32,050	800	11,150	575
55–59	100,500	1,625	53,350	1,400	16,850	700	30,700	1,050	16,100	825	8,850	500	8,200	525	47,450	1,025	13,900	700	28,450	975	10,000	550
60–64	87,550	1,500	49,000	1,200	15,150	750	29,200	1,000	14,000	750	7,000	400	6,500	450	38,400	1,050	12,050	525	27,250	825	9,100	575
65–75	112,550	1,375	58,600	1,175	21,350	900	35,650	975	12,650	600	8,000	550	6,700	450	40,700	975	23,900	800	37,250	950	11,350	550
Years since doctorate																						
≤ 5	143,600	575	102,950	725	35,550	675	67,200	875	29,050	675	26,000	575	16,000	550	44,500	750	14,700	500	26,200	650	11,450	475
6–10	169,900	925	107,300	1,250	32,450	950	66,900	1,150	32,350	975	23,800	800	16,250	675	70,950	1,075	17,300	650	41,800	975	15,250	600
11–15	146,200	925	86,450	1,225	28,400	775	51,550	1,075	23,450	750	17,200	675	11,600	600	68,200	1,050	17,350	625	39,850	900	12,250	575
16–20	117,750	800	67,450	925	21,950	800	39,350	850	18,700	775	9,650	550	9,000	500	56,300	1,025	15,150	675	33,650	850	10,800	625
21–25	105,200	1,000	59,000	950	18,550	700	33,500	950	17,600	725	9,250	600	7,250	525	50,900	1,025	14,550	625	29,250	800	10,100	550
> 25	226,050	1,575	123,100	1,550	43,150	1,000	70,700	1,425	32,050	1,125	17,950	725	16,600	800	97,350	1,375	38,000	950	65,150	1,250	22,750	750
Citizenship																						
U.S. citizen	774,700	2,225	444,700	2,375	146,000	1,850	267,350	2,300	118,200	1,675	74,250	1,325	59,600	1,425	352,100	2,450	110,100	1,650	212,500	2,075	73,950	1,425
Native born	562,450	1,725	310,200	2,050	104,600	1,450	189,500	1,850	74,050	1,175	45,650	1,000	36,750	975	264,500	1,875	89,500	1,425	164,100	1,650	55,800	1,175
Naturalized	212,250	1,775	134,500	1,650	41,400	1,225	77,850	1,450	44,150	1,175	28,650	975	22,850	950	87,550	1,600	20,600	825	48,400	1,200	18,100	750
Non-U.S. citizen	134,000	1,550	101,550	1,300	34,050	850	61,800	1,250	35,000	1,100	29,500	875	17,100	725	36,100	925	6,950	550	23,450	850	8,650	500
Permanent resident	94,750	1,575	69,650	1,200	22,500	750	41,200	1,075	24,800	950	19,550	850	11,800	650	28,050	825	5,500	525	18,500	825	6,200	400

TABLE 28-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2023

(Number and SE)

Characteristic	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	39,250	775	31,900	725	11,550	475	20,600	675	10,200	475	9,950	500	5,300	375	8,050	475	1,450	200	4,950	350	2,450	250
Sector of employment																						
4-year educational institution ^f	341,350	2,475	226,950	1,950	128,250	1,750	120,100	1,750	14,750	650	14,650	650	7,200	425	120,400	1,475	18,350	750	190,400	1,850	27,850	950
Other educational institution ^g	26,750	875	5,050	425	1,850	250	2,250	325	1,350	200	500	100	550	100	9,850	500	2,950	300	20,200	800	3,400	275
Private, for profit ^h	354,100	2,775	214,900	2,300	20,050	775	133,900	1,975	115,750	1,875	71,500	1,350	55,900	1,375	168,350	1,925	46,650	1,250	9,450	625	28,750	850
Private, nonprofit	64,300	1,175	37,350	950	13,150	575	25,800	725	6,500	375	6,450	400	4,300	325	32,100	850	14,950	650	7,000	475	6,650	425
Federal government	58,600	1,250	36,550	875	11,400	575	28,900	825	7,100	475	5,700	350	4,600	400	30,350	875	7,550	500	2,700	325	7,100	400
State or local government	18,700	725	9,050	450	2,200	225	7,000	425	1,900	250	2,300	275	1,350	225	10,700	500	3,700	375	1,000	200	3,000	300
Self-employed ⁱ	42,350	1,150	14,850	700	2,750	325	9,900	525	5,500	425	2,600	300	2,750	300	15,250	625	22,350	775	4,950	450	5,450	475
Other sector ^j	2,450	275	1,500	200	400	100	1,300	200	350	100	D	D	S	S	1,200	175	550	125	150	75	350	125
Employer location																						
New England	86,300	1,450	54,850	1,275	17,500	675	33,500	1,000	15,950	725	9,750	500	6,350	525	38,950	1,025	10,450	600	19,700	650	6,800	400
Middle Atlantic	122,250	1,925	71,200	1,575	26,800	925	42,300	1,175	17,100	700	13,450	625	9,400	525	50,650	1,175	18,550	725	34,450	925	11,450	600
East North Central	103,650	1,725	62,550	1,250	24,050	775	36,750	950	15,450	800	8,800	525	6,950	475	42,850	1,100	12,900	600	34,150	1,050	9,100	500
West North Central	48,650	1,000	28,950	800	11,050	525	17,150	700	6,700	425	3,250	275	3,650	375	19,650	600	6,800	400	17,300	650	4,100	350
South Atlantic	173,350	2,050	100,600	1,650	33,700	950	64,350	1,400	23,600	800	16,450	700	12,450	625	78,450	1,475	23,550	775	43,900	1,200	18,200	725
East South Central	29,150	825	17,400	575	7,200	425	10,350	450	3,400	325	1,900	225	1,800	250	10,950	525	3,950	350	11,450	525	2,700	275
West South Central	70,500	1,600	40,350	1,050	14,500	600	22,850	850	11,300	675	6,900	425	6,350	475	28,900	900	9,750	575	21,000	725	6,550	425
Mountain	60,950	1,225	36,750	925	12,300	525	22,800	750	9,250	475	6,550	450	5,300	350	26,900	875	7,400	500	15,900	650	5,850	400
Pacific	207,350	2,025	129,600	1,700	31,600	1,000	77,000	1,425	49,400	1,125	36,400	1,050	24,150	750	88,350	1,425	22,900	750	35,500	1,075	17,150	725
U.S. territories and other areas	6,500	475	4,000	375	1,400	175	2,100	275	1,050	250	350	125	250	75	2,500	275	800	175	2,500	300	750	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 Other work activities include 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.^f Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^g Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^h Private, for profit includes those self-employed in an incorporated business.

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

^j Other sector 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 as respondents may provide both a primary and a secondary work activity. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 28-2

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary work activity: 2023

(Number and SE)

Characteristic	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	908,700	2,300	355,450	2,700	91,150	1,400	187,350	2,350	76,950	1,400	53,200	1,225	28,350	1,000	185,550	1,975	90,900	1,650	153,800	1,875	41,400	1,025
Sex																						
Male	558,900	1,850	236,100	2,450	61,250	1,450	118,900	2,000	55,950	1,275	43,950	1,150	22,200	925	109,250	1,675	41,150	1,150	84,850	1,550	21,400	775
Female	349,800	1,475	119,400	1,450	29,900	850	68,450	1,100	21,000	750	9,300	475	6,150	375	76,250	1,275	49,750	1,200	69,000	1,125	20,000	625
Ethnicity and race																						
Hispanic or Latino ^c	47,400	700	18,250	500	5,050	225	9,900	425	3,350	225	1,550	150	1,400	175	9,300	375	5,450	300	9,300	375	2,200	200
Not Hispanic or Latino ^d																						
American Indian or Alaska Native	1,750	175	550	100	150	75	250	100	100	50	D	D	50	25	400	100	250	75	400	75	100	50
Asian	240,850	1,900	117,800	1,500	30,050	925	54,000	1,425	33,750	1,025	25,450	950	10,850	725	42,000	1,200	14,450	725	21,550	850	8,750	525
Black or African American	36,050	500	11,200	425	2,050	200	7,200	325	1,950	175	850	125	850	125	8,650	375	4,100	300	7,950	350	2,400	250
White	566,700	2,050	202,050	2,050	52,450	1,075	112,700	1,700	36,900	1,100	24,650	800	14,750	600	121,700	1,600	64,750	1,375	111,700	1,600	27,100	825
Other race ^e	15,950	525	5,600	300	1,350	175	3,300	250	950	175	750	150	450	100	3,450	325	1,950	225	2,900	250	850	150
Age																						
Under 35	101,900	1,100	56,750	825	14,650	475	30,450	750	11,650	550	8,800	400	4,250	325	11,500	450	7,650	450	8,850	375	4,100	275
35–39	139,700	1,525	64,550	1,275	15,700	575	33,850	875	15,000	700	12,450	625	5,150	375	23,450	675	10,300	500	17,700	575	6,100	425
40–44	135,200	1,425	54,450	1,100	13,600	650	29,700	875	11,150	575	8,200	525	4,450	350	29,500	850	10,900	525	23,000	725	4,700	300
45–49	119,100	1,425	44,200	1,000	11,900	675	23,050	800	9,250	525	5,500	450	3,200	300	27,650	850	11,500	575	21,800	700	5,200	400
50–54	112,200	1,400	37,800	1,150	10,000	525	19,000	750	8,750	525	5,550	475	2,800	300	28,550	900	11,100	500	21,150	700	5,250	350
55–59	100,500	1,625	32,650	1,100	7,600	500	16,750	725	8,300	625	5,100	450	3,100	350	25,650	825	10,400	650	18,700	800	4,950	375
60–64	87,550	1,500	29,200	1,000	7,200	475	15,050	725	6,950	475	3,800	325	2,550	300	19,950	825	9,150	500	18,250	650	4,650	400
65–75	112,550	1,375	35,850	925	10,450	650	19,450	675	5,900	400	3,800	375	2,850	300	19,250	675	19,900	725	24,350	775	6,500	475
Years since doctorate																						
≤ 5	143,600	575	74,850	750	19,050	525	41,400	725	14,450	550	12,250	425	5,950	375	16,250	550	11,800	450	16,900	525	5,550	300
6–10	169,900	925	72,300	1,150	15,850	650	39,700	775	16,750	675	12,650	675	6,000	400	30,150	825	12,950	550	27,900	800	7,900	475
11–15	146,200	925	55,350	1,050	14,050	625	29,100	825	12,200	625	8,650	525	4,300	350	32,800	925	12,750	550	26,500	850	5,800	350
16–20	117,750	800	41,400	900	10,900	575	21,500	775	9,050	550	4,700	375	3,200	300	28,750	850	11,700	550	22,400	700	5,600	400
21–25	105,200	1,000	35,550	1,000	9,300	475	17,300	775	9,000	600	5,300	500	2,350	300	27,050	850	10,900	575	19,550	650	4,500	325
> 25	226,050	1,575	75,950	1,400	22,050	825	38,350	975	15,550	725	9,700	575	6,550	550	50,600	1,150	30,750	850	40,550	950	12,000	650
Citizenship																						
U.S. citizen	774,700	2,225	282,000	2,425	71,400	1,300	152,150	2,025	58,450	1,325	37,450	1,025	21,050	850	170,250	1,850	86,250	1,525	140,650	1,675	37,050	975
Native born	562,450	1,725	192,850	1,925	48,500	1,025	110,100	1,525	34,250	950	21,150	700	11,750	475	125,500	1,525	70,850	1,350	111,650	1,375	28,650	875
Naturalized	212,250	1,775	89,150	1,575	22,900	875	42,050	1,300	24,200	900	16,300	725	9,300	650	44,750	1,175	15,350	675	29,000	950	8,350	475
Non-U.S. citizen	134,000	1,550	73,450	1,325	19,750	775	35,200	975	18,500	775	15,750	775	7,300	475	15,300	675	4,650	475	13,200	575	4,350	375
Permanent resident	94,750	1,575	49,050	1,200	12,700	625	23,200	775	13,100	700	10,750	675	5,250	400	12,650	650	3,700	425	10,150	500	3,200	325

TABLE 28-2

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary work activity: 2023

(Number and SE)

Characteristic	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental 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	39,250	775	24,400	650	7,050	400	12,000	525	5,350	425	5,000	375	2,050	250	2,650	275	950	175	3,050	300	1,150	175
Sector of employment																						
4-year educational institution ^f	341,350	2,475	140,000	1,700	70,700	1,350	64,600	1,325	4,650	375	3,600	275	1,650	225	47,400	975	11,400	575	127,900	1,725	9,400	525
Other educational institution ^g	26,750	875	1,200	200	250	75	750	200	250	75	100	50	100	25	3,700	300	2,000	250	18,600	725	1,050	175
Private, for profit ^h	354,100	2,775	143,250	1,925	5,450	425	75,000	1,475	62,800	1,325	43,000	1,200	22,050	900	89,900	1,500	36,900	1,100	2,650	300	16,400	675
Private, nonprofit	64,300	1,175	27,500	825	7,750	450	17,000	675	2,750	250	2,150	250	1,650	250	16,000	625	11,750	600	1,600	225	3,650	350
Federal government	58,600	1,250	27,450	800	5,300	375	19,300	650	2,850	300	2,000	225	1,350	200	16,250	625	6,000	450	650	200	4,950	325
State or local government	18,700	725	5,850	375	850	175	4,300	325	700	150	950	175	600	200	6,550	425	2,650	350	300	75	1,850	225
Self-employed ⁱ	42,350	1,150	9,050	550	700	150	5,600	400	2,750	325	1,350	225	950	200	5,100	400	19,950	750	2,050	250	3,900	400
Other sector ^j	2,450	275	1,150	175	150	75	800	150	200	100	D	D	D	D	650	150	300	100	D	D	250	125
Employer location																						
New England	86,300	1,450	37,900	1,125	9,300	550	20,250	800	8,350	525	4,700	350	2,200	275	17,350	700	8,150	500	12,700	575	3,300	350
Middle Atlantic	122,250	1,925	46,000	1,375	14,450	725	23,300	875	8,200	575	7,050	475	3,050	325	23,650	750	14,450	675	22,800	750	5,250	375
East North Central	103,650	1,725	41,300	1,075	12,100	550	21,450	800	7,800	475	4,050	375	2,050	225	19,650	750	9,950	550	22,000	900	4,600	400
West North Central	48,650	1,000	18,300	650	5,450	375	9,400	500	3,450	325	1,550	175	1,200	225	9,000	475	5,250	375	11,650	575	1,700	200
South Atlantic	173,350	2,050	65,250	1,300	16,250	675	37,550	1,025	11,450	525	8,000	500	4,450	350	39,450	1,150	17,400	625	29,000	1,000	9,800	525
East South Central	29,150	825	10,600	475	3,400	300	5,700	350	1,450	200	700	125	750	150	4,900	325	3,150	325	7,800	425	1,250	200
West South Central	70,500	1,600	26,500	975	8,050	475	13,000	600	5,450	475	3,500	325	2,700	300	13,800	600	7,800	525	12,950	600	3,300	325
Mountain	60,950	1,225	23,300	775	5,800	350	13,300	575	4,250	375	3,350	300	2,500	275	12,450	600	6,100	475	10,000	500	3,250	325
Pacific	207,350	2,025	84,100	1,450	15,800	625	42,350	1,150	25,950	875	20,150	850	9,450	550	43,800	1,025	18,100	700	23,200	875	8,550	500
U.S. territories and other areas	6,500	475	2,250	300	550	100	1,050	175	700	225	150	50	50	50	1,400	200	550	150	1,700	225	400	100

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

^a Administration includes accounting, finance, contracts, and human resources.^b Other work activities include 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.^f Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^g Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^h Private, for profit includes those self-employed in an incorporated business.

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

^j Other sector 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. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 29

U.S. residing doctoral scientists and engineers, by occupation and employment status: 2023

(Number and SE)

Occupation	Total		Employed						Unemployed ^a		Retired		Not employed and 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	1,058,700	1,900	908,700	2,300	803,700	2,550	104,950	1,600	11,050	525	122,450	1,250	16,450	700
Science occupations	566,250	2,850	489,300	2,625	443,700	2,625	45,600	950	6,000	375	61,800	1,300	9,150	525
Biological, agricultural, and other life scientists	196,350	1,675	168,150	1,575	154,650	1,450	13,500	575	2,350	250	21,500	750	4,300	425
Agricultural, food scientists	13,700	525	11,250	475	9,900	450	1,350	175	150	50	2,150	225	150	50
Biochemists, biophysicists	19,900	650	17,100	575	15,850	600	1,250	200	400	150	1,750	250	650	150
Biological scientists	34,100	700	30,000	700	27,600	675	2,350	250	250	75	2,850	275	1,050	200
Forestry, conservation scientists	3,450	250	2,900	225	2,600	225	250	75	D	D	450	125	50	50
Medical scientists	52,800	1,025	46,600	975	42,700	900	3,900	350	750	150	4,450	400	950	200
Postsecondary teachers, agricultural, other natural sciences	7,000	375	5,100	325	4,900	300	250	75	50	25	1,800	200	50	25
Postsecondary teachers, biological sciences	39,800	950	33,000	875	30,850	850	2,150	250	200	75	5,950	425	650	125
Other biological, agricultural, life scientists	25,650	775	22,250	750	20,250	700	2,000	250	550	125	2,100	275	800	200
Computer and information scientists	86,500	1,350	76,900	1,250	71,550	1,200	5,350	425	1,150	200	7,450	475	950	200
Computer and information scientists	74,150	1,375	66,200	1,300	61,950	1,250	4,250	375	1,150	200	6,050	450	700	150
Postsecondary teachers, computer science	12,350	550	10,700	525	9,600	475	1,100	200	D	D	1,350	200	300	125
Mathematical scientists	54,250	1,050	48,650	1,000	44,650	1,000	4,000	325	700	175	4,200	300	700	150
Mathematical scientists	33,000	850	30,100	800	28,100	775	1,950	225	450	150	2,000	225	450	125
Postsecondary teachers, mathematics, statistics	21,250	700	18,550	675	16,550	675	2,000	250	250	75	2,200	225	250	75
Physical scientists	104,900	1,375	88,350	1,325	80,500	1,150	7,850	500	900	175	14,150	650	1,450	175
Chemists, except biochemists	25,900	800	21,850	775	20,350	725	1,500	200	200	75	3,500	300	350	100
Earth, atmospheric, ocean scientists	16,700	600	13,550	550	12,000	525	1,550	150	150	75	2,750	250	250	75
Physicists, astronomers	16,750	725	14,650	650	13,500	650	1,150	200	150	75	1,700	225	250	75
Postsecondary teachers, chemistry	18,900	775	16,250	700	14,600	650	1,600	250	150	75	2,250	250	300	75
Postsecondary teachers, physics	11,450	600	9,350	525	8,200	500	1,150	225	100	50	1,850	300	100	50
Postsecondary teachers, other physical science	8,200	325	6,750	275	6,300	275	450	75	S	S	1,250	150	100	50
Other physical scientists	7,050	425	5,950	400	5,500	375	450	100	100	75	900	200	100	50
Psychologists	42,400	925	36,450	850	30,200	825	6,250	450	250	75	5,100	350	600	150
Psychologists	19,750	750	17,550	725	13,550	625	4,000	400	50	50	1,750	250	400	125
Postsecondary teachers, psychology	22,650	750	18,900	675	16,650	625	2,250	250	200	75	3,350	275	250	75
Social scientists	81,800	1,200	70,750	1,175	62,100	1,200	8,650	500	600	100	9,350	500	1,050	200
Economists	10,750	500	9,700	475	8,300	425	1,350	225	D	D	950	200	S	S
Political scientists	2,700	250	2,100	225	1,800	200	300	100	D	D	500	150	100	50
Postsecondary teachers, economics	12,050	500	10,200	475	9,050	475	1,150	200	D	D	1,650	200	D	D
Postsecondary teachers, political science	10,800	525	9,700	500	8,850	500	850	175	100	50	950	175	D	D
Postsecondary teachers, sociology	8,850	400	7,450	375	6,450	400	1,000	175	D	D	1,300	200	100	50

TABLE 29

U.S. residing doctoral scientists and engineers, by occupation and employment status: 2023

(Number and SE)

Occupation	Total		Employed						Unemployed ^a		Retired		Not employed and 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 social sciences	19,100	625	16,450	600	14,950	575	1,500	175	100	50	2,350	225	150	75
Sociologists, anthropologists	4,900	275	3,950	275	3,100	225	900	125	50	50	650	125	150	75
Other social scientists	12,750	525	11,200	500	9,650	475	1,550	150	200	75	1,050	150	250	75
Engineering occupations	142,000	1,700	127,550	1,600	118,950	1,500	8,600	575	1,350	250	11,700	550	1,400	225
Aerospace, aeronautical, astronautical engineers	8,550	450	7,500	425	6,900	425	550	150	D	D	1,000	175	50	25
Chemical engineers	9,200	550	8,050	500	7,600	475	400	150	D	D	1,000	225	D	D
Civil, architectural, sanitary engineers	8,300	500	7,800	500	7,200	500	600	150	D	D	350	125	100	50
Electrical engineers	32,700	1,075	29,900	1,000	27,650	925	2,250	350	300	150	2,300	275	200	100
Industrial engineers	1,450	225	1,300	225	1,200	225	S	S	D	D	150	50	D	D
Mechanical engineers	15,150	725	13,050	725	12,250	700	750	175	300	125	1,650	275	150	50
Postsecondary teachers, engineering	27,550	875	24,750	850	23,350	800	1,400	200	300	150	2,200	275	300	125
Other engineers	39,100	1,150	35,300	1,075	32,750	1,025	2,550	300	250	75	3,000	275	550	150
S&E-related occupations	161,700	1,950	135,450	1,825	110,600	1,800	24,850	775	1,450	225	22,600	775	2,200	275
Health occupations, except postsecondary teachers and managers	85,900	1,425	72,400	1,300	51,650	1,175	20,750	750	600	150	11,600	500	1,350	250
Postsecondary teachers, health and related science	24,400	750	19,900	725	17,850	625	2,050	250	250	125	3,950	300	350	125
S&E managers, including health	38,550	1,100	33,200	1,050	32,100	1,050	1,050	200	400	100	4,750	400	200	100
S&E precollege teachers	5,900	400	4,500	375	3,950	375	500	100	100	50	1,100	175	250	75
S&E technicians and technologists	5,650	425	4,550	400	4,150	375	350	125	150	75	900	200	100	50
Other S&E-related occupations	1,250	200	950	175	850	175	100	50	D	D	300	125	D	D
Non-S&E occupations	188,750	2,125	156,400	2,025	130,500	1,800	25,900	825	2,250	225	26,400	775	3,700	350
Arts, humanities-related occupations	12,150	525	9,950	475	6,500	375	3,500	325	200	75	1,350	200	600	125
Management-related occupations	40,650	1,150	35,000	1,025	29,800	950	5,200	375	500	125	4,450	375	750	175
Non-S&E managers	65,700	1,325	55,600	1,275	51,750	1,225	3,850	300	550	125	9,200	500	350	125
Non-S&E postsecondary teachers	24,800	800	19,500	725	16,750	625	2,750	300	250	75	4,650	375	350	75
Non-S&E precollege and other teachers	8,050	500	5,450	400	3,300	300	2,150	250	S	S	1,800	225	600	125
Sales, marketing occupations	8,300	450	6,950	450	5,400	425	1,550	225	250	75	850	150	250	100
Social service-related occupations	9,100	475	7,750	475	5,000	425	2,750	300	D	D	1,150	200	150	75
Other non-S&E occupations	20,000	725	16,200	675	12,000	575	4,200	325	200	75	2,950	300	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 and 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 250 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 30

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, and sex: 2023

(Number and SE)

Occupation and employment status	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
All occupations	1,058,700	1,900	654,700	1,675	404,000	1,200
Full time	803,700	2,550	505,100	2,100	298,650	1,650
Part time	104,950	1,600	53,800	1,200	51,150	1,100
Unemployed ^a	11,050	525	6,800	450	4,250	325
Retired	122,450	1,250	83,450	1,075	39,050	800
Not employed and not seeking work ^b	16,450	700	5,600	450	10,900	550
Science occupations	566,250	2,850	356,000	2,325	210,250	1,475
Full time	443,700	2,625	278,650	2,150	165,050	1,550
Part time	45,600	950	26,200	850	19,400	675
Unemployed ^a	6,000	375	3,650	325	2,350	225
Retired	61,800	1,300	44,400	1,125	17,400	550
Not employed and not seeking work ^b	9,150	525	3,100	325	6,050	400
Biological, agricultural, and other life scientists	196,350	1,675	111,300	1,650	85,050	1,150
Full time	154,650	1,450	86,400	1,400	68,250	1,125
Part time	13,500	575	7,350	475	6,150	400
Unemployed ^a	2,350	250	1,200	175	1,150	175
Retired	21,500	750	15,000	650	6,500	350
Not employed and not seeking work ^b	4,300	425	1,350	250	3,000	300
Computer and information scientists	86,500	1,350	69,900	1,200	16,550	675
Full time	71,550	1,200	58,250	1,125	13,300	575
Part time	5,350	425	3,900	375	1,500	225
Unemployed ^a	1,150	200	850	150	300	100
Retired	7,450	475	6,300	450	1,150	125
Not employed and not seeking work ^b	950	200	650	175	350	100
Mathematical scientists	54,250	1,050	37,650	850	16,600	550
Full time	44,650	1,000	30,900	800	13,750	550
Part time	4,000	325	2,850	300	1,100	175
Unemployed ^a	700	175	500	150	200	75
Retired	4,200	300	3,150	300	1,050	125
Not employed and not seeking work ^b	700	150	250	100	500	100
Physical scientists	104,900	1,375	77,750	1,350	27,150	650
Full time	80,500	1,150	59,150	1,100	21,350	600
Part time	7,850	500	5,650	475	2,150	200
Unemployed ^a	900	175	600	125	300	100
Retired	14,150	650	11,750	650	2,400	200
Not employed and not seeking work ^b	1,450	175	600	125	900	125
Psychologists	42,400	925	16,500	650	25,900	750
Full time	30,200	825	11,200	500	19,000	625
Part time	6,250	450	2,250	300	4,000	375
Unemployed ^a	250	75	150	75	100	50
Retired	5,100	350	2,750	250	2,350	250
Not employed and not seeking work ^b	600	150	100	75	500	125
Social scientists	81,800	1,200	42,900	875	38,950	850
Full time	62,100	1,200	32,750	825	29,400	775
Part time	8,650	500	4,200	375	4,450	325
Unemployed ^a	600	100	350	100	300	75
Retired	9,350	500	5,400	425	3,950	275
Not employed and not seeking work ^b	1,050	200	200	75	850	175

TABLE 30

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, and sex: 2023

(Number and SE)

Occupation and employment status	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
Engineering occupations	142,000	1,700	118,150	1,675	23,850	625
Full time	118,950	1,500	98,250	1,500	20,650	575
Part time	8,600	575	7,200	525	1,400	175
Unemployed ^a	1,350	250	1,150	225	200	75
Retired	11,700	550	10,700	525	950	150
Not employed and not seeking work ^b	1,400	225	800	225	600	125
S&E-related occupations	161,700	1,950	77,400	1,550	84,300	1,250
Full time	110,600	1,800	55,750	1,400	54,850	1,025
Part time	24,850	775	7,700	475	17,150	650
Unemployed ^a	1,450	225	650	150	800	175
Retired	22,600	775	12,550	600	10,050	500
Not employed and not seeking work ^b	2,200	275	750	175	1,450	225
Non-S&E occupations	188,750	2,125	103,150	1,675	85,600	1,375
Full time	130,500	1,800	72,400	1,475	58,100	1,100
Part time	25,900	825	12,700	575	13,200	625
Unemployed ^a	2,250	225	1,300	225	900	125
Retired	26,400	775	15,800	625	10,600	525
Not employed and not seeking work ^b	3,700	350	950	175	2,750	300

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 and 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 250 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 31

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, ethnicity, and race: 2023

(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	1,058,700	1,900	52,350	700	2,050	150	263,950	1,675	40,200	475	682,400	1,700	17,750	550
Full time	803,700	2,550	42,650	675	1,400	150	224,550	2,000	31,650	525	488,950	2,050	14,450	500
Part time	104,950	1,600	4,750	300	300	100	16,300	925	4,400	325	77,700	1,375	1,500	175
Unemployed ^d	11,050	525	700	125	S	S	3,000	300	750	150	6,350	400	250	75
Retired	122,450	1,250	3,350	275	150	50	16,100	750	2,750	225	98,900	1,200	1,200	200
Not employed and not seeking work ^e	16,450	700	950	125	100	50	4,000	400	650	125	10,450	475	350	75
Science occupations	566,250	2,850	28,550	575	950	125	142,800	1,675	18,300	450	366,250	2,475	9,350	400
Full time	443,700	2,625	24,050	550	750	100	123,850	1,675	14,850	400	272,250	2,075	7,950	375
Part time	45,600	950	2,050	200	100	50	7,850	625	1,750	175	33,150	825	700	125
Unemployed ^d	6,000	375	400	100	D	D	1,800	250	300	100	3,350	300	100	50
Retired	61,800	1,300	1,600	200	50	25	6,750	500	1,150	175	51,800	1,125	450	100
Not employed and not seeking work ^e	9,150	525	450	75	D	D	2,550	325	250	100	5,700	375	200	75
Biological, agricultural, and other life scientists	196,350	1,675	10,600	425	300	100	48,300	975	5,750	300	127,800	1,550	3,600	250
Full time	154,650	1,450	9,250	400	250	100	42,300	900	4,750	250	94,850	1,325	3,200	250
Part time	13,500	575	550	100	D	D	2,150	300	450	100	10,150	500	200	75
Unemployed ^d	2,350	250	200	75	D	D	650	150	50	25	1,450	200	D	D
Retired	21,500	750	350	100	D	D	1,850	250	350	100	18,900	700	S	S
Not employed and not seeking work ^e	4,300	425	250	75	D	D	1,350	275	S	S	2,500	275	100	50
Computer and information scientists	86,500	1,350	2,650	200	S	S	38,400	975	1,600	175	42,800	950	1,050	175
Full time	71,550	1,200	2,200	175	S	S	34,000	950	1,300	175	33,150	800	950	150
Part time	5,350	425	100	50	D	D	1,800	300	150	50	3,250	300	50	25
Unemployed ^d	1,150	200	100	50	D	D	400	100	D	D	600	150	D	D
Retired	7,450	475	250	75	D	D	1,700	250	100	50	5,400	375	D	D
Not employed and not seeking work ^e	950	200	S	S	D	D	500	175	D	D	400	125	D	D
Mathematical scientists	54,250	1,050	2,450	200	50	25	18,800	750	1,500	150	30,650	850	800	125
Full time	44,650	1,000	2,100	200	D	D	16,500	650	1,250	150	24,200	850	650	100
Part time	4,000	325	200	75	D	D	950	175	150	50	2,550	275	100	50
Unemployed ^d	700	175	50	25	D	D	350	150	D	D	250	75	D	D
Retired	4,200	300	100	50	D	D	850	225	D	D	3,200	225	D	D
Not employed and not seeking work ^e	700	150	D	D	D	D	150	75	D	D	450	125	D	D
Physical scientists	104,900	1,375	4,200	250	100	50	23,150	900	3,100	225	72,750	1,125	1,500	150
Full time	80,500	1,150	3,600	225	100	25	19,600	775	2,550	200	53,450	975	1,300	150

TABLE 31

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, ethnicity, and race: 2023

(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
Part time	7,850	500	250	50	D	D	1,450	250	300	75	5,750	375	100	50
Unemployed ^d	900	175	D	D	D	D	250	75	D	D	600	150	D	D
Retired	14,150	650	350	100	D	D	1,600	250	200	50	11,950	575	100	50
Not employed and not seeking work ^e	1,450	175	S	S	D	D	300	100	S	S	1,050	150	D	D
Psychologists	42,400	925	2,650	250	150	75	3,200	350	1,800	175	33,650	775	950	150
Full time	30,200	825	2,000	200	100	50	2,550	275	1,450	175	23,400	700	750	150
Part time	6,250	450	350	125	D	D	400	175	150	50	5,200	400	100	50
Unemployed ^d	250	75	D	D	D	D	D	D	D	D	150	75	D	D
Retired	5,100	350	250	100	D	D	150	75	150	50	4,450	325	D	D
Not employed and not seeking work ^e	600	150	D	D	D	D	D	D	D	D	450	125	D	D
Social scientists	81,800	1,200	5,950	300	300	75	10,950	575	4,550	275	58,600	975	1,500	150
Full time	62,100	1,200	4,900	275	200	75	9,000	550	3,550	225	43,300	1,000	1,150	150
Part time	8,650	500	600	125	100	50	1,050	225	550	125	6,250	375	100	50
Unemployed ^d	600	100	S	S	D	D	150	75	100	50	300	75	D	D
Retired	9,350	500	350	75	D	D	600	175	300	100	7,900	475	200	75
Not employed and not seeking work ^e	1,050	200	50	25	D	D	S	S	D	D	850	175	D	D
Engineering occupations	142,000	1,700	6,050	250	100	50	56,800	1,125	3,500	225	73,900	1,250	1,700	225
Full time	118,950	1,500	5,350	250	100	50	49,650	1,100	3,200	225	59,300	1,025	1,300	200
Part time	8,600	575	200	50	D	D	2,700	350	150	50	5,450	425	S	S
Unemployed ^d	1,350	250	50	25	D	D	500	125	D	D	800	200	D	D
Retired	11,700	550	300	75	D	D	3,550	375	100	50	7,450	475	250	125
Not employed and not seeking work ^e	1,400	225	100	50	D	D	350	100	D	D	900	200	D	D
S&E-related occupations	161,700	1,950	8,800	375	450	100	29,600	1,000	7,900	400	111,850	1,675	3,100	300
Full time	110,600	1,800	6,450	300	250	75	23,850	975	5,700	350	71,850	1,500	2,400	250
Part time	24,850	775	1,450	175	100	50	2,650	350	1,300	200	19,050	750	300	75
Unemployed ^d	1,450	225	S	S	D	D	300	100	200	100	900	200	D	D
Retired	22,600	775	600	125	50	25	2,450	325	600	125	18,600	675	350	100
Not employed and not seeking work ^e	2,200	275	200	75	D	D	400	150	100	50	1,450	225	50	25
Non-S&E occupations	188,750	2,125	9,000	350	550	100	34,750	1,050	10,500	400	130,350	1,750	3,600	250
Full time	130,500	1,800	6,800	325	350	75	27,150	925	7,850	375	85,500	1,475	2,800	225
Part time	25,900	825	1,000	125	150	75	3,100	350	1,200	175	20,100	725	400	100
Unemployed ^d	2,250	225	200	75	D	D	450	150	250	75	1,300	150	50	50

TABLE 31

U.S. residing doctoral scientists and engineers, by broad occupation, employment status, ethnicity, and race: 2023

(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
Retired	26,400	775	800	125	S	S	3,350	450	900	125	21,100	700	200	75
Not employed and not seeking work ^e	3,700	350	250	50	D	D	700	175	300	100	2,400	250	100	50

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^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 and 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 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 32-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by occupation: 2023

(Percent and SE)

Occupation	Unemployment rate	
	Percent	SE
All occupations	1.2	0.10
Science occupations	1.2	0.10
Biological, agricultural, and other life scientists	1.4	0.15
Agricultural, food scientists	1.3	0.45
Biochemists, biophysicists	2.2	0.75
Biological scientists	0.8	0.20
Forestry, conservation scientists	D	D
Medical scientists	1.6	0.30
Postsecondary teachers, agricultural, other natural sciences	S	S
Postsecondary teachers, biological sciences	0.6	0.20
Other biological, agricultural, life scientists	2.5	0.55
Computer and information scientists	1.5	0.25
Computer and information scientists	1.7	0.30
Postsecondary teachers, computer science	D	D
Mathematical scientists	1.4	0.35
Mathematical scientists	1.5	0.50
Postsecondary teachers, mathematics, statistics	1.2	0.40
Physical scientists	1.0	0.20
Chemists, except biochemists	1.0	0.30
Earth, atmospheric, ocean scientists	1.0	0.40
Physicists, astronomers	1.0	0.40
Postsecondary teachers, chemistry	0.8	0.35
Postsecondary teachers, physics	1.2	0.45
Postsecondary teachers, other physical science	S	S
Other physical scientists	2.0	1.00
Psychologists	0.7	0.20
Psychologists	0.4	0.20
Postsecondary teachers, psychology	0.9	0.35
Social scientists	0.9	0.15
Economists	D	D
Political scientists	D	D
Postsecondary teachers, economics	D	D
Postsecondary teachers, political science	1.0	0.45
Postsecondary teachers, sociology	D	D
Postsecondary teachers, other social sciences	0.6	0.25
Sociologists, anthropologists	1.8	0.85
Other social scientists	1.9	0.65
Engineering occupations	1.1	0.20
Aerospace, aeronautical, astronautical engineers	D	D
Chemical engineers	D	D
Civil, architectural, sanitary engineers	D	D
Electrical engineers	1.0	0.45
Industrial engineers	D	D
Mechanical engineers	2.3	0.80
Postsecondary teachers, engineering	1.2	0.55
Other engineers	0.7	0.25
S&E-related occupations	1.1	0.20
Health occupations, except postsecondary teachers and managers	0.8	0.20
Postsecondary teachers, health and related science	1.2	0.60
S&E managers, including health	1.1	0.30

TABLE 32-1

Unemployment rate among U.S. residing doctoral scientists and engineers, by occupation: 2023

(Percent and SE)

Occupation	Unemployment rate	
	Percent	SE
S&E precollege teachers	1.9	0.90
S&E technicians and technologists	3.4	1.45
Other S&E-related occupations	D	D
Non-S&E occupations	1.4	0.15
Arts, humanities-related occupations	2.1	0.60
Management-related occupations	1.3	0.35
Non-S&E managers	1.0	0.20
Non-S&E postsecondary teachers	1.3	0.35
Non-S&E precollege and other teachers	S	S
Sales, marketing occupations	3.2	1.05
Social service-related occupations	D	D
Other non-S&E occupations	1.3	0.35

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):

Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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. Individuals who reported never having worked but who were still in the labor force during the reference week are included in overall (All occupations) rate calculation but are excluded from computing the rates by occupation. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 32-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by occupation: 2023

(Percent and SE)

Occupation	Involuntarily out-of-field rate	
	Percent	SE
All occupations	2.7	0.10
Science occupations	2.1	0.15
Biological, agricultural, and other life scientists	1.1	0.15
Agricultural, food scientists	1.1	0.50
Biochemists, biophysicists	1.3	0.50
Biological scientists	1.4	0.35
Forestry, conservation scientists	D	D
Medical scientists	1.2	0.25
Postsecondary teachers, agricultural, other natural sciences	D	D
Postsecondary teachers, biological sciences	0.2	0.10
Other biological, agricultural, life scientists	1.7	0.55
Computer and information scientists	7.1	0.55
Computer and information scientists	8.2	0.65
Postsecondary teachers, computer science	D	D
Mathematical scientists	3.6	0.50
Mathematical scientists	5.5	0.80
Postsecondary teachers, mathematics, statistics	D	D
Physical scientists	0.9	0.20
Chemists, except biochemists	1.3	0.45
Earth, atmospheric, ocean scientists	0.9	0.35
Physicists, astronomers	S	S
Postsecondary teachers, chemistry	D	D
Postsecondary teachers, physics	D	D
Postsecondary teachers, other physical science	D	D
Other physical scientists	4.8	2.10
Psychologists	S	S
Psychologists	S	S
Postsecondary teachers, psychology	D	D
Social scientists	0.7	0.20
Economists	D	D
Political scientists	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
Sociologists, anthropologists	D	D
Other social scientists	2.9	0.75
Engineering occupations	1.7	0.20
Aerospace, aeronautical, astronautical engineers	2.0	0.60
Chemical engineers	1.7	0.80
Civil, architectural, sanitary engineers	S	S
Electrical engineers	1.1	0.30
Industrial engineers	5.7	2.80
Mechanical engineers	3.2	1.20
Postsecondary teachers, engineering	D	D
Other engineers	2.6	0.50
S&E-related occupations	2.3	0.25
Health occupations, except postsecondary teachers and managers	2.2	0.30
Postsecondary teachers, health and related science	0.9	0.40
S&E managers, including health	1.8	0.40

TABLE 32-2

Involuntarily out-of-field rate among U.S. residing doctoral scientists and engineers, by occupation: 2023

(Percent and SE)

Occupation	Involuntarily out-of-field rate	
	Percent	SE
S&E precollege teachers	5.6	1.35
S&E technicians and technologists	7.0	1.55
Other S&E-related occupations	S	S
Non-S&E occupations	5.7	0.30
Arts, humanities-related occupations	6.3	1.10
Management-related occupations	8.4	0.75
Non-S&E managers	2.4	0.40
Non-S&E postsecondary teachers	1.0	0.40
Non-S&E precollege and other teachers	9.5	1.65
Sales, marketing occupations	15.2	2.55
Social service-related occupations	3.8	1.10
Other non-S&E occupations	11.8	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):

Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 32-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by occupation: 2023

(Percent and SE)

Occupation	Labor force participation rate	
	Percent	SE
All occupations	86.9	0.15
Science occupations	87.5	0.25
Biological, agricultural, and other life scientists	86.8	0.40
Agricultural, food scientists	83.2	1.50
Biochemists, biophysicists	87.8	1.30
Biological scientists	88.6	0.90
Forestry, conservation scientists	84.8	3.10
Medical scientists	89.7	0.85
Postsecondary teachers, agricultural, other natural sciences	73.8	2.45
Postsecondary teachers, biological sciences	83.4	1.00
Other biological, agricultural, life scientists	88.9	1.25
Computer and information scientists	90.3	0.60
Computer and information scientists	90.9	0.65
Postsecondary teachers, computer science	86.6	1.75
Mathematical scientists	91.0	0.60
Mathematical scientists	92.6	0.70
Postsecondary teachers, mathematics, statistics	88.4	1.10
Physical scientists	85.1	0.60
Chemists, except biochemists	85.2	1.20
Earth, atmospheric, ocean scientists	82.1	1.40
Physicists, astronomers	88.4	1.20
Postsecondary teachers, chemistry	86.5	1.20
Postsecondary teachers, physics	82.9	2.20
Postsecondary teachers, other physical science	83.2	1.50
Other physical scientists	86.2	2.45
Psychologists	86.5	0.85
Psychologists	89.2	1.30
Postsecondary teachers, psychology	84.2	1.15
Social scientists	87.3	0.60
Economists	90.4	1.85
Political scientists	78.5	4.80
Postsecondary teachers, economics	85.3	1.70
Postsecondary teachers, political science	90.9	1.45
Postsecondary teachers, sociology	84.4	1.90
Postsecondary teachers, other social sciences	86.7	1.10
Sociologists, anthropologists	82.7	2.45
Other social scientists	89.8	1.10
Engineering occupations	90.8	0.45
Aerospace, aeronautical, astronautical engineers	87.9	1.85
Chemical engineers	88.5	2.15
Civil, architectural, sanitary engineers	94.7	1.35
Electrical engineers	92.2	0.90
Industrial engineers	88.9	3.55
Mechanical engineers	88.1	1.75
Postsecondary teachers, engineering	90.9	1.05
Other engineers	90.9	0.75
S&E-related occupations	84.7	0.45
Health occupations, except postsecondary teachers and managers	84.9	0.60
Postsecondary teachers, health and related science	82.5	1.25
S&E managers, including health	87.1	1.00

TABLE 32-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by occupation: 2023

(Percent and SE)

Occupation	Labor force participation rate	
	Percent	SE
S&E precollege teachers	77.5	2.65
S&E technicians and technologists	82.7	3.15
Other S&E-related occupations	75.2	6.85
Non-S&E occupations	84.1	0.45
Arts, humanities-related occupations	83.9	1.65
Management-related occupations	87.2	0.95
Non-S&E managers	85.4	0.70
Non-S&E postsecondary teachers	79.7	1.45
Non-S&E precollege and other teachers	70.7	2.70
Sales, marketing occupations	86.7	1.85
Social service-related occupations	85.5	2.10
Other non-S&E occupations	82.1	1.45

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

Note(s):

Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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 2023, 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. Individuals who reported never having worked but were still in the labor force during the reference week are included in overall (All occupation) rate calculation but excluded from computing the rates by occupation. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 33

U.S. residing doctoral scientists and engineers, by occupation and sex: 2023

(Number and SE)

Occupation	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
All occupations	1,058,700	1,900	654,700	1,675	404,000	1,200
Science occupations	566,250	2,850	356,000	2,325	210,250	1,475
Biological, agricultural, and other life scientists	196,350	1,675	111,300	1,650	85,050	1,150
Agricultural, food scientists	13,700	525	9,100	475	4,600	275
Biochemists, biophysicists	19,900	650	13,400	625	6,550	375
Biological scientists	34,100	700	18,650	675	15,450	525
Forestry, conservation scientists	3,450	250	2,150	225	1,300	125
Medical scientists	52,800	1,025	27,850	925	24,950	800
Postsecondary teachers, agricultural, other natural sciences	7,000	375	4,550	350	2,400	225
Postsecondary teachers, biological sciences	39,800	950	22,700	825	17,100	600
Other biological, agricultural, life scientists	25,650	775	12,950	600	12,700	525
Computer and information scientists	86,500	1,350	69,900	1,200	16,550	675
Computer and information scientists	74,150	1,375	60,400	1,250	13,750	625
Postsecondary teachers, computer science	12,350	550	9,550	500	2,850	250
Mathematical scientists	54,250	1,050	37,650	850	16,600	550
Mathematical scientists	33,000	850	22,350	750	10,650	475
Postsecondary teachers, mathematics, statistics	21,250	700	15,300	550	5,950	350
Physical scientists	104,900	1,375	77,750	1,350	27,150	650
Chemists, except biochemists	25,900	800	19,350	725	6,550	325
Earth, atmospheric, ocean scientists	16,700	600	12,200	475	4,500	300
Physicists, astronomers	16,750	725	14,150	675	2,650	250
Postsecondary teachers, chemistry	18,900	775	11,650	625	7,300	450
Postsecondary teachers, physics	11,450	600	9,550	575	1,850	175
Postsecondary teachers, other physical science	8,200	325	5,400	300	2,800	200
Other physical scientists	7,050	425	5,500	425	1,550	175
Psychologists	42,400	925	16,500	650	25,900	750
Psychologists	19,750	750	6,800	475	12,950	600
Postsecondary teachers, psychology	22,650	750	9,650	500	12,950	525
Social scientists	81,800	1,200	42,900	875	38,950	850
Economists	10,750	500	7,100	425	3,600	275
Political scientists	2,700	250	1,700	225	1,000	175
Postsecondary teachers, economics	12,050	500	8,750	450	3,300	300
Postsecondary teachers, political science	10,800	525	6,800	450	4,000	300
Postsecondary teachers, sociology	8,850	400	3,850	275	5,050	325
Postsecondary teachers, other social sciences	19,100	625	8,300	450	10,800	450

TABLE 33

U.S. residing doctoral scientists and engineers, by occupation and sex: 2023

(Number and SE)

Occupation	Total		Male		Female	
	Number	SE	Number	SE	Number	SE
Sociologists, anthropologists	4,900	275	2,050	200	2,850	250
Other social scientists	12,750	525	4,400	325	8,350	400
Engineering occupations	142,000	1,700	118,150	1,675	23,850	625
Aerospace, aeronautical, astronautical engineers	8,550	450	7,450	425	1,100	125
Chemical engineers	9,200	550	7,350	500	1,850	275
Civil, architectural, sanitary engineers	8,300	500	7,100	475	1,200	150
Electrical engineers	32,700	1,075	28,650	1,050	4,050	325
Industrial engineers	1,450	225	1,000	225	450	100
Mechanical engineers	15,150	725	13,500	725	1,650	200
Postsecondary teachers, engineering	27,550	875	22,200	825	5,350	300
Other engineers	39,100	1,150	30,850	1,075	8,250	425
S&E-related occupations	161,700	1,950	77,400	1,550	84,300	1,250
Health occupations, except postsecondary teachers and managers	85,900	1,425	33,900	950	52,000	1,125
Postsecondary teachers, health and related science	24,400	750	9,550	575	14,850	475
S&E managers, including health	38,550	1,100	25,450	925	13,100	550
S&E precollege teachers	5,900	400	3,000	300	2,950	250
S&E technicians and technologists	5,650	425	4,650	400	1,000	150
Other S&E-related occupations	1,250	200	900	175	350	100
Non-S&E occupations	188,750	2,125	103,150	1,675	85,600	1,375
Arts, humanities-related occupations	12,150	525	4,300	375	7,850	425
Management-related occupations	40,650	1,150	21,150	850	19,500	700
Non-S&E managers	65,700	1,325	41,650	1,075	24,100	850
Non-S&E postsecondary teachers	24,800	800	12,800	625	12,000	475
Non-S&E precollege and other teachers	8,050	500	3,100	300	5,000	375
Sales, marketing occupations	8,300	450	5,000	375	3,300	250
Social service-related occupations	9,100	475	3,600	350	5,500	350
Other non-S&E occupations	20,000	725	11,600	625	8,400	375

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 individuals who reported never having worked so could not be classified by occupation. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 34

U.S. residing doctoral scientists and engineers, by occupation, ethnicity, and race: 2023

(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	1,058,700	1,900	52,350	700	2,050	150	263,950	1,675	40,200	475	682,400	1,700	17,750	550
Science occupations	566,250	2,850	28,550	575	950	125	142,800	1,675	18,300	450	366,250	2,475	9,350	400
Biological, agricultural, and other life scientists	196,350	1,675	10,600	425	300	100	48,300	975	5,750	300	127,800	1,550	3,600	250
Agricultural, food scientists	13,700	525	1,100	125	D	D	3,150	300	600	75	8,650	400	150	50
Biochemists, biophysicists	19,900	650	1,100	175	D	D	7,300	500	250	75	10,950	525	300	100
Biological scientists	34,100	700	2,150	175	S	S	8,050	500	1,000	150	22,150	625	700	100
Forestry, conservation scientists	3,450	250	150	50	D	D	200	75	50	25	2,900	225	50	25
Medical scientists	52,800	1,025	2,400	250	50	50	13,850	625	1,850	200	33,500	875	1,150	150
Postsecondary teachers, agricultural, other natural sciences	7,000	375	300	75	D	D	1,000	175	300	75	5,300	350	50	50
Postsecondary teachers, biological sciences	39,800	950	1,900	150	50	50	5,650	500	1,050	175	30,350	850	750	150
Other biological, agricultural, life scientists	25,650	775	1,550	150	D	D	9,050	550	650	100	14,000	625	450	100
Computer and information scientists	86,500	1,350	2,650	200	S	S	38,400	975	1,600	175	42,800	950	1,050	175
Computer and information scientists	74,150	1,375	2,150	175	S	S	33,700	975	1,100	150	36,300	950	900	125
Postsecondary teachers, computer science	12,350	550	500	125	D	D	4,700	375	500	125	6,450	425	S	S
Mathematical scientists	54,250	1,050	2,450	200	50	25	18,800	750	1,500	150	30,650	850	800	125
Mathematical scientists	33,000	850	1,200	125	D	D	13,750	675	800	125	16,550	625	600	125
Postsecondary teachers, mathematics, statistics	21,250	700	1,250	150	D	D	5,000	450	700	100	14,100	550	200	50
Physical scientists	104,900	1,375	4,200	250	100	50	23,150	900	3,100	225	72,750	1,125	1,500	150
Chemists, except biochemists	25,900	800	900	100	50	25	7,650	550	950	125	16,000	650	350	75
Earth, atmospheric, ocean scientists	16,700	600	650	100	*	*	3,600	325	300	75	11,850	450	250	50
Physicists, astronomers	16,750	725	700	150	D	D	3,650	350	250	125	11,900	600	250	75
Postsecondary teachers, chemistry	18,900	775	800	150	D	D	3,300	450	1,000	150	13,550	575	250	75
Postsecondary teachers, physics	11,450	600	400	75	D	D	2,250	350	250	75	8,350	550	150	50
Postsecondary teachers, other physical science	8,200	325	500	100	D	D	900	150	250	75	6,400	275	150	50
Other physical scientists	7,050	425	300	75	D	D	1,800	250	100	50	4,700	350	S	S
Psychologists	42,400	925	2,650	250	150	75	3,200	350	1,800	175	33,650	775	950	150
Psychologists	19,750	750	1,200	200	D	D	1,650	225	750	125	15,700	650	450	125
Postsecondary teachers, psychology	22,650	750	1,450	175	100	50	1,550	275	1,050	150	17,950	675	500	100
Social scientists	81,800	1,200	5,950	300	300	75	10,950	575	4,550	275	58,600	975	1,500	150
Economists	10,750	500	900	125	D	D	2,300	275	350	100	7,000	400	150	75
Political scientists	2,700	250	250	125	D	D	100	50	100	50	2,200	250	50	25
Postsecondary teachers, economics	12,050	500	750	150	D	D	2,100	250	550	100	8,500	475	150	75
Postsecondary teachers, political science	10,800	525	650	125	D	D	1,400	250	650	125	7,900	475	200	50
Postsecondary teachers, sociology	8,850	400	700	100	D	D	1,050	225	800	150	6,000	350	250	75

TABLE 34

U.S. residing doctoral scientists and engineers, by occupation, ethnicity, and race: 2023

(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
Postsecondary teachers, other social sciences	19,100	625	1,550	175	100	50	1,900	225	1,050	150	14,150	500	300	75
Sociologists, anthropologists	4,900	275	350	75	D	D	400	125	200	50	3,850	275	100	50
Other social scientists	12,750	525	800	125	100	50	1,600	225	900	125	9,100	450	250	75
Engineering occupations	142,000	1,700	6,050	250	100	50	56,800	1,125	3,500	225	73,900	1,250	1,700	225
Aerospace, aeronautical, astronautical engineers	8,550	450	550	100	D	D	1,750	225	250	75	5,900	400	150	50
Chemical engineers	9,200	550	350	75	D	D	3,700	350	250	75	4,850	425	50	50
Civil, architectural, sanitary engineers	8,300	500	300	75	D	D	3,150	375	400	100	4,400	350	S	S
Electrical engineers	32,700	1,075	1,050	125	D	D	15,950	700	800	125	14,300	725	600	175
Industrial engineers	1,450	225	200	50	D	D	350	100	50	25	800	225	D	D
Mechanical engineers	15,150	725	400	75	D	D	7,450	600	250	75	6,800	450	250	100
Postsecondary teachers, engineering	27,550	875	1,450	175	D	D	8,850	575	750	100	16,300	650	200	50
Other engineers	39,100	1,150	1,750	150	*	*	15,650	800	800	100	20,550	750	400	75
S&E-related occupations	161,700	1,950	8,800	375	450	100	29,600	1,000	7,900	400	111,850	1,675	3,100	300
Health occupations, except postsecondary teachers and managers	85,900	1,425	5,400	325	200	75	11,650	575	4,700	300	62,200	1,300	1,750	200
Postsecondary teachers, health and related science	24,400	750	1,100	150	100	50	4,050	400	1,400	150	17,350	700	400	75
S&E managers, including health	38,550	1,100	1,700	200	100	50	11,100	700	1,400	175	23,700	725	550	100
S&E precollege teachers	5,900	400	350	100	D	D	450	125	200	75	4,600	325	300	150
S&E technicians and technologists	5,650	425	250	75	D	D	1,850	300	150	75	3,400	300	100	50
Other S&E-related occupations	1,250	200	D	D	D	D	550	150	D	D	600	150	D	D
Non-S&E occupations	188,750	2,125	9,000	350	550	100	34,750	1,050	10,500	400	130,350	1,750	3,600	250
Arts, humanities-related occupations	12,150	525	450	75	D	D	1,300	175	400	100	9,750	500	200	50
Management-related occupations	40,650	1,150	2,200	225	100	50	9,950	575	2,450	225	25,150	875	800	150
Non-S&E managers	65,700	1,325	2,700	200	200	75	12,750	700	3,450	275	45,500	1,100	1,100	175
Non-S&E postsecondary teachers	24,800	800	1,600	150	100	50	4,000	350	1,500	200	17,050	675	500	100
Non-S&E precollege and other teachers	8,050	500	400	100	D	D	1,300	225	450	125	5,700	425	200	75
Sales, marketing occupations	8,300	450	250	50	D	D	1,850	250	500	125	5,450	375	150	50
Social service-related occupations	9,100	475	450	75	50	25	650	150	900	125	6,900	475	150	50
Other non-S&E occupations	20,000	725	800	100	D	D	2,950	350	900	150	14,900	650	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.

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one 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. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes individuals who reported never having worked so could not be classified by occupation. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 35

U.S. residing doctoral scientists and engineers, by occupation and disability status: 2023

(Number and SE)

Occupation	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
All occupations	1,058,700	1,900	122,250	1,675	936,450	2,400
Science occupations	566,250	2,850	68,150	1,425	498,050	2,825
Biological, agricultural, and other life scientists	196,350	1,675	22,700	775	173,650	1,550
Agricultural, food scientists	13,700	525	1,750	200	11,950	525
Biochemists, biophysicists	19,900	650	2,050	250	17,900	600
Biological scientists	34,100	700	3,850	325	30,250	700
Forestry, conservation scientists	3,450	250	400	75	3,050	250
Medical scientists	52,800	1,025	5,400	450	47,400	925
Postsecondary teachers, agricultural, other natural sciences	7,000	375	1,100	175	5,900	350
Postsecondary teachers, biological sciences	39,800	950	5,250	350	34,550	900
Other biological, agricultural, life scientists	25,650	775	2,950	325	22,700	700
Computer and information scientists	86,500	1,350	9,050	475	77,450	1,350
Computer and information scientists	74,150	1,375	7,150	450	66,950	1,350
Postsecondary teachers, computer science	12,350	550	1,900	250	10,500	525
Mathematical scientists	54,250	1,050	6,300	475	47,950	1,000
Mathematical scientists	33,000	850	3,350	350	29,650	800
Postsecondary teachers, mathematics, statistics	21,250	700	2,950	300	18,300	675
Physical scientists	104,900	1,375	12,500	575	92,400	1,375
Chemists, except biochemists	25,900	800	2,950	300	22,950	775
Earth, atmospheric, ocean scientists	16,700	600	2,050	225	14,650	600
Physicists, astronomers	16,750	725	2,000	275	14,750	700
Postsecondary teachers, chemistry	18,900	775	2,200	250	16,700	750
Postsecondary teachers, physics	11,450	600	1,400	225	10,000	575
Postsecondary teachers, other physical science	8,200	325	1,100	125	7,100	325
Other physical scientists	7,050	425	800	175	6,250	425
Psychologists	42,400	925	5,550	425	36,850	825
Psychologists	19,750	750	2,250	275	17,500	725
Postsecondary teachers, psychology	22,650	750	3,300	300	19,350	650
Social scientists	81,800	1,200	12,050	575	69,750	1,175
Economists	10,750	500	1,000	175	9,700	475
Political scientists	2,700	250	350	125	2,350	250
Postsecondary teachers, economics	12,050	500	2,250	250	9,850	450
Postsecondary teachers, political science	10,800	525	1,650	225	9,100	525
Postsecondary teachers, sociology	8,850	400	1,450	200	7,400	375
Postsecondary teachers, other social sciences	19,100	625	3,050	300	16,050	550

TABLE 35

U.S. residing doctoral scientists and engineers, by occupation and disability status: 2023

(Number and SE)

Occupation	Total		With disability		Without disability	
	Number	SE	Number	SE	Number	SE
Sociologists, anthropologists	4,900	275	800	150	4,100	250
Other social scientists	12,750	525	1,500	175	11,250	500
Engineering occupations	142,000	1,700	14,650	675	127,350	1,625
Aerospace, aeronautical, astronautical engineers	8,550	450	850	150	7,650	425
Chemical engineers	9,200	550	700	150	8,500	550
Civil, architectural, sanitary engineers	8,300	500	1,000	200	7,300	500
Electrical engineers	32,700	1,075	3,400	350	29,350	1,000
Industrial engineers	1,450	225	S	S	1,250	175
Mechanical engineers	15,150	725	1,300	225	13,800	700
Postsecondary teachers, engineering	27,550	875	3,600	325	23,950	875
Other engineers	39,100	1,150	3,600	350	35,500	1,075
S&E-related occupations	161,700	1,950	17,700	775	144,050	1,925
Health occupations, except postsecondary teachers and managers	85,900	1,425	9,650	575	76,300	1,350
Postsecondary teachers, health and related science	24,400	750	3,500	375	20,950	725
S&E managers, including health	38,550	1,100	3,300	325	35,200	1,000
S&E precollege teachers	5,900	400	650	150	5,250	400
S&E technicians and technologists	5,650	425	500	125	5,200	425
Other S&E-related occupations	1,250	200	100	50	1,150	200
Non-S&E occupations	188,750	2,125	21,700	800	167,000	1,875
Arts, humanities-related occupations	12,150	525	1,300	150	10,850	500
Management-related occupations	40,650	1,150	4,200	300	36,450	1,075
Non-S&E managers	65,700	1,325	6,250	475	59,500	1,200
Non-S&E postsecondary teachers	24,800	800	3,550	300	21,250	725
Non-S&E precollege and other teachers	8,050	500	1,100	175	6,950	475
Sales, marketing occupations	8,300	450	900	200	7,400	425
Social service-related occupations	9,100	475	1,700	275	7,400	425
Other non-S&E occupations	20,000	725	2,750	250	17,250	625

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. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 36

U.S. residing doctoral scientists and engineers on postdoc appointments, by occupation: 2023

(Number and SE)

Occupation	Number	SE
All occupations	23,450	675
Science occupations	19,450	550
Biological, agricultural, and other life scientists	12,750	425
Agricultural, food scientists	500	100
Biochemists, biophysicists	2,600	225
Biological scientists	4,000	275
Forestry, conservation scientists	150	50
Medical scientists	3,350	250
Postsecondary teachers, agricultural, other natural sciences	S	S
Postsecondary teachers, biological sciences	150	75
Other biological, agricultural, life scientists	2,000	175
Computer and information scientists	450	125
Computer and information scientists	400	125
Postsecondary teachers, computer science	D	D
Mathematical scientists	950	125
Mathematical scientists	600	100
Postsecondary teachers, mathematics, statistics	350	100
Physical scientists	3,700	250
Chemists, except biochemists	1,150	175
Earth, atmospheric, ocean scientists	800	100
Physicists, astronomers	1,450	175
Postsecondary teachers, chemistry	D	D
Postsecondary teachers, physics	D	D
Postsecondary teachers, other physical science	D	D
Other physical scientists	300	100
Psychologists	500	100
Psychologists	500	100
Postsecondary teachers, psychology	D	D
Social scientists	1,100	150
Economists	150	75
Political scientists	50	50
Postsecondary teachers, economics	D	D
Postsecondary teachers, political science	50	50
Postsecondary teachers, sociology	D	D
Postsecondary teachers, other social sciences	50	25
Sociologists, anthropologists	200	75
Other social scientists	500	100
Engineering occupations	2,250	275
Aerospace, aeronautical, astronautical engineers	D	D
Chemical engineers	150	75
Civil, architectural, sanitary engineers	200	75
Electrical engineers	350	125
Industrial engineers	D	D
Mechanical engineers	200	75
Postsecondary teachers, engineering	D	D
Other engineers	1,250	200
S&E-related occupations	1,450	200
Health occupations, except postsecondary teachers and managers	1,000	200
Postsecondary teachers, health and related science	100	50
S&E managers, including health	250	75
S&E precollege teachers	D	D

TABLE 36

U.S. residing doctoral scientists and engineers on postdoc appointments, by occupation: 2023

(Number and SE)

Occupation	Number	SE
S&E technicians and technologists	D	D
Other S&E-related occupations	D	D
Non-S&E occupations	300	100
Arts, humanities-related occupations	D	D
Management-related occupations	D	D
Non-S&E managers	D	D
Non-S&E postsecondary teachers	D	D
Non-S&E precollege and other teachers	D	D
Sales, marketing occupations	D	D
Social service-related occupations	D	D
Other non-S&E occupations	100	50

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. A postdoc appointment is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc appointment status is reported for principal job as of survey reference date (1 February 2023). Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 37

U.S. residing employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2023

(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	16,450	600	7,000	425	9,450	400	1,800	225	800	175	950	175	2,750	225	1,150	150	1,600	150	11,900	475	5,000	350	6,900	325
Sociologists, anthropologists	3,950	275	1,700	200	2,300	225	400	125	50	25	350	125	600	75	200	75	400	75	3,000	250	1,450	200	1,550	175
Other social scientists	11,200	500	3,800	325	7,400	375	1,400	200	500	125	900	150	1,950	175	550	125	1,350	150	7,850	450	2,750	275	5,100	325
Engineering occupations	127,550	1,600	105,450	1,550	22,100	600	52,400	1,100	43,200	1,075	9,150	450	10,400	375	7,950	350	2,450	175	64,750	1,125	54,300	1,100	10,450	400
Aerospace, aeronautical, astronautical engineers	7,500	425	6,500	400	1,000	125	1,550	200	1,300	200	250	75	850	125	750	125	100	50	5,100	350	4,450	350	650	125
Chemical engineers	8,050	500	6,350	450	1,700	250	3,450	325	2,800	325	600	150	600	125	450	100	150	50	4,000	375	3,050	300	950	200
Civil, architectural, sanitary engineers	7,800	500	6,650	475	1,150	150	3,000	375	2,500	350	500	100	750	125	650	125	100	50	4,100	350	3,550	350	550	100
Electrical engineers	29,900	1,000	26,100	975	3,750	300	15,000	675	12,800	650	2,200	250	2,300	225	1,950	225	400	75	12,550	650	11,350	625	1,200	150
Industrial engineers	1,300	225	900	225	400	100	300	100	150	50	150	75	250	75	150	50	100	50	750	200	600	200	150	50
Mechanical engineers	13,050	725	11,550	725	1,450	175	6,450	600	5,750	575	700	150	750	125	650	125	150	50	5,800	450	5,200	450	650	100
Postsecondary teachers, engineering	24,750	850	19,650	775	5,100	300	8,150	550	6,650	525	1,500	200	2,200	200	1,650	200	600	100	14,400	625	11,350	600	3,050	225
Other engineers	35,300	1,075	27,800	1,000	7,550	400	14,550	750	11,250	700	3,300	300	2,650	150	1,750	125	900	100	18,100	700	14,800	675	3,300	250
S&E-related occupations	135,450	1,825	63,450	1,450	72,000	1,175	26,500	1,000	15,100	775	11,450	575	18,050	550	7,100	400	10,900	400	90,900	1,525	41,250	1,100	49,650	1,025
Health occupations, except postsecondary teachers and managers	72,400	1,300	27,550	900	44,850	1,050	10,750	550	5,100	400	5,650	400	10,750	450	3,500	300	7,250	350	50,900	1,175	18,950	800	31,950	875
Postsecondary teachers, health and related science	19,900	725	7,800	550	12,150	475	3,500	375	1,600	275	1,950	250	2,650	200	850	125	1,800	175	13,700	600	5,350	475	8,400	400
S&E managers, including health	33,200	1,050	21,400	825	11,800	550	9,800	675	6,550	550	3,250	375	3,450	300	1,950	200	1,500	175	19,950	675	12,900	550	7,050	400
S&E precollege teachers	4,500	375	2,200	300	2,300	225	350	100	200	100	150	75	700	175	400	125	300	100	3,400	300	1,600	225	1,850	225
S&E technicians and technologists	4,550	400	3,850	375	650	125	1,600	275	1,300	250	300	75	400	100	400	100	*	*	2,500	275	2,200	250	350	100
Other S&E-related occupations	950	175	700	175	250	75	500	150	350	125	150	50	100	50	S	S	D	D	350	125	300	125	S	S
Non-S&E occupations	156,400	2,025	85,100	1,575	71,300	1,375	30,250	975	17,800	825	12,450	575	20,550	525	9,050	350	11,500	400	105,600	1,650	58,250	1,275	47,350	1,150
Arts, humanities-related occupations	9,950	475	3,550	325	6,400	375	1,050	175	350	100	700	150	950	100	300	50	650	100	7,950	425	2,900	325	5,050	350
Management-related occupations	35,000	1,025	17,850	775	17,150	625	9,000	525	4,900	425	4,100	325	4,900	325	2,050	200	2,850	250	21,050	825	10,850	575	10,200	550
Non-S&E managers	55,600	1,275	35,100	1,025	20,500	800	11,000	650	7,700	550	3,350	350	6,750	350	3,550	250	3,200	200	37,800	1,025	23,900	850	13,900	575
Non-S&E postsecondary teachers	19,500	725	10,200	525	9,350	475	3,500	300	1,900	250	1,650	225	3,150	250	1,350	150	1,800	175	12,800	575	6,950	450	5,900	375
Non-S&E precollege and other teachers	5,450	400	1,800	225	3,650	325	900	150	250	75	650	150	800	150	200	75	600	150	3,750	350	1,400	225	2,400	275
Sales, marketing occupations	6,950	450	4,150	350	2,850	250	1,650	250	1,050	225	600	125	800	125	350	100	400	100	4,550	350	2,700	275	1,850	200
Social service-related occupations	7,750	475	3,050	325	4,700	375	600	150	350	125	250	100	1,400	150	400	75	1,000	125	5,800	450	2,350	325	3,400	350
Other non-S&E occupations	16,200	675	9,450	575	6,750	350	2,550	325	1,350	250	1,150	200	1,800	175	850	125	950	100	11,850	600	7,200	550	4,650	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 Asian is single race.

^b Other minority includes Hispanic or Latino ethnicity, more than one race, and the following racial categories (all single race): American Indian or Alaska Native, Black or African American, and Native Hawaiian or Other Pacific Islander. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

^a In this table, all employed minority includes Hispanic or Latino ethnicity, more than one race (data not shown), and the following racial categories (all single race): American Indian or Alaska Native, Black or African American, and Native Hawaiian or Other Pacific Islander. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 39

U.S. residing employed doctoral scientists and engineers, by occupation and citizenship status: 2023

(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	908,700	2,300	774,700	2,225	562,450	1,725	212,250	1,775	134,000	1,550	94,750	1,575	39,250	775
Science occupations	489,300	2,625	406,950	2,450	301,100	1,975	105,800	1,550	82,350	1,375	55,950	1,325	26,400	675
Biological, agricultural, and other life scientists	168,150	1,575	143,300	1,475	110,500	1,325	32,800	875	24,850	775	16,550	675	8,300	375
Agricultural, food scientists	11,250	475	9,250	450	6,700	375	2,550	275	2,000	200	1,400	175	600	100
Biochemists, biophysicists	17,100	575	12,300	525	9,000	425	3,300	325	4,800	450	2,850	350	1,950	250
Biological scientists	30,000	700	25,650	675	20,950	600	4,700	350	4,300	375	2,600	300	1,700	200
Forestry, conservation scientists	2,900	225	2,800	225	2,550	200	250	100	100	50	50	25	S	S
Medical scientists	46,600	975	40,900	950	30,300	800	10,650	600	5,700	375	3,700	325	2,000	200
Postsecondary teachers, agricultural, other natural sciences	5,100	325	4,400	300	3,550	250	800	150	750	150	550	125	150	75
Postsecondary teachers, biological sciences	33,000	875	30,750	850	25,400	750	5,350	475	2,250	300	1,950	275	250	100
Other biological, agricultural, life scientists	22,250	750	17,250	675	12,050	500	5,200	425	5,000	400	3,450	375	1,550	200
Computer and information scientists	76,900	1,250	53,750	1,150	28,600	725	25,150	850	23,150	750	16,000	700	7,150	350
Computer and information scientists	66,200	1,300	45,850	1,075	24,550	650	21,350	800	20,350	700	13,850	625	6,500	350
Postsecondary teachers, computer science	10,700	525	7,900	500	4,100	325	3,850	400	2,800	275	2,150	275	650	100
Mathematical scientists	48,650	1,000	37,000	950	23,300	725	13,700	575	11,650	500	7,650	450	3,950	300
Mathematical scientists	30,100	800	21,550	750	13,250	525	8,300	475	8,500	425	5,500	400	3,050	275
Postsecondary teachers, mathematics, statistics	18,550	675	15,450	625	10,050	475	5,400	375	3,100	300	2,200	250	950	175
Physical scientists	88,350	1,325	75,300	1,175	56,700	925	18,600	750	13,050	600	8,900	550	4,150	275
Chemists, except biochemists	21,850	775	17,900	675	12,900	600	5,000	450	3,950	350	2,550	325	1,400	175
Earth, atmospheric, ocean scientists	13,550	550	11,400	525	8,950	425	2,450	275	2,150	250	1,450	200	700	125
Physicists, astronomers	14,650	650	12,200	600	9,250	550	2,950	300	2,450	300	1,300	225	1,150	175
Postsecondary teachers, chemistry	16,250	700	14,900	650	11,450	525	3,450	350	1,300	300	1,100	300	200	75
Postsecondary teachers, physics	9,350	525	8,150	500	5,450	375	2,700	350	1,200	200	1,100	200	S	S
Postsecondary teachers, other physical science	6,750	275	6,000	275	4,950	225	1,050	150	800	125	600	125	200	75
Other physical scientists	5,950	400	4,750	350	3,750	300	1,000	175	1,200	250	750	200	450	150
Psychologists	36,450	850	35,150	850	31,650	800	3,550	350	1,300	175	950	150	350	100
Psychologists	17,550	725	17,000	725	15,350	675	1,650	275	550	125	400	100	150	50
Postsecondary teachers, psychology	18,900	675	18,150	650	16,250	650	1,900	250	750	150	550	125	200	100
Social scientists	70,750	1,175	62,350	1,150	50,400	950	12,000	575	8,400	500	5,900	425	2,500	275
Economists	9,700	475	7,300	400	5,400	325	1,900	250	2,350	275	1,300	200	1,100	175
Political scientists	2,100	225	1,700	200	1,350	175	300	100	400	125	350	125	D	D
Postsecondary teachers, economics	10,200	475	8,500	450	6,000	400	2,500	300	1,700	225	1,200	200	500	100
Postsecondary teachers, political science	9,700	500	8,850	500	7,100	450	1,750	250	850	175	650	175	200	75
Postsecondary teachers, sociology	7,450	375	6,900	375	5,550	300	1,350	250	550	150	450	150	D	D

TABLE 39

U.S. residing employed doctoral scientists and engineers, by occupation and citizenship status: 2023

(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
Postsecondary teachers, other social sciences	16,450	600	15,050	550	12,900	475	2,150	250	1,400	200	1,100	175	250	75
Sociologists, anthropologists	3,950	275	3,750	275	3,250	225	500	125	250	75	200	75	D	D
Other social scientists	11,200	500	10,300	475	8,800	450	1,500	175	950	175	650	150	300	100
Engineering occupations	127,550	1,600	97,000	1,625	53,800	1,025	43,150	1,200	30,550	825	22,050	825	8,500	475
Aerospace, aeronautical, astronautical engineers	7,500	425	6,900	400	4,850	350	2,050	225	550	125	400	100	150	75
Chemical engineers	8,050	500	6,050	450	3,800	350	2,250	300	2,000	250	1,350	225	650	150
Civil, architectural, sanitary engineers	7,800	500	5,650	375	2,550	300	3,100	350	2,200	250	1,500	225	650	125
Electrical engineers	29,900	1,000	21,250	900	10,300	550	10,950	650	8,650	450	6,500	425	2,150	200
Industrial engineers	1,300	225	900	150	700	150	200	50	400	150	150	75	S	S
Mechanical engineers	13,050	725	9,500	625	4,650	350	4,900	500	3,500	400	2,400	325	1,100	175
Postsecondary teachers, engineering	24,750	850	20,000	800	10,850	575	9,100	625	4,750	375	3,700	350	1,050	150
Other engineers	35,300	1,075	26,800	900	16,200	625	10,600	600	8,500	550	6,050	450	2,450	275
S&E-related occupations	135,450	1,825	126,000	1,700	98,200	1,500	27,800	950	9,450	575	7,300	525	2,200	225
Health occupations, except postsecondary teachers and managers	72,400	1,300	69,300	1,275	57,400	1,225	11,900	650	3,100	375	2,450	350	650	150
Postsecondary teachers, health and related science	19,900	725	18,300	675	14,500	550	3,800	375	1,600	225	1,200	175	400	100
S&E managers, including health	33,200	1,050	29,900	950	20,000	650	9,850	725	3,300	375	2,500	300	800	175
S&E precollege teachers	4,500	375	4,350	375	3,650	350	700	150	150	75	S	S	D	D
S&E technicians and technologists	4,550	400	3,350	325	2,250	250	1,100	225	1,150	200	900	175	300	100
Other S&E-related occupations	950	175	800	150	350	100	450	125	150	75	S	S	D	D
Non-S&E occupations	156,400	2,025	144,800	1,875	109,300	1,550	35,500	1,025	11,600	650	9,450	600	2,150	275
Arts, humanities-related occupations	9,950	475	9,500	475	8,300	450	1,200	200	450	125	350	100	150	75
Management-related occupations	35,000	1,025	31,000	1,025	22,050	800	9,000	575	3,950	375	3,000	350	950	175
Non-S&E managers	55,600	1,275	52,700	1,200	38,100	925	14,600	725	2,850	350	2,600	350	250	75
Non-S&E postsecondary teachers	19,500	725	17,250	700	13,100	550	4,150	350	2,250	250	1,850	225	350	100
Non-S&E precollege and other teachers	5,450	400	5,100	400	4,100	350	1,000	175	350	100	250	100	S	S
Sales, marketing occupations	6,950	450	6,500	425	4,850	350	1,650	250	500	125	450	125	D	D
Social service-related occupations	7,750	475	7,550	475	6,600	450	950	175	200	100	100	75	S	S
Other non-S&E occupations	16,200	675	15,150	625	12,200	550	2,950	325	1,050	200	800	175	250	100

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 40

U.S. residing employed doctoral scientists and engineers, by occupation and age: 2023

(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	908,700	2,300	101,900	1,100	139,700	1,525	135,200	1,425	119,100	1,425	112,200	1,400	100,500	1,625	87,550	1,500	112,550	1,375
Science occupations	489,300	2,625	63,900	900	83,650	1,300	78,100	1,250	64,250	1,175	56,500	1,200	48,800	1,075	41,900	975	52,200	1,150
Biological, agricultural, and other life scientists	168,150	1,575	22,750	550	28,850	775	26,900	850	22,500	725	18,650	700	16,000	700	14,400	625	18,050	650
Agricultural, food scientists	11,250	475	1,300	150	1,450	175	1,600	200	1,450	125	1,100	200	1,350	200	1,350	175	1,700	200
Biochemists, biophysicists	17,100	575	3,800	275	4,250	350	2,050	225	2,000	300	1,200	200	1,750	250	1,050	200	1,050	175
Biological scientists	30,000	700	4,900	275	6,200	400	5,000	350	4,300	325	2,850	275	2,150	250	1,650	225	2,900	250
Forestry, conservation scientists	2,900	225	200	50	350	75	450	100	500	150	300	100	200	75	400	125	450	100
Medical scientists	46,600	975	6,700	350	7,550	450	7,800	500	5,600	325	5,550	425	4,350	450	4,150	375	4,900	375
Postsecondary teachers, agricultural, other natural sciences	5,100	325	350	75	650	150	650	125	750	125	500	100	650	150	650	125	950	200
Postsecondary teachers, biological sciences	33,000	875	1,400	175	3,800	325	5,750	375	5,100	425	5,050	375	3,600	325	3,750	300	4,550	400
Other biological, agricultural, life scientists	22,250	750	4,100	250	4,650	325	3,600	325	2,750	325	2,150	325	2,000	275	1,500	250	1,550	200
Computer and information scientists	76,900	1,250	11,900	475	16,600	625	12,500	600	8,700	475	8,200	500	7,500	475	6,350	500	5,100	425
Computer and information scientists	66,200	1,300	11,050	475	15,000	625	10,900	625	7,250	450	6,350	450	6,550	475	5,150	450	3,950	375
Postsecondary teachers, computer science	10,700	525	850	150	1,600	225	1,650	225	1,450	200	1,850	275	950	175	1,200	200	1,150	200
Mathematical scientists	48,650	1,000	8,050	325	9,250	450	7,750	450	6,100	425	5,250	400	4,200	325	3,850	325	4,200	375
Mathematical scientists	30,100	800	6,000	300	6,650	400	5,200	375	3,300	350	3,100	300	2,100	275	1,750	250	1,950	275
Postsecondary teachers, mathematics, statistics	18,550	675	2,050	200	2,550	225	2,550	250	2,850	300	2,150	275	2,050	225	2,100	225	2,200	250
Physical scientists	88,350	1,325	12,100	450	12,950	500	12,950	600	11,800	550	10,250	625	9,350	550	8,000	475	10,950	500
Chemists, except biochemists	21,850	775	4,700	350	3,800	350	2,950	275	2,850	275	2,150	300	1,800	250	1,600	250	2,000	225
Earth, atmospheric, ocean scientists	13,550	550	1,850	175	2,050	200	1,950	225	2,000	250	1,400	200	1,150	150	1,250	150	1,950	225
Physicists, astronomers	14,650	650	2,650	250	2,250	250	2,100	275	1,500	225	1,800	325	1,700	250	1,000	175	1,650	225
Postsecondary teachers, chemistry	16,250	700	1,150	175	1,950	225	2,550	275	2,400	300	2,500	300	1,950	225	1,700	250	2,000	300
Postsecondary teachers, physics	9,350	525	350	75	1,100	200	1,600	225	1,250	175	1,000	200	1,300	250	1,050	200	1,750	275
Postsecondary teachers, other physical science	6,750	275	500	75	1,000	125	900	100	1,050	150	800	125	650	100	900	125	950	125
Other physical scientists	5,950	400	900	175	800	175	950	175	750	175	600	175	750	175	550	100	650	125
Psychologists	36,450	850	3,500	250	5,950	375	5,700	400	5,350	400	4,550	400	3,850	350	2,900	300	4,650	375
Psychologists	17,550	725	2,250	225	3,200	325	2,750	300	2,400	275	1,650	275	1,550	250	1,150	225	2,600	300
Postsecondary teachers, psychology	18,900	675	1,300	150	2,750	250	2,950	300	2,900	250	2,900	300	2,300	250	1,750	225	2,050	200
Social scientists	70,750	1,175	5,550	275	10,050	425	12,250	550	9,800	475	9,600	475	7,950	475	6,350	400	9,250	450
Economists	9,700	475	1,200	150	1,700	200	1,350	200	1,400	250	900	175	950	175	700	125	1,400	200
Political scientists	2,100	225	200	50	250	75	600	175	250	100	150	75	200	75	250	100	150	75
Postsecondary teachers, economics	10,200	475	850	125	1,450	175	1,650	225	1,500	225	1,150	175	950	175	900	175	1,800	250
Postsecondary teachers, political science	9,700	500	650	100	1,100	150	1,600	225	1,250	175	1,550	250	1,350	225	1,100	200	1,050	200
Postsecondary teachers, sociology	7,450	375	300	75	900	150	1,150	175	1,100	175	1,000	150	1,100	200	850	175	1,000	150
Postsecondary teachers, other social sciences	16,450	600	800	125	2,100	200	3,050	275	2,500	225	2,650	225	1,950	225	1,400	175	1,950	225

TABLE 40

U.S. residing employed doctoral scientists and engineers, by occupation and age: 2023

(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
Sociologists, anthropologists	3,950	275	250	50	450	100	800	125	550	125	550	150	300	75	250	75	800	150
Other social scientists	11,200	500	1,300	175	2,100	200	1,950	225	1,200	150	1,550	200	1,200	150	850	175	1,050	150
Engineering occupations	127,550	1,600	18,700	575	22,200	725	18,300	725	15,850	700	13,700	650	12,950	700	13,100	675	12,750	625
Aerospace, aeronautical, astronautical engineers	7,500	425	950	125	1,250	200	1,050	150	700	150	750	150	850	150	1,000	175	900	150
Chemical engineers	8,050	500	1,900	225	1,250	225	1,350	250	550	175	1,000	175	550	150	850	200	600	150
Civil, architectural, sanitary engineers	7,800	500	1,000	150	1,400	200	1,000	200	800	150	750	150	900	175	1,100	250	850	200
Electrical engineers	29,900	1,000	3,950	300	5,600	400	4,350	375	4,350	425	3,450	325	3,450	400	2,400	350	2,300	350
Industrial engineers	1,300	225	350	125	200	75	250	125	100	75	100	50	50	50	100	50	50	50
Mechanical engineers	13,050	725	1,950	225	2,600	300	1,850	275	1,650	300	1,550	275	1,300	225	1,150	225	1,000	175
Postsecondary teachers, engineering	24,750	850	2,300	250	3,050	275	3,550	350	3,400	350	2,550	300	2,400	325	3,400	375	4,050	425
Other engineers	35,300	1,075	6,350	275	6,800	425	4,900	450	4,250	375	3,550	375	3,400	375	3,050	350	3,000	300
S&E-related occupations	135,450	1,825	10,300	450	17,950	725	18,200	725	18,450	800	18,350	700	16,000	725	13,600	700	22,650	750
Health occupations, except postsecondary teachers and managers	72,400	1,300	5,400	325	9,250	500	8,450	450	9,200	550	9,200	475	7,600	525	7,400	550	15,900	650
Postsecondary teachers, health and related science	19,900	725	1,150	150	2,400	225	2,850	225	2,700	275	2,750	275	2,300	250	2,200	250	3,550	325
S&E managers, including health	33,200	1,050	2,450	225	4,450	350	5,550	425	5,150	425	5,050	425	5,000	450	3,100	300	2,450	275
S&E precollege teachers	4,500	375	350	100	550	150	400	125	750	150	750	200	750	125	600	125	300	100
S&E technicians and technologists	4,550	400	950	150	1,150	200	700	150	500	175	400	125	250	75	250	75	400	150
Other S&E-related occupations	950	175	D	D	100	50	250	100	100	75	200	100	150	75	S	S	S	S
Non-S&E occupations	156,400	2,025	8,950	375	15,950	575	20,600	725	20,550	850	23,700	775	22,750	775	18,950	775	24,950	875
Arts, humanities-related occupations	9,950	475	1,000	125	1,500	150	1,600	200	1,200	175	800	150	700	125	1,000	175	2,200	225
Management-related occupations	35,000	1,025	2,900	225	4,800	375	4,850	350	4,900	450	4,750	400	4,650	425	3,500	350	4,550	400
Non-S&E managers	55,600	1,275	1,600	175	3,750	300	6,400	450	6,950	450	10,850	550	9,700	550	8,100	525	8,250	525
Non-S&E postsecondary teachers	19,500	725	1,000	150	2,050	175	2,900	250	2,550	275	2,600	300	2,900	325	2,200	225	3,250	300
Non-S&E precollege and other teachers	5,450	400	350	100	450	125	800	125	850	125	750	125	700	150	550	150	950	150
Sales, marketing occupations	6,950	450	400	100	900	150	1,150	200	1,100	200	750	125	1,000	225	800	175	900	150
Social service-related occupations	7,750	475	300	100	750	175	800	200	750	175	1,100	175	800	150	1,200	200	2,050	250
Other non-S&E occupations	16,200	675	1,400	200	1,700	200	2,100	225	2,250	325	2,050	275	2,350	250	1,600	225	2,750	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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 41

U.S. residing employed doctoral scientists and engineers, by occupation and years since doctorate: 2023

(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	908,700	2,300	143,600	575	169,900	925	146,200	925	117,750	800	105,200	1,000	226,050	1,575
Science occupations	489,300	2,625	87,650	800	99,000	1,175	80,800	1,075	61,000	950	52,350	1,025	108,500	1,625
Biological, agricultural, and other life scientists	168,150	1,575	31,450	525	32,000	750	28,100	800	21,300	650	18,100	625	37,200	975
Agricultural, food scientists	11,250	475	1,700	150	1,850	150	2,050	250	1,400	175	1,300	225	3,000	275
Biochemists, biophysicists	17,100	575	5,250	300	3,400	325	2,450	325	1,550	225	1,450	225	3,000	325
Biological scientists	30,000	700	7,550	350	6,650	400	4,900	375	3,350	225	2,550	275	5,000	400
Forestry, conservation scientists	2,900	225	500	100	450	100	500	125	450	125	200	50	800	150
Medical scientists	46,600	975	8,850	400	8,900	400	7,200	450	6,000	425	5,250	450	10,400	550
Postsecondary teachers, agricultural, other natural sciences	5,100	325	600	100	800	150	850	125	750	150	500	125	1,650	225
Postsecondary teachers, biological sciences	33,000	875	1,700	175	5,200	350	6,450	375	5,150	350	4,950	375	9,550	525
Other biological, agricultural, life scientists	22,250	750	5,300	275	4,850	325	3,700	325	2,700	300	1,900	250	3,800	350
Computer and information scientists	76,900	1,250	15,850	475	18,450	600	13,450	575	7,100	450	7,850	525	14,150	650
Computer and information scientists	66,200	1,300	14,300	475	16,050	600	11,850	550	5,600	425	6,500	525	11,950	600
Postsecondary teachers, computer science	10,700	525	1,550	175	2,400	250	1,600	225	1,550	200	1,350	250	2,250	275
Mathematical scientists	48,650	1,000	9,950	375	11,350	500	7,550	400	6,100	375	4,200	350	9,450	450
Mathematical scientists	30,100	800	7,550	350	8,150	450	4,700	375	3,450	300	2,000	275	4,300	375
Postsecondary teachers, mathematics, statistics	18,550	675	2,400	175	3,200	275	2,900	250	2,650	250	2,250	250	5,150	350
Physical scientists	88,350	1,325	13,850	450	15,750	525	13,800	575	11,550	600	9,700	500	23,750	725
Chemists, except biochemists	21,850	775	4,600	300	4,650	375	3,250	300	2,400	275	2,250	275	4,700	375
Earth, atmospheric, ocean scientists	13,550	550	2,800	225	2,550	200	2,100	200	1,700	225	1,250	125	3,200	275
Physicists, astronomers	14,650	650	3,200	250	2,350	250	1,800	250	1,850	275	1,750	275	3,700	325
Postsecondary teachers, chemistry	16,250	700	950	150	2,500	275	2,800	300	2,800	300	2,150	275	5,050	425
Postsecondary teachers, physics	9,350	525	550	100	1,250	200	1,750	250	1,300	200	1,050	175	3,450	350
Postsecondary teachers, other physical science	6,750	275	850	100	1,250	125	1,100	125	900	150	600	100	2,100	200
Other physical scientists	5,950	400	900	150	1,200	200	1,050	225	650	150	600	150	1,550	200
Psychologists	36,450	850	5,350	325	7,100	400	5,850	375	5,350	400	4,150	275	8,650	450
Psychologists	17,550	725	3,350	275	3,400	325	2,700	275	2,200	275	1,750	225	4,200	400
Postsecondary teachers, psychology	18,900	675	2,000	200	3,700	325	3,150	300	3,200	300	2,400	225	4,450	325
Social scientists	70,750	1,175	11,250	375	14,350	550	12,000	450	9,550	525	8,350	325	15,300	550
Economists	9,700	475	1,750	200	2,100	225	1,250	200	1,250	250	800	125	2,550	275
Political scientists	2,100	225	400	75	300	100	550	175	200	75	150	75	450	125
Postsecondary teachers, economics	10,200	475	1,200	150	1,700	225	1,800	225	1,250	200	1,250	175	3,000	300
Postsecondary teachers, political science	9,700	500	1,250	150	1,700	250	1,550	200	1,550	225	1,350	175	2,300	275
Postsecondary teachers, sociology	7,450	375	950	100	1,450	175	950	125	1,200	175	1,250	175	1,650	200
Postsecondary teachers, other social sciences	16,450	600	2,300	175	3,900	300	3,400	225	2,350	225	1,750	200	2,800	275

TABLE 41

U.S. residing employed doctoral scientists and engineers, by occupation and years since doctorate: 2023

(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
Sociologists, anthropologists	3,950	275	750	100	850	125	750	125	450	150	350	100	800	125
Other social scientists	11,200	500	2,700	225	2,400	250	1,800	200	1,250	175	1,400	175	1,750	225
Engineering occupations	127,550	1,600	23,300	500	25,300	650	19,500	725	15,950	650	12,950	650	30,500	1,050
Aerospace, aeronautical, astronautical engineers	7,500	425	1,150	125	1,500	225	1,100	150	800	150	900	200	2,050	225
Chemical engineers	8,050	500	1,650	175	1,600	225	1,250	225	750	175	850	200	1,950	250
Civil, architectural, sanitary engineers	7,800	500	1,650	175	1,850	250	900	175	850	200	600	150	2,000	300
Electrical engineers	29,900	1,000	5,300	275	6,050	375	4,800	475	4,050	375	3,500	325	6,150	575
Industrial engineers	1,300	225	350	100	400	175	150	50	150	75	100	75	150	50
Mechanical engineers	13,050	725	2,600	250	2,600	275	2,100	325	2,100	325	1,450	250	2,250	250
Postsecondary teachers, engineering	24,750	850	2,550	225	4,150	300	4,100	400	3,250	325	2,650	325	8,000	600
Other engineers	35,300	1,075	8,100	325	7,150	450	5,100	450	4,000	375	2,900	325	8,000	550
S&E-related occupations	135,450	1,825	18,200	550	22,950	775	22,450	775	18,450	625	17,250	650	36,200	925
Health occupations, except postsecondary teachers and managers	72,400	1,300	9,950	425	11,650	500	10,250	500	9,750	450	8,450	500	22,400	750
Postsecondary teachers, health and related science	19,900	725	3,100	225	3,700	250	4,150	325	2,650	250	2,550	325	3,800	375
S&E managers, including health	33,200	1,050	3,450	275	5,550	400	6,150	450	4,700	400	5,400	450	8,000	525
S&E precollege teachers	4,500	375	400	100	800	200	900	175	700	125	450	125	1,250	200
S&E technicians and technologists	4,550	400	1,200	175	1,100	200	850	225	450	150	300	100	600	150
Other S&E-related occupations	950	175	100	50	150	75	150	75	200	75	S	S	200	100
Non-S&E occupations	156,400	2,025	14,450	450	22,650	675	23,500	750	22,400	775	22,600	775	50,800	1,275
Arts, humanities-related occupations	9,950	475	1,600	175	1,700	175	1,750	200	1,050	150	850	175	3,100	300
Management-related occupations	35,000	1,025	3,850	250	5,850	350	5,550	400	4,800	375	5,050	500	9,850	625
Non-S&E managers	55,600	1,275	2,450	200	5,200	350	7,350	475	8,800	500	9,800	550	21,950	825
Non-S&E postsecondary teachers	19,500	725	2,600	200	3,850	325	3,100	300	2,850	275	2,400	300	4,700	375
Non-S&E precollege and other teachers	5,450	400	600	100	950	175	900	125	850	200	650	125	1,450	225
Sales, marketing occupations	6,950	450	550	100	1,150	175	1,400	225	1,000	225	550	100	2,300	275
Social service-related occupations	7,750	475	1,100	175	1,400	250	1,250	200	750	125	1,100	200	2,200	275
Other non-S&E occupations	16,200	675	1,750	125	2,550	275	2,200	225	2,300	275	2,200	275	5,200	375

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 42

U.S. residing employed doctoral scientists and engineers, by occupation and sector of employment: 2023

(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
Sociologists, anthropologists	3,950	275	1,600	200	100	50	700	150	550	125	500	125	150	50	300	100	100	50
Other social scientists	11,200	500	3,650	300	300	75	2,300	275	2,250	200	1,300	175	750	150	600	125	100	50
Engineering occupations	127,550	1,600	35,600	925	400	125	73,900	1,350	4,300	350	7,850	525	2,500	325	2,800	350	150	75
Aerospace, aeronautical, astronautical engineers	7,500	425	1,100	200	D	D	3,850	300	800	150	1,550	200	S	S	100	50	D	D
Chemical engineers	8,050	500	600	125	D	D	6,450	450	200	75	450	125	D	D	300	150	D	D
Civil, architectural, sanitary engineers	7,800	500	1,050	200	D	D	4,350	350	250	125	550	150	1,300	250	S	S	D	D
Electrical engineers	29,900	1,000	2,300	250	D	D	24,150	900	900	175	1,600	275	250	100	650	175	D	D
Industrial engineers	1,300	225	250	75	D	D	700	150	S	S	100	50	D	D	D	D	D	D
Mechanical engineers	13,050	725	1,600	225	D	D	9,050	600	550	175	1,350	275	D	D	450	150	D	D
Postsecondary teachers, engineering	24,750	850	24,350	850	350	125	D	D	D	D	D	D	D	D	D	D	D	D
Other engineers	35,300	1,075	4,400	350	D	D	25,350	900	1,400	225	2,200	225	850	125	1,000	175	D	D
S&E-related occupations	135,450	1,825	36,100	950	7,150	450	46,600	1,200	16,100	700	9,550	550	3,950	325	15,850	750	200	75
Health occupations, except postsecondary teachers and managers	72,400	1,300	11,400	475	2,350	225	22,500	850	12,250	600	5,550	425	2,550	275	15,600	750	150	75
Postsecondary teachers, health and related science	19,900	725	18,850	700	350	100	100	50	500	150	D	D	S	S	D	D	D	D
S&E managers, including health	33,200	1,050	5,450	375	S	S	19,500	800	3,100	325	3,700	350	1,250	150	S	S	D	D
S&E precollege teachers	4,500	375	150	75	4,350	375	D	D	D	D	D	D	D	D	D	D	D	D
S&E technicians and technologists	4,550	400	250	75	D	D	3,750	375	150	75	200	100	S	S	100	50	D	D
Other S&E-related occupations	950	175	D	D	D	D	700	150	S	S	D	D	D	D	D	D	D	D
Non-S&E occupations	156,400	2,025	43,150	1,050	6,650	375	70,300	1,400	13,450	600	6,350	425	3,200	325	12,750	625	500	125
Arts, humanities-related occupations	9,950	475	950	175	100	50	4,200	300	1,350	175	300	75	150	50	2,850	250	D	D
Management-related occupations	35,000	1,025	4,950	350	650	125	20,200	775	3,250	300	2,500	225	1,000	200	2,350	275	50	50
Non-S&E managers	55,600	1,275	15,350	600	2,000	225	29,100	950	5,150	325	1,550	225	900	150	1,400	175	100	50
Non-S&E postsecondary teachers	19,500	725	18,300	675	900	150	D	D	100	50	D	D	D	D	D	D	D	D
Non-S&E precollege and other teachers	5,450	400	950	175	2,350	250	650	125	400	100	S	S	D	D	850	200	D	D
Sales, marketing occupations	6,950	450	100	50	D	D	5,650	425	200	75	D	D	D	D	950	175	D	D
Social service-related occupations	7,750	475	1,050	175	500	150	1,850	225	2,000	250	250	75	300	125	1,700	250	D	D
Other non-S&E occupations	16,200	675	1,400	200	200	75	8,600	550	1,050	175	1,500	200	750	125	2,600	275	50	50

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 Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^c Private, for profit includes those self-employed in an incorporated business.

^d Self-employed or business owner in a nonincorporated business.

^e Other sector 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 43

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2023

(Number and SE)

Employment sector and occupation	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
All sectors	908,700	2,300	558,900	1,850	349,800	1,475
Science occupations	489,300	2,625	304,850	2,100	184,400	1,525
Biological, agricultural, and other life scientists	168,150	1,575	93,750	1,525	74,400	1,125
Computer and information scientists	76,900	1,250	62,100	1,125	14,800	650
Mathematical scientists	48,650	1,000	33,750	800	14,900	550
Physical scientists	88,350	1,325	64,800	1,250	23,550	625
Psychologists	36,450	850	13,450	600	23,000	725
Social scientists	70,750	1,175	36,950	825	33,800	825
Engineering occupations	127,550	1,600	105,450	1,550	22,100	600
S&E-related occupations	135,450	1,825	63,450	1,450	72,000	1,175
Non-S&E occupations	156,400	2,025	85,100	1,575	71,300	1,375
4-year educational institution ^a	341,350	2,475	199,700	2,000	141,650	1,600
Science occupations	226,500	2,275	133,900	1,775	92,650	1,475
Biological, agricultural, and other life scientists	76,550	1,275	43,000	1,050	33,550	875
Computer and information scientists	15,550	575	11,650	525	3,950	300
Mathematical scientists	21,100	775	14,900	575	6,200	375
Physical scientists	41,350	1,000	29,000	925	12,300	475
Psychologists	22,450	725	9,000	450	13,450	525
Social scientists	49,500	1,000	26,300	775	23,200	700
Engineering occupations	35,600	925	28,500	825	7,100	375
S&E-related occupations	36,100	950	15,450	700	20,600	575
Non-S&E occupations	43,150	1,050	21,800	775	21,300	675
Other educational institution ^b	26,750	875	11,850	625	14,900	600
Science occupations	12,550	600	6,450	500	6,100	375
Biological, agricultural, and other life scientists	3,200	325	1,200	225	2,000	225
Computer and information scientists	550	150	450	175	50	25
Mathematical scientists	1,000	150	700	150	250	75
Physical scientists	3,750	350	2,450	325	1,300	175
Psychologists	1,500	200	450	100	1,050	175
Social scientists	2,550	275	1,150	175	1,400	200
Engineering occupations	400	125	250	125	150	75
S&E-related occupations	7,150	450	2,950	325	4,200	300
Non-S&E occupations	6,650	375	2,200	200	4,450	325
Private, for profit ^c	354,100	2,775	246,450	2,300	107,700	1,300
Science occupations	163,300	2,125	113,850	1,725	49,450	1,050
Biological, agricultural, and other life scientists	54,400	1,250	31,150	975	23,250	750
Computer and information scientists	53,650	1,225	44,200	1,150	9,450	525
Mathematical scientists	20,150	725	14,150	625	6,000	400
Physical scientists	24,600	875	19,700	800	4,900	300
Psychologists	4,850	425	1,800	250	3,100	325
Social scientists	5,650	425	2,850	300	2,750	250
Engineering occupations	73,900	1,350	62,200	1,275	11,700	525
S&E-related occupations	46,600	1,200	26,550	975	20,050	775
Non-S&E occupations	70,300	1,400	43,850	1,275	26,450	800
Private, nonprofit	64,300	1,175	33,800	1,025	30,550	825
Science occupations	30,500	750	16,900	650	13,600	525
Biological, agricultural, and other life scientists	12,600	550	7,000	450	5,600	325
Computer and information scientists	2,700	275	1,900	250	800	150
Mathematical scientists	2,550	225	1,650	200	900	125
Physical scientists	5,350	400	3,950	350	1,350	175

TABLE 43

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2023

(Number and SE)

Employment sector and occupation	All employed		Male		Female	
	Number	SE	Number	SE	Number	SE
Psychologists	2,550	275	400	100	2,150	275
Social scientists	4,800	350	1,950	225	2,850	275
Engineering occupations	4,300	350	3,400	325	900	150
S&E-related occupations	16,100	700	7,400	550	8,700	475
Non-S&E occupations	13,450	600	6,100	450	7,350	400
Federal government	58,600	1,250	34,950	950	23,700	700
Science occupations	34,850	875	20,900	700	13,950	500
Biological, agricultural, and other life scientists	14,500	625	7,850	425	6,650	425
Computer and information scientists	1,850	200	1,650	200	200	50
Mathematical scientists	2,650	275	1,550	225	1,100	150
Physical scientists	9,600	500	6,900	475	2,700	225
Psychologists	2,100	250	700	150	1,400	200
Social scientists	4,150	300	2,250	250	1,900	175
Engineering occupations	7,850	525	6,600	500	1,300	150
S&E-related occupations	9,550	550	4,350	400	5,200	375
Non-S&E occupations	6,350	425	3,150	300	3,250	275
State or local government	18,700	725	10,200	550	8,550	400
Science occupations	9,000	475	4,950	375	4,100	250
Biological, agricultural, and other life scientists	2,950	225	1,150	150	1,800	200
Computer and information scientists	800	200	650	200	150	50
Mathematical scientists	500	125	300	100	250	75
Physical scientists	2,400	275	1,700	225	650	125
Psychologists	1,000	175	300	125	700	150
Social scientists	1,350	175	800	150	550	100
Engineering occupations	2,500	325	1,900	300	650	125
S&E-related occupations	3,950	325	1,800	250	2,150	225
Non-S&E occupations	3,200	325	1,550	225	1,650	250
Self-employed ^d	42,350	1,150	20,700	875	21,650	875
Science occupations	10,950	675	7,050	550	3,900	375
Biological, agricultural, and other life scientists	3,650	350	2,250	275	1,400	225
Computer and information scientists	1,750	275	1,600	275	150	50
Mathematical scientists	650	125	450	100	150	75
Physical scientists	1,300	175	1,000	150	250	75
Psychologists	1,950	300	750	200	1,200	225
Social scientists	1,650	200	950	175	700	125
Engineering occupations	2,800	350	2,550	350	250	75
S&E-related occupations	15,850	750	4,850	400	10,950	650
Non-S&E occupations	12,750	625	6,250	475	6,500	425
Other sector ^e	2,450	275	1,300	200	1,200	225
Science occupations	1,600	225	900	175	700	150
Biological, agricultural, and other life scientists	250	75	S	S	100	50
Computer and information scientists	D	D	D	D	D	D
Mathematical scientists	S	S	D	D	D	D
Physical scientists	100	50	D	D	D	D
Psychologists	D	D	D	D	D	D
Social scientists	1,200	200	700	150	450	150
Engineering occupations	150	75	S	S	D	D
S&E-related occupations	200	75	100	50	100	50
Non-S&E occupations	500	125	200	75	350	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 Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^c Private, for profit includes those self-employed in an incorporated business.

^d Self-employed or business owner in a nonincorporated business.

^e Other sector includes employers not broken out separately.

Note(s):

Numbers are rounded to nearest 50. Standard errors are rounded up to nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 44

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2023

(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	908,700	2,300	47,400	700	1,750	175	240,850	1,900	36,050	500	566,700	2,050	15,950	525
Science occupations	489,300	2,625	26,100	550	800	100	131,700	1,700	16,650	400	305,400	2,200	8,600	400
Biological, agricultural, and other life scientists	168,150	1,575	9,850	400	250	100	44,450	925	5,200	275	104,950	1,375	3,400	275
Computer and information scientists	76,900	1,250	2,300	175	S	S	35,800	975	1,400	175	36,400	825	950	150
Mathematical scientists	48,650	1,000	2,300	200	D	D	17,450	700	1,450	150	26,750	850	750	125
Physical scientists	88,350	1,325	3,800	250	100	25	21,050	850	2,850	225	59,150	1,025	1,400	150
Psychologists	36,450	850	2,350	225	100	50	2,950	350	1,600	175	28,600	725	850	150
Social scientists	70,750	1,175	5,550	300	300	75	10,050	550	4,100	250	49,550	975	1,250	150
Engineering occupations	127,550	1,600	5,550	250	100	50	52,400	1,100	3,350	225	64,750	1,125	1,400	200
S&E-related occupations	135,450	1,825	7,950	350	350	75	26,500	1,000	7,000	375	90,900	1,525	2,700	275
Non-S&E occupations	156,400	2,025	7,800	325	450	100	30,250	975	9,050	400	105,600	1,650	3,250	250
4-year educational institution ^d	341,350	2,475	20,100	450	650	100	72,100	1,450	14,450	450	227,850	2,050	6,200	325
Science occupations	226,500	2,275	13,400	450	400	75	47,450	1,225	8,450	375	152,800	1,800	4,050	300
Biological, agricultural, and other life scientists	76,550	1,275	4,550	225	50	25	18,000	650	2,000	175	50,450	1,025	1,550	175
Computer and information scientists	15,550	575	600	100	D	D	5,850	400	550	125	8,350	450	200	125
Mathematical scientists	21,100	775	1,200	150	D	D	5,750	450	650	100	13,250	600	250	75
Physical scientists	41,350	1,000	1,800	175	*	*	9,150	600	1,300	175	28,300	775	750	100
Psychologists	22,450	725	1,500	175	100	50	1,800	275	1,050	175	17,450	625	550	125
Social scientists	49,500	1,000	3,750	300	200	75	6,900	475	2,850	250	34,950	850	800	125
Engineering occupations	35,600	925	1,800	175	D	D	12,200	625	950	125	20,300	725	300	75
S&E-related occupations	36,100	950	2,400	200	100	50	6,500	500	2,150	200	24,200	800	800	125
Non-S&E occupations	43,150	1,050	2,550	200	150	50	5,950	450	2,950	250	30,550	900	1,000	125
Other educational institution ^e	26,750	875	2,100	200	150	75	3,250	375	2,100	200	18,500	725	600	150
Science occupations	12,550	600	900	125	S	S	2,050	300	900	125	8,350	475	250	75
Biological, agricultural, and other life scientists	3,200	325	200	50	D	D	550	175	200	50	2,150	225	100	50
Computer and information scientists	550	150	D	D	D	D	D	D	*	*	350	125	D	D
Mathematical scientists	1,000	150	150	50	D	D	150	75	50	25	600	125	D	D
Physical scientists	3,750	350	250	50	D	D	1,050	250	300	75	2,150	275	D	D
Psychologists	1,500	200	100	50	D	D	D	D	100	50	1,200	175	D	D
Social scientists	2,550	275	250	75	D	D	100	50	200	75	1,900	250	100	50
Engineering occupations	400	125	D	D	D	D	D	D	D	D	300	125	D	D
S&E-related occupations	7,150	450	650	125	D	D	500	125	450	75	5,350	350	S	S
Non-S&E occupations	6,650	375	550	100	50	25	650	125	800	125	4,500	375	150	50

TABLE 44

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2023

(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
Private, for profit ^f	354,100	2,775	15,100	450	300	75	130,650	1,775	10,750	425	191,800	2,025	5,550	375
Science occupations	163,300	2,125	6,900	325	100	50	63,950	1,425	4,100	300	85,550	1,525	2,700	250
Biological, agricultural, and other life scientists	54,400	1,250	3,150	275	D	D	18,350	725	1,800	200	29,950	875	1,100	175
Computer and information scientists	53,650	1,225	1,450	175	D	D	27,500	1,000	750	150	23,250	750	650	100
Mathematical scientists	20,150	725	650	100	D	D	9,700	575	400	75	9,100	475	300	75
Physical scientists	24,600	875	950	100	50	25	6,800	475	750	125	15,700	675	350	100
Psychologists	4,850	425	350	100	D	D	500	150	150	50	3,650	350	200	100
Social scientists	5,650	425	350	75	D	D	1,050	200	250	50	3,850	350	100	50
Engineering occupations	73,900	1,350	2,850	175	S	S	35,000	950	1,700	175	33,500	875	800	175
S&E-related occupations	46,600	1,200	2,400	225	50	50	12,400	700	2,100	225	29,000	875	650	125
Non-S&E occupations	70,300	1,400	3,000	225	100	50	19,250	900	2,850	250	43,750	1,025	1,350	200
Private, nonprofit	64,300	1,175	3,300	250	200	100	13,800	675	2,800	250	42,900	975	1,300	150
Science occupations	30,500	750	1,550	200	S	S	7,450	500	850	125	19,900	650	600	100
Biological, agricultural, and other life scientists	12,600	550	600	100	D	D	3,550	350	250	75	7,900	450	200	50
Computer and information scientists	2,700	275	50	25	D	D	850	175	D	D	1,700	200	50	25
Mathematical scientists	2,550	225	150	50	D	D	800	175	100	50	1,400	175	100	50
Physical scientists	5,350	400	200	50	D	D	1,450	225	100	25	3,500	325	50	25
Psychologists	2,550	275	100	50	D	D	300	100	50	25	2,000	250	S	S
Social scientists	4,800	350	450	125	D	D	500	125	300	75	3,400	300	150	50
Engineering occupations	4,300	350	150	50	D	D	1,450	275	100	25	2,550	250	50	25
S&E-related occupations	16,100	700	950	150	D	D	3,300	400	800	150	10,650	600	400	150
Non-S&E occupations	13,450	600	650	100	S	S	1,600	250	1,050	175	9,800	550	250	50
Federal government	58,600	1,250	3,600	225	250	75	10,700	625	3,100	250	39,800	1,025	1,150	150
Science occupations	34,850	875	2,250	225	50	25	6,650	500	1,550	150	23,700	675	650	100
Biological, agricultural, and other life scientists	14,500	625	1,050	150	S	S	3,000	350	650	100	9,400	450	350	75
Computer and information scientists	1,850	200	100	50	D	D	450	150	50	25	1,250	175	50	25
Mathematical scientists	2,650	275	150	50	D	D	800	150	150	50	1,550	200	50	25
Physical scientists	9,600	500	550	150	D	D	1,700	250	350	100	6,750	450	150	50
Psychologists	2,100	250	150	75	D	D	100	50	100	50	1,800	225	D	D
Social scientists	4,150	300	250	75	D	D	600	125	200	50	3,000	250	50	50
Engineering occupations	7,850	525	450	75	D	D	1,600	275	350	100	5,300	375	100	50
S&E-related occupations	9,550	550	550	100	100	50	1,550	300	750	150	6,300	475	250	75
Non-S&E occupations	6,350	425	350	75	S	S	850	200	450	100	4,450	350	150	75
State or local government	18,700	725	1,000	125	50	25	4,450	400	1,400	175	11,500	575	350	75

TABLE 44

U.S. residing employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2023

(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
Science occupations	9,000	475	400	100	D	D	2,000	250	450	100	6,000	400	150	50
Biological, agricultural, and other life scientists	2,950	225	100	50	D	D	400	100	150	50	2,250	225	50	50
Computer and information scientists	800	200	*	*	D	D	350	150	D	D	400	125	D	D
Mathematical scientists	500	125	*	*	D	D	150	75	D	D	350	100	D	D
Physical scientists	2,400	275	100	25	D	D	700	175	50	25	1,500	225	S	S
Psychologists	1,000	175	D	D	D	D	D	D	D	D	750	150	D	D
Social scientists	1,350	175	100	50	D	D	350	100	150	50	750	125	*	*
Engineering occupations	2,500	325	150	50	D	D	1,200	225	150	75	950	175	50	25
S&E-related occupations	3,950	325	300	75	D	D	1,000	200	400	100	2,200	225	50	25
Non-S&E occupations	3,200	325	150	50	D	D	250	75	400	125	2,350	250	100	50
Self-employed ^g	42,350	1,150	1,650	150	S	S	5,350	525	1,250	175	33,200	1,025	800	150
Science occupations	10,950	675	350	75	D	D	1,650	350	250	75	8,450	550	200	75
Biological, agricultural, and other life scientists	3,650	350	150	50	D	D	550	200	100	75	2,800	275	D	D
Computer and information scientists	1,750	275	50	25	D	D	600	175	D	D	1,100	225	D	D
Mathematical scientists	650	125	D	D	D	D	100	50	D	D	450	125	D	D
Physical scientists	1,300	175	50	25	D	D	100	50	D	D	1,100	175	D	D
Psychologists	1,950	300	S	S	D	D	S	S	D	D	1,700	275	D	D
Social scientists	1,650	200	50	50	D	D	S	S	50	50	1,300	150	D	D
Engineering occupations	2,800	350	100	50	D	D	700	200	D	D	1,900	300	100	50
S&E-related occupations	15,850	750	750	125	D	D	1,300	275	350	100	13,150	675	300	100
Non-S&E occupations	12,750	625	500	100	D	D	1,650	275	600	150	9,700	550	200	75
Other sector ^h	2,450	275	450	100	D	D	600	175	150	75	1,200	200	D	D
Science occupations	1,600	225	350	100	D	D	450	150	100	50	650	150	D	D
Biological, agricultural, and other life scientists	250	75	S	S	D	D	D	D	D	D	100	50	D	D
Computer and information scientists	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Mathematical scientists	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Physical scientists	100	50	D	D	D	D	D	D	D	D	100	50	D	D
Psychologists	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Social scientists	1,200	200	300	75	D	D	350	125	D	D	450	150	D	D
Engineering occupations	150	75	D	D	D	D	D	D	D	D	D	D	D	D
S&E-related occupations	200	75	D	D	D	D	D	D	D	D	100	50	D	D
Non-S&E occupations	500	125	S	S	D	D	D	D	D	D	400	125	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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^d Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^e Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^f Private, for profit includes those self-employed in an incorporated business.

^g Self-employed or business owner in a nonincorporated business.

^h Other sector includes employers not broken out separately.

Note(s):

Numbers are rounded to nearest 50. Standard errors are rounded up to nearest 25. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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 as respondents may provide both a primary and a secondary work activity. 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 45-2

U.S. residing employed doctoral scientists and engineers, by occupation and primary work activity: 2023

(Number and SE)

Occupation	All employed		Research and development								Computer applications		Design		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Basic research		Applied research		Experimental development													
	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	16,450	600	4,350	350	1,950	200	2,300	275	100	50	D	D	D	D	1,200	175	150	75	10,450	475	250	75
Sociologists, anthropologists	3,950	275	2,700	250	650	150	1,850	200	150	75	D	D	D	D	650	125	100	50	150	50	350	100
Other social scientists	11,200	500	7,200	375	800	175	5,850	350	500	75	200	75	250	75	2,250	225	300	75	100	50	900	150
Engineering occupations	127,550	1,600	64,800	1,250	6,750	450	28,950	950	29,100	1,000	5,200	375	14,950	700	20,050	800	2,800	375	13,800	575	5,900	450
Aerospace, aeronautical, astronautical engineers	7,500	425	4,350	325	350	125	2,050	200	2,000	225	550	125	1,000	150	1,250	175	D	D	100	50	250	75
Chemical engineers	8,050	500	5,100	425	200	75	1,700	250	3,200	350	150	75	900	200	1,250	250	S	S	D	D	450	125
Civil, architectural, sanitary engineers	7,800	500	2,050	275	200	75	1,500	250	350	100	450	125	1,950	250	1,800	275	1,050	200	D	D	500	125
Electrical engineers	29,900	1,000	17,350	750	450	100	6,050	425	10,850	650	2,200	275	4,600	475	4,300	425	100	75	S	S	1,150	200
Industrial engineers	1,300	225	400	100	S	S	150	75	150	75	D	D	S	S	300	100	S	S	D	D	300	100
Mechanical engineers	13,050	725	7,100	500	400	125	3,450	375	3,250	350	500	125	2,500	325	2,000	300	200	75	D	D	600	200
Postsecondary teachers, engineering	24,750	850	9,350	600	3,800	375	5,300	425	250	125	S	S	D	D	1,900	250	D	D	13,200	550	S	S
Other engineers	35,300	1,075	19,150	750	1,300	225	8,800	500	9,050	575	1,250	200	3,750	350	7,200	425	1,200	275	200	75	2,550	275
S&E-related occupations	135,450	1,825	24,350	800	4,350	400	15,750	650	4,250	425	4,050	375	1,400	225	31,050	925	54,750	1,200	15,800	625	4,000	350
Health occupations, except postsecondary teachers and managers	72,400	1,300	8,950	450	1,300	200	6,400	350	1,300	200	150	75	350	100	7,600	500	51,000	1,175	1,550	225	2,750	325
Postsecondary teachers, health and related science	19,900	725	5,750	375	1,350	225	4,250	325	150	50	D	D	D	D	1,900	250	2,000	250	9,850	500	300	100
S&E managers, including health	33,200	1,050	8,400	575	1,600	275	4,350	375	2,450	325	750	175	800	175	20,850	800	1,500	250	50	50	800	175
S&E precollege teachers	4,500	375	S	S	D	D	D	D	D	D	D	D	D	D	100	50	D	D	4,300	375	D	D
S&E technicians and technologists	4,550	400	1,100	200	50	50	700	150	300	125	2,800	325	150	75	350	100	D	D	D	D	S	S
Other S&E-related occupations	950	175	100	75	D	D	D	D	D	D	200	75	S	S	250	75	250	100	D	D	D	D
Non-S&E occupations	156,400	2,025	25,700	850	4,000	275	14,000	625	7,750	550	2,000	200	2,500	250	73,650	1,325	20,150	850	18,950	750	13,450	650
Arts, humanities-related occupations	9,950	475	2,500	225	500	125	800	150	1,200	150	50	50	100	50	2,850	275	2,000	225	450	100	2,050	225
Management-related occupations	35,000	1,025	5,600	450	500	100	2,850	300	2,250	325	800	150	1,350	225	18,950	775	4,000	325	500	100	3,800	325
Non-S&E managers	55,600	1,275	9,750	550	600	125	5,950	400	3,200	350	850	150	800	150	38,650	1,075	2,500	325	350	100	2,700	275
Non-S&E postsecondary teachers	19,500	725	4,300	275	1,950	200	2,250	225	100	50	D	D	D	D	1,450	200	200	75	12,900	625	550	150
Non-S&E precollege and other teachers	5,450	400	650	150	200	100	350	100	S	S	D	D	D	D	600	125	150	75	3,700	300	250	100
Sales, marketing occupations	6,950	450	900	150	D	D	400	100	400	125	D	D	*	*	5,250	400	300	100	S	S	450	100
Social service-related occupations	7,750	475	450	125	D	D	250	100	200	75	D	D	D	D	1,800	250	3,950	325	500	125	950	200
Other non-S&E occupations	16,200	675	1,600	175	100	50	1,150	175	350	75	50	50	200	100	4,100	325	6,950	525	550	175	2,700	250

* = 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 Other work activities include 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 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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 46
U.S. residing employed doctoral scientists and engineers, by employer location and broad occupation: 2023

(Number and SE)

Employer location	All employed		Science occupations																		Engineering occupations		S&E-related occupations		Non-S&E occupations	
	Number	SE	Total		Biological, agricultural, and other life scientists		Computer and information scientists		Mathematical scientists		Physical scientists		Psychologists		Social scientists		Number	SE	Number	SE	Number	SE				
			Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE												
Virginia	28,300	875	15,250	600	3,800	325	3,150	325	1,800	225	2,800	250	1,000	150	2,700	275	3,700	325	3,200	275	6,150	425				
West Virginia	2,350	275	1,450	250	750	150	D	D	S	S	250	75	S	S	250	75	300	100	250	75	350	100				
East South Central	29,150	825	15,500	500	5,550	350	1,150	175	1,650	200	3,500	300	1,450	200	2,200	200	4,050	350	5,300	375	4,250	350				
Alabama	8,250	450	4,000	300	1,350	175	400	100	550	125	850	175	350	100	550	100	1,450	225	1,600	225	1,150	175				
Kentucky	6,000	500	3,050	300	1,300	200	200	75	400	150	450	100	300	75	450	100	750	175	1,250	225	950	175				
Mississippi	3,150	250	1,800	175	850	125	D	D	100	50	350	75	150	75	350	100	400	100	550	125	400	75				
Tennessee	11,750	550	6,600	400	2,050	200	550	125	600	125	1,900	225	650	150	850	125	1,500	175	1,900	225	1,750	250				
West South Central	70,500	1,600	34,600	1,050	11,150	525	4,000	375	3,550	350	7,350	475	3,250	325	5,300	400	12,250	650	10,350	600	13,300	650				
Arkansas	4,400	375	2,350	300	750	125	150	50	200	100	550	175	300	100	400	100	300	100	700	125	1,100	225				
Louisiana	6,150	400	3,700	300	1,200	175	150	50	400	100	850	150	300	100	850	150	750	150	700	125	950	150				
Oklahoma	5,350	425	2,850	325	1,300	200	S	S	100	50	650	150	350	100	350	100	600	125	950	175	950	175				
Texas	54,600	1,450	25,700	875	7,900	475	3,600	325	2,850	300	5,350	400	2,300	300	3,650	350	10,600	675	8,050	525	10,250	575				
Mountain	60,950	1,225	31,300	700	9,750	475	3,650	300	2,600	225	8,400	350	2,300	225	4,550	325	10,750	575	9,250	475	9,700	500				
Arizona	13,650	625	5,950	350	1,800	275	750	125	650	125	1,300	150	450	100	1,050	175	2,800	350	2,200	250	2,650	275				
Colorado	20,100	800	10,650	475	2,900	250	1,450	225	800	150	3,250	250	700	175	1,550	175	3,150	325	3,200	300	3,150	275				
Idaho	3,400	300	1,700	175	750	150	100	50	100	50	400	100	200	75	200	50	750	175	400	100	550	125				
Montana	2,600	225	1,650	200	800	125	D	D	100	50	350	100	100	50	200	75	250	100	250	75	450	100				
Nevada	2,950	275	1,500	175	450	125	S	S	100	50	400	125	150	75	300	75	350	150	550	125	500	125				
New Mexico	8,450	450	4,200	300	1,050	175	550	125	300	100	1,750	200	200	75	400	100	2,500	275	1,000	225	750	125				
Utah	8,700	500	4,950	375	1,700	225	700	150	550	125	800	125	500	150	700	175	900	175	1,350	200	1,500	200				
Wyoming	1,100	200	600	125	250	75	D	D	D	D	150	75	D	D	150	100	D	D	350	125	150	75				
Pacific	207,350	2,025	109,850	1,625	33,850	900	31,450	900	9,300	425	16,950	650	6,900	450	11,350	525	37,950	1,025	28,300	950	31,300	950				
Alaska	1,600	200	950	150	400	125	D	D	50	50	250	75	D	D	150	75	S	S	400	100	200	75				
California	156,900	1,825	82,500	1,450	26,000	825	23,700	825	6,800	375	13,050	600	5,100	425	7,900	450	29,350	875	20,950	825	24,100	875				
Hawaii	3,200	325	1,950	250	600	125	350	175	S	S	400	100	200	100	350	100	300	125	400	75	500	175				
Oregon	16,250	700	6,850	425	2,150	250	1,300	200	450	100	1,050	150	650	125	1,200	200	4,750	400	2,350	250	2,350	275				
Washington	29,400	875	17,650	725	4,700	325	6,050	475	1,900	250	2,250	275	950	200	1,750	250	3,450	300	4,200	325	4,100	325				
Puerto Rico	2,800	250	1,500	200	600	125	50	25	100	50	350	100	250	125	150	75	300	100	550	125	400	100				
U.S. territories and other areas	3,750	400	2,150	225	750	175	150	50	250	100	250	75	100	75	650	150	500	200	250	125	800	200				

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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 47

U.S. residing employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 2023

(Number and SE)

Characteristic	All employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations	
			Total		Biological, agricultural, and other life scientists		Computer and information scientists		Mathematical scientists		Physical scientists		Psychologists		Social scientists							
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE		
> 25	226,050	1,575	108,500	1,625	37,200	975	14,150	650	9,450	450	23,750	725	8,650	450	15,300	550	30,500	1,050	36,200	925	50,800	1,275
Place of birth																						
United States	555,700	1,700	297,350	1,950	108,900	1,300	28,250	725	22,800	700	56,300	925	31,400	800	49,750	950	53,700	1,050	96,800	1,450	107,900	1,550
Asia	245,150	1,900	131,550	1,650	41,900	925	38,350	1,025	18,100	700	20,950	850	2,250	300	9,950	500	58,400	1,175	24,750	1,025	30,450	1,050
Europe	53,550	975	30,900	825	7,700	450	6,200	450	4,450	325	6,050	400	1,350	200	5,100	375	7,450	425	6,650	550	8,600	500
North America ^d	13,700	500	7,650	425	2,350	200	1,050	225	800	150	1,200	150	550	150	1,700	250	1,550	200	1,950	225	2,550	250
Central America	2,300	225	1,050	175	400	75	100	50	50	50	150	50	S	S	300	100	450	100	400	100	350	75
Caribbean	4,150	300	2,200	200	700	125	200	75	200	75	400	100	250	75	350	75	400	75	750	150	850	150
South America	13,750	450	8,400	350	3,050	200	900	150	950	150	1,300	175	350	75	1,800	175	2,150	200	1,500	150	1,700	175
Africa	18,000	475	8,900	425	2,750	250	1,600	225	1,050	125	1,750	200	200	100	1,550	175	3,300	350	2,500	250	3,350	300
Oceania	2,100	225	1,350	175	350	125	200	100	200	100	250	75	100	50	250	100	200	75	150	75	400	125
Unknown	S	S	D	D	D	D	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.

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.^d North America excludes United States.**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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

* = 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

Note(s):
Median annual salary 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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 51

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and citizenship status: 2023

(Dollars and SE)

Field	All full-time employed		U.S. citizen						Non-U.S. citizen					
			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	137,000	1,500	140,000	1,500	130,000	500	155,000	2,500	130,000	500	135,000	2,000	115,000	3,000
Science	130,000	500	130,000	500	125,000	1,000	150,000	2,000	125,000	2,000	129,000	1,000	105,000	4,000
Biological, agricultural, and environmental life sciences	129,000	2,000	130,000	1,000	125,000	2,000	149,000	1,000	110,000	2,500	120,000	3,000	82,000	3,000
Agricultural and food sciences	119,000	1,500	125,000	3,500	120,000	3,000	140,000	7,500	92,000	4,000	97,000	10,500	75,000	8,000
Biochemistry and biophysics	140,000	3,500	143,000	5,000	135,000	6,500	168,000	14,500	120,000	5,500	128,000	9,000	68,000	16,500
Cell, cellular biology, and molecular biology	134,000	5,500	139,000	4,000	133,000	5,500	149,000	6,000	109,000	3,500	110,000	4,000	74,000	35,500
Microbiological sciences and immunology	139,000	3,500	141,000	4,000	139,000	3,500	169,000	14,000	97,000	8,000	99,000	12,000	85,000	15,500
Natural resources and conservation	105,000	3,000	108,000	4,000	106,000	3,500	109,000	3,000	92,000	5,500	100,000	10,500	80,000	9,500
Zoology	98,000	3,000	100,000	2,500	97,000	5,500	124,000	13,000	87,000	15,500	87,000	14,500	D	D
Other biological sciences	130,000	3,000	130,000	500	125,000	1,000	149,000	1,500	109,000	6,000	120,000	2,500	81,000	3,500
Computer and information sciences	185,000	5,000	181,000	4,500	175,000	4,000	196,000	8,500	191,000	8,500	200,000	2,000	178,000	7,500
Mathematics and statistics	130,000	3,500	125,000	4,000	119,000	4,000	139,000	5,500	139,000	6,500	140,000	6,500	127,000	11,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	140,000	500	141,000	2,500	136,000	2,500	150,000	500	128,000	3,500	130,000	4,500	95,000	8,000
Astronomy and astrophysics	130,000	5,500	135,000	7,500	130,000	6,000	168,000	12,000	102,000	25,000	116,000	17,500	81,000	15,500
Chemistry, except biochemistry	135,000	3,000	140,000	1,500	134,000	3,000	148,000	3,000	120,000	5,500	125,000	5,000	109,000	12,500
Geosciences, atmospheric sciences, and ocean sciences	118,000	4,000	120,000	3,000	115,000	2,500	135,000	6,000	108,000	7,500	121,000	10,500	79,000	9,000
Physics	156,000	4,000	159,000	4,000	157,000	5,000	160,000	3,000	149,000	4,000	159,000	9,000	96,000	29,000
Psychology	117,000	2,500	118,000	2,500	117,000	2,500	122,000	6,500	98,000	9,500	107,000	11,000	68,000	7,000
Social sciences	116,000	2,000	115,000	2,000	111,000	1,500	127,000	3,500	119,000	5,000	118,000	7,500	122,000	8,500
Economics	160,000	4,500	164,000	4,500	160,000	4,000	170,000	11,000	150,000	5,000	150,000	11,000	147,000	5,500
Political science and government	116,000	4,000	116,000	3,500	113,000	4,500	124,000	12,500	104,000	15,500	101,000	14,000	120,000	18,000
Sociology, demography, and population studies	101,000	3,500	102,000	3,500	100,000	3,500	109,000	8,500	92,000	9,500	95,000	12,500	78,000	19,000
Other social sciences	100,000	2,500	100,000	500	99,000	2,000	103,000	6,000	87,000	5,500	92,000	4,000	69,000	5,500
Engineering	160,000	500	167,000	3,000	160,000	1,000	175,000	2,000	140,000	1,000	145,000	4,500	126,000	4,500
Aerospace, aeronautical, and astronautical engineering	171,000	3,000	175,000	4,000	171,000	7,500	183,000	10,500	135,000	13,000	160,000	18,500	108,000	13,500
Chemical engineering	159,000	4,500	163,000	4,500	155,000	4,500	174,000	5,000	139,000	3,000	141,000	6,000	127,000	6,500
Civil engineering	130,000	2,000	138,000	6,000	130,000	6,000	149,000	13,500	109,000	5,500	118,000	5,500	98,000	2,500
Electrical and computer engineering	181,000	3,500	189,000	1,500	180,000	3,500	200,000	4,500	166,000	5,000	173,000	8,500	149,000	2,500
Mechanical engineering	150,000	3,000	156,000	4,000	155,000	3,500	158,000	7,000	128,000	4,000	129,000	2,500	115,000	4,500
Metallurgical and materials engineering	154,000	4,000	159,000	4,000	156,000	4,000	160,000	10,000	139,000	7,000	146,000	7,000	129,000	9,500
Other engineering	150,000	3,000	160,000	1,000	158,000	3,500	164,000	5,500	130,000	2,500	134,000	4,500	120,000	6,000
Health	125,000	2,500	129,000	3,000	120,000	3,500	149,000	6,000	114,000	4,000	118,000	3,500	98,000	6,000

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

Note(s):
Median annual salary 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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 53

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 2023

(Dollars and SE)

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	137,000	1,500	105,000	500	125,000	500	135,000	1,500	145,000	2,000	156,000	4,000	169,000	3,500
Science	130,000	500	99,000	2,000	118,000	2,500	125,000	1,000	138,000	3,500	149,000	3,000	160,000	3,500
Biological, agricultural, and environmental life sciences	129,000	2,000	89,000	1,500	117,000	3,000	127,000	3,000	143,000	4,000	146,000	5,500	169,000	2,500
Agricultural and food sciences	119,000	1,500	89,000	1,500	104,000	5,000	108,000	8,500	135,000	11,000	133,000	10,000	150,000	8,500
Biochemistry and biophysics	140,000	3,500	86,000	5,000	124,000	6,500	139,000	9,000	149,000	5,000	166,000	15,000	179,000	12,500
Cell, cellular biology, and molecular biology	134,000	5,500	83,000	6,000	115,000	7,000	132,000	7,500	139,000	13,500	145,000	11,500	175,000	6,000
Microbiological sciences and immunology	139,000	3,500	94,000	5,000	125,000	5,000	144,000	10,000	150,000	7,000	155,000	10,500	179,000	7,500
Natural resources and conservation	105,000	3,000	87,000	3,500	88,000	3,000	109,000	2,000	120,000	2,000	137,000	9,500	140,000	7,000
Zoology	98,000	3,000	76,000	6,000	74,000	7,000	84,000	4,500	112,000	5,500	97,000	7,000	119,000	7,000
Other biological sciences	130,000	3,000	89,000	2,000	120,000	1,000	129,000	3,000	145,000	3,500	150,000	6,500	170,000	5,500
Computer and information sciences	185,000	5,000	164,000	7,500	191,000	8,000	200,000	2,500	180,000	12,500	196,000	7,000	195,000	12,000
Mathematics and statistics	130,000	3,500	112,000	6,500	123,000	8,500	121,000	6,000	139,000	9,000	130,000	7,500	139,000	6,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	140,000	500	104,000	3,500	126,000	3,500	130,000	5,000	144,000	4,000	160,000	4,500	165,000	4,500
Astronomy and astrophysics	130,000	5,500	82,000	6,500	122,000	9,500	151,000	15,000	128,000	11,500	134,000	21,500	174,000	12,000
Chemistry, except biochemistry	135,000	3,000	105,000	3,500	125,000	5,000	128,000	3,500	144,000	4,000	150,000	5,500	168,000	5,000
Geosciences, atmospheric sciences, and ocean sciences	118,000	4,000	85,000	3,500	100,000	2,000	115,000	3,000	134,000	7,500	147,000	5,500	149,000	4,500
Physics	156,000	4,000	130,000	4,500	152,000	4,500	150,000	8,000	149,000	7,000	198,000	11,500	168,000	4,000
Psychology	117,000	2,500	96,000	1,500	106,000	3,500	112,000	5,500	123,000	4,500	137,000	6,000	139,000	2,500
Social sciences	116,000	2,000	93,000	2,500	100,000	1,000	109,000	4,000	120,000	2,500	131,000	6,500	149,000	3,500
Economics	160,000	4,500	137,000	6,500	155,000	7,500	164,000	12,500	158,000	12,500	175,000	15,500	183,000	11,000
Political science and government	116,000	4,000	92,000	5,000	100,000	2,000	103,000	7,000	119,000	13,000	153,000	12,000	147,000	7,500
Sociology, demography, and population studies	101,000	3,500	86,000	4,500	92,000	5,500	100,000	4,500	109,000	11,000	109,000	8,000	135,000	13,500
Other social sciences	100,000	2,500	79,000	1,500	87,000	2,500	98,000	3,000	105,000	4,500	111,000	4,500	124,000	6,000
Engineering	160,000	500	126,000	2,500	149,000	1,500	160,000	2,500	170,000	4,500	180,000	2,000	189,000	3,000
Aerospace, aeronautical, and astronautical engineering	171,000	3,000	131,000	7,000	152,000	6,000	173,000	4,500	184,000	20,000	199,000	11,500	199,000	6,000
Chemical engineering	159,000	4,500	125,000	3,500	140,000	5,500	158,000	7,500	155,000	5,500	199,000	16,000	198,000	6,500
Civil engineering	130,000	2,000	100,000	2,500	116,000	4,000	118,000	5,500	150,000	12,000	153,000	9,500	173,000	6,500
Electrical and computer engineering	181,000	3,500	149,000	2,000	179,000	4,000	184,000	5,000	200,000	4,000	192,000	7,500	199,000	4,000
Mechanical engineering	150,000	3,000	119,000	2,000	140,000	4,500	155,000	5,000	156,000	13,000	178,000	6,500	179,000	9,000
Metallurgical and materials engineering	154,000	4,000	125,000	6,500	149,000	3,000	155,000	4,000	165,000	13,500	150,000	12,000	187,000	10,000
Other engineering	150,000	3,000	120,000	500	146,000	4,500	159,000	6,500	159,000	3,500	179,000	5,500	183,000	6,500
Health	125,000	2,500	99,000	3,000	119,000	1,000	124,000	4,500	140,000	6,000	168,000	12,000	183,000	6,000

SE = standard error.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 54

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2023

(Dollars and SE)

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	137,000	1,500	105,000	1,000	87,000	2,000	175,000	500	140,000	2,000	145,000	1,000	110,000	1,500	119,000	2,500	147,000	22,000
Science	130,000	500	100,000	1,500	87,000	2,500	170,000	1,500	135,000	5,000	144,000	2,000	107,000	2,500	119,000	6,500	148,000	28,000
Biological, agricultural, and environmental life sciences	129,000	2,000	100,000	1,000	80,000	3,500	168,000	4,000	129,000	6,000	139,000	1,500	99,000	2,000	116,000	9,000	90,000	30,000
Agricultural and food sciences	119,000	1,500	103,000	3,500	79,000	14,000	149,000	3,000	100,000	5,500	144,000	9,500	86,000	10,000	S	S	D	D
Biochemistry and biophysics	140,000	3,500	109,000	6,000	79,000	8,500	169,000	6,500	151,000	16,000	139,000	8,500	66,000	12,500	S	S	D	D
Cell, cellular biology, and molecular biology	134,000	5,500	100,000	5,000	96,000	6,000	169,000	5,000	150,000	12,000	167,000	6,000	D	D	D	D	D	D
Microbiological sciences and immunology	139,000	3,500	100,000	3,500	69,000	8,500	173,000	3,500	139,000	22,500	140,000	5,500	94,000	8,000	107,000	49,000	D	D
Natural resources and conservation	105,000	3,000	90,000	3,000	79,000	14,000	125,000	7,000	107,000	10,000	125,000	3,000	95,000	3,500	96,000	10,500	122,000	22,500
Zoology	98,000	3,000	92,000	4,000	65,000	6,500	120,000	15,500	106,000	14,500	119,000	9,000	82,000	7,000	D	D	D	D
Other biological sciences	130,000	3,000	100,000	2,500	80,000	6,000	170,000	2,000	121,000	6,000	136,000	3,000	110,000	4,500	115,000	28,500	D	D
Computer and information sciences	185,000	5,000	119,000	2,500	79,000	9,000	212,000	4,000	159,000	5,500	175,000	11,000	130,000	41,500	195,000	26,500	D	D
Mathematics and statistics	130,000	3,500	99,000	1,000	85,000	4,500	189,000	7,000	150,000	15,500	155,000	8,500	109,000	22,000	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	140,000	500	100,000	1,500	79,000	2,000	165,000	2,000	155,000	3,500	149,000	2,000	114,000	9,500	99,000	16,500	S	S
Astronomy and astrophysics	130,000	5,500	100,000	4,000	65,000	14,000	193,000	13,000	156,000	9,000	127,000	20,500	156,000	12,000	D	D	D	D
Chemistry, except biochemistry	135,000	3,000	89,000	2,000	79,000	2,000	157,000	3,500	141,000	15,500	155,000	8,000	101,000	12,000	91,000	23,500	D	D
Geosciences, atmospheric sciences, and ocean sciences	118,000	4,000	100,000	2,000	84,000	5,500	150,000	1,000	117,000	4,500	136,000	5,500	104,000	7,500	61,000	15,000	D	D
Physics	156,000	4,000	115,000	6,500	77,000	2,500	180,000	2,000	178,000	8,000	154,000	7,000	151,000	27,500	134,000	19,000	D	D
Psychology	117,000	2,500	100,000	1,500	99,000	2,500	140,000	4,500	122,000	4,500	137,000	5,000	119,000	6,500	118,000	8,000	S	S
Social sciences	116,000	2,000	102,000	2,000	90,000	6,500	175,000	5,000	149,000	6,500	155,000	6,000	104,000	5,500	98,000	7,500	186,000	25,000
Economics	160,000	4,500	130,000	4,000	62,000	16,500	204,000	10,000	180,000	12,000	169,000	5,500	112,000	12,500	109,000	20,000	196,000	31,500
Political science and government	116,000	4,000	101,000	4,000	103,000	9,000	174,000	19,000	159,000	15,500	156,000	10,500	106,000	14,000	S	S	S	S
Sociology, demography, and population studies	101,000	3,500	98,000	2,500	96,000	8,000	154,000	7,000	145,000	5,500	148,000	17,000	90,000	11,500	134,000	54,000	221,000	108,500
Other social sciences	100,000	2,500	93,000	2,000	90,000	4,500	140,000	9,000	100,000	5,000	129,000	9,500	94,000	7,500	S	S	59,000	25,500
Engineering	160,000	500	120,000	500	75,000	14,000	180,000	2,000	160,000	3,500	159,000	1,000	129,000	9,000	131,000	22,500	D	D
Aerospace, aeronautical, and astronautical engineering	171,000	3,000	126,000	8,500	D	D	189,000	6,500	177,000	11,000	153,000	9,500	*	*	D	D	D	D
Chemical engineering	159,000	4,500	110,000	6,000	D	D	169,000	5,000	150,000	15,500	147,000	6,500	141,000	30,500	S	S	D	D
Civil engineering	130,000	2,000	115,000	5,000	82,000	27,500	149,000	4,000	145,000	23,500	128,000	9,500	112,000	8,000	S	S	D	D
Electrical and computer engineering	181,000	3,500	125,000	4,000	85,000	10,000	200,000	500	169,000	10,500	152,000	7,000	183,000	36,500	146,000	27,500	D	D
Mechanical engineering	150,000	3,000	119,000	1,000	D	D	164,000	6,000	138,000	17,500	155,000	7,000	D	D	S	S	D	D
Metallurgical and materials engineering	154,000	4,000	97,000	12,000	S	S	160,000	5,000	168,000	6,000	148,000	5,500	S	S	122,000	21,500	D	D
Other engineering	150,000	3,000	120,000	1,500	70,000	18,500	175,000	3,000	149,000	9,000	148,000	5,000	137,000	15,000	129,000	51,000	D	D
Health	125,000	2,500	107,000	2,500	85,000	15,500	172,000	5,500	147,000	7,500	150,000	6,500	105,000	12,500	133,000	22,000	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.

SE = standard error.

^a Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^c Private, for profit includes those self-employed in an incorporated business.

^d Self-employed or business owner in a nonincorporated business.

^e Other sector includes employers not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 55

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2023

(Dollars and SE)

Employment sector and field of study	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
All sectors	137,000	1,500	150,000	1,000	120,000	500
Science	130,000	500	140,000	500	117,000	1,500
Biological, agricultural, and environmental life sciences	129,000	2,000	135,000	3,000	120,000	500
Computer and information sciences	185,000	5,000	194,000	6,500	150,000	7,500
Mathematics and statistics	130,000	3,500	133,000	5,500	114,000	6,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	140,000	500	147,000	3,000	120,000	3,000
Psychology	117,000	2,500	125,000	2,500	110,000	2,000
Social sciences	116,000	2,000	123,000	3,500	107,000	2,500
Engineering	160,000	500	164,000	2,500	145,000	2,000
Health	125,000	2,500	136,000	5,000	120,000	1,500
4-year educational institution ^a	105,000	1,000	110,000	500	99,000	1,500
Science	100,000	1,500	109,000	2,000	95,000	1,500
Biological, agricultural, and environmental life sciences	100,000	1,000	110,000	1,000	93,000	2,000
Computer and information sciences	119,000	2,500	121,000	3,000	107,000	6,000
Mathematics and statistics	99,000	1,000	100,000	2,000	90,000	2,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	100,000	1,500	102,000	3,500	90,000	1,500
Psychology	100,000	1,500	105,000	3,000	100,000	1,000
Social sciences	102,000	2,000	110,000	1,500	98,000	2,000
Engineering	120,000	500	120,000	500	114,000	5,500
Health	107,000	2,500	109,000	5,000	105,000	2,500
Other educational institution ^b	87,000	2,000	88,000	2,000	85,000	1,500
Science	87,000	2,500	90,000	4,500	85,000	1,500
Biological, agricultural, and environmental life sciences	80,000	3,500	88,000	10,000	77,000	4,000
Computer and information sciences	79,000	9,000	79,000	11,500	93,000	26,500
Mathematics and statistics	85,000	4,500	85,000	8,000	86,000	11,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	79,000	2,000	80,000	3,500	74,000	2,500
Psychology	99,000	2,500	103,000	8,000	97,000	3,500
Social sciences	90,000	6,500	99,000	4,000	85,000	3,500
Engineering	75,000	14,000	77,000	14,000	71,000	18,000
Health	85,000	15,500	75,000	8,000	98,000	18,000
Private, for profit ^c	175,000	500	180,000	500	159,000	2,500
Science	170,000	1,500	179,000	1,000	157,000	3,500
Biological, agricultural, and environmental life sciences	168,000	4,000	170,000	2,500	160,000	4,500
Computer and information sciences	212,000	4,000	219,000	4,500	200,000	1,500
Mathematics and statistics	189,000	7,000	198,000	7,000	170,000	9,500

TABLE 55

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2023

(Dollars and SE)

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	165,000	2,000	170,000	1,500	150,000	500
Psychology	140,000	4,500	149,000	4,500	130,000	4,000
Social sciences	175,000	5,000	199,000	9,500	155,000	7,500
Engineering	180,000	2,000	180,000	500	160,000	2,500
Health	172,000	5,500	180,000	10,500	165,000	6,000
Private, nonprofit	140,000	2,000	155,000	4,000	120,000	3,000
Science	135,000	5,000	150,000	1,500	120,000	1,000
Biological, agricultural, and environmental life sciences	129,000	6,000	149,000	6,000	113,000	5,500
Computer and information sciences	159,000	5,500	160,000	13,500	157,000	18,500
Mathematics and statistics	150,000	15,500	150,000	22,000	144,000	22,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	155,000	3,500	159,000	3,000	129,000	11,500
Psychology	122,000	4,500	130,000	3,500	116,000	4,000
Social sciences	149,000	6,500	150,000	5,500	144,000	8,500
Engineering	160,000	3,500	164,000	4,500	133,000	13,000
Health	147,000	7,500	164,000	24,500	131,000	12,500
Federal government	145,000	1,000	150,000	500	140,000	500
Science	144,000	2,000	149,000	1,500	139,000	3,500
Biological, agricultural, and environmental life sciences	139,000	1,500	141,000	3,000	135,000	3,000
Computer and information sciences	175,000	11,000	174,000	13,000	183,000	18,000
Mathematics and statistics	155,000	8,500	156,000	8,000	149,000	15,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	149,000	2,000	150,000	4,000	139,000	4,500
Psychology	137,000	5,000	140,000	7,000	134,000	5,500
Social sciences	155,000	6,000	158,000	4,000	149,000	3,500
Engineering	150,000	1,000	150,000	1,500	141,000	6,000
Health	150,000	6,500	149,000	14,500	150,000	8,500
State or local government	110,000	1,500	118,000	5,000	104,000	3,500
Science	107,000	2,500	110,000	5,000	102,000	4,000
Biological, agricultural, and environmental life sciences	99,000	2,000	106,000	5,500	96,000	3,500
Computer and information sciences	130,000	41,500	D	D	D	D
Mathematics and statistics	109,000	22,000	109,000	21,000	S	S
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	114,000	9,500	119,000	14,000	107,000	8,000
Psychology	119,000	6,500	112,000	8,500	120,000	6,500
Social sciences	104,000	5,500	111,000	8,000	90,000	6,500
Engineering	129,000	9,000	131,000	10,500	119,000	9,500
Health	105,000	12,500	115,000	26,500	100,000	12,000

TABLE 55

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 2023

(Dollars and SE)

Employment sector and field of study	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
Self-employed ^d	119,000	2,500	133,000	18,000	102,000	11,000
Science	119,000	6,500	128,000	18,500	100,000	9,000
Biological, agricultural, and environmental life sciences	116,000	9,000	117,000	16,000	107,000	17,500
Computer and information sciences	195,000	26,500	198,000	28,500	D	D
Mathematics and statistics	S	S	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	99,000	16,500	84,000	34,000	99,000	20,500
Psychology	118,000	8,000	149,000	3,000	101,000	11,500
Social sciences	98,000	7,500	102,000	8,500	86,000	31,000
Engineering	131,000	22,500	144,000	17,000	112,000	13,500
Health	133,000	22,000	121,000	41,500	133,000	35,000
Other sector ^e	147,000	22,000	179,000	36,500	129,000	19,000
Science	148,000	28,000	194,000	35,000	128,000	10,000
Biological, agricultural, and environmental life sciences	90,000	30,000	88,000	30,000	121,000	53,000
Computer and information sciences	D	D	D	D	D	D
Mathematics and statistics	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	S	S	D	D	D	D
Psychology	S	S	D	D	S	S
Social sciences	186,000	25,000	220,000	33,000	144,000	31,500
Engineering	D	D	D	D	D	D
Health	S	S	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 Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.^c Private, for profit includes those self-employed in an incorporated business.^d Self-employed or business owner in a nonincorporated business.^e Other sector includes employers not broken out separately.**Note(s):**

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 56
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2023

(Dollars and SE)

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	137,000	1,500	120,000	2,500	110,000	11,500	150,000	500	120,000	1,000	134,000	1,500	125,000	3,500
Science	130,000	500	115,000	3,500	99,000	12,000	142,000	4,000	116,000	3,500	127,000	1,500	119,000	2,500
Biological, agricultural, and environmental life sciences	129,000	2,000	112,000	4,000	85,000	17,000	135,000	5,000	120,000	4,500	128,000	2,500	120,000	4,500
Computer and information sciences	185,000	5,000	171,000	11,500	D	D	200,000	2,000	161,000	21,500	179,000	3,500	196,000	30,000
Mathematics and statistics	130,000	3,500	113,000	7,500	D	D	150,000	6,000	107,000	11,000	120,000	2,500	105,000	14,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	140,000	500	124,000	5,000	126,000	11,000	146,000	3,000	112,000	6,000	139,000	1,000	124,000	5,000
Psychology	117,000	2,500	104,000	2,500	120,000	10,500	109,000	2,500	119,000	5,500	120,000	1,000	110,000	3,000
Social sciences	116,000	2,000	114,000	3,500	90,000	10,000	126,000	3,500	105,000	5,000	115,000	2,500	110,000	8,000
Engineering	160,000	500	138,000	3,000	179,000	10,500	160,000	500	146,000	6,000	160,000	1,000	161,000	6,500
Health	125,000	2,500	115,000	5,500	109,000	32,000	130,000	3,000	111,000	7,000	127,000	4,500	140,000	22,000
4-year educational institution ^d	105,000	1,000	97,000	2,500	96,000	4,000	104,000	3,000	100,000	1,500	106,000	1,500	98,000	3,000
Science	100,000	1,500	95,000	2,500	85,000	8,000	100,000	2,000	99,000	2,500	103,000	1,500	97,000	3,500
Biological, agricultural, and environmental life sciences	100,000	1,000	89,000	2,500	85,000	12,500	100,000	5,000	93,000	7,500	103,000	2,000	89,000	4,000
Computer and information sciences	119,000	2,500	102,000	15,500	D	D	112,000	5,000	128,000	29,500	122,000	3,500	S	S
Mathematics and statistics	99,000	1,000	98,000	4,000	D	D	99,000	500	88,000	6,500	99,000	2,000	74,000	10,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	100,000	1,500	82,000	4,000	*	*	92,000	4,000	82,000	9,000	101,000	2,500	99,000	6,500
Psychology	100,000	1,500	99,000	5,000	82,000	17,000	97,000	6,500	106,000	5,500	100,000	2,500	95,000	8,000
Social sciences	102,000	2,000	103,000	4,000	85,000	15,000	107,000	3,500	100,000	2,000	101,000	2,000	99,000	10,500
Engineering	120,000	500	109,000	2,500	S	S	110,000	3,000	111,000	7,500	127,000	4,000	120,000	10,000
Health	107,000	2,500	106,000	5,000	S	S	107,000	8,000	98,000	4,000	108,000	3,000	86,000	12,500
Other educational institution ^e	87,000	2,000	82,000	3,500	71,000	17,000	94,000	13,500	94,000	4,000	86,000	2,500	76,000	17,000
Science	87,000	2,500	82,000	3,500	68,000	16,500	93,000	13,000	95,000	5,500	86,000	3,000	87,000	8,500
Biological, agricultural, and environmental life sciences	80,000	3,500	72,000	10,500	D	D	105,000	25,500	72,000	6,000	80,000	4,000	106,000	27,000
Computer and information sciences	79,000	9,000	D	D	D	D	S	S	S	S	84,000	15,500	D	D
Mathematics and statistics	85,000	4,500	D	D	D	D	104,000	16,500	D	D	80,000	8,500	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	79,000	2,000	78,000	4,000	D	D	76,000	4,000	92,000	14,000	78,000	3,000	S	S
Psychology	99,000	2,500	89,000	12,000	D	D	D	D	99,000	12,500	100,000	2,500	D	D
Social sciences	90,000	6,500	85,000	11,500	D	D	84,000	25,500	99,000	8,500	90,000	6,000	86,000	4,000
Engineering	75,000	14,000	75,000	11,500	D	D	113,000	29,000	75,000	16,000	73,000	15,500	D	D
Health	85,000	15,500	D	D	D	D	D	D	66,000	19,000	93,000	20,500	D	D
Private, for profit ^f	175,000	500	150,000	3,500	180,000	14,000	179,000	3,000	150,000	1,500	175,000	500	167,000	6,500
Science	170,000	1,500	150,000	4,000	174,000	20,500	176,000	3,000	140,000	8,000	172,000	3,000	159,000	9,500
Biological, agricultural, and environmental life sciences	168,000	4,000	149,000	3,500	D	D	165,000	5,500	145,000	8,500	170,000	2,500	168,000	9,000

TABLE 56
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2023

(Dollars and SE)

Employment sector and field of study	All full-time employed		Hispanic or Latino ^a		Not Hispanic or Latino ^b									
	Median salary	SE	Median salary	SE	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
Computer and information sciences	212,000	4,000	197,000	6,500	D	D	217,000	6,500	209,000	18,000	207,000	7,000	189,000	22,500
Mathematics and statistics	189,000	7,000	185,000	16,000	D	D	198,000	5,000	151,000	8,500	183,000	7,000	149,000	21,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	165,000	2,000	150,000	9,500	D	D	159,000	2,500	139,000	12,000	170,000	2,000	149,000	13,500
Psychology	140,000	4,500	118,000	9,000	D	D	147,000	10,500	122,000	8,500	144,000	5,500	118,000	24,000
Social sciences	175,000	5,000	183,000	22,500	D	D	178,000	8,500	127,000	21,500	178,000	5,000	S	S
Engineering	180,000	2,000	153,000	5,500	S	S	180,000	1,000	164,000	5,500	180,000	1,000	173,000	20,500
Health	172,000	5,500	136,000	10,500	D	D	166,000	15,000	178,000	46,500	174,000	5,500	247,000	63,000
Private, nonprofit	140,000	2,000	116,000	3,000	101,000	31,500	139,000	7,500	138,000	9,000	144,000	4,000	135,000	10,500
Science	135,000	5,000	115,000	3,000	S	S	128,000	5,500	130,000	9,000	138,000	4,500	127,000	10,000
Biological, agricultural, and environmental life sciences	129,000	6,000	109,000	11,500	D	D	113,000	10,000	127,000	20,000	140,000	6,000	127,000	26,500
Computer and information sciences	159,000	5,500	D	D	D	D	156,000	21,000	D	D	169,000	12,500	D	D
Mathematics and statistics	150,000	15,500	113,000	5,500	D	D	150,000	37,000	S	S	159,000	14,000	S	S
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	155,000	3,500	147,000	19,000	D	D	149,000	5,500	144,000	24,500	159,000	5,000	162,000	54,500
Psychology	122,000	4,500	100,000	5,000	D	D	123,000	12,000	140,000	14,500	123,000	5,000	111,000	19,500
Social sciences	149,000	6,500	116,000	10,500	D	D	150,000	16,000	128,000	7,500	150,000	3,500	126,000	13,500
Engineering	160,000	3,500	135,000	13,500	D	D	154,000	12,000	169,000	35,000	162,000	3,500	149,000	39,000
Health	147,000	7,500	128,000	19,500	D	D	113,000	12,500	147,000	30,000	149,000	3,500	154,000	22,000
Federal government	145,000	1,000	136,000	5,000	140,000	10,000	150,000	2,500	135,000	4,000	147,000	2,500	130,000	5,500
Science	144,000	2,000	139,000	5,000	137,000	13,000	149,000	3,500	131,000	4,500	145,000	2,000	128,000	3,000
Biological, agricultural, and environmental life sciences	139,000	1,500	129,000	6,500	D	D	144,000	8,500	134,000	5,500	140,000	1,500	118,000	5,500
Computer and information sciences	175,000	11,000	S	S	D	D	185,000	25,500	187,000	35,500	179,000	5,500	S	S
Mathematics and statistics	155,000	8,500	S	S	D	D	164,000	24,000	D	D	154,000	9,500	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	149,000	2,000	142,000	6,000	D	D	156,000	10,000	123,000	7,500	150,000	1,500	128,000	12,000
Psychology	137,000	5,000	139,000	11,000	D	D	120,000	18,000	129,000	13,500	139,000	6,000	132,000	12,500
Social sciences	155,000	6,000	144,000	12,500	D	D	164,000	13,000	130,000	8,500	156,000	5,500	D	D
Engineering	150,000	1,000	132,000	5,500	D	D	149,000	7,500	158,000	9,500	150,000	1,500	161,000	22,500
Health	150,000	6,500	108,000	25,000	D	D	163,000	19,000	155,000	23,000	149,000	5,500	D	D
State or local government	110,000	1,500	99,000	3,000	S	S	112,000	5,500	106,000	6,500	110,000	3,000	110,000	16,000
Science	107,000	2,500	99,000	4,000	S	S	109,000	3,500	111,000	11,000	105,000	3,000	106,000	13,000
Biological, agricultural, and environmental life sciences	99,000	2,000	96,000	4,000	D	D	105,000	7,500	118,000	17,500	98,000	4,000	98,000	14,500
Computer and information sciences	130,000	41,500	D	D	D	D	D	D	D	D	D	D	D	D
Mathematics and statistics	109,000	22,000	D	D	D	D	S	S	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	114,000	9,500	93,000	8,000	D	D	110,000	14,500	D	D	120,000	12,000	D	D
Psychology	119,000	6,500	106,000	21,500	D	D	116,000	5,500	119,000	21,000	119,000	11,500	D	D

TABLE 56
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, ethnicity, and race: 2023

(Dollars and SE)

Employment sector and field of study	All full-time employed		Hispanic or Latino ^a		Not Hispanic or Latino ^b										
	Median salary	SE	Median salary	SE	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	
Social sciences	104,000	5,500	105,000	18,000		D	D	106,000	10,500	91,000	25,500	102,000	5,000	99,000	23,500
Engineering	129,000	9,000	109,000	33,500		D	D	120,000	13,000	103,000	9,500	146,000	8,500	D	D
Health	105,000	12,500	D	D		D	D	106,000	20,000	79,000	21,500	130,000	23,500	D	D
Self-employed ^d	119,000	2,500	81,000	13,500		D	D	138,000	26,500	120,000	32,000	120,000	3,500	S	S
Science	119,000	6,500	87,000	16,000		D	D	141,000	26,500	92,000	12,500	119,000	4,000	69,000	26,500
Biological, agricultural, and environmental life sciences	116,000	9,000	S	S		D	D	156,000	28,500	S	S	110,000	14,000	D	D
Computer and information sciences	195,000	26,500	D	D		D	D	S	S	D	D	S	S	D	D
Mathematics and statistics	S	S	D	D		D	D	D	D	D	D	S	S	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	99,000	16,500	S	S		D	D	100,000	36,500	D	D	69,000	13,000	D	D
Psychology	118,000	8,000	90,000	8,500		D	D	D	D	87,000	24,000	124,000	12,000	D	D
Social sciences	98,000	7,500	S	S		D	D	S	S	D	D	109,000	11,000	D	D
Engineering	131,000	22,500	66,000	22,500		D	D	127,000	25,500	D	D	131,000	31,500	D	D
Health	133,000	22,000	D	D		D	D	D	D	S	S	148,000	31,500	D	D
Other sector ^h	147,000	22,000	202,000	32,500		D	D	S	S	D	D	128,000	10,500	D	D
Science	148,000	28,000	195,000	22,000		D	D	S	S	D	D	128,000	14,000	D	D
Biological, agricultural, and environmental life sciences	90,000	30,000	*	*		D	D	D	D	D	D	108,000	24,000	D	D
Computer and information sciences	D	D	D	D		D	D	D	D	D	D	D	D	D	D
Mathematics and statistics	D	D	D	D		D	D	D	D	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	S	S	D	D		D	D	D	D	D	D	S	S	D	D
Psychology	S	S	D	D		D	D	D	D	D	D	S	S	D	D
Social sciences	186,000	25,000	209,000	42,500		D	D	S	S	D	D	183,000	53,000	D	D
Engineering	D	D	D	D		D	D	D	D	D	D	D	D	D	D
Health	S	S	D	D		D	D	D	D	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.

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^d Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^e Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^f Private, for profit includes those self-employed in an incorporated business.

^g Self-employed or business owner in a nonincorporated business.

^h Other sector includes employers not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 57-1

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and primary or secondary work activity: 2023

(Dollars and SE)

Field of study	All full-time employed		Computer applications		Design		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	Median salary	SE
All fields	137,000	1,500	160,000	500	158,000	3,500	150,000	500	140,000	1,500	140,000	1,000	100,000	500	120,000	500
Science	130,000	500	152,000	4,500	150,000	1,000	146,000	1,500	137,000	3,500	130,000	500	96,000	1,500	110,000	2,000
Biological, agricultural, and environmental life sciences	129,000	2,000	129,000	3,000	131,000	4,500	145,000	3,000	175,000	8,500	127,000	2,500	97,000	2,000	115,000	3,500
Agricultural and food sciences	119,000	1,500	123,000	7,000	149,000	12,500	135,000	6,500	127,000	4,500	119,000	2,000	100,000	4,000	109,000	10,500
Biochemistry and biophysics	140,000	3,500	164,000	16,500	130,000	9,000	150,000	4,500	183,000	21,500	140,000	4,000	95,000	6,500	123,000	9,500
Cell, cellular biology, and molecular biology	134,000	5,500	138,000	12,000	154,000	12,000	156,000	6,000	185,000	23,500	130,000	4,500	100,000	3,000	125,000	7,500
Microbiological sciences and immunology	139,000	3,500	106,000	10,500	131,000	5,000	149,000	2,000	224,000	32,000	139,000	4,000	92,000	8,000	116,000	9,000
Natural resources and conservation	105,000	3,000	109,000	3,500	120,000	3,000	116,000	4,000	109,000	8,000	102,000	3,000	87,000	2,500	100,000	8,000
Zoology	98,000	3,000	139,000	23,500	114,000	26,500	96,000	7,000	107,000	32,500	100,000	2,500	85,000	3,000	100,000	6,000
Other biological sciences	130,000	3,000	128,000	4,000	129,000	4,500	142,000	3,500	174,000	14,500	127,000	3,000	100,000	3,000	113,000	6,500
Computer and information sciences	185,000	5,000	199,000	500	200,000	1,000	203,000	4,500	177,000	43,500	185,000	5,500	110,000	3,000	184,000	15,500
Mathematics and statistics	130,000	3,500	156,000	9,000	177,000	10,000	154,000	7,500	172,000	24,500	136,000	4,500	90,000	2,000	90,000	7,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	140,000	500	150,000	1,500	150,000	2,500	160,000	3,000	171,000	11,500	140,000	500	90,000	2,500	120,000	3,500
Astronomy and astrophysics	130,000	5,500	128,000	9,500	182,000	16,500	156,000	10,500	191,000	28,500	125,000	6,000	90,000	7,500	123,000	9,000
Chemistry, except biochemistry	135,000	3,000	149,000	3,500	149,000	8,500	157,000	4,000	167,000	13,500	139,000	3,000	84,000	2,500	119,000	7,500
Geosciences, atmospheric sciences, and ocean sciences	118,000	4,000	128,000	6,000	129,000	9,000	129,000	4,000	124,000	6,500	116,000	4,000	93,000	2,500	116,000	6,500
Physics	156,000	4,000	164,000	5,000	154,000	7,500	180,000	4,000	197,000	8,500	155,000	4,000	104,000	6,000	127,000	5,500
Psychology	117,000	2,500	129,000	6,500	137,000	9,000	125,000	2,000	120,000	500	120,000	2,000	97,000	2,000	99,000	2,500
Social sciences	116,000	2,000	146,000	8,500	148,000	4,000	136,000	4,500	149,000	4,500	120,000	500	96,000	1,500	100,000	1,000
Economics	160,000	4,500	151,000	9,000	148,000	6,000	184,000	7,000	200,000	19,000	161,000	5,500	120,000	4,000	136,000	25,500
Political science and government	116,000	4,000	148,000	17,000	149,000	9,500	140,000	7,000	123,000	26,000	111,000	4,500	94,000	3,000	107,000	5,500
Sociology, demography, and population studies	101,000	3,500	137,000	18,500	131,000	27,000	126,000	7,000	105,000	12,000	108,000	3,000	88,000	3,000	100,000	1,500
Other social sciences	100,000	2,500	110,000	9,000	128,000	18,000	109,000	2,000	114,000	4,500	100,000	1,000	89,000	2,000	90,000	3,000
Engineering	160,000	500	167,000	4,000	165,000	2,000	180,000	3,000	163,000	9,500	156,000	2,000	116,000	3,500	150,000	2,000
Aerospace, aeronautical, and astronautical engineering	171,000	3,000	165,000	9,000	167,000	8,500	183,000	5,500	163,000	16,500	171,000	5,000	121,000	9,500	169,000	26,500
Chemical engineering	159,000	4,500	165,000	7,000	149,000	7,000	180,000	5,500	139,000	12,500	150,000	3,000	115,000	16,500	150,000	8,000
Civil engineering	130,000	2,000	135,000	7,500	130,000	8,000	149,000	6,000	128,000	9,500	121,000	7,000	107,000	7,500	122,000	11,500
Electrical and computer engineering	181,000	3,500	189,000	5,000	189,000	3,000	200,000	500	199,000	7,500	180,000	1,000	117,000	4,500	157,000	7,000
Mechanical engineering	150,000	3,000	149,000	2,500	157,000	8,500	166,000	7,000	184,000	19,000	146,000	4,500	117,000	8,000	144,000	12,000
Metallurgical and materials engineering	154,000	4,000	157,000	3,000	154,000	4,500	176,000	8,000	145,000	20,500	150,000	2,500	124,000	22,000	149,000	1,000
Other engineering	150,000	3,000	150,000	2,000	150,000	8,500	174,000	5,000	185,000	12,500	150,000	500	115,000	5,000	142,000	7,000
Health	125,000	2,500	119,000	5,500	148,000	9,500	145,000	4,500	134,000	7,500	128,000	4,000	99,000	1,000	121,000	7,000

SE = standard error.

^a Administration includes accounting, finance, contracts, and human resources.

^b R&D includes basic research, applied research, and experimental development.

^c Other work activities include production, operations, maintenance, and other activities not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 57-2

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by field of doctorate and primary work activity: 2023

(Dollars and SE)

Field of study	All full-time employed		Computer applications		Design		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	Median salary	SE
All fields	137,000	1,500	170,000	3,500	157,000	4,000	170,000	3,000	140,000	2,500	140,000	500	89,000	1,000	125,000	3,000
Science	130,000	500	165,000	4,500	156,000	6,000	160,000	500	135,000	4,000	135,000	1,000	85,000	500	120,000	2,000
Biological, agricultural, and environmental life sciences	129,000	2,000	134,000	6,500	137,000	6,500	155,000	3,000	198,000	9,000	126,000	2,500	84,000	1,500	120,000	2,000
Agricultural and food sciences	119,000	1,500	132,000	11,000	155,000	9,500	157,000	6,000	129,000	24,500	115,000	3,000	90,000	5,000	100,000	12,500
Biochemistry and biophysics	140,000	3,500	168,000	15,000	137,000	43,500	168,000	10,500	207,000	25,500	139,000	4,500	80,000	5,500	126,000	15,500
Cell, cellular biology, and molecular biology	134,000	5,500	146,000	24,500	160,000	10,500	158,000	4,000	197,000	19,500	128,000	5,500	85,000	4,500	127,000	11,000
Microbiological sciences and immunology	139,000	3,500	97,000	9,000	132,000	17,000	151,000	7,000	239,000	25,500	139,000	3,500	79,000	2,500	113,000	8,500
Natural resources and conservation	105,000	3,000	107,000	6,000	118,000	8,000	120,000	4,500	109,000	8,000	103,000	3,000	83,000	3,500	111,000	12,000
Zoology	98,000	3,000	D	D	D	D	109,000	8,500	90,000	44,500	102,000	5,500	83,000	2,500	98,000	5,500
Other biological sciences	130,000	3,000	130,000	7,500	132,000	7,000	158,000	4,500	198,000	12,500	126,000	2,500	84,000	2,000	119,000	2,000
Computer and information sciences	185,000	5,000	200,000	2,500	198,000	9,000	216,000	6,000	243,000	43,000	189,000	6,000	100,000	2,500	186,000	20,000
Mathematics and statistics	130,000	3,500	162,000	9,000	173,000	16,500	184,000	11,000	203,000	21,500	150,000	2,500	84,000	1,500	128,000	11,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	140,000	500	157,000	7,000	151,000	7,500	170,000	3,000	190,000	14,500	142,000	3,000	81,000	1,500	124,000	5,000
Astronomy and astrophysics	130,000	5,500	131,000	13,500	181,000	56,500	184,000	6,500	D	D	119,000	10,000	75,000	2,500	129,000	12,500
Chemistry, except biochemistry	135,000	3,000	149,000	5,500	144,000	14,000	167,000	4,000	184,000	18,000	140,000	1,500	78,000	1,500	124,000	7,500
Geosciences, atmospheric sciences, and ocean sciences	118,000	4,000	138,000	7,000	115,000	7,500	140,000	2,500	122,000	12,500	120,000	3,000	87,000	4,000	107,000	11,000
Physics	156,000	4,000	170,000	9,500	163,000	11,500	200,000	5,500	219,000	14,500	154,000	5,000	86,000	4,000	129,000	6,500
Psychology	117,000	2,500	138,000	17,000	149,000	16,500	140,000	4,000	120,000	1,000	123,000	4,000	84,000	1,500	102,000	5,000
Social sciences	116,000	2,000	148,000	9,500	149,000	16,500	150,000	3,000	147,000	8,000	135,000	3,500	88,000	1,500	108,000	4,500
Economics	160,000	4,500	162,000	16,000	152,000	37,000	204,000	10,500	198,000	19,500	164,000	7,500	106,000	4,000	165,000	17,500
Political science and government	116,000	4,000	155,000	65,500	148,000	27,000	153,000	6,500	128,000	38,500	123,000	6,500	88,000	3,000	125,000	13,000
Sociology, demography, and population studies	101,000	3,500	127,000	42,000	D	D	140,000	11,500	102,000	6,000	127,000	8,500	81,000	2,500	109,000	12,500
Other social sciences	100,000	2,500	114,000	8,500	137,000	43,500	120,000	4,500	113,000	7,000	109,000	2,500	83,000	2,500	93,000	6,500
Engineering	160,000	500	173,000	4,000	159,000	4,500	186,000	4,500	166,000	10,500	155,000	2,000	105,000	2,500	149,000	4,000
Aerospace, aeronautical, and astronautical engineering	171,000	3,000	182,000	10,000	155,000	10,500	180,000	4,000	D	D	166,000	10,000	124,000	19,000	195,000	71,500
Chemical engineering	159,000	4,500	164,000	11,000	153,000	10,000	189,000	8,500	137,000	13,000	149,000	5,000	97,000	6,000	146,000	10,500
Civil engineering	130,000	2,000	145,000	6,000	130,000	7,000	159,000	10,000	140,000	14,500	119,000	2,000	101,000	6,500	117,000	21,500
Electrical and computer engineering	181,000	3,500	186,000	7,500	180,000	6,500	205,000	12,000	196,000	10,000	181,000	4,000	109,000	3,500	162,000	19,000
Mechanical engineering	150,000	3,000	150,000	8,000	153,000	10,000	180,000	5,500	163,000	49,500	148,000	5,000	102,000	5,000	144,000	20,500
Metallurgical and materials engineering	154,000	4,000	160,000	13,000	150,000	5,000	190,000	7,500	144,000	16,000	148,000	1,500	82,000	13,000	149,000	1,500
Other engineering	150,000	3,000	158,000	6,500	150,000	10,500	182,000	4,500	189,000	17,000	150,000	4,000	105,000	5,500	147,000	7,000
Health	125,000	2,500	140,000	17,500	143,000	23,000	160,000	8,000	139,000	7,500	128,000	3,500	94,000	4,000	128,000	11,500

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

^a Administration includes accounting, finance, contracts, and human resources.

^b R&D includes basic research, applied research, and experimental development.

^c Other work activities include production, operations, maintenance, and other activities not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 58

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2023

(Dollars and SE)

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		
All locations	137,000	1,500	130,000	500	129,000	2,000	185,000	5,000	130,000	3,500	140,000	500	117,000	2,500	116,000	2,000	160,000	500	125,000	2,500
New England	149,000	2,500	145,000	3,000	150,000	1,500	174,000	9,500	148,000	11,000	149,000	2,000	123,000	7,500	119,000	8,500	160,000	4,000	145,000	11,500
Connecticut	133,000	5,000	131,000	4,000	129,000	8,000	124,000	26,500	162,000	11,500	137,000	10,000	116,000	21,000	129,000	2,500	142,000	10,500	127,000	14,500
Maine	94,000	4,000	90,000	4,000	95,000	20,500	D	D	81,000	8,500	90,000	10,000	88,000	11,500	81,000	6,000	192,000	83,000	D	D
Massachusetts	159,000	2,500	153,000	4,000	159,000	4,000	193,000	14,500	149,000	9,500	161,000	6,000	126,000	8,500	125,000	13,000	169,000	4,000	157,000	11,500
New Hampshire	108,000	11,000	104,000	12,000	94,000	9,000	D	D	D	D	109,000	28,000	125,000	26,500	87,000	5,000	132,000	10,500	96,000	10,500
Rhode Island	119,000	5,000	119,000	5,000	102,000	15,500	D	D	123,000	5,500	119,000	23,000	116,000	17,500	121,000	14,500	146,000	28,000	94,000	14,500
Vermont	114,000	5,500	113,000	7,500	107,000	6,500	D	D	D	D	86,000	26,000	151,000	20,000	125,000	31,500	138,000	42,500	S	S
Middle Atlantic	140,000	500	132,000	3,500	139,000	3,000	192,000	13,000	149,000	11,500	140,000	4,000	116,000	3,500	119,000	2,000	157,000	4,000	140,000	8,500
New Jersey	159,000	6,000	152,000	5,500	176,000	11,000	174,000	21,500	170,000	17,000	150,000	6,000	119,000	6,000	149,000	9,500	159,000	7,000	221,000	32,500
New York	140,000	1,000	134,000	4,500	129,000	6,000	210,000	8,000	169,000	14,500	145,000	7,500	120,000	3,000	123,000	5,000	165,000	7,500	134,000	8,000
Pennsylvania	126,000	3,500	120,000	1,500	131,000	5,500	140,000	17,500	113,000	10,500	129,000	6,500	108,000	5,500	104,000	4,500	149,000	6,000	114,000	8,000
East North Central	120,000	500	111,000	2,000	115,000	2,500	125,000	7,500	100,000	2,500	115,000	4,500	111,000	4,500	100,000	2,000	138,000	2,500	118,000	5,500
Illinois	130,000	2,000	121,000	5,000	125,000	7,500	136,000	11,500	119,000	41,000	125,000	8,500	110,000	7,500	119,000	7,500	145,000	7,500	132,000	10,000
Indiana	112,000	5,000	107,000	4,500	120,000	4,500	107,000	13,500	90,000	13,000	106,000	8,500	104,000	7,000	87,000	10,000	120,000	7,000	94,000	17,000
Michigan	120,000	3,000	109,000	3,000	108,000	7,000	106,000	19,000	100,000	8,500	118,000	5,500	113,000	8,000	94,000	4,500	144,000	6,500	119,000	7,000
Ohio	116,000	4,500	111,000	3,500	114,000	5,000	147,000	28,000	95,000	11,000	112,000	8,000	119,000	7,500	95,000	5,000	130,000	6,000	107,000	6,000
Wisconsin	100,000	3,500	96,000	4,500	95,000	7,000	157,000	18,000	89,000	12,000	99,000	7,000	100,000	7,500	91,000	7,500	123,000	11,000	110,000	11,500
West North Central	110,000	3,000	105,000	3,000	110,000	3,500	117,000	21,000	91,000	5,000	109,000	9,000	109,000	6,500	90,000	4,500	137,000	6,500	110,000	7,500
Iowa	99,000	1,500	98,000	4,000	119,000	11,000	S	S	83,000	15,500	94,000	2,500	91,000	6,500	83,000	5,000	100,000	11,000	93,000	10,000
Kansas	105,000	3,000	105,000	4,000	114,000	9,500	D	D	87,000	5,500	85,000	9,000	111,000	7,000	102,000	20,500	113,000	19,000	100,000	3,500
Minnesota	125,000	5,500	112,000	3,500	118,000	7,500	145,000	14,500	91,000	10,500	133,000	9,000	112,000	9,500	95,000	5,000	154,000	5,000	117,000	12,000
Missouri	111,000	4,500	110,000	3,000	115,000	8,000	112,000	16,000	103,000	8,500	118,000	16,000	101,000	7,500	90,000	13,000	126,000	24,000	118,000	9,000
Nebraska	100,000	7,500	89,000	6,000	84,000	9,000	D	D	83,000	18,000	84,000	18,500	95,000	9,500	84,000	9,000	119,000	4,500	100,000	14,500
North Dakota	92,000	4,000	92,000	5,500	86,000	8,000	D	D	D	D	86,000	7,500	129,000	10,000	96,000	11,000	94,000	6,000	D	D
South Dakota	89,000	14,000	86,000	17,500	83,000	12,500	D	D	D	D	70,000	10,500	131,000	22,500	82,000	28,000	85,000	13,000	147,000	39,000
South Atlantic	132,000	3,000	130,000	1,000	126,000	3,500	149,000	5,500	122,000	5,500	135,000	4,500	120,000	3,500	135,000	5,000	149,000	2,000	125,000	3,500
Delaware	140,000	7,000	141,000	9,000	154,000	16,000	D	D	170,000	25,500	151,000	12,000	102,000	6,500	105,000	2,500	140,000	12,000	125,000	16,000
District of Columbia	159,000	3,500	157,000	5,000	131,000	8,000	153,000	29,000	141,000	14,000	148,000	8,000	146,000	5,500	171,000	4,000	158,000	8,000	169,000	6,500
Florida	116,000	4,500	109,000	3,000	107,000	7,000	150,000	29,500	94,000	5,500	105,000	7,500	115,000	8,500	101,000	8,000	130,000	10,000	108,000	6,000
Georgia	119,000	1,000	115,000	4,000	116,000	5,500	118,000	35,000	97,000	13,500	116,000	8,500	119,000	7,000	102,000	7,500	141,000	6,000	127,000	8,500
Maryland	146,000	3,500	140,000	3,500	135,000	3,500	156,000	18,000	146,000	5,500	154,000	6,500	135,000	9,500	139,000	7,500	159,000	1,500	149,000	11,500
North Carolina	128,000	4,000	123,000	4,000	120,000	8,000	141,000	18,000	130,000	8,000	125,000	10,000	119,000	5,000	108,000	8,500	140,000	5,000	120,000	15,500
South Carolina	100,000	2,500	99,000	3,000	95,000	10,500	97,000	23,000	79,000	6,500	101,000	12,500	105,000	14,500	96,000	4,500	114,000	5,000	81,000	5,000

TABLE 58

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad field of doctorate: 2023

(Dollars and SE)

Employer location	All fields		Science														Engineering		Health	
	Median salary	SE	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				
Virginia	137,000	4,000	129,000	5,000	120,000	8,000	163,000	15,000	119,000	16,000	137,000	5,000	120,000	5,000	125,000	10,500	167,000	12,000	107,000	5,000
West Virginia	109,000	6,500	102,000	12,000	109,000	13,000	D	D	D	D	S	S	77,000	6,500	104,000	27,500	108,000	5,000	D	D
East South Central	103,000	2,500	100,000	2,500	99,000	4,000	116,000	20,500	79,000	3,500	102,000	6,000	100,000	2,500	87,000	3,000	135,000	9,500	104,000	7,000
Alabama	107,000	5,500	100,000	4,500	100,000	9,000	116,000	17,500	82,000	10,000	102,000	9,000	94,000	14,000	85,000	8,000	150,000	9,500	106,000	12,500
Kentucky	95,000	5,500	92,000	7,000	91,000	10,000	99,000	7,500	74,000	6,000	103,000	18,500	84,000	15,500	95,000	6,000	100,000	7,000	102,000	10,500
Mississippi	101,000	3,000	94,000	7,500	95,000	8,500	D	D	D	D	102,000	7,000	102,000	14,500	80,000	9,500	133,000	17,000	113,000	15,000
Tennessee	110,000	3,000	100,000	3,000	99,000	5,000	171,000	49,500	78,000	8,000	101,000	11,000	104,000	6,500	88,000	4,500	140,000	10,000	90,000	17,500
West South Central	121,000	4,000	112,000	4,000	110,000	4,000	156,000	11,000	108,000	5,000	131,000	7,500	110,000	5,000	98,000	2,000	150,000	4,000	108,000	9,500
Arkansas	100,000	2,500	100,000	3,500	112,000	12,000	D	D	D	D	76,000	15,500	106,000	21,500	97,000	9,000	126,000	17,000	104,000	7,000
Louisiana	90,000	3,500	90,000	3,000	93,000	9,000	168,000	61,500	70,000	7,000	91,000	5,000	89,000	7,000	80,000	6,000	113,000	8,000	73,000	7,000
Oklahoma	102,000	9,000	95,000	5,000	100,000	15,500	D	D	80,000	11,000	99,000	14,500	95,000	20,000	87,000	7,000	126,000	6,500	85,000	11,000
Texas	130,000	3,000	120,000	1,000	110,000	5,000	159,000	13,500	116,000	15,500	150,000	3,000	116,000	8,500	106,000	5,500	159,000	5,500	119,000	5,500
Mountain	123,000	3,000	116,000	3,500	110,000	1,500	154,000	10,500	116,000	4,500	130,000	2,500	109,000	4,000	101,000	4,000	149,000	3,000	118,000	11,000
Arizona	125,000	4,000	114,000	6,000	119,000	8,500	S	S	109,000	7,000	115,000	9,000	103,000	14,000	99,000	9,500	138,000	5,500	110,000	22,000
Colorado	120,000	4,000	117,000	5,500	108,000	7,500	174,000	19,500	114,000	10,500	130,000	3,500	104,000	5,000	99,000	9,500	149,000	5,500	102,000	19,500
Idaho	116,000	4,000	108,000	4,500	109,000	7,000	D	D	D	D	118,000	9,500	77,000	12,000	82,000	21,000	146,000	4,500	D	D
Montana	94,000	5,000	93,000	4,500	96,000	6,000	D	D	D	D	99,000	11,000	79,000	26,500	86,000	5,500	92,000	19,000	102,000	8,500
Nevada	116,000	6,000	112,000	5,500	116,000	7,000	D	D	110,000	15,000	95,000	19,000	91,000	29,500	118,000	16,000	146,000	34,500	96,000	47,500
New Mexico	152,000	5,500	139,000	5,000	117,000	7,500	145,000	19,500	150,000	9,500	172,000	9,000	115,000	15,000	100,000	10,500	170,000	5,000	168,000	54,000
Utah	120,000	1,000	119,000	1,500	118,000	5,000	150,000	11,500	111,000	19,000	122,000	5,500	119,000	8,000	107,000	3,500	128,000	9,000	116,000	9,500
Wyoming	108,000	11,000	107,000	12,000	87,000	12,500	D	D	D	D	107,000	13,000	D	D	D	D	S	S	D	D
Pacific	168,000	3,000	155,000	3,000	150,000	3,500	219,000	5,500	166,000	8,000	161,000	4,000	128,000	4,000	130,000	3,500	190,000	2,000	140,000	8,000
Alaska	103,000	6,000	102,000	8,000	105,000	14,000	D	D	D	D	125,000	21,000	88,000	10,500	63,000	30,500	D	D	D	D
California	175,000	2,500	165,000	3,000	155,000	4,500	220,000	8,500	169,000	11,500	170,000	1,500	131,000	5,000	139,000	7,000	200,000	2,500	150,000	2,500
Hawaii	120,000	14,000	108,000	15,000	84,000	13,500	D	D	S	S	132,000	7,500	104,000	19,000	89,000	15,500	121,000	19,000	D	D
Oregon	140,000	2,000	129,000	6,500	119,000	10,000	192,000	16,000	129,000	19,000	139,000	7,000	99,000	2,000	105,000	9,500	158,000	5,500	108,000	4,000
Washington	159,000	4,500	149,000	3,000	135,000	7,500	203,000	8,000	164,000	25,000	150,000	6,500	120,000	10,000	127,000	5,500	179,000	2,000	118,000	4,500
Puerto Rico	79,000	4,000	74,000	5,500	80,000	6,500	*	*	D	D	80,000	3,000	60,000	6,500	80,000	17,500	89,000	4,000	S	S
U.S. territories and other areas	118,000	13,500	104,000	8,500	102,000	17,000	D	D	92,000	31,000	111,000	36,000	110,000	49,500	85,000	14,500	147,000	21,500	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.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 59
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2023

(Dollars and SE)

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	105,000	1,000	145,000	1,500	102,000	1,500	94,000	1,500	72,000	2,000	90,000	6,500	79,000	2,000
Male	110,000	500	150,000	1,000	105,000	1,500	95,000	1,500	75,000	3,000	79,000	8,000	78,000	2,500
Female	99,000	1,500	135,000	3,000	100,000	500	91,000	1,500	71,000	1,500	100,000	14,000	80,000	2,500
Science	100,000	1,500	140,000	500	100,000	500	91,000	1,500	70,000	2,000	90,000	7,500	78,000	1,500
Male	109,000	2,000	145,000	2,500	102,000	2,000	93,000	2,000	70,000	2,500	80,000	9,500	77,000	2,500
Female	95,000	1,500	130,000	2,000	98,000	2,000	90,000	1,000	70,000	2,000	102,000	15,500	79,000	2,500
Biological, agricultural, and environmental life sciences	100,000	1,000	150,000	4,000	110,000	1,500	97,000	2,500	70,000	2,500	78,000	11,000	70,000	2,000
Male	110,000	1,000	155,000	6,000	114,000	4,000	100,000	1,000	70,000	4,500	73,000	8,500	70,000	2,500
Female	93,000	2,000	143,000	8,000	108,000	4,000	93,000	2,500	69,000	5,000	86,000	4,500	71,000	2,000
Agricultural and food sciences	103,000	3,500	130,000	5,500	102,000	7,000	84,000	5,500	83,000	8,500	D	D	75,000	6,500
Male	109,000	3,000	135,000	6,500	109,000	8,500	83,000	6,500	80,000	11,000	D	D	85,000	17,000
Female	92,000	3,000	119,000	7,500	98,000	2,500	87,000	8,000	100,000	6,000	D	D	71,000	5,500
Biochemistry and biophysics	109,000	6,000	168,000	9,500	108,000	8,500	92,000	5,500	58,000	3,500	D	D	75,000	4,500
Male	119,000	7,500	166,000	13,500	115,000	12,000	99,000	15,000	59,000	3,500	D	D	75,000	5,500
Female	91,000	3,000	169,000	15,000	99,000	8,000	88,000	2,000	S	S	D	D	76,000	10,500
Cell, cellular biology, and molecular biology	100,000	5,000	170,000	15,500	113,000	8,000	107,000	6,500	84,000	17,500	D	D	75,000	6,500
Male	109,000	4,500	176,000	13,500	118,000	10,000	106,000	8,500	D	D	D	D	79,000	10,500
Female	96,000	5,500	149,000	20,500	108,000	12,500	107,000	15,000	75,000	27,500	D	D	75,000	4,000
Microbiological sciences and immunology	100,000	3,500	164,000	13,000	127,000	8,500	96,000	4,500	75,000	12,000	D	D	74,000	3,000
Male	116,000	7,000	175,000	11,000	146,000	16,500	99,000	6,000	D	D	D	D	74,000	2,000
Female	89,000	4,000	138,000	16,000	108,000	9,500	90,000	7,500	72,000	7,500	D	D	70,000	5,000
Natural resources and conservation	90,000	3,000	122,000	5,500	92,000	4,000	83,000	4,000	68,000	4,000	D	D	69,000	5,500
Male	90,000	5,500	121,000	11,000	88,000	7,000	82,000	6,000	69,000	4,000	D	D	78,000	9,000
Female	89,000	3,500	124,000	11,000	93,000	7,500	84,000	5,500	60,000	12,500	D	D	66,000	5,000
Zoology	92,000	4,000	110,000	6,000	90,000	6,500	83,000	9,000	D	D	D	D	65,000	2,500
Male	99,000	4,500	112,000	18,000	94,000	7,000	73,000	5,000	D	D	D	D	59,000	10,000
Female	84,000	2,000	108,000	6,000	84,000	2,500	87,000	6,000	D	D	D	D	65,000	500
Other biological sciences	100,000	2,500	156,000	6,500	113,000	6,000	101,000	3,000	69,000	1,000	89,000	7,000	69,000	1,000
Male	110,000	2,000	159,000	9,500	114,000	6,000	106,000	4,500	70,000	3,500	D	D	68,000	1,500
Female	94,000	2,000	147,000	9,000	110,000	8,000	95,000	3,500	67,000	5,500	D	D	70,000	1,500
Computer and information sciences	119,000	2,500	163,000	7,500	112,000	3,500	104,000	1,500	87,000	14,500	D	D	94,000	9,500
Male	121,000	3,000	166,000	8,500	114,000	4,000	104,000	2,000	98,000	7,500	D	D	97,000	11,500
Female	107,000	6,000	155,000	18,000	107,000	7,500	100,000	7,000	77,000	4,000	D	D	78,000	24,500
Mathematics and statistics	99,000	1,000	121,000	6,500	94,000	4,500	87,000	2,500	64,000	4,000	D	D	69,000	6,000
Male	100,000	2,000	127,000	4,500	99,000	5,000	87,000	2,500	61,000	2,000	D	D	70,000	6,500

TABLE 59
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2023

(Dollars and SE)

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
Female	90,000	2,000	110,000	4,500	89,000	4,000	87,000	7,500	78,000	7,000	D	D	65,000	12,000
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	100,000	1,500	134,000	6,000	92,000	3,000	84,000	3,000	70,000	3,500	103,000	8,000	80,000	2,500
Male	102,000	3,500	139,000	5,000	92,000	4,000	85,000	3,500	75,000	6,500	D	D	80,000	3,500
Female	90,000	1,500	125,000	6,000	91,000	5,000	81,000	4,000	67,000	3,500	D	D	76,000	5,500
Astronomy and astrophysics	100,000	4,000	133,000	11,500	84,000	8,000	92,000	6,500	D	D	D	D	88,000	5,000
Male	100,000	6,500	138,000	17,000	83,000	8,000	80,000	14,000	D	D	D	D	89,000	11,000
Female	97,000	5,000	120,000	9,500	87,000	16,000	99,000	6,000	D	D	D	D	79,000	6,500
Chemistry, except biochemistry	89,000	2,000	121,000	5,000	81,000	2,500	77,000	2,500	70,000	3,500	D	D	73,000	4,000
Male	95,000	3,500	127,000	4,500	82,000	2,500	75,000	4,000	72,000	9,500	D	D	73,000	4,500
Female	83,000	2,500	100,000	12,500	80,000	4,000	78,000	3,500	70,000	5,000	D	D	72,000	9,500
Geosciences, atmospheric sciences, and ocean sciences	100,000	2,000	134,000	5,000	100,000	2,000	82,000	3,000	68,000	3,500	105,000	16,500	84,000	5,500
Male	102,000	3,500	132,000	8,500	100,000	2,500	83,000	4,000	77,000	10,500	S	S	88,000	7,000
Female	91,000	2,500	135,000	3,000	98,000	3,500	81,000	3,500	67,000	4,500	S	S	79,000	5,000
Physics	115,000	6,500	150,000	6,000	100,000	8,500	99,000	3,000	73,000	10,500	D	D	80,000	8,000
Male	116,000	6,500	150,000	5,500	99,000	3,500	99,000	3,500	75,000	8,500	D	D	82,000	9,000
Female	110,000	12,500	160,000	23,500	110,000	18,500	85,000	12,500	D	D	D	D	75,000	9,500
Psychology	100,000	1,500	132,000	3,500	94,000	3,500	88,000	3,500	70,000	3,000	S	S	90,000	3,000
Male	105,000	3,000	135,000	3,500	99,000	2,000	84,000	6,000	73,000	11,000	D	D	84,000	4,000
Female	100,000	1,000	127,000	6,000	90,000	2,000	90,000	4,500	69,000	2,500	D	D	91,000	4,500
Social sciences	102,000	2,000	139,000	3,000	100,000	1,500	85,000	1,500	69,000	3,000	D	D	90,000	3,500
Male	110,000	1,500	144,000	6,500	101,000	2,500	88,000	4,000	64,000	3,500	S	S	94,000	5,500
Female	98,000	2,000	126,000	5,000	97,000	2,500	83,000	2,000	73,000	4,000	D	D	85,000	4,500
Economics	130,000	4,000	168,000	13,000	123,000	4,000	116,000	4,000	91,000	18,500	D	D	99,000	22,500
Male	139,000	6,000	180,000	18,500	124,000	4,000	115,000	4,000	S	S	D	D	101,000	29,000
Female	118,000	4,500	130,000	15,500	115,000	10,500	117,000	6,500	105,000	24,500	D	D	90,000	21,000
Political science and government	101,000	4,000	140,000	11,000	94,000	6,500	81,000	4,000	83,000	14,500	D	D	93,000	7,000
Male	105,000	3,500	143,000	11,500	94,000	9,000	80,000	7,000	71,000	12,500	D	D	95,000	10,000
Female	100,000	3,500	139,000	19,500	90,000	7,500	81,000	3,500	D	D	D	D	89,000	7,500
Sociology, demography, and population studies	98,000	2,500	133,000	9,500	90,000	4,500	80,000	3,000	61,000	14,500	D	D	90,000	7,000
Male	96,000	3,000	143,000	19,500	86,000	6,500	79,000	6,000	S	S	D	D	88,000	10,500
Female	98,000	2,500	119,000	11,500	94,000	5,000	82,000	4,000	68,000	12,000	D	D	89,000	15,000
Other social sciences	93,000	2,000	123,000	3,000	93,000	3,500	75,000	3,000	64,000	1,500	D	D	86,000	4,500
Male	95,000	2,500	121,000	4,000	91,000	4,500	74,000	3,500	60,000	4,000	D	D	91,000	8,000
Female	90,000	2,500	124,000	6,000	94,000	4,000	76,000	3,000	69,000	3,000	D	D	84,000	3,000
Engineering	120,000	500	160,000	4,500	113,000	4,000	100,000	1,500	87,000	5,000	D	D	84,000	3,500

TABLE 59
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and faculty rank: 2023

(Dollars and SE)

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
Male	120,000	500	159,000	5,500	111,000	4,000	100,000	2,000	86,000	6,500	D	D	85,000	3,000
Female	114,000	5,500	163,000	5,500	119,000	4,000	100,000	2,500	87,000	9,500	D	D	80,000	7,000
Aerospace, aeronautical, and astronautical engineering	126,000	8,500	195,000	17,500	120,000	9,000	96,000	2,500	D	D	D	D	113,000	26,000
Male	122,000	7,000	197,000	15,500	119,000	17,000	95,000	2,500	D	D	D	D	98,000	16,500
Female	145,000	6,500	D	D	127,000	22,500	117,000	22,500	D	D	D	D	155,000	6,500
Chemical engineering	110,000	6,000	154,000	8,000	101,000	6,500	106,000	4,000	D	D	D	D	64,000	2,500
Male	110,000	9,500	152,000	12,500	102,000	6,500	103,000	3,000	D	D	D	D	63,000	3,500
Female	107,000	8,000	156,000	24,500	D	D	108,000	7,500	D	D	D	D	70,000	16,500
Civil engineering	115,000	5,000	160,000	7,500	106,000	8,000	95,000	3,000	110,000	35,000	D	D	78,000	11,500
Male	115,000	4,500	163,000	14,500	109,000	9,000	94,000	4,500	S	S	D	D	76,000	11,500
Female	110,000	7,500	158,000	6,500	100,000	7,000	95,000	2,500	D	D	D	D	82,000	9,000
Electrical and computer engineering	125,000	4,000	160,000	13,500	108,000	5,500	102,000	6,000	92,000	7,000	D	D	100,000	18,000
Male	120,000	5,000	150,000	16,000	108,000	5,500	100,000	5,500	D	D	D	D	100,000	12,500
Female	132,000	9,000	172,000	12,000	114,000	14,500	108,000	13,000	D	D	D	D	133,000	44,000
Mechanical engineering	119,000	1,000	151,000	13,500	112,000	7,500	100,000	3,000	94,000	9,000	D	D	93,000	10,500
Male	120,000	1,500	155,000	16,000	108,000	5,500	102,000	5,000	D	D	D	D	96,000	12,500
Female	111,000	9,000	130,000	12,500	140,000	9,000	99,000	1,000	D	D	D	D	71,000	5,000
Metallurgical and materials engineering	97,000	12,000	179,000	8,500	114,000	4,500	96,000	8,000	S	S	D	D	74,000	11,000
Male	94,000	18,500	176,000	13,500	115,000	8,000	92,000	12,000	D	D	D	D	66,000	10,000
Female	97,000	18,000	204,000	19,000	D	D	D	D	D	D	D	D	92,000	7,000
Other engineering	120,000	1,500	160,000	3,000	123,000	7,000	107,000	4,000	79,000	4,500	D	D	80,000	5,500
Male	120,000	4,000	155,000	6,500	122,000	8,500	109,000	3,500	79,000	6,500	D	D	85,000	11,500
Female	106,000	4,000	165,000	7,000	122,000	8,000	100,000	6,000	79,000	20,000	D	D	71,000	2,000
Health	107,000	2,500	155,000	9,000	104,000	3,500	92,000	4,000	76,000	20,000	D	D	82,000	11,500
Male	109,000	5,000	166,000	11,500	100,000	3,500	86,000	7,500	95,000	28,500	D	D	65,000	3,500
Female	105,000	2,500	145,000	6,000	105,000	4,500	94,000	3,500	74,000	8,000	D	D	94,000	7,000

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 salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 60

Median annual salary 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: 2023

(Dollars and SE)

Field of study and sex	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	
	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	82,000	1,000	120,000	1,000	104,000	10,500	145,000	2,000	95,000	3,000	104,000	1,500	92,000	1,000	96,000	1,500	68,000	1,500	77,000	3,500	90,000	4,500	93,000	23,000	68,000	1,000	100,000	3,000
Male	81,000	1,500	121,000	2,000	106,000	12,000	150,000	1,000	100,000	2,000	105,000	2,000	94,000	1,500	98,000	2,000	65,000	2,000	84,000	4,500	85,000	12,000	72,000	8,000	67,000	2,000	109,000	3,500
Female	82,000	1,500	110,000	1,000	95,000	15,000	135,000	3,000	90,000	2,500	100,000	1,500	90,000	1,500	94,000	2,500	70,000	2,000	73,000	3,000	90,000	2,000	117,000	6,500	69,000	1,000	96,000	2,500
Science	79,000	1,500	115,000	1,000	96,000	10,500	140,000	500	90,000	3,500	101,000	1,500	90,000	500	95,000	2,500	65,000	2,000	75,000	2,500	90,000	2,500	97,000	26,500	68,000	1,000	100,000	2,500
Male	80,000	2,000	120,000	500	96,000	23,500	145,000	2,500	98,000	6,500	104,000	2,000	92,000	2,500	96,000	2,500	64,000	2,000	80,000	5,500	85,000	9,500	69,000	14,500	68,000	2,000	105,000	5,000
Female	78,000	1,500	105,000	1,500	96,000	14,000	130,000	2,000	87,000	2,500	100,000	1,000	88,000	2,500	91,000	3,000	69,000	2,000	72,000	3,500	D	D	115,000	7,000	68,000	1,500	95,000	2,500
Biological, agricultural, and environmental life sciences	73,000	1,500	118,000	3,000	D	D	150,000	4,000	100,000	5,500	110,000	3,000	94,000	2,000	100,000	2,000	71,000	3,000	70,000	3,000	84,000	4,000	71,000	16,500	65,000	500	91,000	3,000
Male	75,000	2,000	123,000	4,000	S	S	155,000	6,000	101,000	10,500	114,000	4,000	94,000	4,000	104,000	4,500	69,000	5,500	71,000	9,500	D	D	S	S	65,000	1,000	93,000	4,500
Female	72,000	2,000	107,000	3,500	D	D	144,000	8,000	97,000	6,500	110,000	4,000	92,000	3,000	94,000	4,000	72,000	5,000	65,000	7,500	D	D	D	D	65,000	1,000	88,000	2,500
Computer and information sciences	103,000	3,500	134,000	8,000	S	S	163,000	7,500	113,000	4,000	111,000	5,500	104,000	2,500	98,000	5,500	79,000	17,000	89,000	15,500	D	D	D	D	76,000	6,500	130,000	27,500
Male	104,000	4,500	139,000	6,500	D	D	166,000	8,500	115,000	5,000	112,000	7,500	104,000	2,500	103,000	9,000	D	D	103,000	15,000	D	D	D	D	75,000	10,000	143,000	22,000
Female	100,000	4,000	112,000	10,000	D	D	156,000	14,500	98,000	6,000	109,000	9,000	105,000	7,500	S	S	D	D	D	D	D	D	D	D	79,000	5,000	S	S
Mathematics and statistics	78,000	3,000	105,000	2,500	D	D	121,000	6,500	89,000	6,500	95,000	4,500	89,000	2,000	81,000	7,500	60,000	2,000	75,000	4,500	D	D	D	D	65,000	3,500	91,000	10,500
Male	79,000	4,000	109,000	3,500	D	D	127,000	4,500	90,000	9,000	99,000	4,000	88,000	2,000	81,000	7,500	55,000	4,500	74,000	5,000	D	D	D	D	66,000	5,000	89,000	36,500
Female	78,000	4,500	96,000	3,500	D	D	110,000	4,500	75,000	17,000	89,000	4,000	87,000	7,500	82,000	15,500	78,000	15,000	77,000	7,000	D	D	D	D	62,000	9,500	93,000	14,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	72,000	1,500	115,000	3,000	D	D	134,000	5,500	81,000	2,500	94,000	4,000	83,000	3,500	86,000	5,000	63,000	4,000	83,000	8,000	D	D	105,000	39,500	66,000	2,000	114,000	7,000
Male	70,000	2,500	119,000	3,000	D	D	139,000	5,000	82,000	3,000	95,000	5,000	85,000	3,500	86,000	7,000	63,000	3,500	84,000	10,000	D	D	D	D	65,000	2,000	120,000	8,500
Female	73,000	2,500	102,000	3,000	D	D	125,000	6,000	78,000	4,500	93,000	6,000	80,000	3,500	85,000	8,500	61,000	9,000	70,000	3,000	D	D	S	S	68,000	2,500	99,000	4,000
Psychology	82,000	3,000	110,000	1,000	73,000	9,500	132,000	3,500	80,000	4,500	98,000	3,000	89,000	3,500	84,000	5,500	69,000	5,500	70,000	5,500	D	D	D	D	77,000	3,500	105,000	4,500
Male	79,000	3,000	116,000	3,500	D	D	136,000	3,500	77,000	6,000	100,000	3,000	86,000	6,000	79,000	9,500	73,000	11,500	S	S	D	D	D	D	76,000	4,500	91,000	11,000
Female	84,000	2,500	107,000	3,000	D	D	129,000	6,000	82,000	5,000	91,000	4,500	90,000	4,500	88,000	11,000	68,000	4,500	69,000	5,000	D	D	D	D	79,000	5,000	107,000	4,500
Social sciences	85,000	2,000	113,000	3,000	100,000	10,000	139,000	2,500	89,000	2,500	100,000	1,500	85,000	1,500	81,000	5,000	64,000	3,000	78,000	4,000	D	D	D	D	78,000	4,000	105,000	7,500
Male	85,000	1,500	120,000	500	D	D	145,000	6,000	90,000	7,500	104,000	3,500	90,000	3,500	83,000	6,000	61,000	6,000	74,000	7,000	D	D	D	D	73,000	5,000	109,000	10,500
Female	82,000	1,500	105,000	2,500	D	D	126,000	5,000	87,000	2,500	100,000	2,000	83,000	2,000	80,000	7,000	67,000	2,500	81,000	6,000	D	D	D	D	80,000	4,000	99,000	5,500
Engineering	93,000	2,000	135,000	3,500	110,000	11,500	160,000	4,500	109,000	9,000	114,000	4,000	100,000	1,500	103,000	5,000	80,000	6,500	89,000	4,000	D	D	D	D	68,000	2,500	119,000	2,500
Male	93,000	2,000	135,000	4,000	S	S	159,000	5,500	109,000	10,500	111,000	4,000	100,000	2,000	100,000	4,500	80,000	7,500	89,000	7,500	D	D	D	D	67,000	2,500	120,000	10,500
Female	94,000	2,000	138,000	6,500	D	D	164,000	6,000	109,000	16,500	120,000	5,000	100,000	1,000	107,000	6,500	82,000	11,500	88,000	13,500	D	D	D	D	70,000	3,000	100,000	8,500
Health	87,000	2,500	124,000	4,500	116,000	35,500	159,000	10,000	95,000	7,500	106,000	6,500	90,000	2,500	101,000	4,000	72,000	7,000	98,000	10,000	D	D	D	D	69,000	3,000	108,000	10,500
Male	80,000	2,500	136,000	7,500	D	D	169,000	11,500	88,000	6,000	102,000	9,500	83,000	4,500	112,000	17,000	56,000	8,000	S	S	D	D	D	D	62,000	3,000	98,000	25,500
Female	91,000	3,000	120,000	2,500	S	S	147,000	6,000	98,000	7,500	109,000	9,000	92,000	3,500	99,000	5,500	76,000	31,500	S	S	D	D	D	D	74,000	8,500	109,000	11,000

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 salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 61

Median annual salary 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: 2023

(Dollars and SE)

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	105,000	1,000	145,000	1,500	102,000	1,500	94,000	1,500	72,000	2,000	90,000	6,500	79,000	2,000
Hispanic or Latino ^a	97,000	2,500	130,000	7,000	100,000	2,500	91,000	2,500	72,000	4,500	D	D	72,000	2,500
Not Hispanic or Latino ^b														
American Indian or Alaska Native	96,000	4,000	173,000	39,500	96,000	3,500	81,000	9,000	D	D	D	D	66,000	16,000
Asian	104,000	3,000	148,000	3,000	110,000	1,500	100,000	500	73,000	3,500	D	D	70,000	1,000
Black or African American	100,000	1,500	148,000	6,000	97,000	4,000	89,000	2,000	63,000	4,500	D	D	85,000	7,000
White	106,000	1,500	145,000	2,500	100,000	1,500	91,000	1,500	73,000	2,500	85,000	15,000	85,000	500
Other race ^c	98,000	3,000	150,000	13,000	100,000	4,500	89,000	3,000	74,000	11,500	D	D	80,000	4,500
Science	100,000	1,500	140,000	500	100,000	500	91,000	1,500	70,000	2,000	90,000	7,500	78,000	1,500
Hispanic or Latino ^a	95,000	2,500	131,000	7,000	100,000	1,000	90,000	2,000	71,000	5,000	D	D	70,000	2,000
Not Hispanic or Latino ^b														
American Indian or Alaska Native	85,000	8,000	111,000	32,000	95,000	2,000	75,000	8,500	D	D	D	D	D	D
Asian	100,000	2,000	145,000	5,000	110,000	2,500	100,000	1,000	72,000	4,000	D	D	70,000	1,000
Black or African American	99,000	2,500	145,000	9,000	96,000	5,500	85,000	3,500	64,000	5,500	D	D	80,000	7,000
White	103,000	1,500	140,000	1,500	100,000	500	90,000	1,500	70,000	2,000	90,000	16,000	84,000	2,000
Other race ^c	97,000	3,500	149,000	12,000	100,000	5,500	88,000	2,500	69,000	6,500	D	D	79,000	4,500
Biological, agricultural, and environmental life sciences	100,000	1,000	150,000	4,000	110,000	1,500	97,000	2,500	70,000	2,500	78,000	11,000	70,000	2,000
Hispanic or Latino ^a	89,000	2,500	122,000	9,500	100,000	5,500	93,000	3,000	79,000	4,500	D	D	65,000	3,500
Not Hispanic or Latino ^b														
American Indian or Alaska Native	85,000	12,500	D	D	S	S	D	D	D	D	D	D	D	D
Asian	100,000	5,000	154,000	7,500	121,000	3,500	105,000	7,000	69,000	5,000	D	D	68,000	1,500
Black or African American	93,000	7,500	145,000	16,000	121,000	15,000	90,000	8,000	70,000	6,500	D	D	64,000	2,000
White	103,000	2,000	150,000	5,000	109,000	4,000	95,000	2,500	70,000	3,000	76,000	12,500	75,000	1,500
Other race ^c	89,000	4,000	155,000	30,000	97,000	19,500	98,000	7,000	65,000	5,000	D	D	69,000	3,500
Computer and information sciences	119,000	2,500	163,000	7,500	112,000	3,500	104,000	1,500	87,000	14,500	D	D	94,000	9,500
Hispanic or Latino ^a	102,000	15,500	180,000	33,500	99,000	25,500	95,000	17,000	D	D	D	D	63,000	11,500
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	112,000	5,000	150,000	19,500	107,000	7,000	104,000	5,500	S	S	D	D	92,000	18,500
Black or African American	128,000	29,500	S	S	108,000	29,000	101,000	4,000	D	D	D	D	D	D
White	122,000	3,500	162,000	5,500	118,000	6,500	104,000	3,000	84,000	10,500	D	D	98,000	20,500
Other race ^c	S	S	S	S	D	D	S	S	D	D	D	D	D	D
Mathematics and statistics	99,000	1,000	121,000	6,500	94,000	4,500	87,000	2,500	64,000	4,000	D	D	69,000	6,000

TABLE 61

Median annual salary 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: 2023

(Dollars and SE)

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
Hispanic or Latino ^a	98,000	4,000	126,000	9,000	99,000	7,000	90,000	5,000	D	D	D	D	80,000	10,500
Not Hispanic or Latino ^b											D	D		
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Asian	99,000	500	111,000	6,500	96,000	6,000	99,000	6,500	64,000	4,500	D	D	73,000	11,500
Black or African American	88,000	6,500	98,000	11,500	86,000	7,500	77,000	7,500	D	D	D	D	D	D
White	99,000	2,000	127,000	3,500	92,000	4,000	82,000	6,500	68,000	7,000	D	D	63,000	6,000
Other race ^c	74,000	10,000	*	*	D	D	70,000	7,500	D	D	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	100,000	1,500	134,000	6,000	92,000	3,000	84,000	3,000	70,000	3,500	103,000	8,000	80,000	2,500
Hispanic or Latino ^a	82,000	4,000	110,000	9,000	90,000	7,500	77,000	2,000	69,000	7,500	D	D	65,000	4,500
Not Hispanic or Latino ^b														
American Indian or Alaska Native	*	*	D	D	D	D	D	D	D	D	D	D	D	D
Asian	92,000	4,000	149,000	8,000	108,000	12,500	87,000	5,500	71,000	17,500	D	D	69,000	2,000
Black or African American	82,000	9,000	109,000	8,500	79,000	9,500	69,000	4,000	D	D	D	D	69,000	4,500
White	101,000	2,500	130,000	4,000	90,000	3,500	84,000	3,000	70,000	3,000	99,000	15,500	94,000	4,000
Other race ^c	99,000	6,500	133,000	3,500	94,000	12,000	96,000	9,500	D	D	D	D	82,000	14,000
Psychology	100,000	1,500	132,000	3,500	94,000	3,500	88,000	3,500	70,000	3,000	S	S	90,000	3,000
Hispanic or Latino ^a	99,000	5,000	119,000	10,500	104,000	4,000	94,000	6,500	S	S	D	D	87,000	7,000
Not Hispanic or Latino ^b														
American Indian or Alaska Native	82,000	17,000	D	D	D	D	D	D	D	D	D	D	D	D
Asian	97,000	6,500	112,000	34,500	85,000	4,000	91,000	10,000	D	D	D	D	77,000	8,500
Black or African American	106,000	5,500	147,000	7,500	95,000	15,000	82,000	8,000	S	S	D	D	109,000	9,500
White	100,000	2,500	131,000	3,000	94,000	4,000	87,000	4,000	75,000	4,000	D	D	89,000	3,000
Other race ^c	95,000	8,000	135,000	27,000	85,000	12,500	85,000	19,000	D	D	D	D	79,000	11,500
Social sciences	102,000	2,000	139,000	3,000	100,000	1,500	85,000	1,500	69,000	3,000	D	D	90,000	3,500
Hispanic or Latino ^a	103,000	4,000	145,000	10,000	100,000	2,500	85,000	6,000	65,000	14,000	D	D	70,000	8,500
Not Hispanic or Latino ^b														
American Indian or Alaska Native	85,000	15,000	D	D	D	D	71,000	3,500	D	D	D	D	D	D
Asian	107,000	3,500	130,000	10,500	105,000	5,500	95,000	9,500	85,000	2,000	D	D	84,000	12,000
Black or African American	100,000	2,000	142,000	25,500	90,000	9,500	84,000	5,000	68,000	17,500	D	D	83,000	14,000
White	101,000	2,000	138,000	4,500	98,000	3,000	80,000	2,500	65,000	3,500	D	D	91,000	4,000
Other race ^c	99,000	10,500	124,000	22,500	110,000	4,500	86,000	3,000	D	D	D	D	96,000	5,000
Engineering	120,000	500	160,000	4,500	113,000	4,000	100,000	1,500	87,000	5,000	D	D	84,000	3,500
Hispanic or Latino ^a	109,000	2,500	118,000	11,000	111,000	6,000	101,000	6,000	S	S	D	D	83,000	15,000

TABLE 61

Median annual salary 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: 2023

(Dollars and SE)

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
Not Hispanic or Latino ^b														
American Indian or Alaska Native	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Asian	110,000	3,000	149,000	2,000	110,000	4,500	100,000	2,000	68,000	4,000	D	D	70,000	2,500
Black or African American	111,000	7,500	200,000	30,000	112,000	10,000	104,000	4,500	D	D	D	D	94,000	10,500
White	127,000	4,000	170,000	6,000	114,000	4,500	103,000	3,500	97,000	7,000	D	D	100,000	14,500
Other race ^c	120,000	10,000	D	D	123,000	20,500	122,000	12,000	D	D	D	D	92,000	9,500
Health	107,000	2,500	155,000	9,000	104,000	3,500	92,000	4,000	76,000	20,000	D	D	82,000	11,500
Hispanic or Latino ^a	106,000	5,000	138,000	16,000	100,000	14,000	100,000	7,000	S	S	D	D	102,000	30,500
Not Hispanic or Latino ^b														
American Indian or Alaska Native	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Asian	107,000	8,000	176,000	20,500	117,000	11,500	99,000	4,000	D	D	D	D	64,000	5,500
Black or African American	98,000	4,000	128,000	32,000	94,000	7,500	100,000	6,500	D	D	D	D	96,000	12,500
White	108,000	3,000	150,000	8,000	103,000	3,500	89,000	2,500	75,000	12,000	D	D	91,000	6,500
Other race ^c	86,000	12,500	S	S	70,000	7,500	89,000	10,000	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.

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 62
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2023
(Dollars and SE)

Field of study and sex	All full-time employed		Tenured		Not tenured				Tenure not applicable	
	Median salary	SE	Median salary	SE	On tenure track		Not on tenure track		Median salary	SE
					Median salary	SE	Median salary	SE		
All fields	105,000	1,000	121,000	2,000	98,000	1,000	90,000	500	85,000	1,000
Male	110,000	500	128,000	3,000	99,000	500	92,000	2,000	85,000	1,500
Female	99,000	1,500	113,000	3,000	95,000	1,500	90,000	1,500	83,000	1,500
Science	100,000	1,500	120,000	500	96,000	1,500	87,000	2,000	82,000	2,000
Male	109,000	2,000	125,000	2,500	99,000	1,500	87,000	3,000	83,000	3,000
Female	95,000	1,500	110,000	500	92,000	2,000	86,000	2,000	81,000	2,000
Biological, agricultural, and environmental life sciences	100,000	1,000	130,000	2,500	108,000	2,500	88,000	2,500	75,000	1,000
Male	110,000	1,000	137,000	5,500	110,000	3,500	91,000	4,000	75,000	2,000
Female	93,000	2,000	120,000	1,500	103,000	5,000	85,000	2,500	75,000	2,000
Agricultural and food sciences	103,000	3,500	120,000	5,500	82,000	6,000	89,000	5,500	74,000	3,500
Male	109,000	3,000	129,000	7,500	80,000	10,000	91,000	5,500	78,000	6,000
Female	92,000	3,000	110,000	3,500	82,000	6,500	83,000	4,000	71,000	3,000
Biochemistry and biophysics	109,000	6,000	149,000	10,000	122,000	17,000	80,000	4,000	75,000	7,000
Male	119,000	7,500	151,000	12,500	146,000	10,500	79,000	5,500	75,000	12,000
Female	91,000	3,000	123,000	22,500	105,000	10,000	83,000	5,000	75,000	10,500
Cell, cellular biology, and molecular biology	100,000	5,000	130,000	9,000	109,000	8,000	99,000	9,500	85,000	4,000
Male	109,000	4,500	136,000	14,500	110,000	8,500	98,000	13,000	85,000	4,000
Female	96,000	5,500	125,000	11,000	100,000	19,000	98,000	9,500	80,000	8,500
Microbiological sciences and immunology	100,000	3,500	142,000	9,500	109,000	7,500	87,000	5,000	76,000	3,500
Male	116,000	7,000	160,000	12,500	111,000	11,000	101,000	11,500	79,000	5,000
Female	89,000	4,000	119,000	7,000	100,000	13,000	84,000	5,000	72,000	6,000
Natural resources and conservation	90,000	3,000	110,000	4,500	85,000	4,500	82,000	4,500	74,000	6,000
Male	90,000	5,500	114,000	6,500	83,000	5,500	75,000	7,000	79,000	8,000
Female	89,000	3,500	107,000	5,000	88,000	8,000	88,000	5,500	68,000	6,000
Zoology	92,000	4,000	104,000	4,500	88,000	5,500	83,000	1,500	65,000	2,500
Male	99,000	4,500	106,000	6,000	88,000	17,500	80,000	5,500	74,000	14,000
Female	84,000	2,000	99,000	6,000	88,000	8,000	83,000	3,000	65,000	1,000
Other biological sciences	100,000	2,500	130,000	5,500	112,000	3,000	89,000	2,000	73,000	2,500
Male	110,000	2,000	138,000	7,500	117,000	4,000	100,000	7,500	72,000	3,000
Female	94,000	2,000	125,000	6,500	109,000	3,500	85,000	4,500	75,000	3,000
Computer and information sciences	119,000	2,500	145,000	10,000	105,000	3,000	100,000	6,500	100,000	6,000
Male	121,000	3,000	149,000	9,000	105,000	4,000	105,000	15,000	100,000	7,500
Female	107,000	6,000	116,000	17,000	104,000	7,000	100,000	5,500	100,000	16,500
Mathematics and statistics	99,000	1,000	109,000	3,000	91,000	3,500	78,000	3,000	73,000	4,000

TABLE 62
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2023

(Dollars and SE)

Field of study and sex	All full-time employed		Tenured		Not tenured				Tenure not applicable	
	Median salary	SE	Median salary	SE	On tenure track		Not on tenure track		Median salary	SE
					Median salary	SE	Median salary	SE		
Male	100,000	2,000	114,000	5,000	90,000	5,000	76,000	2,500	73,000	4,500
Female	90,000	2,000	98,000	3,500	91,000	6,000	80,000	10,000	72,000	6,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	100,000	1,500	119,000	3,500	90,000	2,000	84,000	5,000	80,000	3,000
Male	102,000	3,500	120,000	2,000	90,000	3,500	84,000	4,000	85,000	3,500
Female	90,000	1,500	109,000	5,500	89,000	3,500	75,000	5,500	74,000	3,500
Astronomy and astrophysics	100,000	4,000	125,000	6,000	96,000	6,000	93,000	6,500	75,000	6,000
Male	100,000	6,500	125,000	8,500	91,000	12,000	93,000	8,500	79,000	12,500
Female	97,000	5,000	123,000	10,000	100,000	10,500	91,000	7,000	73,000	4,000
Chemistry, except biochemistry	89,000	2,000	110,000	9,500	83,000	6,000	73,000	2,500	76,000	4,000
Male	95,000	3,500	115,000	4,500	80,000	8,500	76,000	3,000	79,000	5,000
Female	83,000	2,500	90,000	3,000	85,000	10,500	70,000	2,000	69,000	6,000
Geosciences, atmospheric sciences, and ocean sciences	100,000	2,000	120,000	4,000	85,000	3,000	85,000	7,500	86,000	4,000
Male	102,000	3,500	119,000	3,000	85,000	5,000	87,000	11,000	90,000	3,500
Female	91,000	2,500	116,000	7,000	85,000	3,500	77,000	9,500	80,000	4,000
Physics	115,000	6,500	132,000	8,500	102,000	8,000	95,000	10,500	84,000	7,500
Male	116,000	6,500	137,000	9,500	105,000	11,500	90,000	8,000	86,000	9,500
Female	110,000	12,500	129,000	3,500	97,000	9,000	136,000	37,000	70,000	7,000
Psychology	100,000	1,500	109,000	1,000	83,000	3,000	97,000	6,000	96,000	3,000
Male	105,000	3,000	118,000	5,000	81,000	4,500	81,000	18,500	94,000	4,000
Female	100,000	1,000	103,000	4,000	84,000	5,500	98,000	4,500	97,000	3,500
Social sciences	102,000	2,000	117,000	3,500	90,000	2,000	79,000	1,500	87,000	4,000
Male	110,000	1,500	121,000	4,500	93,000	4,000	79,000	4,000	90,000	5,500
Female	98,000	2,000	109,000	2,000	85,000	2,000	79,000	2,000	84,000	2,000
Economics	130,000	4,000	148,000	8,000	128,000	7,500	99,000	10,500	99,000	8,000
Male	139,000	6,000	156,000	12,500	128,000	9,500	109,000	11,500	103,000	11,000
Female	118,000	4,500	125,000	10,500	128,000	13,000	92,000	9,000	83,000	4,000
Political science and government	101,000	4,000	113,000	5,000	85,000	3,000	74,000	3,000	94,000	5,500
Male	105,000	3,500	112,000	7,500	88,000	4,000	74,000	3,500	98,000	11,000
Female	100,000	3,500	113,000	7,500	81,000	3,000	76,000	5,000	92,000	6,000
Sociology, demography, and population studies	98,000	2,500	104,000	6,000	80,000	3,500	92,000	6,000	84,000	6,500
Male	96,000	3,000	105,000	6,500	80,000	4,500	102,000	11,000	71,000	15,500
Female	98,000	2,500	101,000	6,500	84,000	6,000	81,000	9,000	89,000	12,000
Other social sciences	93,000	2,000	107,000	3,000	79,000	1,500	70,000	2,000	82,000	3,500
Male	95,000	2,500	109,000	2,500	79,000	1,500	66,000	4,000	81,000	8,000

TABLE 62
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers in 4-year educational institutions, by field of doctorate, sex, and tenure status: 2023

(Dollars and SE)

Field of study and sex	All full-time employed		Tenured		Not tenured				Tenure not applicable	
	Median salary	SE	Median salary	SE	On tenure track		Not on tenure track		Median salary	SE
					Median salary	SE	Median salary	SE		
Female	90,000	2,500	104,000	4,000	79,000	2,500	71,000	3,000	82,000	4,000
Engineering	120,000	500	143,000	4,500	103,000	2,500	99,000	2,500	92,000	4,000
Male	120,000	500	141,000	4,000	103,000	2,500	99,000	2,500	94,000	6,500
Female	114,000	5,500	150,000	3,000	102,000	4,000	105,000	9,000	84,000	4,000
Aerospace, aeronautical, and astronautical engineering	126,000	8,500	160,000	26,000	96,000	2,500	91,000	14,500	136,000	22,500
Male	122,000	7,000	176,000	30,000	95,000	2,500	88,000	17,500	112,000	23,500
Female	145,000	6,500	141,000	12,000	106,000	6,000	*	*	151,000	6,500
Chemical engineering	110,000	6,000	149,000	10,000	105,000	3,500	104,000	8,500	66,000	10,500
Male	110,000	9,500	141,000	15,000	104,000	3,500	D	D	65,000	10,000
Female	107,000	8,000	155,000	11,000	104,000	3,500	S	S	72,000	17,000
Civil engineering	115,000	5,000	127,000	9,500	95,000	2,000	86,000	10,000	95,000	8,000
Male	115,000	4,500	120,000	8,500	94,000	3,000	85,000	11,500	100,000	19,000
Female	110,000	7,500	145,000	7,500	95,000	1,500	87,000	21,500	87,000	10,000
Electrical and computer engineering	125,000	4,000	142,000	5,000	107,000	5,000	106,000	13,000	101,000	3,000
Male	120,000	5,000	140,000	4,500	106,000	5,000	100,000	14,500	100,000	3,500
Female	132,000	9,000	168,000	13,500	104,000	9,000	111,000	12,500	114,000	32,000
Mechanical engineering	119,000	1,000	134,000	5,500	100,000	2,000	101,000	16,000	94,000	6,000
Male	120,000	1,500	132,000	5,000	101,000	4,500	109,000	24,500	95,000	6,500
Female	111,000	9,000	140,000	5,000	99,000	1,000	88,000	18,500	90,000	24,000
Metallurgical and materials engineering	97,000	12,000	166,000	16,000	101,000	10,500	79,000	6,000	74,000	10,000
Male	94,000	18,500	165,000	15,000	99,000	9,500	79,000	6,500	66,000	10,500
Female	97,000	18,000	155,000	56,000	D	D	D	D	88,000	7,000
Other engineering	120,000	1,500	147,000	6,500	112,000	3,500	105,000	9,000	85,000	8,000
Male	120,000	4,000	147,000	6,000	113,000	3,000	103,000	7,500	101,000	11,500
Female	106,000	4,000	142,000	14,500	109,000	6,000	112,000	23,500	72,000	5,500
Health	107,000	2,500	120,000	3,000	89,000	1,500	104,000	4,500	102,000	4,000
Male	109,000	5,000	130,000	11,500	80,000	3,000	109,000	11,500	96,000	8,000
Female	105,000	2,500	118,000	4,000	91,000	3,000	103,000	4,000	104,000	5,000

* = 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 salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 63
Median annual salary 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: 2023
 (Dollars and SE)

Field of study and sex	All full-time employed				Tenured				Not tenured								Tenure not applicable			
	< 10		≥ 10		< 10		≥ 10		On tenure track				Not on tenure track				< 10		≥ 10	
	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	82,000	1,000	120,000	1,000	93,000	3,000	125,000	1,000	95,000	1,000	104,000	2,500	80,000	1,000	100,000	500	69,000	1,000	106,000
Male	81,000	1,500	121,000	2,000	99,000	4,000	130,000	500	97,000	2,000	104,000	4,000	78,000	2,500	102,000	4,000	68,000	1,500	113,000	4,000
Female	82,000	1,500	110,000	1,000	87,000	3,000	117,000	3,000	91,000	2,000	104,000	3,000	83,000	2,000	95,000	4,000	70,000	1,000	100,000	1,000
Science	79,000	1,500	115,000	1,000	90,000	2,500	120,000	1,500	92,000	1,500	104,000	3,500	76,000	2,000	96,000	3,000	68,000	1,000	102,000	3,500
Male	80,000	2,000	120,000	500	93,000	6,500	126,000	2,500	95,000	2,500	105,000	5,000	75,000	1,500	100,000	2,000	68,000	1,500	110,000	3,000
Female	78,000	1,500	105,000	1,500	87,000	2,500	111,000	3,500	89,000	2,500	103,000	4,000	79,000	2,500	90,000	2,500	69,000	1,000	98,000	3,500
Biological, agricultural, and environmental life sciences	73,000	1,500	118,000	3,000	99,000	4,500	130,000	3,500	98,000	4,000	115,000	4,500	79,000	2,500	98,000	5,000	65,000	500	96,000	4,000
Male	75,000	2,000	123,000	4,000	100,000	8,000	138,000	4,000	100,000	5,500	120,000	4,000	79,000	2,000	104,000	5,500	65,000	1,500	104,000	7,000
Female	72,000	2,000	107,000	3,500	97,000	15,500	120,000	3,500	95,000	4,000	110,000	4,000	76,000	4,500	89,000	2,500	65,000	500	92,000	3,000
Computer and information sciences	103,000	3,500	134,000	8,000	113,000	5,000	149,000	7,500	105,000	3,000	105,000	11,000	95,000	7,000	101,000	14,000	84,000	8,500	115,000	9,500
Male	104,000	4,500	139,000	6,500	113,000	14,500	149,000	6,000	104,000	2,500	112,000	13,500	95,000	15,500	113,000	12,000	77,000	10,500	117,000	13,500
Female	100,000	4,000	112,000	10,000	98,000	10,000	126,000	20,000	108,000	9,500	S	S	100,000	13,500	100,000	17,000	84,000	6,000	112,000	34,500
Mathematics and statistics	78,000	3,000	105,000	2,500	87,000	12,500	110,000	2,500	90,000	3,000	97,000	9,000	69,000	4,000	87,000	7,500	64,000	2,000	85,000	9,000
Male	79,000	4,000	109,000	3,500	83,000	12,500	114,000	4,000	90,000	3,500	93,000	9,000	68,000	3,500	80,000	10,500	64,000	3,000	87,000	12,000
Female	78,000	4,500	96,000	3,500	79,000	24,000	98,000	3,500	90,000	8,000	D	D	71,000	11,000	94,000	13,000	64,000	7,500	82,000	14,500
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	72,000	1,500	115,000	3,000	82,000	2,000	120,000	2,000	88,000	2,500	92,000	4,500	72,000	3,500	94,000	6,500	65,000	1,500	115,000	5,500
Male	70,000	2,500	119,000	3,000	82,000	3,500	120,000	4,000	90,000	4,500	91,000	6,000	74,000	6,000	95,000	8,000	63,000	2,000	125,000	7,500
Female	73,000	2,500	102,000	3,000	85,000	11,000	109,000	5,500	85,000	5,000	101,000	3,500	70,000	3,000	89,000	9,500	66,000	2,500	98,000	3,500
Psychology	82,000	3,000	110,000	1,000	76,000	6,000	111,000	3,500	80,000	5,000	90,000	11,500	85,000	3,500	100,000	5,000	80,000	4,000	109,000	2,500
Male	79,000	3,000	116,000	3,500	78,000	10,500	120,000	3,500	80,000	6,000	81,000	9,000	72,000	5,000	104,000	21,500	80,000	6,000	115,000	8,000
Female	84,000	2,500	107,000	3,000	74,000	6,500	108,000	4,000	79,000	6,500	103,000	20,500	91,000	7,000	100,000	3,000	79,000	4,500	109,000	2,500
Social sciences	85,000	2,000	113,000	3,000	89,000	2,500	120,000	500	89,000	3,000	92,000	4,000	70,000	3,500	87,000	4,000	74,000	3,500	99,000	2,500
Male	85,000	1,500	120,000	500	89,000	6,000	125,000	2,500	93,000	3,500	90,000	12,000	68,000	5,500	94,000	8,000	72,000	4,000	100,000	4,000
Female	82,000	1,500	105,000	2,500	89,000	3,000	111,000	3,500	85,000	1,500	92,000	9,000	72,000	3,000	82,000	3,500	78,000	5,500	96,000	5,000
Engineering	93,000	2,000	135,000	3,500	107,000	9,500	148,000	5,000	103,000	3,000	104,000	5,000	90,000	3,500	119,000	7,500	70,000	3,500	119,000	2,500
Male	93,000	2,000	135,000	4,000	110,000	11,000	144,000	5,000	104,000	2,500	102,000	5,500	89,000	4,500	119,000	11,500	68,000	3,500	120,000	4,000
Female	94,000	2,000	138,000	6,500	95,000	4,000	154,000	6,000	100,000	3,000	107,000	3,000	91,000	6,500	116,000	8,500	73,000	3,500	104,000	12,500
Health	87,000	2,500	124,000	4,500	86,000	7,000	129,000	5,000	85,000	2,000	106,000	3,000	97,000	4,500	124,000	7,500	82,000	8,000	123,000	9,500
Male	80,000	2,500	136,000	7,500	81,000	7,000	145,000	11,500	78,000	3,000	109,000	18,000	95,000	9,500	119,000	17,500	63,000	5,000	139,000	17,500
Female	91,000	3,000	120,000	2,500	87,000	11,500	120,000	5,500	89,000	1,500	105,000	4,000	97,000	5,500	125,000	6,500	94,000	11,500	121,000	8,000

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 salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 64

Median annual salary 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: 2023

(Dollars and SE)

Field of study, ethnicity, and race	All full-time employed		Tenured		Not tenured				Tenure not applicable	
	Median salary	SE	Median salary	SE	On tenure track		Not on tenure track		Median salary	SE
					Median salary	SE	Median salary	SE		
All fields	105,000	1,000	121,000	2,000	98,000	1,000	90,000	500	85,000	1,000
Hispanic or Latino ^a	97,000	2,500	114,000	3,500	96,000	5,000	87,000	4,000	74,000	3,000
Not Hispanic or Latino ^b										
American Indian or Alaska Native	96,000	4,000	127,000	44,000	90,000	8,000	83,000	18,500	58,000	6,000
Asian	104,000	3,000	127,000	3,500	104,000	4,000	91,000	4,000	73,000	2,000
Black or African American	100,000	1,500	114,000	4,000	90,000	5,000	84,000	5,500	93,000	5,500
White	106,000	1,500	121,000	2,000	95,000	2,000	90,000	1,500	90,000	1,500
Other race ^c	98,000	3,000	119,000	5,500	91,000	7,000	92,000	5,500	81,000	3,500
Science	100,000	1,500	120,000	500	96,000	1,500	87,000	2,000	82,000	2,000
Hispanic or Latino ^a	95,000	2,500	111,000	4,000	91,000	4,000	83,000	4,000	71,000	2,000
Not Hispanic or Latino ^b										
American Indian or Alaska Native	85,000	8,000	96,000	6,500	85,000	9,000	D	D	56,000	2,500
Asian	100,000	2,000	120,000	4,000	107,000	3,500	90,000	4,000	72,000	2,500
Black or African American	99,000	2,500	114,000	4,500	89,000	3,500	76,000	7,500	88,000	5,000
White	103,000	1,500	120,000	500	92,000	1,000	87,000	2,000	86,000	2,000
Other race ^c	97,000	3,500	117,000	6,000	91,000	6,000	89,000	4,500	80,000	3,500
Biological, agricultural, and environmental life sciences	100,000	1,000	130,000	2,500	108,000	2,500	88,000	2,500	75,000	1,000
Hispanic or Latino ^a	89,000	2,500	112,000	6,000	101,000	7,500	85,000	4,000	65,000	3,500
Not Hispanic or Latino ^b										
American Indian or Alaska Native	85,000	12,500	D	D	S	S	D	D	S	S
Asian	100,000	5,000	140,000	7,000	114,000	5,000	100,000	9,000	70,000	2,000
Black or African American	93,000	7,500	130,000	7,500	110,000	11,000	76,000	8,500	75,000	6,000
White	103,000	2,000	130,000	3,000	102,000	4,000	87,000	2,500	80,000	2,500
Other race ^c	89,000	4,000	104,000	15,500	110,000	20,000	99,000	8,000	68,000	2,500
Computer and information sciences	119,000	2,500	145,000	10,000	105,000	3,000	100,000	6,500	100,000	6,000
Hispanic or Latino ^a	102,000	15,500	134,000	45,000	107,000	16,000	88,000	24,500	71,000	9,000
Not Hispanic or Latino ^b										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	112,000	5,000	122,000	13,000	104,000	5,500	98,000	10,000	97,000	5,000
Black or African American	128,000	29,500	147,000	10,500	98,000	3,000	D	D	D	D
White	122,000	3,500	146,000	8,000	105,000	6,000	109,000	12,000	101,000	12,500
Other race ^c	S	S	S	S	D	D	D	D	D	D

TABLE 64

Median annual salary 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: 2023

(Dollars and SE)

Field of study, ethnicity, and race	All full-time employed		Tenured		Not tenured				Tenure not applicable	
	Median salary	SE	Median salary	SE	On tenure track		Not on tenure track		Median salary	SE
					Median salary	SE	Median salary	SE		
Mathematics and statistics	99,000	1,000	109,000	3,000	91,000	3,500	78,000	3,000	73,000	4,000
Hispanic or Latino ^a	98,000	4,000	114,000	9,500	102,000	18,500	75,000	5,500	76,000	10,000
Not Hispanic or Latino ^b										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	99,000	500	100,000	10,500	107,000	8,500	96,000	5,500	65,000	4,500
Black or African American	88,000	6,500	89,000	5,500	74,000	8,500	60,000	4,500	90,000	20,000
White	99,000	2,000	113,000	4,000	87,000	3,000	77,000	3,500	74,000	5,500
Other race ^c	74,000	10,000	S	S	73,000	11,000	D	D	D	D
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	100,000	1,500	119,000	3,500	90,000	2,000	84,000	5,000	80,000	3,000
Hispanic or Latino ^a	82,000	4,000	99,000	7,500	78,000	8,500	77,000	10,500	67,000	4,500
Not Hispanic or Latino ^b										
American Indian or Alaska Native	*	*	D	D	D	D	D	D	D	D
Asian	92,000	4,000	129,000	11,500	97,000	6,500	83,000	4,000	69,000	1,500
Black or African American	82,000	9,000	94,000	8,500	75,000	17,000	64,000	4,500	65,000	5,500
White	101,000	2,500	119,000	3,000	89,000	3,000	87,000	6,500	91,000	4,000
Other race ^c	99,000	6,500	110,000	11,000	98,000	4,000	71,000	6,000	82,000	14,500
Psychology	100,000	1,500	109,000	1,000	83,000	3,000	97,000	6,000	96,000	3,000
Hispanic or Latino ^a	99,000	5,000	104,000	5,000	91,000	7,000	97,000	12,500	93,000	7,500
Not Hispanic or Latino ^b										
American Indian or Alaska Native	82,000	17,000	D	D	D	D	D	D	D	D
Asian	97,000	6,500	105,000	6,500	91,000	5,500	69,000	15,000	83,000	8,000
Black or African American	106,000	5,500	130,000	13,500	80,000	6,000	98,000	10,000	105,000	7,500
White	100,000	2,500	110,000	1,500	82,000	3,000	98,000	5,500	97,000	4,000
Other race ^c	95,000	8,000	107,000	15,000	85,000	7,500	S	S	89,000	13,500
Social sciences	102,000	2,000	117,000	3,500	90,000	2,000	79,000	1,500	87,000	4,000
Hispanic or Latino ^a	103,000	4,000	118,000	9,500	88,000	7,000	67,000	3,500	76,000	13,000
Not Hispanic or Latino ^b										
American Indian or Alaska Native	85,000	15,000	94,000	7,000	D	D	D	D	D	D
Asian	107,000	3,500	117,000	4,500	102,000	7,000	85,000	6,000	89,000	7,000
Black or African American	100,000	2,000	113,000	7,500	87,000	6,500	73,000	4,000	90,000	5,000
White	101,000	2,000	117,000	4,500	86,000	3,500	79,000	2,500	85,000	5,000
Other race ^c	99,000	10,500	116,000	5,000	86,000	5,500	84,000	6,500	94,000	8,500

TABLE 64

Median annual salary 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: 2023

(Dollars and SE)

Field of study, ethnicity, and race	All full-time employed		Tenured		Not tenured				Tenure not applicable	
	Median salary	SE	Median salary	SE	On tenure track		Not on tenure track		Median salary	SE
					Median salary	SE	Median salary	SE		
Engineering	120,000	500	143,000	4,500	103,000	2,500	99,000	2,500	92,000	4,000
Hispanic or Latino ^a	109,000	2,500	119,000	5,000	108,000	3,000	92,000	6,500	90,000	13,500
Not Hispanic or Latino ^b										
American Indian or Alaska Native	S	S	D	D	D	D	D	D	D	D
Asian	110,000	3,000	136,000	6,000	100,000	1,000	93,000	9,000	74,000	3,500
Black or African American	111,000	7,500	122,000	28,500	107,000	5,500	79,000	12,500	96,000	10,500
White	127,000	4,000	150,000	5,500	104,000	2,500	109,000	6,500	114,000	10,000
Other race ^c	120,000	10,000	160,000	29,000	126,000	13,500	101,000	11,000	93,000	13,500
Health	107,000	2,500	120,000	3,000	89,000	1,500	104,000	4,500	102,000	4,000
Hispanic or Latino ^a	106,000	5,000	117,000	25,500	102,000	5,500	113,000	12,500	103,000	13,000
Not Hispanic or Latino ^b										
American Indian or Alaska Native	S	S	D	D	D	D	D	D	D	D
Asian	107,000	8,000	130,000	7,500	99,000	4,500	100,000	4,000	74,000	8,000
Black or African American	98,000	4,000	96,000	11,000	90,000	8,000	105,000	11,500	99,000	9,000
White	108,000	3,000	120,000	5,000	85,000	3,000	104,000	6,500	106,000	4,000
Other race ^c	86,000	12,500	S	S	82,000	9,000	S	S	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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.**Note(s):**

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 65

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2023

(Dollars and SE)

Occupation	All full-time employed						Hispanic or Latino ^a						Not Hispanic or Latino ^b																															
	Total		Male		Female		Total		Male		Female		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	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	137,000	1,500	150,000	1,000	120,000	500	120,000	2,500	130,000	2,500	109,000	2,500	110,000	11,500	119,000	13,000	100,000	6,000	150,000	500	152,000	3,000	135,000	3,000	120,000	1,000	124,000	2,000	115,000	4,000	134,000	1,500	147,000	2,000	117,000	1,500	125,000	3,500	135,000	5,500	115,000	5,000		
Science occupations	125,000	1,500	135,000	1,000	112,000	2,000	112,000	3,500	123,000	4,000	102,000	3,000	95,000	7,000	97,000	20,000	88,000	6,500	140,000	1,000	150,000	3,500	128,000	2,500	110,000	3,000	116,000	5,000	105,000	4,000	121,000	2,000	130,000	2,500	108,000	1,500	119,000	3,500	121,000	8,000	111,000	8,500		
Biological, agricultural, and other life scientists	120,000	500	123,000	2,500	113,000	3,000	106,000	4,500	114,000	6,500	99,000	2,500	85,000	17,000	S	S	86,000	20,500	123,000	3,500	125,000	3,500	120,000	500	118,000	5,500	120,000	5,500	109,000	7,500	120,000	1,000	123,000	2,500	110,000	1,000	120,000	7,000	120,000	8,500	120,000	9,500		
Agricultural, food scientists	124,000	2,500	130,000	5,500	117,000	4,500	123,000	7,500	135,000	11,500	110,000	7,500	D	D	D	D	D	D	118,000	5,000	123,000	5,500	114,000	7,500	100,000	7,500	100,000	14,000	94,000	11,500	130,000	5,500	139,000	5,500	120,000	4,500	123,000	5,500	S	S	122,000	11,500		
Biochemists, biophysicists	122,000	4,500	128,000	4,500	115,000	5,500	128,000	9,500	130,000	9,000	98,000	17,500	D	D	D	D	D	D	116,000	6,500	116,000	7,000	106,000	15,000	83,000	24,000	96,000	31,500	79,000	24,000	129,000	2,500	131,000	7,000	117,000	6,000	150,000	17,500	148,000	26,500	158,000	13,000		
Biological scientists	116,000	3,500	120,000	1,500	109,000	2,500	97,000	9,000	101,000	11,000	96,000	12,500	S	S	D	D	D	D	120,000	2,500	118,000	5,500	120,000	2,000	119,000	9,000	139,000	25,000	107,000	8,500	115,000	4,000	120,000	1,500	114,000	5,000	112,000	10,500	112,000	20,000				
Forestry, conservation scientists	104,000	6,500	121,000	12,000	85,000	5,500	88,000	18,500	100,000	22,500	71,000	3,500	D	D	D	D	D	D	97,000	20,000	S	S	D	D	D	D	*	*	D	D	109,000	6,000	129,000	8,500	87,000	5,000	S	S	D	D	S	S		
Medical scientists	143,000	3,500	149,000	4,000	138,000	3,000	125,000	9,000	130,000	15,000	120,000	9,000	D	D	D	D	D	D	138,000	4,500	140,000	3,000	130,000	8,500	135,000	11,500	172,000	32,000	124,000	6,500	149,000	2,500	150,000	5,000	144,000	5,000	137,000	11,000	142,000	18,500	133,000	12,000		
Postsecondary teachers, agricultural, other natural sciences	110,000	2,500	115,000	4,500	103,000	5,500	99,000	5,000	100,000	6,000	92,000	5,500	D	D	D	D	D	D	109,000	4,500	107,000	5,000	109,000	2,500	91,000	18,500	88,000	23,500	98,000	22,500	110,000	4,000	115,000	4,000	100,000	6,000	D	D	D	D	D	D		
Postsecondary teachers, biological sciences	95,000	1,500	100,000	2,000	87,000	2,500	85,000	2,500	90,000	5,500	80,000	2,500	D	D	D	D	D	D	117,000	5,000	120,000	6,500	112,000	11,000	86,000	6,500	89,000	4,500	79,000	13,000	90,000	1,500	98,000	3,500	85,000	1,500	95,000	7,500	89,000	20,000	101,000	13,500		
Other biological, agricultural, life scientists	129,000	4,000	132,000	6,000	124,000	2,500	104,000	8,500	109,000	12,000	98,000	10,500	D	D	D	D	D	D	129,000	3,500	129,000	10,500	128,000	4,500	138,000	9,500	130,000	11,500	139,000	15,500	129,000	2,500	137,000	7,500	122,000	4,000	119,000	7,000	134,000	15,500	101,000	7,500		
Computer and information scientists	176,000	3,000	180,000	500	159,000	5,500	155,000	8,500	171,000	9,000	135,000	3,500	S	S	D	D	D	D	184,000	6,000	189,000	4,000	166,000	9,500	159,000	13,000	167,000	17,000	148,000	11,500	171,000	3,000	175,000	2,000	150,000	5,500	176,000	18,500	180,000	25,000	166,000	26,500		
Computer and information scientists	185,000	2,500	164,000	1,500	170,000	4,000	164,000	10,000	179,000	7,000	136,000	1,500	S	S	D	D	D	D	194,000	7,500	198,000	2,500	179,000	6,000	177,000	12,000	153,000	10,000	179,000	1,000	182,000	3,500	168,000	6,500	172,000	11,500	171,000	10,500	177,000	26,000				
Postsecondary teachers, computer science	112,000	3,000	115,000	3,500	105,000	6,000	108,000	9,000	115,000	12,500	91,000	13,500	D	D	D	D	D	D	111,000	3,500	114,000	4,000	101,000	6,000	125,000	22,500	103,000	11,000	147,000	23,500	110,000	3,500	113,000	6,500	102,000	6,500	S	S	S	S	*	*		
Mathematical scientists	136,000	2,500	139,000	2,000	130,000	2,500	124,000	9,500	125,000	9,500	110,000	19,000	D	D	D	D	D	D	150,000	3,000	150,000	7,000	149,000	3,000	114,000	8,500	116,000	11,500	111,000	10,500	129,000	2,000	135,000	4,000	118,000	4,000	121,000	17,000	122,000	24,500	112,000	22,000		
Mathematical scientists	160,000	2,500	169,000	4,500	150,000	1,500	149,000	5,500	150,000	7,000	138,000	19,500	D	D	D	D	D	D	169,000	5,000	169,000	5,000	167,000	9,000	137,000	7,000	146,000	8,500	128,000	7,500	160,000	3,500	170,000	5,500	140,000	6,500	139,000	10,000	140,000	35,000	136,000	2,500		
Postsecondary teachers, mathematics, statistics	95,000	2,000	99,000	1,000	89,000	3,000	99,000	8,000	99,000	4,500	80,000	3,000	D	D	D	D	D	D	99,000	2,500	99,000	500	95,000	4,000	83,000	6,000	80,000	2,000	98,000	8,500	95,000	3,500	99,000	2,500	85,000	6,000	69,000	12,500	S	S	S	S	69,000	7,500
Physical scientists	120,000	500	125,000	3,000	102,000	3,000	112,000	6,000	120,000	8,000	94,000	5,000	129,000	10,000	122,000	12,500	D	D	120,000	1,500	125,000	6,000	109,000	2,000	102,000	5,000	98,000	7,500	106,000	6,500	120,000	1,000	130,000	2,500	100,000	1,000	110,000	7,500	109,000	11,500	110,000	8,500		
Chemists, except biochemists	130,000	2,000	137,000	4,000	120,000	4,500	128,000	4,000	130,000	14,000	123,000	3,500	D	D	D	D	D	D	128,000	2,500	129,000	5,000	115,000	7,500	117,000	6,000	118,000	13,500	115,000	10,000	137,000	3,500	143,000	3,500	119,000	5,500	111,000	15,000	100,000	29,000	D	D		
Earth, atmospheric, ocean scientists	125,000	4,500	132,000	4,500	110,000	3,000	112,000	8,000	117,000	12,000	107,000	12,500	D	D	D	D	D	D	110,000	8,000	115,000	16,000	108,000	6,500	114,000	9,000	113,000	9,000	112,000	22,000	130,000	3,000	139,000	6,000	108,000	4,500	102,000	11,500	106,000	14,000	90,000	9,500		
Physicists, astronomers	150,000	3,500	156,000	5,500	129,000	5,000	143,000	4,000	143,000	4,000	135,000	33,500	D	D	D	D	D	D	126,000	9,500	126,000	15,000	117,000	34,000	S	S	139,000	19,500	S	S	160,000	3,500	162,000	4,500	139,000	3,000	122,000	22,500	85,000	40,000	D	D		
Postsecondary teachers, chemistry	84,000	2,000	90,000	4,000	79,000	2,500	78,000	2,500	80,000	9,000	76,000	2,500	D	D	D	D	D	D	85,000	6,500	81,000	11,000	85,000	9,000	72,000	5,500	70,000	5,000	79,000	14,500	85,000	3,000	94,000	3,000	78,000	3,000	95,000	10,000	80,000	15,500	99,000	3,500		
Postsecondary teachers, physics	100,000	5,000	100,000	3,500	106,000	6,500	87,000	8,000	85,000	12,500	76,000	15,000	D	D	D	D	D	D	111,000	12,000	106,000	8,500	159,000	16,500	80,000	10,500	82,000	10,000	D	D	99,000	3,500	99,000	4,000	103,000	6,500	98,000	17,500	S	S	D	D		
Postsecondary teachers, other physical science	98,000	2,500	100,000	1,500	91,000	3,000	76,000	5,500	70,000	11,500	79,000	4,500	D	D	D	D	D	D	97,000	7,500	95,000	9,000	103,000	8,500	95,000	26,000	99,000	29,000	68,000	9,500	100,000	2,000	100,000	3,500	91,000	3,000	97,000	17,500	85,000	11,500	110,000	12,000		
Other physical scientists	148,000	4,500	150,000	5,500	143,000	8,500	134,000	6,000	133,000	7,000	131,000	9,500	D	D	D	D	D	D	148,00																									

TABLE 65
Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2023
 (Dollars and SE)

Occupation	All full-time employed						Hispanic or Latino ^a						Not Hispanic or Latino ^b																															
	Total		Male		Female		Total		Male		Female		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	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								
Postsecondary teachers, sociology	89,000	2,500	89,000	5,500	89,000	3,500	100,000	5,000	103,000	19,000	100,000	5,500	D	D	D	D	D	D	97,000	13,500	83,000	8,500	102,000	6,000	91,000	8,000	99,000	5,000	85,000	7,500	85,000	3,000	88,000	6,500	83,000	3,500	86,000	8,000	D	D	86,000	9,000		
Postsecondary teachers, other social sciences	92,000	2,000	92,000	3,000	92,000	2,500	85,000	3,500	84,000	4,000	87,000	6,500	91,000	8,500	D	D	D	D	81,000	7,500	93,000	9,000	100,000	11,000	90,000	5,500	96,000	4,000	95,000	5,500	97,000	7,000	92,000	2,500	91,000	3,500	93,000	2,500	84,000	8,500	87,000	28,500	83,000	7,000
Sociologists, anthropologists	110,000	7,500	97,000	12,000	120,000	12,000	123,000	4,500	111,000	14,000	130,000	13,500	D	D	D	D	D	D	119,000	16,000	S	S	120,000	15,000	121,000	17,500	D	D	130,000	26,000	102,000	5,500	92,000	7,000	107,000	8,000	162,000	16,500	D	D	D	D		
Other social scientists	125,000	4,000	130,000	5,000	119,000	5,000	116,000	6,000	139,000	23,000	114,000	8,000	D	D	D	D	D	D	141,000	15,000	145,000	31,000	139,000	14,500	128,000	14,000	148,000	32,000	99,000	16,500	125,000	4,500	129,000	5,000	118,000	6,000	128,000	20,500	S	S	148,000	20,000		
Engineering occupations	150,000	500	153,000	2,500	140,000	2,000	130,000	3,500	128,000	5,500	130,000	4,500	176,000	7,500	178,000	6,000	D	D	150,000	500	151,000	3,000	140,000	4,000	130,000	7,000	137,000	8,500	129,000	2,000	153,000	2,500	157,000	2,500	139,000	2,500	147,000	16,000	157,000	13,000	134,000	5,500		
Aerospace, aeronautical, astronautical engineers	170,000	2,500	141,000	3,000	140,000	11,500	141,000	6,000	140,000	9,000	D	D	D	D	D	D	D	D	169,000	6,500	169,000	10,000	166,000	19,000	141,000	10,500	*	*	175,000	5,000	177,000	5,000	156,000	14,500	161,000	21,500	164,000	14,000	*	*				
Chemical engineers	149,000	3,500	150,000	4,500	140,000	7,000	147,000	16,500	153,000	14,500	120,000	12,500	D	D	D	D	D	D	145,000	3,500	146,000	3,500	138,000	9,500	146,000	20,000	146,000	18,500	D	D	155,000	5,500	155,000	6,500	144,000	17,000	D	D	D	D				
Civil, architectural, sanitary engineers	128,000	4,000	130,000	5,000	114,000	6,500	106,000	10,000	109,000	10,500	101,000	17,000	D	D	D	D	D	D	115,000	6,000	117,000	6,500	109,000	5,000	103,000	25,000	107,000	25,000	S	S	144,000	7,000	149,000	3,000	120,000	7,000	S	S	S	S				
Electrical engineers	180,000	500	180,000	3,500	165,000	4,000	168,000	9,000	168,000	11,000	155,000	33,000	D	D	D	D	D	D	180,000	1,000	181,000	5,000	164,000	3,500	161,000	4,500	164,000	6,500	148,000	11,000	182,000	4,000	183,000	3,500	174,000	5,000	159,000	25,000	159,000	26,500	D	D		
Industrial engineers	129,000	14,500	120,000	18,000	116,000	12,500	120,000	15,000	118,000	9,000	12,500	D	D	D	D	D	D	D	120,000	12,000	D	D	110,000	16,500	D	D	D	D	137,000	19,000	129,000	19,000	121,000	21,000	D	D	D	D	D	D				
Mechanical engineers	150,000	1,000	150,000	3,000	137,000	5,000	125,000	7,000	125,000	7,000	D	D	D	D	D	D	D	D	149,000	5,000	150,000	3,500	131,000	8,500	127,000	4,000	126,000	10,500	D	D	155,000	3,000	155,000	2,500	142,000	10,000	136,000	25,500	D	D	S	S		
Postsecondary teachers, engineering	120,000	500	120,000	500	116,000	5,500	110,000	4,000	109,000	6,500	111,000	12,500	D	D	D	D	D	D	119,000	1,500	119,000	1,500	109,000	14,500	106,000	5,500	101,000	6,500	126,000	9,000	120,000	1,000	120,000	3,000	117,000	6,500	125,000	9,000	120,000	6,000	S	S		
Other engineers	150,000	1,000	155,000	3,000	140,000	3,000	138,000	5,500	138,000	6,500	133,000	7,500	*	*	*	*	*	D	D	150,000	1,000	152,000	4,500	144,000	6,000	134,000	13,000	166,000	36,000	126,000	6,000	152,000	3,500	157,000	3,500	137,000	5,000	134,000	14,000	169,000	38,000	134,000	3,500	
S&E-related occupations	145,000	2,500	171,000	4,500	125,000	3,500	118,000	5,000	139,000	9,000	104,000	6,000	140,000	8,500	113,000	40,000	141,000	8,500	169,000	4,000	183,000	7,500	149,000	6,500	124,000	3,000	144,000	9,500	116,000	6,500	143,000	3,500	174,000	4,000	123,000	4,000	123,000	8,000	129,000	24,000	115,000	7,500		
Health occupations, except postsecondary teachers and managers	130,000	1,000	149,000	4,500	120,000	1,000	101,000	6,000	109,000	8,500	99,000	2,500	123,000	25,500	D	D	D	D	159,000	12,000	187,000	23,000	130,000	10,000	123,000	5,500	125,000	13,000	121,000	7,500	130,000	2,500	149,000	3,500	120,000	3,500	112,000	9,000	144,000	22,500	109,000	5,000		
Postsecondary teachers, health and related science	120,000	3,000	136,000	8,500	109,000	3,000	118,000	10,000	138,000	39,000	106,000	5,500	D	D	D	D	D	D	121,000	6,500	125,000	9,000	119,000	7,000	103,000	7,000	109,000	11,500	99,000	8,500	120,000	4,000	139,000	8,500	107,000	3,500	119,000	9,500	151,000	56,500	94,000	21,500		
S&E managers, including health	194,000	5,000	200,000	2,000	172,000	4,500	151,000	9,000	186,000	18,000	125,000	10,500	D	D	D	D	D	D	199,000	6,000	200,000	5,000	179,000	13,000	152,000	5,000	151,000	5,000	156,000	15,500	195,000	4,000	204,000	7,000	174,000	5,000	171,000	17,000	155,000	41,500	171,000	16,500		
S&E precollege teachers	74,000	3,000	75,000	3,000	70,000	5,000	76,000	3,500	82,000	6,500	73,000	6,000	D	D	D	D	D	D	73,000	4,000	76,000	4,000	S	S	62,000	3,500	D	D	62,000	4,000	74,000	2,500	75,000	2,500	71,000	5,000	S	S	S	S	D	D		
S&E technicians and technologists	159,000	3,000	159,000	4,000	140,000	19,500	177,000	6,500	177,000	6,000	D	D	D	D	D	D	D	D	155,000	9,000	155,000	7,500	118,000	13,000	D	D	D	D	159,000	4,500	159,000	7,500	156,000	16,500	196,000	15,500	199,000	20,000	D	D	D	D		
Other S&E-related occupations	166,000	23,500	177,000	31,000	150,000	19,500	D	D	D	D	D	D	D	D	D	D	D	D	157,000	1,000	157,000	27,500	150,000	22,000	D	D	D	D	181,000	46,000	182,000	40,500	D	D	D	D	D	D	D	D	D	D		
Non-S&E occupations	154,000	3,500	175,000	4,000	133,000	4,000	133,000	6,000	158,000	7,000	115,000	5,500	114,000	11,000	116,000	21,000	103,000	18,500	175,000	5,500	183,000	7,500	165,000	12,000	130,000	7,500	132,000	15,500	130,000	7,500	150,000	4,500	176,000	4,500	130,000	2,000	140,000	9,000	164,000	18,000	113,000	6,000		
Arts, humanities-related occupations	99,000	2,000	97,000	6,000	100,000	2,000	99,000	8,500	114,000	11,500	91,000	5,500	D	D	D	D	D	D	92,000	7,500	96,000	37,000	90,000	10,000	84,000	10,500	73,000	31,500	85,000	9,500	100,000	2,500	91,000	9,500	100,000	5,500	102,000	9,000	D	D	103,000	14,000		
Management-related occupations	160,000	4,000	179,000	2,500	144,000	3,500	134,000	8,500	141,000	9,000	130,000	13,000	D	D	D	D	D	D	179,000	4,000	188,000	10,500	174,000	7,500	148,000	5,500	136,000	30,500	148,000	4,000	154,000	4,500	179,000	3,500	130,000	5,500	124,000	22,500	163,000	78,500	109,000	11,000		
Non-S&E managers	200,000	500	220,000	4,500	183,000	4,500	199,000	12,500	199,000	14,000	170,000	24,500	127,000	39,000	D	D	D	D	224,000	14,000	240,000	25,500	211,000	10,500	169,000	7,000	180,000	12,000	164,000	9,500	200,000	500	219,000	7,000	180,000	2,500	191,000	14,500	222,000	44,500	170,000	10,500		
Non-S&E postsecondary teachers	101,000	3,000	113,000	4,500	90,000	2,500	99,000	6,000	110,000	10,500	89,000	5,500	S	S	D	D	D	D	100,000	5,500	113,000	8,000	89,000	3,500	101,000	12,000	99,000	18,500	103,000	17,500	104,000	5,000	114,000	5,500	93,000	4,000	91,000	7,000	92,000	5,000	87,000	10,500		
Non-S&E precollege and other teachers	74,000	5,000	84,000	10,500	70,000	6,500	70,000	22,500	D	D	76,000	7,500	D	D	D	D	D	D	92,000	23,500	D	D	91,000	32,500	84,000	13,500	D	D	78,000	14,500	73,000	6,000	83,000	10,500	66,000	7,500	62,000	12,000	D	D	D	D		
Sales, marketing occupations	150,000	2,500	157,000	4,000	140,000	10,500	148,000	28,000	153,000	31,500	146,000	41,500	D	D	D	D	D	D	155,000	8,000	158,000	3,000	114,000	20,500	111,000	16,500	111,000	11,000	87,000	36,500	150,000	6,000	158,000	10,500	145,000	8,500	188,000	65,000	D	D	D	D		
Social service-related occupations	82,000	4,500	73,000	9,000	84,000	3,500	73,000	6,500	D	D	68,000	7,000	D	D	D	D	D	D	72,000	15,500	94,000	21,000	71,																					

* = 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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 66

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and citizenship status: 2023

(Dollars and SE)

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	137,000	1,500	140,000	1,500	130,000	500	155,000	2,500	130,000	500	135,000	2,000	115,000	3,000
Science occupations	125,000	1,500	125,000	500	120,000	500	145,000	1,500	128,000	2,500	130,000	4,000	110,000	4,000
Biological, agricultural, and other life scientists	120,000	500	121,000	2,000	120,000	500	137,000	3,500	100,000	1,500	115,000	4,500	80,000	4,500
Agricultural, food scientists	124,000	2,500	130,000	5,500	130,000	5,500	134,000	6,000	94,000	5,000	109,000	12,500	67,000	12,000
Biochemists, biophysicists	122,000	4,500	131,000	4,000	129,000	3,000	135,000	5,500	97,000	15,500	116,000	4,500	73,000	8,500
Biological scientists	116,000	3,500	120,000	500	119,000	3,000	124,000	6,000	89,000	5,500	100,000	8,000	66,000	5,500
Forestry, conservation scientists	104,000	6,500	106,000	7,000	104,000	7,000	131,000	21,000	75,000	3,000	D	D	S	S
Medical scientists	143,000	3,500	149,000	1,500	148,000	3,500	150,000	9,500	104,000	5,500	125,000	8,500	81,000	9,000
Postsecondary teachers, agricultural, other natural sciences	110,000	2,500	110,000	2,500	110,000	3,500	108,000	3,000	105,000	13,500	119,000	15,500	75,000	10,500
Postsecondary teachers, biological sciences	95,000	1,500	95,000	2,000	90,000	1,000	119,000	5,000	96,000	7,500	98,000	9,000	83,000	15,500
Other biological, agricultural, life scientists	129,000	4,000	131,000	4,500	129,000	4,000	149,000	8,000	110,000	11,000	123,000	5,500	88,000	8,000
Computer and information scientists	176,000	3,000	175,000	3,000	169,000	1,500	179,000	3,500	180,000	4,500	189,000	6,500	179,000	4,500
Computer and information scientists	185,000	2,500	180,000	3,000	175,000	3,000	189,000	4,500	192,000	6,500	199,000	1,000	180,000	1,500
Postsecondary teachers, computer science	112,000	3,000	116,000	4,500	116,000	5,500	116,000	6,000	105,000	6,000	110,000	8,000	90,000	7,000
Mathematical scientists	136,000	2,500	134,000	3,500	125,000	2,000	147,000	5,500	139,000	5,000	139,000	7,500	138,000	6,500
Mathematical scientists	160,000	2,500	162,000	4,500	154,000	5,500	179,000	3,500	160,000	6,000	159,000	6,000	155,000	7,000
Postsecondary teachers, mathematics, statistics	95,000	2,000	98,000	3,000	90,000	3,000	109,000	5,000	90,000	1,500	91,000	4,000	84,000	13,000
Physical scientists	120,000	500	122,000	3,500	120,000	500	130,000	3,500	100,000	5,000	118,000	5,000	80,000	2,500
Chemists, except biochemists	130,000	2,000	137,000	3,500	135,000	3,000	139,000	8,000	120,000	4,500	120,000	2,500	92,000	12,500
Earth, atmospheric, ocean scientists	125,000	4,500	129,000	3,000	129,000	2,500	124,000	10,000	100,000	8,500	127,000	7,500	75,000	5,500
Physicists, astronomers	150,000	3,500	160,000	3,000	160,000	3,000	155,000	7,500	87,000	8,000	108,000	7,000	69,000	7,000
Postsecondary teachers, chemistry	84,000	2,000	85,000	2,500	84,000	2,500	88,000	5,000	79,000	4,500	79,000	5,000	D	D
Postsecondary teachers, physics	100,000	5,000	100,000	6,000	93,000	3,500	125,000	14,500	98,000	15,500	104,000	18,000	S	S
Postsecondary teachers, other physical science	98,000	2,500	100,000	2,500	95,000	4,000	115,000	9,000	93,000	4,000	94,000	7,500	77,000	16,000
Other physical scientists	148,000	4,500	153,000	4,000	152,000	5,500	162,000	12,000	111,000	7,500	115,000	18,500	110,000	7,000
Psychologists	108,000	3,000	108,000	2,500	106,000	3,000	114,000	8,000	93,000	9,500	103,000	10,500	60,000	3,500
Psychologists	127,000	4,000	127,000	4,000	126,000	3,500	137,000	15,500	113,000	32,000	135,000	28,000	57,000	3,500
Postsecondary teachers, psychology	92,000	3,000	93,000	3,500	90,000	2,000	105,000	6,500	87,000	8,000	93,000	7,500	D	D
Social scientists	110,000	1,000	109,000	1,500	105,000	1,500	120,000	5,000	117,000	7,000	110,000	7,500	123,000	7,000
Economists	170,000	5,500	170,000	7,500	162,000	6,500	181,000	8,000	171,000	17,500	159,000	20,500	188,000	25,500
Political scientists	139,000	11,500	137,000	12,000	139,000	12,500	119,000	32,500	148,000	34,500	152,000	36,000	D	D
Postsecondary teachers, economics	124,000	3,000	127,000	4,000	128,000	4,000	126,000	8,500	118,000	7,500	121,000	4,500	105,000	6,500
Postsecondary teachers, political science	93,000	4,000	95,000	4,000	94,000	3,000	100,000	9,500	82,000	3,500	81,000	3,500	79,000	22,500
Postsecondary teachers, sociology	89,000	2,500	90,000	2,000	88,000	3,000	99,000	6,000	80,000	9,500	83,000	8,500	D	D

TABLE 66

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and citizenship status: 2023

(Dollars and SE)

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
Postsecondary teachers, other social sciences	92,000	2,000	92,000	2,500	92,000	2,500	96,000	8,000	91,000	4,000	95,000	5,500	70,000	5,500
Sociologists, anthropologists	110,000	7,500	110,000	7,500	107,000	6,500	126,000	10,500	102,000	22,500	106,000	22,000	D	D
Other social scientists	125,000	4,000	125,000	3,500	125,000	5,500	129,000	11,500	118,000	10,500	120,000	23,000	110,000	22,500
Engineering occupations	150,000	500	159,000	2,500	151,000	2,000	165,000	4,000	130,000	1,000	134,000	3,000	115,000	5,500
Aerospace, aeronautical, astronautical engineers	170,000	2,500	171,000	3,000	171,000	4,500	172,000	7,000	135,000	19,500	145,000	17,500	D	D
Chemical engineers	149,000	3,500	156,000	5,000	152,000	5,000	168,000	8,000	135,000	5,000	139,000	4,500	129,000	4,000
Civil, architectural, sanitary engineers	128,000	4,000	140,000	6,000	138,000	13,500	140,000	9,000	100,000	3,500	109,000	7,000	86,000	8,000
Electrical engineers	180,000	500	186,000	4,500	182,000	3,500	195,000	8,000	163,000	4,500	170,000	6,000	147,000	8,000
Industrial engineers	129,000	14,500	143,000	11,500	148,000	15,000	121,000	24,000	113,000	6,500	109,000	9,000	S	S
Mechanical engineers	150,000	1,000	155,000	3,000	156,000	4,000	155,000	7,500	127,000	6,000	130,000	8,000	118,000	9,000
Postsecondary teachers, engineering	120,000	500	121,000	4,000	120,000	1,000	129,000	6,000	100,000	3,500	105,000	5,000	93,000	2,500
Other engineers	150,000	1,000	159,000	1,000	150,000	2,500	175,000	5,500	129,000	2,000	130,000	4,000	119,000	10,000
S&E-related occupations	145,000	2,500	145,000	3,000	135,000	3,500	177,000	5,500	140,000	8,500	145,000	8,500	125,000	14,500
Health occupations, except postsecondary teachers and managers	130,000	1,000	130,000	2,000	126,000	3,500	158,000	9,000	109,000	8,000	113,000	11,000	78,000	26,500
Postsecondary teachers, health and related science	120,000	3,000	120,000	1,500	115,000	4,000	138,000	8,500	101,000	6,500	110,000	8,000	98,000	8,000
S&E managers, including health	194,000	5,000	196,000	4,000	190,000	4,000	202,000	5,000	170,000	5,000	167,000	6,500	170,000	16,000
S&E precollege teachers	74,000	3,000	74,000	2,500	75,000	2,500	64,000	3,500	S	S	S	S	D	D
S&E technicians and technologists	159,000	3,000	157,000	6,500	158,000	8,500	151,000	7,500	159,000	5,000	159,000	9,500	157,000	20,000
Other S&E-related occupations	166,000	23,500	178,000	22,000	181,000	56,000	172,000	18,500	D	D	S	S	D	D
Non-S&E occupations	154,000	3,500	155,000	3,000	150,000	3,500	179,000	3,000	149,000	6,500	156,000	10,500	122,000	15,000
Arts, humanities-related occupations	99,000	2,000	100,000	2,000	99,000	2,000	110,000	21,500	79,000	8,000	88,000	15,000	D	D
Management-related occupations	160,000	4,000	155,000	4,500	148,000	3,500	179,000	7,500	180,000	2,000	183,000	12,500	163,000	18,000
Non-S&E managers	200,000	500	200,000	500	200,000	500	229,000	15,500	195,000	26,000	197,000	28,000	161,000	42,500
Non-S&E postsecondary teachers	101,000	3,000	102,000	3,000	100,000	2,000	108,000	4,500	98,000	6,500	103,000	16,500	77,000	10,500
Non-S&E precollege and other teachers	74,000	5,000	75,000	5,000	74,000	5,000	96,000	19,000	66,000	14,500	D	D	S	S
Sales, marketing occupations	150,000	2,500	150,000	2,500	150,000	4,000	157,000	7,500	136,000	29,000	141,000	31,500	D	D
Social service-related occupations	82,000	4,500	83,000	4,500	84,000	4,000	73,000	13,500	63,000	17,500	S	S	S	S
Other non-S&E occupations	139,000	8,500	137,000	9,500	124,000	6,500	180,000	16,000	173,000	42,000	209,000	54,000	142,000	45,500

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 salary 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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 67

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and age: 2023

(Dollars and SE)

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	137,000	1,500	112,000	2,500	125,000	1,000	130,000	3,000	140,000	500	150,000	500	155,000	3,000	150,000	1,000	150,000	500
Science occupations	125,000	1,500	110,000	1,500	120,000	500	121,000	2,500	126,000	3,000	133,000	4,000	139,000	2,500	140,000	2,500	150,000	3,000
Biological, agricultural, and other life scientists	120,000	500	90,000	1,500	109,000	2,000	115,000	2,500	120,000	2,500	131,000	5,500	136,000	4,500	143,000	6,000	156,000	5,000
Agricultural, food scientists	124,000	2,500	98,000	2,500	102,000	7,000	123,000	4,500	120,000	9,000	134,000	6,500	136,000	3,500	150,000	7,000	147,000	12,500
Biochemists, biophysicists	122,000	4,500	85,000	6,500	117,000	3,500	116,000	7,500	134,000	14,000	169,000	14,000	151,000	8,500	148,000	11,500	180,000	13,000
Biological scientists	116,000	3,500	71,000	3,000	106,000	4,000	115,000	5,000	121,000	5,000	126,000	5,500	147,000	8,000	123,000	7,500	149,000	8,000
Forestry, conservation scientists	104,000	6,500	75,000	7,000	79,000	7,500	87,000	6,500	99,000	15,000	142,000	13,500	106,000	17,000	145,000	14,000	143,000	19,500
Medical scientists	143,000	3,500	99,000	3,500	125,000	5,000	145,000	7,000	149,000	2,500	170,000	6,500	166,000	15,000	184,000	11,500	194,000	11,000
Postsecondary teachers, agricultural, other natural sciences	110,000	2,500	86,000	4,000	91,000	4,500	103,000	8,500	107,000	4,000	105,000	8,000	108,000	2,000	125,000	11,000	139,000	10,500
Postsecondary teachers, biological sciences	95,000	1,500	71,000	6,000	86,000	3,500	81,000	4,500	89,000	2,000	97,000	3,000	98,000	6,500	106,000	4,500	137,000	10,500
Other biological, agricultural, life scientists	129,000	4,000	108,000	6,000	119,000	5,000	137,000	8,500	128,000	5,000	160,000	11,500	157,000	10,000	132,000	8,500	163,000	17,000
Computer and information scientists	176,000	3,000	175,000	3,500	180,000	3,000	189,000	8,000	179,000	4,000	177,000	6,000	169,000	8,500	158,000	4,500	170,000	7,500
Computer and information scientists	185,000	2,500	179,000	2,000	190,000	6,000	199,000	1,500	199,000	11,500	198,000	9,500	174,000	6,500	165,000	10,000	179,000	5,000
Postsecondary teachers, computer science	112,000	3,000	108,000	7,500	107,000	4,500	106,000	5,500	101,000	9,000	117,000	7,000	136,000	10,500	118,000	10,000	112,000	15,000
Mathematical scientists	136,000	2,500	134,000	4,000	141,000	6,500	139,000	4,000	130,000	8,500	138,000	8,500	136,000	8,000	130,000	6,500	127,000	9,500
Mathematical scientists	160,000	2,500	149,000	5,000	160,000	5,000	164,000	10,000	171,000	8,500	172,000	16,500	182,000	9,000	186,000	10,500	148,000	10,000
Postsecondary teachers, mathematics, statistics	95,000	2,000	75,000	2,500	80,000	8,500	85,000	4,500	99,000	3,500	100,000	6,000	102,000	5,000	105,000	4,500	119,000	5,500
Physical scientists	120,000	500	94,000	2,000	106,000	3,500	115,000	4,000	125,000	4,000	129,000	4,500	137,000	7,000	146,000	7,000	149,000	3,000
Chemists, except biochemists	130,000	2,000	101,000	4,500	123,000	4,000	130,000	3,000	140,000	9,000	147,000	11,000	159,000	7,000	168,000	12,000	172,000	13,000
Earth, atmospheric, ocean scientists	125,000	4,500	87,000	3,500	104,000	4,500	128,000	12,000	132,000	12,500	130,000	16,000	150,000	8,000	157,000	13,000	172,000	12,000
Physicists, astronomers	150,000	3,500	106,000	9,000	123,000	12,500	150,000	10,500	149,000	14,500	163,000	12,500	179,000	12,500	180,000	7,500	185,000	7,500
Postsecondary teachers, chemistry	84,000	2,000	71,000	2,500	78,000	2,000	79,000	4,500	86,000	10,000	83,000	7,500	90,000	6,000	95,000	5,000	97,000	6,500
Postsecondary teachers, physics	100,000	5,000	72,000	14,500	99,000	5,500	81,000	7,500	98,000	4,500	106,000	15,000	109,000	17,000	117,000	22,000	139,000	10,000
Postsecondary teachers, other physical science	98,000	2,500	74,000	3,000	85,000	4,500	85,000	5,500	109,000	6,500	99,000	10,000	98,000	3,500	109,000	11,000	130,000	10,500
Other physical scientists	148,000	4,500	125,000	13,000	120,000	14,500	152,000	5,500	126,000	21,000	160,000	29,500	164,000	23,500	179,000	11,000	159,000	6,000
Psychologists	108,000	3,000	98,000	3,500	100,000	5,000	100,000	4,500	110,000	5,500	109,000	3,000	120,000	10,500	106,000	5,000	132,000	9,500
Psychologists	127,000	4,000	114,000	6,500	115,000	4,500	125,000	6,000	133,000	6,500	141,000	15,000	160,000	14,000	118,000	22,500	150,000	8,000
Postsecondary teachers, psychology	92,000	3,000	71,000	2,000	77,000	2,500	83,000	3,500	88,000	7,000	100,000	3,000	104,000	5,500	102,000	5,500	116,000	8,000
Social scientists	110,000	1,000	98,000	4,000	103,000	3,000	100,000	3,500	105,000	4,500	114,000	6,000	125,000	5,500	115,000	7,000	120,000	5,500
Economists	170,000	5,500	147,000	8,500	159,000	6,000	180,000	19,500	155,000	18,000	249,000	11,500	165,000	15,000	169,000	15,000	175,000	24,000
Political scientists	139,000	11,500	106,000	19,500	101,000	7,000	136,000	22,500	133,000	25,000	163,000	27,500	176,000	51,500	D	D	141,000	26,000
Postsecondary teachers, economics	124,000	3,000	118,000	9,000	119,000	4,500	122,000	6,500	128,000	9,000	144,000	29,000	130,000	21,000	128,000	16,500	122,000	13,000
Postsecondary teachers, political science	93,000	4,000	81,000	7,500	75,000	5,500	81,000	5,500	83,000	3,000	99,000	7,000	116,000	13,000	111,000	16,000	127,000	5,000
Postsecondary teachers, sociology	89,000	2,500	82,000	17,000	78,000	6,500	82,000	4,500	82,000	8,500	89,000	8,500	98,000	4,500	90,000	5,500	108,000	18,500
Postsecondary teachers, other social sciences	92,000	2,000	78,000	4,500	81,000	3,000	89,000	2,500	90,000	4,500	98,000	5,500	100,000	9,500	99,000	2,500	95,000	6,500

TABLE 67

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and age: 2023

(Dollars and SE)

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
Sociologists, anthropologists	110,000	7,500	79,000	9,500	93,000	4,500	105,000	28,500	132,000	19,500	128,000	11,000	112,000	45,500	82,000	22,000	120,000	51,500
Other social scientists	125,000	4,000	93,000	7,500	116,000	10,000	118,000	3,500	145,000	17,000	150,000	6,500	130,000	14,500	125,000	11,000	133,000	29,000
Engineering occupations	150,000	500	124,000	2,000	140,000	2,000	146,000	5,000	160,000	4,500	179,000	4,500	175,000	4,000	169,000	4,000	156,000	8,000
Aerospace, aeronautical, astronautical engineers	170,000	2,500	134,000	5,000	150,000	2,500	158,000	11,000	164,000	16,000	191,000	5,500	196,000	7,000	178,000	7,000	202,000	15,500
Chemical engineers	149,000	3,500	128,000	3,000	143,000	7,000	150,000	9,000	147,000	14,000	195,000	19,000	180,000	17,500	190,000	10,000	182,000	13,000
Civil, architectural, sanitary engineers	128,000	4,000	89,000	4,500	109,000	3,500	120,000	10,500	129,000	18,500	138,000	10,000	166,000	5,500	150,000	24,500	169,000	40,500
Electrical engineers	180,000	500	149,000	6,500	177,000	4,000	175,000	7,500	193,000	7,000	200,000	6,000	194,000	7,500	184,000	12,000	195,000	8,500
Industrial engineers	129,000	14,500	137,000	6,000	109,000	10,500	114,000	2,000	165,000	49,000	149,000	9,500	D	D	D	D	D	D
Mechanical engineers	150,000	1,000	119,000	3,000	136,000	5,000	150,000	7,000	164,000	19,500	177,000	6,500	167,000	12,000	170,000	17,500	150,000	12,000
Postsecondary teachers, engineering	120,000	500	103,000	3,500	101,000	3,000	109,000	4,000	119,000	3,500	144,000	14,000	135,000	5,500	148,000	16,000	127,000	8,000
Other engineers	150,000	1,000	122,000	4,000	138,000	5,000	157,000	7,000	167,000	11,500	179,000	5,000	184,000	7,000	165,000	6,000	164,000	11,000
S&E-related occupations	145,000	2,500	100,000	1,500	125,000	3,500	149,000	4,500	150,000	4,000	164,000	6,500	166,000	6,500	159,000	6,500	144,000	6,500
Health occupations, except postsecondary teachers and managers	130,000	1,000	89,000	3,000	114,000	4,500	130,000	9,000	133,000	6,000	152,000	8,000	153,000	6,000	146,000	5,500	140,000	5,500
Postsecondary teachers, health and related science	120,000	3,000	97,000	4,000	90,000	5,500	111,000	6,000	121,000	9,500	131,000	8,500	119,000	6,000	141,000	14,500	126,000	5,000
S&E managers, including health	194,000	5,000	139,000	4,500	169,000	7,000	194,000	6,000	199,000	6,000	205,000	7,000	211,000	15,000	199,000	3,500	205,000	11,500
S&E precollege teachers	74,000	3,000	64,000	7,500	65,000	7,000	74,000	4,000	74,000	3,500	66,000	12,000	86,000	3,500	79,000	4,000	63,000	28,000
S&E technicians and technologists	159,000	3,000	138,000	11,500	168,000	10,000	170,000	21,500	143,000	10,000	138,000	52,500	166,000	31,500	129,000	52,500	105,000	47,000
Other S&E-related occupations	166,000	23,500	D	D	D	D	141,000	9,000	D	D	D	D	176,000	18,000	D	D	D	D
Non-S&E occupations	154,000	3,500	116,000	4,500	123,000	5,000	150,000	4,500	150,000	3,000	177,000	6,000	176,000	5,000	170,000	5,500	160,000	9,500
Arts, humanities-related occupations	99,000	2,000	88,000	4,500	103,000	4,500	109,000	9,000	99,000	7,000	132,000	11,500	79,000	21,500	82,000	24,000	75,000	22,000
Management-related occupations	160,000	4,000	134,000	4,000	140,000	10,000	161,000	6,500	154,000	11,500	170,000	9,000	178,000	8,500	178,000	6,500	154,000	11,500
Non-S&E managers	200,000	500	130,000	15,000	180,000	16,500	191,000	11,500	194,000	10,500	209,000	11,000	220,000	11,000	220,000	12,500	209,000	14,000
Non-S&E postsecondary teachers	101,000	3,000	88,000	10,500	90,000	5,000	86,000	4,000	99,000	3,000	100,000	1,000	111,000	13,000	119,000	8,000	114,000	5,500
Non-S&E precollege and other teachers	74,000	5,000	68,000	21,000	63,000	6,500	68,000	10,500	86,000	25,000	86,000	12,500	79,000	13,000	81,000	11,500	61,000	9,000
Sales, marketing occupations	150,000	2,500	117,000	11,000	140,000	14,000	161,000	10,000	146,000	12,000	175,000	15,000	148,000	10,000	141,000	25,000	163,000	59,000
Social service-related occupations	82,000	4,500	82,000	9,500	82,000	7,500	80,000	10,500	83,000	10,000	80,000	13,000	80,000	9,500	96,000	6,000	65,000	8,500
Other non-S&E occupations	139,000	8,500	129,000	14,500	111,000	13,000	128,000	12,500	171,000	14,000	172,000	41,000	149,000	27,500	123,000	2,500	134,000	40,000

D = suppressed to avoid disclosure of confidential information.

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

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 68

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and years since doctorate: 2023

(Dollars and SE)

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	137,000	1,500	105,000	500	125,000	500	135,000	1,500	145,000	2,000	156,000	4,000	169,000	3,500
Science occupations	125,000	1,500	101,000	2,000	120,000	500	125,000	2,000	130,000	500	140,000	2,000	150,000	500
Biological, agricultural, and other life scientists	120,000	500	85,000	1,000	112,000	4,000	120,000	1,000	130,000	1,500	135,000	4,500	156,000	4,000
Agricultural, food scientists	124,000	2,500	90,000	3,500	107,000	7,500	123,000	3,500	140,000	3,000	138,000	5,000	160,000	6,000
Biochemists, biophysicists	122,000	4,500	85,000	3,500	120,000	5,500	127,000	13,000	144,000	12,000	138,000	14,500	174,000	3,500
Biological scientists	116,000	3,500	71,000	3,000	110,000	5,000	119,000	5,500	134,000	6,000	131,000	12,500	164,000	12,500
Forestry, conservation scientists	104,000	6,500	73,000	3,000	88,000	6,500	106,000	15,500	116,000	20,500	125,000	24,500	149,000	3,500
Medical scientists	143,000	3,500	91,000	5,500	130,000	3,000	152,000	7,000	149,000	1,000	171,000	7,500	192,000	7,000
Postsecondary teachers, agricultural, other natural sciences	110,000	2,500	82,000	3,500	91,000	6,000	102,000	7,000	109,000	7,000	112,000	5,000	135,000	7,500
Postsecondary teachers, biological sciences	95,000	1,500	71,000	3,000	80,000	4,000	84,000	2,500	95,000	4,500	104,000	6,500	120,000	5,000
Other biological, agricultural, life scientists	129,000	4,000	100,000	3,000	124,000	4,000	138,000	11,000	145,000	12,000	157,000	8,000	167,000	9,500
Computer and information scientists	176,000	3,000	164,000	5,500	179,000	3,000	189,000	9,000	176,000	6,500	180,000	5,500	172,000	5,500
Computer and information scientists	185,000	2,500	172,000	3,500	190,000	5,000	200,000	4,000	199,000	10,500	189,000	7,500	179,000	5,000
Postsecondary teachers, computer science	112,000	3,000	100,000	4,000	104,000	4,500	109,000	5,000	109,000	10,000	125,000	11,500	140,000	14,500
Mathematical scientists	136,000	2,500	129,000	4,000	140,000	5,000	135,000	6,000	138,000	7,500	135,000	7,500	139,000	6,000
Mathematical scientists	160,000	2,500	145,000	5,000	160,000	8,000	163,000	11,000	190,000	10,000	181,000	9,500	188,000	7,500
Postsecondary teachers, mathematics, statistics	95,000	2,000	72,000	3,000	80,000	5,000	86,000	3,500	100,000	2,000	99,000	1,000	119,000	3,500
Physical scientists	120,000	500	91,000	2,500	105,000	4,000	116,000	5,500	129,000	4,500	140,000	6,500	150,000	500
Chemists, except biochemists	130,000	2,000	100,000	2,000	122,000	4,500	132,000	8,000	140,000	6,000	150,000	6,000	171,000	5,500
Earth, atmospheric, ocean scientists	125,000	4,500	89,000	3,000	107,000	4,500	134,000	5,000	133,000	13,000	156,000	7,000	176,000	6,500
Physicists, astronomers	150,000	3,500	98,000	4,500	136,000	7,000	149,000	10,000	152,000	6,000	183,000	13,000	183,000	4,000
Postsecondary teachers, chemistry	84,000	2,000	62,000	3,000	71,000	3,500	79,000	2,500	89,000	4,500	90,000	9,000	98,000	7,000
Postsecondary teachers, physics	100,000	5,000	71,000	4,000	90,000	7,500	99,000	7,500	94,000	5,000	112,000	12,500	130,000	8,500
Postsecondary teachers, other physical science	98,000	2,500	69,000	3,000	85,000	3,000	92,000	4,000	110,000	6,500	100,000	9,000	124,000	5,500
Other physical scientists	148,000	4,500	113,000	13,000	128,000	12,000	149,000	12,000	165,000	9,000	146,000	23,000	169,000	8,000
Psychologists	108,000	3,000	95,000	5,500	95,000	5,500	103,000	3,500	117,000	6,500	110,000	3,500	125,000	9,500
Psychologists	127,000	4,000	108,000	3,500	120,000	3,000	126,000	5,500	164,000	7,000	149,000	8,500	150,000	5,500
Postsecondary teachers, psychology	92,000	3,000	72,000	2,500	77,000	2,500	83,000	3,500	97,000	4,000	100,000	4,000	117,000	6,500
Social scientists	110,000	1,000	90,000	1,000	98,000	3,000	105,000	4,500	115,000	5,500	121,000	5,000	139,000	5,500
Economists	170,000	5,500	139,000	9,500	170,000	10,000	190,000	24,000	157,000	10,000	202,000	38,500	185,000	10,000
Political scientists	139,000	11,500	103,000	10,000	123,000	22,000	141,000	21,500	117,000	52,500	D	D	224,000	53,000
Postsecondary teachers, economics	124,000	3,000	109,000	7,500	117,000	6,000	124,000	7,500	127,000	8,500	121,000	7,500	151,000	19,500
Postsecondary teachers, political science	93,000	4,000	72,000	2,500	83,000	4,000	76,000	7,500	96,000	8,500	115,000	11,000	129,000	10,000
Postsecondary teachers, sociology	89,000	2,500	78,000	8,500	72,000	2,500	84,000	2,000	89,000	8,000	97,000	4,500	101,000	6,500
Postsecondary teachers, other social sciences	92,000	2,000	73,000	1,500	80,000	1,500	93,000	3,500	99,000	1,000	114,000	6,500	110,000	8,000

TABLE 68

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and years since doctorate: 2023

(Dollars and SE)

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
Sociologists, anthropologists	110,000	7,500	85,000	6,000	99,000	3,000	123,000	24,000	148,000	22,000	110,000	27,000	157,000	37,000
Other social scientists	125,000	4,000	95,000	5,000	120,000	6,000	130,000	9,000	134,000	11,500	150,000	7,000	154,000	15,500
Engineering occupations	150,000	500	120,000	2,500	140,000	2,000	152,000	4,000	169,000	2,500	179,000	5,000	179,000	2,500
Aerospace, aeronautical, astronautical engineers	170,000	2,500	134,000	4,500	149,000	2,500	162,000	6,000	192,000	8,000	199,000	4,000	186,000	9,500
Chemical engineers	149,000	3,500	128,000	2,500	138,000	4,000	152,000	13,500	156,000	21,500	182,000	12,500	196,000	4,000
Civil, architectural, sanitary engineers	128,000	4,000	93,000	5,500	115,000	5,000	129,000	7,500	148,000	10,500	171,000	9,500	175,000	12,000
Electrical engineers	180,000	500	140,000	3,500	176,000	4,500	182,000	3,500	200,000	10,000	198,000	7,000	200,000	1,500
Industrial engineers	129,000	14,500	124,000	12,000	114,000	6,000	103,000	18,000	D	D	D	D	141,000	19,000
Mechanical engineers	150,000	1,000	119,000	3,500	140,000	4,500	152,000	8,000	171,000	9,500	173,000	10,000	175,000	11,000
Postsecondary teachers, engineering	120,000	500	96,000	1,000	100,000	3,000	115,000	5,500	120,000	4,500	135,000	9,000	141,000	7,000
Other engineers	150,000	1,000	119,000	2,000	145,000	5,000	153,000	4,000	179,000	2,500	176,000	12,000	180,000	5,500
S&E-related occupations	145,000	2,500	99,000	1,500	129,000	4,500	149,000	7,500	156,000	5,000	179,000	5,500	179,000	5,500
Health occupations, except postsecondary teachers and managers	130,000	1,000	91,000	3,500	120,000	1,000	137,000	5,000	147,000	5,000	159,000	10,000	151,000	7,000
Postsecondary teachers, health and related science	120,000	3,000	90,000	2,500	100,000	2,000	117,000	6,500	129,000	4,000	139,000	5,000	166,000	11,500
S&E managers, including health	194,000	5,000	133,000	6,500	165,000	6,500	194,000	8,000	195,000	8,000	205,000	12,500	225,000	6,000
S&E precollege teachers	74,000	3,000	64,000	6,500	65,000	2,500	64,000	9,000	75,000	2,000	65,000	17,000	87,000	4,000
S&E technicians and technologists	159,000	3,000	142,000	11,500	174,000	8,000	158,000	7,500	138,000	32,500	163,000	25,500	130,000	31,500
Other S&E-related occupations	166,000	23,500	D	D	182,000	32,000	S	S	152,000	32,500	S	S	141,000	45,500
Non-S&E occupations	154,000	3,500	100,000	500	120,000	2,500	144,000	5,500	160,000	5,500	185,000	7,000	199,000	5,000
Arts, humanities-related occupations	99,000	2,000	89,000	4,500	99,000	5,500	110,000	10,000	118,000	23,000	93,000	16,000	99,000	15,000
Management-related occupations	160,000	4,000	119,000	2,000	137,000	7,000	155,000	6,500	174,000	7,500	183,000	8,000	179,000	5,500
Non-S&E managers	200,000	500	120,000	7,500	175,000	7,500	179,000	7,000	197,000	6,500	218,000	10,000	239,000	8,000
Non-S&E postsecondary teachers	101,000	3,000	86,000	5,000	87,000	2,500	95,000	5,000	100,000	3,500	115,000	9,500	135,000	7,500
Non-S&E precollege and other teachers	74,000	5,000	59,000	4,500	69,000	4,000	74,000	13,000	79,000	12,000	S	S	87,000	8,000
Sales, marketing occupations	150,000	2,500	101,000	10,500	149,000	10,000	162,000	12,500	142,000	17,500	176,000	18,000	150,000	19,000
Social service-related occupations	82,000	4,500	72,000	2,000	84,000	7,500	68,000	7,500	93,000	4,500	88,000	15,500	84,000	13,000
Other non-S&E occupations	139,000	8,500	93,000	6,500	115,000	18,000	133,000	20,500	159,000	20,500	171,000	36,000	162,000	11,000

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 salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 69

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and sector of employment: 2023

(Dollars and SE)

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	
Sociologists, anthropologists	110,000	7,500	107,000	11,000	S	S	145,000	19,500	112,000	14,000	110,000	14,000	73,000	13,000	D	D	D	D	
Other social scientists	125,000	4,000	100,000	5,000	95,000	13,500	149,000	10,500	130,000	9,000	147,000	3,500	108,000	9,500	99,000	34,000	D	D	
Engineering occupations	150,000	500	120,000	500	89,000	8,000	166,000	2,500	169,000	5,000	150,000	1,500	120,000	6,500	119,000	22,500	S	S	
Aerospace, aeronautical, astronautical engineers	170,000	2,500	155,000	16,000	D	D	175,000	7,000	185,000	10,000	150,000	7,000	S	S	D	D	D	D	
Chemical engineers	149,000	3,500	130,000	12,500	D	D	150,000	5,000	174,000	66,500	148,000	10,000	D	D	D	D	D	D	
Civil, architectural, sanitary engineers	128,000	4,000	114,000	6,000	D	D	133,000	6,500	185,000	61,000	120,000	10,000	115,000	7,000	D	D	D	D	
Electrical engineers	180,000	500	141,000	15,000	D	D	185,000	4,500	171,000	16,000	149,000	6,000	175,000	33,500	D	D	D	D	
Industrial engineers	129,000	14,500	110,000	13,000	D	D	137,000	6,500	S	S	119,000	25,000	D	D	D	D	D	D	
Mechanical engineers	150,000	1,000	104,000	5,500	D	D	150,000	4,000	155,000	14,000	160,000	14,000	D	D	D	D	D	D	
Postsecondary teachers, engineering	120,000	500	120,000	500	87,000	2,500	D	D	D	D	D	D	D	D	D	D	D	D	D
Other engineers	150,000	1,000	100,000	8,500	D	D	160,000	3,500	158,000	14,000	149,000	3,000	118,000	7,500	104,000	11,000	D	D	
S&E-related occupations	145,000	2,500	120,000	1,500	80,000	2,500	189,000	3,000	147,000	5,000	152,000	3,500	118,000	7,500	136,000	11,000	S	S	
Health occupations, except postsecondary teachers and managers	130,000	1,000	110,000	4,000	101,000	4,000	149,000	5,500	131,000	6,000	141,000	2,000	107,000	5,500	135,000	11,000	S	S	
Postsecondary teachers, health and related science	120,000	3,000	117,000	3,500	94,000	15,000	D	D	244,000	56,000	D	D	S	S	D	D	D	D	
S&E managers, including health	194,000	5,000	148,000	6,000	S	S	212,000	5,500	172,000	12,500	177,000	6,000	129,000	4,000	D	D	D	D	
S&E precollege teachers	74,000	3,000	S	S	74,000	2,500	D	D	D	D	D	D	D	D	D	D	D	D	D
S&E technicians and technologists	159,000	3,000	107,000	18,500	D	D	161,000	5,000	127,000	13,000	129,000	31,500	D	D	D	D	D	D	
Other S&E-related occupations	166,000	23,500	D	D	D	D	182,000	18,500	D	D	D	D	D	D	D	D	D	D	D
Non-S&E occupations	154,000	3,500	123,000	3,500	98,000	4,500	200,000	500	126,000	5,000	150,000	6,500	116,000	9,500	99,000	10,000	107,000	23,500	
Arts, humanities-related occupations	99,000	2,000	79,000	3,500	D	D	109,000	6,000	92,000	7,000	119,000	6,500	D	D	85,000	31,500	D	D	
Management-related occupations	160,000	4,000	106,000	4,000	99,000	10,500	185,000	5,000	124,000	13,500	155,000	6,500	106,000	7,500	128,000	25,500	D	D	
Non-S&E managers	200,000	500	177,000	4,500	147,000	9,500	249,000	9,000	185,000	9,500	181,000	6,000	135,000	3,500	147,000	34,000	D	D	
Non-S&E postsecondary teachers	101,000	3,000	103,000	3,500	83,000	13,500	D	D	S	S	D	D	D	D	D	D	D	D	
Non-S&E precollege and other teachers	74,000	5,000	108,000	13,000	68,000	3,500	S	S	84,000	12,500	D	D	D	D	D	D	D	D	
Sales, marketing occupations	150,000	2,500	D	D	D	D	150,000	3,000	162,000	65,500	D	D	D	D	191,000	74,500	D	D	
Social service-related occupations	82,000	4,500	70,000	1,000	89,000	14,500	93,000	7,500	74,000	7,000	105,000	11,000	134,000	37,500	80,000	13,500	D	D	
Other non-S&E occupations	139,000	8,500	88,000	5,500	S	S	187,000	15,500	80,000	16,000	148,000	14,500	84,000	15,000	45,000	22,000	D	D	

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 Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^c Private, for profit includes those self-employed in an incorporated business.

^d Self-employed or business owner in a nonincorporated business.

^e Other sector includes employers not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 70

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and disability status: 2023

(Dollars and SE)

Occupation	All full-time employed		With disability		Without disability	
	Median salary	SE	Median salary	SE	Median salary	SE
All occupations	137,000	1,500	125,000	2,000	139,000	1,500
Science occupations	125,000	1,500	116,000	4,000	127,000	1,500
Biological, agricultural, and other life scientists	120,000	500	110,000	2,500	120,000	500
Agricultural, food scientists	124,000	2,500	124,000	7,500	124,000	2,500
Biochemists, biophysicists	122,000	4,500	101,000	11,500	125,000	4,500
Biological scientists	116,000	3,500	93,000	7,000	120,000	2,500
Forestry, conservation scientists	104,000	6,500	114,000	9,000	100,000	6,500
Medical scientists	143,000	3,500	128,000	10,000	145,000	3,000
Postsecondary teachers, agricultural, other natural sciences	110,000	2,500	119,000	12,000	109,000	3,000
Postsecondary teachers, biological sciences	95,000	1,500	89,000	4,000	95,000	1,500
Other biological, agricultural, life scientists	129,000	4,000	137,000	14,500	128,000	3,500
Computer and information scientists	176,000	3,000	168,000	6,500	179,000	4,000
Computer and information scientists	185,000	2,500	177,000	5,000	185,000	3,500
Postsecondary teachers, computer science	112,000	3,000	120,000	3,000	110,000	3,000
Mathematical scientists	136,000	2,500	133,000	7,500	137,000	2,500
Mathematical scientists	160,000	2,500	155,000	8,000	160,000	5,000
Postsecondary teachers, mathematics, statistics	95,000	2,000	95,000	4,500	95,000	2,500
Physical scientists	120,000	500	110,000	5,000	120,000	500
Chemists, except biochemists	130,000	2,000	130,000	10,000	130,000	2,500
Earth, atmospheric, ocean scientists	125,000	4,500	118,000	10,500	125,000	5,000
Physicists, astronomers	150,000	3,500	140,000	16,500	150,000	4,500
Postsecondary teachers, chemistry	84,000	2,000	92,000	4,500	83,000	2,000
Postsecondary teachers, physics	100,000	5,000	87,000	8,000	104,000	6,000
Postsecondary teachers, other physical science	98,000	2,500	99,000	6,000	98,000	3,500
Other physical scientists	148,000	4,500	146,000	36,500	148,000	4,500
Psychologists	108,000	3,000	103,000	4,000	109,000	3,000
Psychologists	127,000	4,000	122,000	6,500	129,000	4,000
Postsecondary teachers, psychology	92,000	3,000	95,000	8,500	92,000	3,000
Social scientists	110,000	1,000	100,000	1,500	110,000	1,500
Economists	170,000	5,500	141,000	6,500	175,000	6,500
Political scientists	139,000	11,500	163,000	45,500	138,000	10,000
Postsecondary teachers, economics	124,000	3,000	130,000	28,000	124,000	3,000
Postsecondary teachers, political science	93,000	4,000	95,000	5,000	90,000	4,500
Postsecondary teachers, sociology	89,000	2,500	97,000	4,500	88,000	4,000
Postsecondary teachers, other social sciences	92,000	2,000	89,000	2,500	93,000	2,500

TABLE 70

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and disability status: 2023

(Dollars and SE)

Occupation	All full-time employed		With disability		Without disability	
	Median salary	SE	Median salary	SE	Median salary	SE
Sociologists, anthropologists	110,000	7,500	88,000	21,000	114,000	7,500
Other social scientists	125,000	4,000	119,000	12,000	125,000	3,500
Engineering occupations	150,000	500	150,000	7,500	150,000	500
Aerospace, aeronautical, astronautical engineers	170,000	2,500	156,000	15,000	170,000	3,500
Chemical engineers	149,000	3,500	142,000	24,000	149,000	3,000
Civil, architectural, sanitary engineers	128,000	4,000	131,000	11,000	128,000	6,000
Electrical engineers	180,000	500	179,000	8,500	180,000	1,000
Industrial engineers	129,000	14,500	S	S	136,000	8,500
Mechanical engineers	150,000	1,000	134,000	13,500	150,000	1,500
Postsecondary teachers, engineering	120,000	500	120,000	5,500	120,000	500
Other engineers	150,000	1,000	146,000	9,500	150,000	1,500
S&E-related occupations	145,000	2,500	133,000	4,500	147,000	4,000
Health occupations, except postsecondary teachers and managers	130,000	1,000	125,000	6,500	130,000	2,000
Postsecondary teachers, health and related science	120,000	3,000	120,000	8,000	120,000	3,500
S&E managers, including health	194,000	5,000	186,000	7,000	195,000	4,500
S&E precollege teachers	74,000	3,000	61,000	2,000	75,000	2,000
S&E technicians and technologists	159,000	3,000	134,000	26,500	159,000	3,500
Other S&E-related occupations	166,000	23,500	D	D	165,000	23,000
Non-S&E occupations	154,000	3,500	138,000	7,500	156,000	4,000
Arts, humanities-related occupations	99,000	2,000	75,000	9,000	100,000	2,000
Management-related occupations	160,000	4,000	140,000	10,500	160,000	4,500
Non-S&E managers	200,000	500	204,000	6,000	200,000	500
Non-S&E postsecondary teachers	101,000	3,000	94,000	4,500	103,000	3,000
Non-S&E precollege and other teachers	74,000	5,000	88,000	12,500	73,000	5,500
Sales, marketing occupations	150,000	2,500	153,000	7,000	150,000	2,500
Social service-related occupations	82,000	4,500	68,000	2,500	85,000	4,500
Other non-S&E occupations	139,000	8,500	96,000	7,500	145,000	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.

Note(s):

Median annual salary 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. 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 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 71

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2023

(Dollars and SE)

Employment sector and occupation	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
All sectors	137,000	1,500	150,000	1,000	120,000	500
Science occupations	125,000	1,500	135,000	1,000	112,000	2,000
Biological, agricultural, and other life scientists	120,000	500	123,000	2,500	113,000	3,000
Computer and information scientists	176,000	3,000	180,000	500	159,000	5,500
Mathematical scientists	136,000	2,500	139,000	2,000	130,000	2,500
Physical scientists	120,000	500	125,000	3,000	102,000	3,000
Psychologists	108,000	3,000	110,000	3,500	105,000	2,000
Social scientists	110,000	1,000	118,000	3,500	101,000	2,000
Engineering occupations	150,000	500	153,000	2,500	140,000	2,000
S&E-related occupations	145,000	2,500	171,000	4,500	125,000	3,500
Non-S&E occupations	154,000	3,500	175,000	4,000	133,000	4,000
4-year educational institution ^a	105,000	1,000	110,000	500	99,000	1,500
Science occupations	100,000	1,500	103,000	1,500	90,000	1,500
Biological, agricultural, and other life scientists	95,000	1,500	100,000	2,000	88,000	1,500
Computer and information scientists	118,000	3,500	120,000	1,500	108,000	5,000
Mathematical scientists	99,000	2,500	100,000	500	90,000	3,500
Physical scientists	93,000	1,500	98,000	2,500	85,000	2,000
Psychologists	98,000	2,000	103,000	3,500	92,000	3,000
Social scientists	100,000	500	105,000	3,000	96,000	2,000
Engineering occupations	120,000	500	120,000	500	116,000	4,500
S&E-related occupations	120,000	1,500	130,000	4,500	110,000	2,000
Non-S&E occupations	123,000	3,500	139,000	3,500	110,000	2,500
Other educational institution ^b	87,000	2,000	88,000	2,000	85,000	1,500
Science occupations	85,000	2,500	88,000	6,000	84,000	2,500
Biological, agricultural, and other life scientists	84,000	6,500	88,000	13,500	79,000	4,500
Computer and information scientists	87,000	19,500	85,000	26,500	94,000	6,500
Mathematical scientists	89,000	12,500	92,000	13,000	77,000	16,000
Physical scientists	81,000	3,000	82,000	4,500	79,000	6,000
Psychologists	89,000	8,000	89,000	17,000	89,000	7,000
Social scientists	88,000	4,000	100,000	6,500	85,000	3,500
Engineering occupations	89,000	8,000	88,000	8,000	D	D
S&E-related occupations	80,000	2,500	81,000	5,500	80,000	2,000
Non-S&E occupations	98,000	4,500	99,000	3,000	95,000	5,000
Private, for profit ^c	175,000	500	180,000	500	160,000	2,500
Science occupations	170,000	500	175,000	500	156,000	2,500
Biological, agricultural, and other life scientists	150,000	2,000	153,000	3,500	149,000	500
Computer and information scientists	200,000	6,000	199,000	500	179,000	5,500
Mathematical scientists	175,000	4,500	179,000	2,500	168,000	5,000
Physical scientists	148,000	2,500	149,000	500	135,000	4,500
Psychologists	157,000	10,000	137,000	20,000	160,000	6,500
Social scientists	170,000	12,000	179,000	15,000	152,000	5,500
Engineering occupations	166,000	2,500	170,000	1,500	149,000	2,000
S&E-related occupations	190,000	3,000	200,000	4,500	158,000	7,000
Non-S&E occupations	200,000	500	210,000	6,500	174,000	5,000
Private, nonprofit	140,000	2,000	155,000	4,000	120,000	3,500
Science occupations	135,000	4,500	150,000	1,000	120,000	2,500
Biological, agricultural, and other life scientists	110,000	6,000	123,000	8,000	100,000	2,000
Computer and information scientists	155,000	4,500	155,000	7,000	165,000	14,500
Mathematical scientists	150,000	6,500	166,000	12,000	125,000	11,000

TABLE 71

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2023

(Dollars and SE)

Employment sector and occupation	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
Physical scientists	155,000	3,500	159,000	4,000	116,000	8,500
Psychologists	128,000	4,000	137,000	20,000	125,000	7,000
Social scientists	149,000	3,500	155,000	6,500	140,000	9,500
Engineering occupations	169,000	5,000	170,000	5,500	159,000	16,500
S&E-related occupations	147,000	5,000	185,000	13,500	124,000	5,500
Non-S&E occupations	128,000	5,500	131,000	8,500	120,000	8,000
Federal government	145,000	1,000	150,000	500	140,000	500
Science occupations	140,000	1,000	145,000	2,000	134,000	3,500
Biological, agricultural, and other life scientists	130,000	3,000	134,000	4,500	129,000	2,000
Computer and information scientists	160,000	8,500	163,000	9,500	138,000	10,000
Mathematical scientists	144,000	5,500	147,000	6,000	139,000	5,500
Physical scientists	140,000	3,000	149,000	7,000	129,000	4,000
Psychologists	140,000	3,500	158,000	11,000	135,000	7,000
Social scientists	153,000	5,000	155,000	8,500	150,000	5,000
Engineering occupations	150,000	1,500	150,000	1,500	139,000	6,000
S&E-related occupations	152,000	3,500	168,000	7,000	144,000	3,000
Non-S&E occupations	150,000	6,500	159,000	6,500	146,000	5,000
State or local government	110,000	1,500	118,000	5,000	104,000	3,500
Science occupations	104,000	3,000	110,000	4,000	99,000	4,000
Biological, agricultural, and other life scientists	86,000	4,500	93,000	8,500	84,000	6,000
Computer and information scientists	109,000	10,000	108,000	9,500	129,000	14,000
Mathematical scientists	102,000	6,000	105,000	14,500	101,000	5,000
Physical scientists	125,000	10,000	132,000	10,500	104,000	7,500
Psychologists	110,000	5,500	109,000	5,000	110,000	10,000
Social scientists	100,000	6,000	115,000	7,000	93,000	3,000
Engineering occupations	120,000	6,500	127,000	12,500	113,000	7,500
S&E-related occupations	118,000	7,500	115,000	11,500	118,000	8,500
Non-S&E occupations	116,000	9,500	131,000	16,000	106,000	6,500
Self-employed ^d	120,000	2,000	131,000	16,000	108,000	12,000
Science occupations	119,000	10,000	112,000	19,000	119,000	8,000
Biological, agricultural, and other life scientists	117,000	20,500	99,000	38,500	117,000	12,000
Computer and information scientists	143,000	54,000	143,000	52,500	D	D
Mathematical scientists	S	S	S	S	D	D
Physical scientists	95,000	39,000	S	S	D	D
Psychologists	128,000	9,000	129,000	9,000	122,000	26,000
Social scientists	102,000	19,500	100,000	43,500	94,000	24,500
Engineering occupations	110,000	10,000	113,000	12,500	D	D
S&E-related occupations	139,000	7,500	150,000	6,500	120,000	12,000
Non-S&E occupations	99,000	7,000	118,000	19,000	89,000	4,000
Other sector ^e	147,000	22,000	179,000	36,500	129,000	19,000
Science occupations	171,000	25,500	197,000	39,500	146,000	26,000
Biological, agricultural, and other life scientists	81,000	8,000	S	S	D	D
Computer and information scientists	D	D	D	D	D	D
Mathematical scientists	S	S	D	D	D	D
Physical scientists	D	D	D	D	D	D
Psychologists	D	D	D	D	D	D
Social scientists	187,000	25,500	240,000	33,500	138,000	26,000
Engineering occupations	S	S	D	D	D	D
S&E-related occupations	S	S	S	S	S	S

TABLE 71

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 2023

(Dollars and SE)

Employment sector and occupation	All full-time employed		Male		Female	
	Median salary	SE	Median salary	SE	Median salary	SE
Non-S&E occupations	107,000	23,500	S	S	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.

^a Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^b Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^c Private, for profit includes those self-employed in an incorporated business.

^d Self-employed or business owner in a nonincorporated business.

^e Other sector includes employers not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 72

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2023

(Dollars and SE)

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	137,000	1,500	120,000	2,500	110,000	11,500	150,000	500	120,000	1,000	134,000	1,500	125,000	3,500
Science occupations	125,000	1,500	112,000	3,500	95,000	7,000	140,000	1,000	110,000	3,000	121,000	2,000	119,000	3,500
Biological, agricultural, and other life scientists	120,000	500	106,000	4,500	85,000	17,000	123,000	3,500	118,000	5,500	120,000	1,000	120,000	7,000
Computer and information scientists	176,000	3,000	155,000	8,500	S	S	184,000	6,000	159,000	13,000	171,000	3,000	176,000	18,500
Mathematical scientists	136,000	2,500	124,000	9,500	D	D	150,000	3,000	114,000	8,500	129,000	2,000	121,000	17,000
Physical scientists	120,000	500	112,000	6,000	129,000	10,000	120,000	1,500	102,000	5,000	120,000	1,000	110,000	7,500
Psychologists	108,000	3,000	103,000	4,000	70,000	24,500	110,000	11,000	93,000	11,000	109,000	1,500	86,000	8,500
Social scientists	110,000	1,000	115,000	4,000	93,000	4,500	118,000	3,500	100,000	1,500	108,000	2,500	110,000	10,500
Engineering occupations	150,000	500	130,000	3,500	176,000	7,500	150,000	500	130,000	7,000	153,000	2,500	147,000	16,000
S&E-related occupations	145,000	2,500	118,000	5,000	140,000	8,500	169,000	4,000	124,000	3,000	143,000	3,500	123,000	8,000
Non-S&E occupations	154,000	3,500	133,000	6,000	114,000	11,000	175,000	5,500	130,000	7,500	150,000	4,500	140,000	9,000
4-year educational institution ^d	105,000	1,000	97,000	2,500	96,000	4,000	104,000	3,000	100,000	1,500	106,000	1,500	98,000	3,000
Science occupations	100,000	1,500	91,000	2,000	92,000	6,000	100,000	500	90,000	3,000	100,000	1,000	94,000	5,000
Biological, agricultural, and other life scientists	95,000	1,500	81,000	3,500	85,000	14,000	97,000	4,500	89,000	3,000	95,000	2,000	91,000	8,000
Computer and information scientists	118,000	3,500	106,000	9,500	D	D	113,000	3,500	127,000	18,000	119,000	3,000	211,000	69,500
Mathematical scientists	99,000	2,500	98,000	5,500	D	D	100,000	2,500	82,000	6,000	99,000	3,000	85,000	9,500
Physical scientists	93,000	1,500	81,000	2,500	*	*	90,000	3,000	75,000	6,500	95,000	3,000	89,000	6,000
Psychologists	98,000	2,000	97,000	3,000	88,000	21,500	95,000	6,000	88,000	7,500	99,000	2,000	85,000	3,500
Social scientists	100,000	500	100,000	4,000	92,000	5,500	106,000	5,500	97,000	4,000	100,000	500	97,000	5,500
Engineering occupations	120,000	500	110,000	3,000	D	D	110,000	4,000	105,000	6,000	125,000	3,500	125,000	6,500
S&E-related occupations	120,000	1,500	108,000	2,500	S	S	120,000	3,000	105,000	6,000	120,000	2,500	100,000	13,000
Non-S&E occupations	123,000	3,500	110,000	6,500	75,000	33,000	115,000	5,500	123,000	8,000	127,000	3,500	112,000	19,000
Other educational institution ^e	87,000	2,000	82,000	3,500	71,000	17,000	94,000	13,500	94,000	4,000	86,000	2,500	76,000	17,000
Science occupations	85,000	2,500	82,000	4,000	S	S	101,000	13,000	88,000	5,000	85,000	2,000	100,000	19,000
Biological, agricultural, and other life scientists	84,000	6,500	68,000	7,000	D	D	119,000	29,000	71,000	7,500	80,000	4,000	S	S
Computer and information scientists	87,000	19,500	D	D	D	D	D	D	*	*	81,000	15,500	D	D
Mathematical scientists	89,000	12,500	78,000	6,000	D	D	D	D	D	D	87,000	21,500	D	D
Physical scientists	81,000	3,000	82,000	12,000	D	D	77,000	6,000	75,000	6,500	83,000	4,000	D	D
Psychologists	89,000	8,000	D	D	D	D	D	D	D	D	95,000	9,000	D	D
Social scientists	88,000	4,000	86,000	8,500	D	D	D	D	96,000	6,500	85,000	4,500	D	D
Engineering occupations	89,000	8,000	D	D	D	D	D	D	D	D	D	D	D	D
S&E-related occupations	80,000	2,500	78,000	3,500	D	D	78,000	7,500	89,000	7,000	80,000	3,000	S	S
Non-S&E occupations	98,000	4,500	92,000	9,500	D	D	72,000	20,500	118,000	19,000	97,000	5,000	79,000	15,500

TABLE 72

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2023

(Dollars and SE)

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
Private, for profit ^f	175,000	500	150,000	3,500	180,000	14,000	180,000	3,500	150,000	1,500	175,000	500	168,000	6,500
Science occupations	170,000	500	149,000	1,500	178,000	21,500	175,000	3,500	150,000	3,500	169,000	1,500	163,000	7,000
Biological, agricultural, and other life scientists	150,000	2,000	139,000	4,000	D	D	149,000	1,500	150,000	10,000	157,000	4,000	165,000	9,000
Computer and information scientists	200,000	6,000	179,000	8,500	D	D	200,000	500	180,000	8,500	190,000	3,000	180,000	17,000
Mathematical scientists	175,000	4,500	168,000	7,000	D	D	179,000	2,500	140,000	12,500	174,000	5,500	139,000	8,000
Physical scientists	148,000	2,500	139,000	10,000	D	D	139,000	4,000	124,000	9,500	149,000	1,000	137,000	24,500
Psychologists	157,000	10,000	143,000	17,000	D	D	171,000	22,500	143,000	17,500	150,000	12,000	S	S
Social scientists	170,000	12,000	157,000	21,500	D	D	159,000	21,500	161,000	32,500	170,000	14,000	197,000	21,000
Engineering occupations	166,000	2,500	149,000	3,000	D	D	165,000	2,500	148,000	6,000	170,000	1,000	159,000	13,500
S&E-related occupations	190,000	3,000	148,000	13,000	S	S	199,000	1,000	151,000	7,500	189,000	5,500	196,000	30,000
Non-S&E occupations	200,000	500	177,000	12,000	S	S	200,000	3,000	149,000	12,000	200,000	500	184,000	30,500
Private, nonprofit	140,000	2,000	116,000	3,000	101,000	31,500	139,000	7,500	138,000	9,000	144,000	4,000	135,000	10,500
Science occupations	135,000	4,500	115,000	3,000	S	S	126,000	5,500	125,000	10,000	142,000	4,500	136,000	12,000
Biological, agricultural, and other life scientists	110,000	6,000	93,000	7,000	D	D	97,000	5,000	78,000	20,500	121,000	6,500	128,000	14,500
Computer and information scientists	155,000	4,500	110,000	38,500	D	D	155,000	17,500	D	D	153,000	5,000	D	D
Mathematical scientists	150,000	6,500	111,000	9,000	D	D	149,000	24,500	141,000	17,000	150,000	7,500	D	D
Physical scientists	155,000	3,500	146,000	19,000	D	D	149,000	5,500	126,000	15,500	160,000	3,500	102,000	23,500
Psychologists	128,000	4,000	D	D	D	D	133,000	15,500	D	D	127,000	5,000	D	D
Social scientists	149,000	3,500	118,000	13,000	D	D	149,000	17,500	139,000	16,000	150,000	4,000	135,000	29,000
Engineering occupations	169,000	5,000	147,000	33,500	D	D	167,000	15,500	154,000	27,500	170,000	4,500	D	D
S&E-related occupations	147,000	5,000	137,000	23,500	D	D	153,000	17,500	141,000	11,500	148,000	4,500	118,000	34,000
Non-S&E occupations	128,000	5,500	103,000	11,500	S	S	123,000	19,000	146,000	22,500	128,000	6,500	121,000	18,000
Federal government	145,000	1,000	136,000	5,000	140,000	10,000	150,000	2,500	135,000	4,000	147,000	2,500	130,000	5,500
Science occupations	140,000	1,000	140,000	5,500	D	D	144,000	6,000	126,000	4,500	141,000	2,500	129,000	12,500
Biological, agricultural, and other life scientists	130,000	3,000	124,000	7,500	S	S	130,000	7,000	122,000	5,000	132,000	3,500	120,000	7,000
Computer and information scientists	160,000	8,500	149,000	30,000	D	D	157,000	6,500	153,000	18,000	169,000	6,500	D	D
Mathematical scientists	144,000	5,500	124,000	21,500	D	D	147,000	6,500	132,000	18,000	144,000	9,000	D	D
Physical scientists	140,000	3,000	142,000	2,000	D	D	135,000	11,500	115,000	6,500	144,000	5,500	141,000	7,000
Psychologists	140,000	3,500	D	D	D	D	D	D	142,000	22,500	141,000	6,500	D	D
Social scientists	153,000	5,000	145,000	18,500	D	D	173,000	13,000	133,000	9,000	150,000	5,000	D	D
Engineering occupations	150,000	1,500	128,000	6,000	D	D	149,000	10,000	152,000	11,500	150,000	1,500	130,000	11,500
S&E-related occupations	152,000	3,500	139,000	8,500	D	D	192,000	13,000	142,000	7,000	152,000	4,000	130,000	14,500
Non-S&E occupations	150,000	6,500	125,000	9,500	S	S	165,000	11,000	148,000	11,000	154,000	6,500	113,000	16,000
State or local government	110,000	1,500	99,000	3,000	S	S	112,000	5,500	106,000	6,500	110,000	3,000	110,000	16,000

TABLE 72

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, ethnicity, and race: 2023

(Dollars and SE)

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	104,000	3,000	99,000	6,000	D	D	110,000	4,500	89,000	5,500	103,000	3,500	118,000	18,000
Biological, agricultural, and other life scientists	86,000	4,500	95,000	11,500	D	D	80,000	7,000	74,000	11,000	87,000	6,500	96,000	25,000
Computer and information scientists	109,000	10,000	*	*	D	D	107,000	10,000	D	D	124,000	33,000	D	D
Mathematical scientists	102,000	6,000	*	*	D	D	115,000	10,500	D	D	97,000	6,000	D	D
Physical scientists	125,000	10,000	84,000	5,000	D	D	127,000	27,500	D	D	122,000	11,500	S	S
Psychologists	110,000	5,500	D	D	D	D	D	D	D	D	115,000	10,500	D	D
Social scientists	100,000	6,000	D	D	D	D	112,000	11,000	76,000	33,000	100,000	4,000	*	*
Engineering occupations	120,000	6,500	113,000	30,500	D	D	114,000	7,000	105,000	15,000	141,000	14,000	D	D
S&E-related occupations	118,000	7,500	96,000	3,500	D	D	122,000	14,000	100,000	20,000	120,000	9,000	104,000	28,500
Non-S&E occupations	116,000	9,500	94,000	13,000	D	D	86,000	14,000	143,000	32,500	116,000	12,000	91,000	28,000
Self-employed ^g	120,000	2,000	83,000	11,000	D	D	141,000	25,000	98,000	21,000	120,000	3,500	70,000	30,000
Science occupations	119,000	10,000	153,000	25,500	D	D	121,000	29,000	93,000	31,500	119,000	18,500	S	S
Biological, agricultural, and other life scientists	117,000	20,500	D	D	D	D	D	D	D	D	116,000	26,500	D	D
Computer and information scientists	143,000	54,000	D	D	D	D	S	S	D	D	126,000	41,000	D	D
Mathematical scientists	S	S	D	D	D	D	D	D	D	D	S	S	D	D
Physical scientists	95,000	39,000	D	D	D	D	D	D	D	D	S	S	D	D
Psychologists	128,000	9,000	D	D	D	D	D	D	D	D	117,000	18,000	D	D
Social scientists	102,000	19,500	D	D	D	D	D	D	D	D	100,000	35,000	D	D
Engineering occupations	110,000	10,000	S	S	D	D	S	S	D	D	111,000	8,500	D	D
S&E-related occupations	139,000	7,500	84,000	10,500	D	D	S	S	D	D	139,000	7,000	D	D
Non-S&E occupations	99,000	7,000	49,000	23,500	D	D	113,000	30,000	93,000	8,000	98,000	10,500	D	D
Other sector ^h	147,000	22,000	202,000	32,500	D	D	S	S	D	D	128,000	10,500	D	D
Science occupations	171,000	25,500	197,000	26,000	D	D	S	S	S	S	147,000	37,500	D	D
Biological, agricultural, and other life scientists	81,000	8,000	D	D	D	D	D	D	D	D	S	S	D	D
Computer and information scientists	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Mathematical scientists	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Physical scientists	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Psychologists	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Social scientists	187,000	25,500	203,000	32,500	D	D	S	S	D	D	188,000	55,500	D	D
Engineering occupations	S	S	D	D	D	D	D	D	D	D	D	D	D	D
S&E-related occupations	S	S	D	D	D	D	D	D	D	D	D	D	D	D
Non-S&E occupations	107,000	23,500	D	D	D	D	D	D	D	D	S	S	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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^d Four-year educational institution includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^e Other educational institution includes 2-year colleges, community colleges, technical institutes, precollege institutions, and other educational institutions.

^f Private, for profit includes those self-employed in an incorporated business.

^g Self-employed or business owner in a nonincorporated business.

^h Other sector includes employers not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 73-1

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2023

(Dollars and SE)

Occupation	All full-time employed		Computer applications		Design		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	Median salary	SE
All occupations	137,000	1,500	160,000	500	158,000	3,500	150,000	500	140,000	1,500	140,000	1,000	100,000	500	120,000	500
Science occupations	125,000	1,500	160,000	1,000	150,000	2,000	137,000	2,000	139,000	5,000	130,000	500	95,000	1,000	109,000	2,500
Biological, agricultural, and other life scientists	120,000	500	109,000	8,500	127,000	5,000	130,000	500	150,000	7,000	120,000	500	93,000	2,000	116,000	4,500
Agricultural, food scientists	124,000	2,500	126,000	8,500	131,000	7,500	130,000	4,000	150,000	17,500	121,000	3,000	87,000	23,500	128,000	12,500
Biochemists, biophysicists	122,000	4,500	92,000	16,500	117,000	11,500	139,000	7,000	170,000	50,000	120,000	3,000	108,000	22,500	128,000	7,500
Biological scientists	116,000	3,500	92,000	9,500	114,000	7,000	125,000	3,000	136,000	22,500	115,000	3,500	110,000	9,500	108,000	6,000
Forestry, conservation scientists	104,000	6,500	89,000	15,000	118,000	32,500	111,000	9,500	D	D	103,000	6,500	117,000	53,500	97,000	12,500
Medical scientists	143,000	3,500	106,000	11,500	128,000	8,000	150,000	5,500	173,000	13,500	140,000	3,500	129,000	18,000	146,000	6,500
Postsecondary teachers, agricultural, other natural sciences	110,000	2,500	D	D	D	D	104,000	7,000	D	D	111,000	5,000	108,000	4,000	89,000	3,500
Postsecondary teachers, biological sciences	95,000	1,500	185,000	14,000	D	D	98,000	3,500	S	S	106,000	4,500	88,000	2,000	81,000	5,500
Other biological, agricultural, life scientists	129,000	4,000	119,000	9,500	133,000	6,500	139,000	5,500	139,000	19,000	124,000	4,000	118,000	13,000	120,000	4,000
Computer and information scientists	176,000	3,000	180,000	500	189,000	6,500	186,000	4,000	149,000	20,500	180,000	2,000	111,000	3,000	147,000	5,500
Computer and information scientists	185,000	2,500	180,000	2,500	189,000	6,000	194,000	6,500	151,000	20,000	190,000	2,500	146,000	9,500	150,000	10,000
Postsecondary teachers, computer science	112,000	3,000	99,000	2,500	D	D	129,000	4,500	S	S	119,000	3,000	110,000	2,000	92,000	7,000
Mathematical scientists	136,000	2,500	150,000	500	168,000	6,500	156,000	6,000	159,000	10,500	145,000	3,500	90,000	2,000	99,000	3,000
Mathematical scientists	160,000	2,500	150,000	3,000	168,000	6,000	185,000	7,500	162,000	12,500	162,000	5,000	140,000	15,000	134,000	10,000
Postsecondary teachers, mathematics, statistics	95,000	2,000	96,000	7,000	80,000	19,000	100,000	5,500	S	S	102,000	4,000	90,000	1,000	81,000	4,000
Physical scientists	120,000	500	120,000	6,000	139,000	6,000	130,000	1,500	134,000	12,500	127,000	3,500	90,000	1,000	103,000	4,000
Chemists, except biochemists	130,000	2,000	125,000	21,000	125,000	9,500	145,000	4,000	127,000	14,500	132,000	3,500	128,000	13,000	108,000	5,000
Earth, atmospheric, ocean scientists	125,000	4,500	113,000	9,000	129,000	22,000	132,000	6,000	122,000	11,000	120,000	5,500	103,000	9,000	122,000	8,500
Physicists, astronomers	150,000	3,500	121,000	13,000	145,000	5,500	165,000	7,000	256,000	34,500	149,000	1,500	138,000	66,500	119,000	9,000
Postsecondary teachers, chemistry	84,000	2,000	S	S	75,000	14,000	82,000	2,500	D	D	95,000	3,500	82,000	1,500	79,000	4,000
Postsecondary teachers, physics	100,000	5,000	111,000	19,000	D	D	101,000	7,000	S	S	121,000	6,000	98,000	4,500	84,000	3,000
Postsecondary teachers, other physical science	98,000	2,500	82,000	9,500	D	D	98,000	4,000	D	D	100,000	2,000	94,000	2,000	80,000	6,000
Other physical scientists	148,000	4,500	133,000	27,500	149,000	6,000	154,000	6,000	145,000	28,000	148,000	4,500	143,000	26,500	147,000	19,000
Psychologists	108,000	3,000	132,000	8,500	125,000	13,500	113,000	4,000	121,000	5,000	113,000	3,500	90,000	2,000	87,000	4,500
Psychologists	127,000	4,000	137,000	16,500	134,000	16,000	131,000	5,500	123,000	5,000	130,000	4,500	120,000	8,000	109,000	6,000
Postsecondary teachers, psychology	92,000	3,000	D	D	D	D	90,000	3,500	110,000	8,500	100,000	1,000	89,000	2,500	75,000	4,500
Social scientists	110,000	1,000	126,000	3,500	134,000	11,500	125,000	5,000	146,000	11,500	116,000	3,000	95,000	1,500	100,000	1,000
Economists	170,000	5,500	150,000	8,000	144,000	7,000	180,000	6,500	192,000	15,000	170,000	6,500	D	D	183,000	22,500
Political scientists	139,000	11,500	D	D	D	D	137,000	11,500	D	D	135,000	17,500	D	D	118,000	19,000
Postsecondary teachers, economics	124,000	3,000	D	D	D	D	122,000	6,000	D	D	136,000	5,500	121,000	3,500	90,000	6,000
Postsecondary teachers, political science	93,000	4,000	D	D	D	D	88,000	9,500	D	D	98,000	4,000	90,000	2,500	88,000	6,500
Postsecondary teachers, sociology	89,000	2,500	D	D	D	D	96,000	11,000	D	D	97,000	4,500	85,000	3,500	81,000	7,500
Postsecondary teachers, other social sciences	92,000	2,000	S	S	D	D	99,000	5,000	122,000	34,500	95,000	1,500	90,000	500	90,000	5,500

TABLE 73-1

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2023

(Dollars and SE)

Occupation	All full-time employed		Computer applications		Design		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	Median salary	SE
Sociologists, anthropologists	110,000	7,500	D	D	143,000	23,500	111,000	9,500	104,000	12,000	111,000	8,500	S	S	105,000	17,000
Other social scientists	125,000	4,000	103,000	17,000	104,000	14,000	129,000	4,500	123,000	31,000	124,000	4,500	109,000	15,500	128,000	2,500
Engineering occupations	150,000	500	156,000	4,000	160,000	2,000	165,000	3,500	130,000	8,500	150,000	1,000	119,000	3,500	145,000	4,000
Aerospace, aeronautical, astronautical engineers	170,000	2,500	151,000	6,500	166,000	6,000	179,000	5,000	149,000	4,000	170,000	4,000	D	D	180,000	10,500
Chemical engineers	149,000	3,500	143,000	16,500	149,000	8,000	174,000	9,000	D	D	145,000	2,500	D	D	139,000	7,000
Civil, architectural, sanitary engineers	128,000	4,000	106,000	13,500	128,000	6,000	139,000	3,500	120,000	16,500	122,000	8,000	97,000	12,000	121,000	12,500
Electrical engineers	180,000	500	183,000	5,000	179,000	5,500	195,000	8,000	137,000	49,500	180,000	2,000	S	S	158,000	7,500
Industrial engineers	129,000	14,500	D	D	112,000	16,000	149,000	32,500	D	D	123,000	13,500	D	D	141,000	23,000
Mechanical engineers	150,000	1,000	144,000	7,000	150,000	5,000	155,000	9,000	167,000	29,000	150,000	1,500	S	S	149,000	5,000
Postsecondary teachers, engineering	120,000	500	99,000	8,000	101,000	20,000	125,000	4,000	S	S	120,000	1,000	117,000	3,500	117,000	13,000
Other engineers	150,000	1,000	149,000	2,000	153,000	5,000	161,000	5,500	129,000	14,000	150,000	500	130,000	16,500	145,000	4,500
S&E-related occupations	145,000	2,500	170,000	9,500	174,000	9,000	165,000	3,500	135,000	5,000	153,000	5,000	109,000	2,500	120,000	5,000
Health occupations, except postsecondary teachers and managers	130,000	1,000	116,000	12,000	140,000	21,000	135,000	6,000	129,000	3,000	130,000	3,500	130,000	5,500	122,000	7,000
Postsecondary teachers, health and related science	120,000	3,000	122,000	8,000	S	S	124,000	6,000	209,000	20,000	120,000	2,000	110,000	1,500	99,000	3,500
S&E managers, including health	194,000	5,000	227,000	19,000	199,000	5,000	194,000	5,000	201,000	16,000	195,000	5,000	144,000	12,500	170,000	7,500
S&E precollege teachers	74,000	3,000	S	S	S	S	77,000	2,500	S	S	74,000	4,500	74,000	3,000	77,000	10,000
S&E technicians and technologists	159,000	3,000	157,000	7,000	134,000	14,500	171,000	4,500	D	D	159,000	5,500	D	D	104,000	28,500
Other S&E-related occupations	166,000	23,500	182,000	12,000	178,000	26,500	151,000	8,500	156,000	56,000	202,000	70,500	D	D	D	D
Non-S&E occupations	154,000	3,500	168,000	18,000	174,000	7,500	170,000	2,000	149,000	1,500	160,000	2,500	100,000	3,000	125,000	5,000
Arts, humanities-related occupations	99,000	2,000	83,000	33,000	103,000	21,500	109,000	6,500	98,000	7,000	99,000	3,500	70,000	25,500	97,000	5,500
Management-related occupations	160,000	4,000	178,000	7,000	164,000	7,500	158,000	5,500	150,000	7,500	174,000	7,500	124,000	9,000	145,000	5,500
Non-S&E managers	200,000	500	184,000	20,000	214,000	12,500	200,000	1,000	221,000	23,000	204,000	6,500	159,000	16,000	190,000	8,000
Non-S&E postsecondary teachers	101,000	3,000	117,000	22,000	S	S	100,000	7,000	100,000	12,500	110,000	3,000	100,000	2,000	86,000	4,500
Non-S&E precollege and other teachers	74,000	5,000	D	D	D	D	74,000	8,500	75,000	8,500	92,000	6,500	68,000	4,500	67,000	9,000
Sales, marketing occupations	150,000	2,500	149,000	22,500	159,000	20,500	150,000	4,000	144,000	37,000	159,000	3,500	103,000	14,500	102,000	29,500
Social service-related occupations	82,000	4,500	D	D	94,000	14,000	86,000	5,000	83,000	4,500	72,000	8,500	80,000	8,000	78,000	13,500
Other non-S&E occupations	139,000	8,500	83,000	9,000	91,000	18,000	139,000	11,000	198,000	9,000	119,000	8,500	120,000	24,500	71,000	8,500

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 basic research, applied research, and experimental development.^c Other work activities include production, operations, maintenance, and other activities broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 73-2

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary work activity: 2023

(Dollars and SE)

Occupation	All full-time employed		Computer applications		Design		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	Median salary	SE
All occupations	137,000	1,500	170,000	3,500	157,000	4,000	170,000	3,000	140,000	2,500	140,000	500	89,000	1,000	125,000	3,000
Science occupations	125,000	1,500	170,000	1,500	155,000	5,000	150,000	500	140,000	7,000	134,000	2,000	85,000	500	122,000	4,000
Biological, agricultural, and other life scientists	120,000	500	115,000	6,500	123,000	6,500	141,000	4,000	158,000	8,500	121,000	2,000	83,000	2,000	125,000	2,500
Agricultural, food scientists	124,000	2,500	114,000	18,000	D	D	140,000	7,500	152,000	15,000	120,000	3,500	S	S	138,000	7,500
Biochemists, biophysicists	122,000	4,500	D	D	128,000	8,500	153,000	6,500	S	S	120,000	3,000	D	D	135,000	6,500
Biological scientists	116,000	3,500	98,000	18,500	110,000	5,500	135,000	6,500	143,000	15,500	110,000	2,500	78,000	19,500	104,000	9,000
Forestry, conservation scientists	104,000	6,500	D	D	S	S	112,000	11,000	D	D	95,000	8,500	*	*	109,000	16,000
Medical scientists	143,000	3,500	115,000	14,500	114,000	16,500	160,000	6,500	179,000	15,500	139,000	3,500	S	S	146,000	8,000
Postsecondary teachers, agricultural, other natural sciences	110,000	2,500	D	D	D	D	111,000	10,000	D	D	115,000	5,500	98,000	4,000	D	D
Postsecondary teachers, biological sciences	95,000	1,500	D	D	D	D	120,000	3,500	D	D	121,000	4,000	80,000	500	83,000	12,500
Other biological, agricultural, life scientists	129,000	4,000	129,000	18,500	139,000	20,500	140,000	5,500	128,000	24,500	121,000	4,000	108,000	26,500	124,000	6,500
Computer and information scientists	176,000	3,000	180,000	1,000	189,000	8,000	195,000	7,000	170,000	22,000	182,000	4,000	100,000	3,000	136,000	10,500
Computer and information scientists	185,000	2,500	180,000	1,000	189,000	8,000	200,000	3,000	171,000	22,000	189,000	3,500	126,000	7,500	137,000	11,000
Postsecondary teachers, computer science	112,000	3,000	D	D	D	D	142,000	14,000	D	D	141,000	7,500	100,000	2,000	D	D
Mathematical scientists	136,000	2,500	150,000	4,000	157,000	13,500	189,000	9,000	171,000	22,500	150,000	2,500	84,000	2,500	115,000	11,500
Mathematical scientists	160,000	2,500	150,000	3,500	157,000	13,000	199,000	7,000	171,000	22,500	162,000	5,000	D	D	123,000	12,000
Postsecondary teachers, mathematics, statistics	95,000	2,000	D	D	D	D	116,000	7,500	D	D	115,000	5,000	84,000	2,500	79,000	8,000
Physical scientists	120,000	500	127,000	15,000	144,000	13,500	140,000	2,500	143,000	24,500	134,000	3,500	80,000	1,500	116,000	5,500
Chemists, except biochemists	130,000	2,000	144,000	58,000	115,000	31,000	135,000	6,500	112,000	19,000	132,000	4,500	D	D	105,000	4,500
Earth, atmospheric, ocean scientists	125,000	4,500	127,000	16,000	116,000	17,000	141,000	7,500	123,000	10,000	120,000	4,000	111,000	24,000	123,000	13,000
Physicists, astronomers	150,000	3,500	102,000	23,000	129,000	27,500	177,000	10,500	267,000	19,500	149,000	1,500	S	S	121,000	7,000
Postsecondary teachers, chemistry	84,000	2,000	D	D	D	D	118,000	4,500	D	D	119,000	4,500	77,000	2,000	D	D
Postsecondary teachers, physics	100,000	5,000	D	D	D	D	140,000	26,500	S	S	130,000	11,500	84,000	2,500	D	D
Postsecondary teachers, other physical science	98,000	2,500	D	D	D	D	110,000	9,500	D	D	118,000	4,000	90,000	3,500	79,000	2,500
Other physical scientists	148,000	4,500	133,000	29,000	164,000	10,000	153,000	12,000	132,000	58,500	146,000	6,000	D	D	127,000	14,000
Psychologists	108,000	3,000	D	D	D	D	126,000	6,000	121,000	5,000	125,000	4,500	80,000	2,000	105,000	7,000
Psychologists	127,000	4,000	D	D	S	S	144,000	10,500	124,000	5,000	129,000	5,500	S	S	109,000	5,000
Postsecondary teachers, psychology	92,000	3,000	D	D	D	D	106,000	5,000	111,000	9,000	116,000	5,500	80,000	1,500	92,000	19,000
Social scientists	110,000	1,000	126,000	23,000	106,000	34,500	140,000	5,500	150,000	31,500	129,000	2,000	88,000	2,000	120,000	8,500
Economists	170,000	5,500	153,000	17,500	S	S	201,000	18,000	193,000	11,500	157,000	5,000	D	D	166,000	18,500
Political scientists	139,000	11,500	D	D	D	D	139,000	5,500	D	D	136,000	22,500	D	D	168,000	11,000
Postsecondary teachers, economics	124,000	3,000	D	D	D	D	140,000	15,500	D	D	153,000	11,500	104,000	3,500	D	D
Postsecondary teachers, political science	93,000	4,000	D	D	D	D	124,000	29,000	D	D	111,000	7,500	85,000	1,500	D	D
Postsecondary teachers, sociology	89,000	2,500	D	D	D	D	115,000	17,500	D	D	108,000	4,500	80,000	1,000	89,000	8,500
Postsecondary teachers, other social sciences	92,000	2,000	D	D	D	D	117,000	7,500	D	D	101,000	3,000	85,000	2,000	99,000	10,000

TABLE 73-2

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by occupation and primary work activity: 2023

(Dollars and SE)

Occupation	All full-time employed		Computer applications		Design		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	Median salary	SE
Sociologists, anthropologists	110,000	7,500	D	D	D	D	100,000	17,500	D	D	114,000	12,000	S	S	92,000	19,000
Other social scientists	125,000	4,000	86,000	5,500	99,000	11,500	150,000	7,000	144,000	45,500	120,000	5,000	D	D	125,000	10,000
Engineering occupations	150,000	500	159,000	3,500	154,000	4,500	170,000	2,000	130,000	13,500	153,000	3,000	107,000	4,000	145,000	5,000
Aerospace, aeronautical, astronautical engineers	170,000	2,500	151,000	9,000	159,000	8,000	178,000	3,000	D	D	170,000	5,000	S	S	169,000	31,500
Chemical engineers	149,000	3,500	D	D	156,000	8,000	164,000	16,500	S	S	144,000	3,000	D	D	139,000	6,500
Civil, architectural, sanitary engineers	128,000	4,000	121,000	39,500	128,000	10,000	150,000	11,000	140,000	22,000	116,000	6,000	D	D	103,000	21,500
Electrical engineers	180,000	500	180,000	14,500	175,000	6,500	185,000	7,000	S	S	181,000	3,500	S	S	149,000	8,500
Industrial engineers	129,000	14,500	D	D	S	S	156,000	32,000	D	D	134,000	6,000	D	D	140,000	23,500
Mechanical engineers	150,000	1,000	142,000	11,500	147,000	9,000	154,000	8,000	D	D	150,000	2,500	D	D	144,000	11,000
Postsecondary teachers, engineering	120,000	500	D	D	D	D	149,000	14,000	D	D	131,000	6,000	107,000	3,500	S	S
Other engineers	150,000	1,000	149,000	7,000	150,000	3,000	169,000	6,500	117,000	27,500	149,000	2,000	138,000	15,500	146,000	6,500
S&E-related occupations	145,000	2,500	170,000	11,500	184,000	14,000	180,000	3,500	130,000	4,500	150,000	4,500	90,000	2,500	134,000	9,000
Health occupations, except postsecondary teachers and managers	130,000	1,000	100,000	49,500	119,000	15,000	146,000	8,000	127,000	3,000	130,000	8,000	130,000	18,000	130,000	8,000
Postsecondary teachers, health and related science	120,000	3,000	D	D	D	D	150,000	7,000	245,000	21,000	125,000	3,500	100,000	1,500	97,000	14,500
S&E managers, including health	194,000	5,000	243,000	26,000	201,000	11,500	198,000	4,000	170,000	35,500	174,000	5,500	D	D	170,000	11,500
S&E precollege teachers	74,000	3,000	D	D	D	D	S	S	D	D	D	D	74,000	3,500	D	D
S&E technicians and technologists	159,000	3,000	156,000	10,000	139,000	41,500	172,000	7,000	D	D	159,000	4,500	D	D	S	S
Other S&E-related occupations	166,000	23,500	197,000	29,500	S	S	135,000	8,000	160,000	59,500	D	D	D	D	D	D
Non-S&E occupations	154,000	3,500	146,000	9,000	179,000	10,000	179,000	3,500	160,000	7,500	157,000	6,000	90,000	1,000	111,000	5,500
Arts, humanities-related occupations	99,000	2,000	D	D	D	D	107,000	7,500	90,000	13,500	100,000	7,000	49,000	20,000	92,000	5,000
Management-related occupations	160,000	4,000	171,000	24,500	179,000	10,500	159,000	7,500	160,000	13,000	179,000	12,000	130,000	25,500	140,000	11,000
Non-S&E managers	200,000	500	141,000	29,500	202,000	29,500	201,000	5,000	240,000	37,500	199,000	5,000	107,000	24,500	164,000	9,000
Non-S&E postsecondary teachers	101,000	3,000	D	D	D	D	128,000	10,500	118,000	37,000	134,000	7,500	90,000	3,000	75,000	14,500
Non-S&E precollege and other teachers	74,000	5,000	D	D	D	D	95,000	16,000	D	D	100,000	8,500	68,000	5,000	S	S
Sales, marketing occupations	150,000	2,500	D	D	D	D	150,000	8,500	S	S	159,000	7,000	S	S	72,000	27,500
Social service-related occupations	82,000	4,500	D	D	D	D	85,000	8,500	88,000	7,500	72,000	14,000	84,000	3,000	52,000	14,000
Other non-S&E occupations	139,000	8,500	D	D	162,000	77,000	110,000	13,000	198,000	7,000	98,000	5,500	138,000	28,000	59,000	11,000

* = 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 basic research, applied research, and experimental development.^c Other work activities include production, operations, maintenance, and other activities not broken out separately.

Note(s):

Median annual salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 74

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad occupation: 2023

(Dollars and SE)

Employer location	All full-time employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations	
			Total		Biological, agricultural, and other life scientists		Computer and information scientists		Mathematical scientists		Physical scientists		Psychologists		Social scientists							
	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	137,000	1,500	125,000	1,500	120,000	500	176,000	3,000	136,000	2,500	120,000	500	108,000	3,000	110,000	1,000	150,000	500	145,000	2,500	154,000	3,500
New England	149,000	2,500	139,000	2,000	140,000	2,500	169,000	4,000	151,000	10,000	127,000	3,500	110,000	8,000	110,000	4,500	150,000	4,000	160,000	5,500	178,000	7,000
Connecticut	133,000	5,000	129,000	2,000	119,000	9,000	172,000	14,000	162,000	19,000	125,000	7,500	108,000	11,000	128,000	12,500	141,000	7,500	137,000	19,000	152,000	16,000
Maine	94,000	4,000	90,000	4,500	103,000	20,500	S	S	77,000	4,500	85,000	10,000	D	D	79,000	7,500	194,000	62,500	77,000	14,000	116,000	18,500
Massachusetts	159,000	2,500	149,000	2,000	149,000	1,500	169,000	4,500	164,000	10,000	134,000	8,000	112,000	14,000	113,000	8,500	159,000	5,500	186,000	10,500	188,000	12,500
New Hampshire	108,000	11,000	96,000	9,000	92,000	5,000	D	D	S	S	108,000	16,500	S	S	91,000	10,500	139,000	26,000	123,000	23,500	98,000	48,500
Rhode Island	119,000	5,000	119,000	8,000	96,000	14,500	111,000	16,500	124,000	7,500	125,000	30,500	93,000	29,000	111,000	18,000	143,000	21,000	103,000	12,500	149,000	17,500
Vermont	114,000	5,500	100,000	6,500	104,000	16,500	S	S	D	D	91,000	9,000	D	D	107,000	13,000	153,000	27,000	165,000	15,500	S	S
Middle Atlantic	140,000	500	129,000	3,500	121,000	3,000	173,000	4,500	151,000	9,500	115,000	5,500	106,000	4,000	117,000	4,000	139,000	3,500	149,000	5,000	174,000	6,000
New Jersey	159,000	6,000	150,000	1,500	156,000	9,500	160,000	13,500	179,000	17,500	132,000	13,500	109,000	5,000	146,000	15,500	144,000	10,500	161,000	12,000	185,000	11,000
New York	140,000	1,000	125,000	3,500	109,000	3,500	185,000	10,000	169,000	8,500	110,000	8,000	111,000	7,000	119,000	4,500	148,000	12,000	149,000	8,000	183,000	7,500
Pennsylvania	126,000	3,500	117,000	3,500	122,000	5,000	150,000	11,500	118,000	10,000	108,000	5,500	95,000	9,000	100,000	5,000	134,000	3,000	136,000	9,000	147,000	5,500
East North Central	120,000	500	110,000	1,000	110,000	2,500	139,000	3,500	119,000	6,500	100,000	5,000	110,000	5,500	97,000	4,000	130,000	3,500	130,000	3,500	130,000	4,000
Illinois	130,000	2,000	119,000	3,000	118,000	5,500	135,000	12,500	144,000	10,000	100,000	9,000	109,000	8,000	112,000	6,500	135,000	5,000	140,000	7,000	150,000	10,000
Indiana	112,000	5,000	100,000	3,500	116,000	9,000	116,000	16,500	88,000	11,000	93,000	17,500	94,000	10,000	91,000	11,500	119,000	4,500	121,000	17,500	130,000	12,000
Michigan	120,000	3,000	115,000	4,500	100,000	4,500	138,000	2,500	120,000	9,500	115,000	4,000	114,000	18,500	98,000	7,000	138,000	9,500	130,000	6,000	108,000	7,500
Ohio	116,000	4,500	110,000	1,500	110,000	4,500	149,000	22,500	115,000	10,500	99,000	6,500	116,000	7,000	91,000	8,000	130,000	5,500	125,000	8,000	125,000	9,500
Wisconsin	100,000	3,500	93,000	3,500	99,000	6,500	145,000	23,500	89,000	14,500	89,000	10,000	83,000	6,500	85,000	5,000	117,000	16,500	122,000	9,000	110,000	12,500
West North Central	110,000	3,000	100,000	1,500	107,000	5,000	131,000	11,500	99,000	5,000	91,000	5,000	95,000	4,500	92,000	4,000	136,000	5,500	120,000	3,000	120,000	8,000
Iowa	99,000	1,500	95,000	4,000	118,000	15,500	89,000	10,500	113,000	29,500	87,000	7,000	90,000	5,500	91,000	8,000	104,000	14,500	117,000	13,500	88,000	9,000
Kansas	105,000	3,000	99,000	6,000	114,000	8,500	90,000	15,000	86,000	7,000	89,000	10,000	99,000	5,500	89,000	7,500	106,000	12,000	118,000	7,500	125,000	27,500
Minnesota	125,000	5,500	110,000	5,000	110,000	5,000	155,000	8,000	103,000	7,500	100,000	8,500	92,000	5,000	98,000	5,000	149,000	6,000	125,000	9,000	118,000	7,000
Missouri	111,000	4,500	107,000	5,500	108,000	7,000	114,000	8,000	109,000	7,000	82,000	22,000	92,000	22,000	90,000	11,000	146,000	24,000	110,000	13,000	139,000	13,500
Nebraska	100,000	7,500	84,000	4,500	79,000	7,500	114,000	5,000	91,000	20,000	76,000	9,500	91,000	10,500	83,000	4,500	118,000	7,000	129,000	21,000	106,000	20,000
North Dakota	92,000	4,000	86,000	5,000	80,000	6,500	D	D	D	D	85,000	4,000	D	D	106,000	22,000	93,000	11,000	105,000	13,500	S	S
South Dakota	89,000	14,000	80,000	6,000	85,000	13,000	D	D	D	D	71,000	7,500	D	D	D	D	87,000	13,000	126,000	13,000	158,000	20,000
South Atlantic	132,000	3,000	125,000	2,000	120,000	500	150,000	2,000	130,000	4,000	122,000	3,500	105,000	3,500	128,000	2,500	140,000	1,500	148,000	5,500	155,000	5,000
Delaware	140,000	7,000	141,000	10,000	134,000	5,500	151,000	31,500	158,000	30,500	162,000	11,500	D	D	104,000	9,000	133,000	11,500	137,000	46,000	162,000	29,500
District of Columbia	159,000	3,500	149,000	1,500	129,000	2,500	145,000	13,000	144,000	8,000	144,000	7,000	146,000	5,000	164,000	4,500	145,000	6,500	155,000	16,000	183,000	4,500
Florida	116,000	4,500	100,000	3,500	93,000	5,500	138,000	20,500	117,000	6,500	89,000	7,500	100,000	4,500	99,000	7,500	120,000	5,500	129,000	14,500	135,000	8,000
Georgia	119,000	1,000	107,000	4,000	107,000	5,000	140,000	13,000	107,000	8,500	98,000	8,000	94,000	15,000	99,000	6,000	129,000	8,000	126,000	6,000	144,000	4,000
Maryland	146,000	3,500	135,000	3,500	130,000	2,000	158,000	6,500	144,000	7,000	149,000	6,000	116,000	9,500	138,000	13,000	159,000	2,500	165,000	7,500	154,000	7,000
North Carolina	128,000	4,000	117,000	3,500	117,000	4,000	150,000	8,000	139,000	4,000	98,000	5,500	99,000	13,500	95,000	4,000	141,000	4,500	149,000	14,500	154,000	6,500
South Carolina	100,000	2,500	93,000	5,500	88,000	7,000	87,000	20,500	71,000	6,500	97,000	4,000	84,000	11,500	93,000	9,000	114,000	5,000	114,000	19,500	113,000	21,000

TABLE 74

Median annual salary of U.S. residing full-time employed doctoral scientists and engineers, by employer location and broad occupation: 2023

(Dollars and SE)

Employer location	All full-time employed		Science occupations														Engineering occupations		S&E-related occupations		Non-S&E occupations			
			Total		Biological, agricultural, and other life scientists		Computer and information scientists		Mathematical scientists		Physical scientists		Psychologists		Social scientists									
	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	137,000	4,000	125,000	4,500	114,000	11,000	167,000	13,500	128,000	10,500	119,000	2,500	117,000	8,000	117,000	5,000	148,000	7,500	160,000	20,000	156,000	10,000		
West Virginia	109,000	6,500	94,000	14,000	94,000	19,000	D	D	D	D	153,000	37,500	S	S	75,000	13,500	108,000	4,500	109,000	21,500	132,000	20,000		
East South Central	103,000	2,500	95,000	4,500	90,000	4,000	133,000	16,000	84,000	3,500	102,000	6,000	96,000	12,000	85,000	3,000	122,000	6,500	113,000	8,000	114,000	8,000		
Alabama	107,000	5,500	92,000	7,500	93,000	10,500	134,000	16,500	85,000	11,500	86,000	7,000	83,000	20,000	84,000	6,000	140,000	14,000	121,000	12,000	124,000	17,000		
Kentucky	95,000	5,500	84,000	4,000	84,000	10,000	98,000	23,000	82,000	4,000	88,000	10,000	71,000	7,000	82,000	12,500	98,000	7,500	100,000	2,000	109,000	6,000		
Mississippi	101,000	3,000	99,000	5,500	99,000	4,500	D	D	D	D	100,000	5,500	D	D	78,000	9,000	137,000	38,500	113,000	25,000	101,000	18,500		
Tennessee	110,000	3,000	99,000	4,000	86,000	5,500	137,000	24,000	80,000	30,500	119,000	14,500	101,000	7,000	87,000	6,000	125,000	6,500	122,000	14,000	119,000	16,500		
West South Central	121,000	4,000	109,000	3,000	100,000	3,000	154,000	5,000	113,000	5,500	109,000	8,000	105,000	5,000	92,000	5,500	150,000	3,000	125,000	4,000	140,000	10,500		
Arkansas	100,000	2,500	94,000	5,500	95,000	5,000	103,000	23,500	D	D	75,000	9,500	121,000	27,500	95,000	14,000	96,000	17,000	92,000	14,500	149,000	20,000		
Louisiana	90,000	3,500	83,000	4,500	89,000	7,000	128,000	14,000	71,000	21,500	77,000	3,500	85,000	7,000	82,000	4,500	112,000	11,500	114,000	17,000	97,000	18,500		
Oklahoma	102,000	9,000	88,000	5,500	94,000	19,000	D	D	76,000	14,500	97,000	21,000	75,000	9,000	81,000	5,500	124,000	14,500	125,000	15,500	108,000	48,000		
Texas	130,000	3,000	119,000	3,000	102,000	5,000	155,000	5,000	119,000	11,000	128,000	10,000	107,000	4,000	100,000	8,500	156,000	6,500	128,000	4,000	147,000	10,000		
Mountain	123,000	3,000	115,000	2,500	105,000	4,000	149,000	3,000	119,000	4,500	124,000	4,500	102,000	5,000	101,000	4,500	145,000	4,500	130,000	3,000	122,000	5,000		
Arizona	125,000	4,000	110,000	4,000	114,000	8,000	136,000	18,500	114,000	9,500	104,000	6,000	94,000	7,000	92,000	7,500	135,000	4,500	144,000	12,000	126,000	13,000		
Colorado	120,000	4,000	119,000	5,000	95,000	6,000	155,000	8,000	121,000	9,500	127,000	3,500	104,000	9,500	94,000	11,000	141,000	11,500	120,000	4,500	120,000	12,500		
Idaho	116,000	4,000	104,000	8,500	100,000	13,000	137,000	19,000	D	D	109,000	11,500	D	D	83,000	14,500	145,000	5,000	122,000	32,000	118,000	11,500		
Montana	94,000	5,000	91,000	3,500	89,000	10,000	D	D	D	D	96,000	11,000	D	D	91,000	2,000	115,000	13,000	109,000	4,000	79,000	8,500		
Nevada	116,000	6,000	110,000	6,500	121,000	11,500	S	S	114,000	14,000	99,000	14,500	D	D	87,000	12,500	125,000	36,000	108,000	19,000	140,000	18,000		
New Mexico	152,000	5,500	138,000	5,000	107,000	6,500	156,000	4,500	132,000	10,500	160,000	8,500	96,000	6,000	104,000	6,500	173,000	3,000	180,000	37,500	145,000	26,000		
Utah	120,000	1,000	120,000	2,000	111,000	7,500	145,000	4,500	113,000	9,500	119,000	9,000	128,000	23,500	110,000	9,000	119,000	11,500	119,000	6,500	119,000	8,500		
Wyoming	108,000	11,000	98,000	13,000	87,000	5,000	D	D	D	D	98,000	7,500	D	D	D	D	D	D	D	D	137,000	16,500	100,000	27,500
Pacific	168,000	3,000	156,000	3,500	133,000	4,000	200,000	2,000	169,000	3,000	140,000	2,500	119,000	3,500	123,000	5,000	180,000	2,500	180,000	7,000	180,000	4,500		
Alaska	103,000	6,000	101,000	9,000	100,000	24,000	D	D	D	D	107,000	20,000	D	D	83,000	39,500	S	S	113,000	22,000	89,000	13,500		
California	175,000	2,500	165,000	2,500	140,000	3,500	210,000	1,500	174,000	6,500	148,000	3,000	124,000	4,500	130,000	4,500	184,000	4,500	195,000	7,000	195,000	8,000		
Hawaii	120,000	14,000	114,000	16,000	91,000	11,500	146,000	38,000	S	S	129,000	5,500	S	S	103,000	16,500	116,000	8,000	146,000	43,000	88,000	16,500		
Oregon	140,000	2,000	111,000	8,000	100,000	6,000	160,000	8,000	143,000	25,000	103,000	9,000	96,000	7,500	100,000	4,000	150,000	3,500	142,000	9,500	148,000	18,000		
Washington	159,000	4,500	151,000	5,000	119,000	3,500	198,000	3,500	156,000	16,000	125,000	9,000	109,000	11,500	118,000	9,000	175,000	5,000	169,000	14,000	170,000	18,500		
Puerto Rico	79,000	4,000	80,000	2,500	83,000	8,000	S	S	81,000	3,000	79,000	8,000	49,000	14,500	S	S	80,000	9,000	60,000	7,000	80,000	7,500		
U.S. territories and other areas	118,000	13,500	98,000	13,000	108,000	17,000	124,000	30,500	79,000	28,000	72,000	15,000	D	D	78,000	15,000	147,000	51,500	S	S	147,000	36,000		

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 salary 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 75

U.S. residing doctoral scientists and engineers on postdoc appointments, by field of doctorate: 2023

(Number and SE)

Field of study	Number	SE
Total postdocs	23,450	675
Science	19,050	550
Biological, agricultural, and environmental life sciences	10,700	375
Agricultural and food sciences	400	75
Biochemistry and biophysics	1,100	150
Cell, cellular biology, and molecular biology	1,300	150
Microbiological sciences and immunology	1,050	150
Natural resources and conservation	250	50
Zoology	200	75
Other biological sciences	6,400	300
Computer and information sciences	350	125
Mathematics and statistics	700	125
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	4,950	325
Astronomy and astrophysics	400	75
Chemistry, except biochemistry	2,100	200
Geosciences, atmospheric sciences, and ocean sciences	850	100
Physics	1,600	175
Psychology	1,250	200
Social sciences	1,150	125
Economics	200	75
Political science and government	150	50
Sociology, demography, and population studies	250	75
Other social sciences	550	100
Engineering	3,500	325
Aerospace, aeronautical, and astronautical engineering	100	50
Chemical engineering	450	100
Civil engineering	400	125
Electrical and computer engineering	650	175
Mechanical engineering	450	100
Metallurgical and materials engineering	450	100
Other engineering	1,000	150
Health	900	125

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 appointment is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc appointment status is reported for principal job as of survey reference date (1 February 2023). Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 76

Postdoc appointment status of U.S. residing doctoral scientists and engineers, by years since doctorate and broad field of doctorate: 2023

(Number and SE)

Years since doctorate and status of postdoc 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		
Doctorate recipient	908,700	2,300	667,950	2,050	235,050	1,175	36,350	550	38,500	600	141,800	1,125	112,100	900	104,100	875	196,750	1,300	44,000	600
Postdoc appointment in 2023	23,450	675	19,050	550	10,700	375	350	125	700	125	4,950	325	1,250	200	1,150	125	3,500	325	900	125
≤ 5 years	143,600	575	99,000	625	35,450	450	7,350	275	6,450	225	21,200	450	13,700	375	14,900	325	35,100	500	9,500	300
Postdoc appointment in 2023	18,800	550	15,350	475	8,450	325	250	75	600	100	4,150	275	900	150	950	125	2,700	200	800	125
6–10 years	169,900	925	120,550	1,000	43,050	575	8,600	375	7,150	350	24,150	475	17,350	450	20,250	425	39,300	675	10,050	350
Postdoc appointment in 2023	3,350	300	2,850	300	1,950	200	D	D	D	D	650	150	S	S	100	50	450	125	50	50
11–15 years	146,200	925	107,600	925	40,800	700	7,150	400	5,850	325	21,050	625	16,450	450	16,250	500	31,550	675	7,100	350
Postdoc appointment in 2023	650	150	500	125	300	100	D	D	D	D	S	S	D	D	D	D	S	S	D	D
> 15 years	449,000	1,925	340,850	1,675	115,750	950	13,300	425	19,000	450	75,400	925	64,650	775	52,750	775	90,800	975	17,350	500
Postdoc appointment in 2023	650	225	400	175	D	D	D	D	D	D	D	D	S	S	D	D	S	S	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 appointment 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 appointment status is reported for principal job as of survey reference date (1 February 2023). Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 77
U.S. residing doctoral scientists and engineers on postdoc appointments, by selected demographic characteristics and broad field of doctorate: 2023

(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				
On postdoc appointment in February 2023	23,450	675	19,050	550	10,700	375	350	125	700	125	4,950	325	1,250	200	1,150	125	3,500	325	900	125		
Years since doctorate																						
≤ 5 years	18,800	550	15,350	475	8,450	325	250	75	600	100	4,150	275	900	150	950	125	2,700	200	800	125		
6–10 years	3,350	300	2,850	300	1,950	200	D	D	D	D	650	150	S	S	100	50	450	125	50	50		
11–15 years	650	150	500	125	300	100	D	D	D	D	S	S	D	D	D	D	S	S	D	D		
> 15 years	650	225	400	175	D	D	D	D	D	D	D	D	S	S	D	D	S	S	D	D		
Sex																						
Male	13,650	550	10,650	450	5,550	325	200	75	500	100	3,350	275	450	175	600	125	2,650	300	400	75		
Female	9,800	400	8,400	375	5,150	250	S	S	200	75	1,600	175	750	125	500	75	900	125	500	100		
Ethnicity and race																						
Hispanic or Latino ^a	1,850	125	1,650	125	1,000	100	D	D	50	25	300	50	150	75	150	50	200	75	50	25		
Not Hispanic or Latino ^b																						
American Indian or Alaska Native	S	S	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
Asian	9,050	475	6,650	350	3,600	250	150	50	200	75	2,150	225	300	75	250	75	2,050	250	350	75		
Black or African American	900	125	750	125	400	75	D	D	D	D	100	50	D	D	150	50	50	25	100	50		
White	11,050	425	9,450	400	5,400	275	S	S	400	75	2,300	225	650	175	550	100	1,200	175	400	75		
Other race ^c	550	100	500	100	300	75	D	D	D	D	100	50	D	D	D	D	D	D	D	D		
Age																						
Under 35	13,050	450	10,650	425	5,650	275	150	50	500	100	3,400	250	550	125	450	100	2,050	175	350	75		
35–44	8,550	475	7,100	400	4,550	325	100	50	200	50	1,350	200	350	100	550	100	1,050	200	450	100		
45–75	1,800	275	1,300	200	550	100	D	D	D	D	200	75	350	125	150	50	400	200	100	50		
Citizenship																						
U.S. citizen	13,500	475	11,650	450	6,950	300	200	125	400	75	2,350	200	900	200	800	125	1,350	200	550	100		
Non-U.S. citizen	9,950	500	7,400	400	3,750	250	150	50	250	75	2,600	275	300	75	350	100	2,200	250	350	75		
Sector of employment																						
Educational institution ^d	17,300	600	13,950	450	7,500	300	350	125	600	100	3,700	275	950	150	950	125	2,600	300	700	125		
Business or industry ^e	3,950	325	3,350	300	2,250	225	D	D	D	D	750	150	S	S	50	50	550	150	S	S		
Government ^f	2,200	200	1,750	200	1,000	125	D	D	S	S	500	100	D	D	100	50	350	75	100	50		

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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

^d 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. Detail may not add to total because of rounding. A postdoc appointment is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc appointment status is reported for the principal job as of the survey reference date (1 February 2023). Years since doctorate were calculated as academic years since doctorate attainment. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE 78

Doctoral scientists and engineers, by residence location, sex, employment status, and sector of employment: 2023

(Number and SE)

Residence location	Total		Male		Female		Employment status											
							Employed, by employment sector								Unemployed ^a		Not in the labor force ^b	
	All employed		Educational institution		Business or industry		Government											
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Worldwide	1,222,400	950	771,300	875	451,100	525	1,055,000	1,900	459,600	2,775	500,300	2,825	95,100	1,650	13,750	625	153,650	1,525
U.S. residing population	1,058,950	1,925	654,750	1,675	404,200	1,200	908,700	2,300	368,100	2,450	462,250	2,800	78,350	1,450	11,250	550	139,050	1,400
New England	94,200	1,500	57,650	1,150	36,550	900	83,600	1,450	30,200	725	50,200	1,150	3,150	300	1,100	200	9,550	450
Middle Atlantic	140,350	1,950	86,100	1,725	54,250	1,100	122,750	1,800	54,350	1,225	63,550	1,425	4,850	425	1,050	175	16,550	700
East North Central	126,050	1,800	78,600	1,425	47,450	975	107,350	1,725	53,550	1,175	48,250	1,225	5,550	425	1,350	200	17,350	650
West North Central	59,700	1,250	37,200	1,025	22,500	700	50,250	1,050	26,250	800	21,100	700	2,900	250	750	200	8,700	550
South Atlantic	203,200	2,325	120,650	1,825	82,600	1,250	173,650	2,175	67,000	1,275	72,200	1,450	34,450	975	1,750	225	27,800	725
East South Central	35,500	1,000	21,600	775	13,900	525	30,350	875	17,350	625	10,000	550	3,000	300	400	125	4,750	400
West South Central	84,550	1,750	53,400	1,525	31,150	800	73,100	1,550	34,000	850	34,400	1,200	4,700	375	750	150	10,650	575
Mountain	76,600	1,400	48,700	1,175	27,900	800	63,000	1,250	26,000	750	30,850	950	6,150	375	900	150	12,700	550
Pacific and U.S. territories	238,850	2,275	150,950	1,975	87,900	1,150	204,600	2,025	59,400	1,125	131,650	1,775	13,550	625	3,250	325	31,000	1,025
Non-U.S. residing population	163,450	1,875	116,550	1,700	46,900	1,125	146,300	1,825	91,500	1,500	38,100	1,275	16,750	875	2,550	300	14,600	800
Europe	40,250	1,100	25,850	900	14,400	675	36,350	1,075	20,500	775	11,350	650	4,450	400	600	150	3,300	350
Asia	81,300	1,525	61,400	1,300	19,900	875	73,100	1,525	48,950	1,300	16,950	975	7,200	550	1,000	225	7,150	600
North America ^c	19,450	700	12,950	550	6,450	450	17,200	625	10,550	600	4,600	350	2,000	275	450	175	1,750	250
Central America	1,250	150	950	150	300	75	1,050	150	450	100	400	100	150	75	D	D	200	75
Caribbean	800	125	450	100	350	75	700	125	350	75	200	100	150	50	D	D	S	S
South America	8,000	425	5,950	400	2,050	175	7,350	425	4,700	350	1,600	225	1,050	150	100	25	600	125
Africa	5,650	400	4,500	350	1,150	150	4,750	375	2,500	250	1,450	200	750	175	200	75	700	125
Oceania	6,250	475	4,150	450	2,050	225	5,300	450	3,050	325	1,350	200	950	200	150	50	800	150

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 retirement, family responsibilities, chronic illness, or other reasons.^c North America excludes United States.**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 2023. The worldwide and non-U.S. residing population totals include an estimated 550 individuals who were living abroad, but in an unspecified location. 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. Business or industry includes private for-profit, private nonprofit, self-employed or business owners in incorporated or nonincorporated business, and employers not broken out separately. Government includes U.S. federal, state, and local government and non-U.S. government at any level.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE R-1

Retirement status by employment status among doctoral scientists and engineers, by selected demographic characteristics and field of doctorate: 2023

(Number, percent, and SE)

Characteristic	Total		Employed				Not employed			
			Never retired		Previously retired ^a		Not retired ^b		Retired ^c	
	Number	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
U.S. residing doctorate recipient	1,058,950	1,925	79.2	0.20	6.6	0.15	2.4	0.10	11.8	0.15
Sex										
Male	654,750	1,675	78.0	0.30	7.3	0.20	1.7	0.10	13.0	0.20
Female	404,200	1,200	81.1	0.25	5.4	0.20	3.7	0.20	9.8	0.20
Ethnicity and race										
Hispanic or Latino ^d	52,400	700	85.4	0.70	5.1	0.45	3.0	0.30	6.5	0.50
Not Hispanic or Latino ^e										
American Indian or Alaska Native	2,050	150	72.6	4.00	11.8	2.65	5.9	2.35	9.7	2.55
Asian	264,150	1,675	87.9	0.45	3.3	0.25	2.6	0.20	6.2	0.30
Black or African American	40,200	475	83.6	0.80	6.1	0.60	2.8	0.40	7.6	0.55
White	682,400	1,700	75.0	0.25	8.0	0.20	2.2	0.10	14.7	0.20
Other race ^f	17,750	550	85.0	1.40	4.9	0.90	3.1	0.45	7.0	1.05
Age										
Under 55	626,850	2,050	96.1	0.15	0.9	0.10	2.7	0.15	0.2	0.05
55–60	128,600	1,550	87.5	0.55	5.9	0.40	2.4	0.25	4.2	0.35
61–65	101,500	1,350	67.1	0.95	14.2	0.60	2.4	0.30	16.3	0.75
66–70	103,800	1,325	36.4	0.80	20.2	0.65	1.6	0.25	41.8	0.80
71–75	98,200	1,200	18.1	0.75	21.8	0.75	1.3	0.25	58.8	0.90
Disability status										
With disability	122,350	1,675	68.2	0.80	9.4	0.50	3.9	0.35	18.5	0.55
Without disability	936,600	2,400	80.7	0.20	6.2	0.15	2.2	0.10	10.9	0.15
Field of study										
Science	787,000	1,825	78.2	0.25	6.7	0.15	2.5	0.10	12.6	0.15
Biological, agricultural, and environmental life sciences	274,850	950	80.2	0.35	5.4	0.20	2.8	0.20	11.6	0.30
Computer and information sciences	40,300	450	86.2	0.80	4.1	0.45	2.4	0.50	7.3	0.60
Mathematics and statistics	44,650	475	80.6	0.95	5.6	0.55	2.9	0.45	10.9	0.65
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	167,650	1,025	78.6	0.55	6.0	0.35	2.4	0.20	13.0	0.45
Psychology	135,750	625	71.8	0.55	10.8	0.50	2.2	0.25	15.2	0.50
Social sciences	123,800	825	76.5	0.60	7.6	0.40	2.2	0.25	13.6	0.45
Engineering	219,400	1,125	84.0	0.45	5.7	0.30	2.1	0.20	8.3	0.35
Health	52,600	475	75.1	0.75	8.5	0.65	2.4	0.35	13.9	0.70
Non-U.S. residing doctorate recipient	163,450	1,875	81.8	0.60	7.7	0.40	2.9	0.25	7.6	0.45
Sex										
Male	116,550	1,700	80.8	0.75	8.4	0.50	2.3	0.30	8.5	0.55

TABLE R-1

Retirement status by employment status among doctoral scientists and engineers, by selected demographic characteristics and field of doctorate: 2023

(Number, percent, and SE)

Characteristic	Total		Employed				Not employed			
			Never retired		Previously retired ^a		Not retired ^b		Retired ^c	
	Number	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
Female	46,900	1,125	84.3	0.90	5.9	0.60	4.4	0.55	5.3	0.60
Age										
Under 55	97,050	1,500	94.2	0.55	2.1	0.40	3.5	0.40	0.1	0.10
55–60	23,600	925	88.3	1.30	5.3	0.95	2.2	0.60	4.1	0.95
61–65	21,100	875	74.0	2.05	13.4	1.45	1.6	0.55	11.0	1.35
66–70	13,050	625	31.1	2.50	31.0	2.80	2.2	1.00	35.7	2.90
71–75	8,650	550	21.2	3.10	27.4	2.95	1.2	0.55	50.2	3.45
Field of study										
Science	114,500	1,700	82.2	0.70	7.4	0.50	2.8	0.30	7.6	0.50
Engineering	42,600	1,150	81.3	1.10	8.1	0.90	2.7	0.55	7.9	0.85
Health	6,350	425	79.2	3.60	9.3	2.35	5.6	2.20	5.9	1.65

SE = standard error.

^a Employed and previously retired includes individuals who were working during the survey reference week and had retired previously from any position.^b Not employed and not retired includes individuals who were unemployed or not seeking work because of reasons other than retired.^c Not employed, retired individuals include those who reported not working and being retired regardless of whether they were currently seeking work or had another reason for not working.^d Hispanic or Latino may be of any race.^e American Indian or Alaska Native, Asian, Black or African American, and White are single race.^f Other race includes individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.**Note(s):**

Numbers are rounded to the nearest 50. Standard errors of numbers are rounded up to the nearest 25. Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE R-2

Retirement experiences for doctoral scientists and engineers, by residence location and employment status: 2023

(Number, percent, and SE)

Retirement experiences	U.S. residing doctorate recipients										Non-U.S. residing doctorate recipients									
	Total		Employed, previously retired ^a				Not employed, retired ^b				Total		Employed, previously retired ^a				Not employed, retired ^b			
			Full time		Part time		Under 67		67–75				Full time		Part time		Under 67		67–75	
	Number	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Number	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
Doctorate recipient ever retired	194,500	1,700	14.0	0.40	21.9	0.45	15.4	0.50	48.7	0.55	25,000	900	25.0	1.75	25.3	2.00	18.0	1.60	31.8	1.70
Employment situation encouraged retirement																				
Became eligible for pension	55,750	1,225	16.6	0.80	21.0	0.85	14.1	0.80	48.4	1.10	11,150	725	23.5	2.20	21.8	2.60	17.2	2.50	37.5	3.05
Work was not satisfying	44,550	1,200	18.5	1.10	20.8	1.10	21.7	1.00	39.0	1.30	3,600	375	24.6	4.90	27.2	4.95	29.1	4.50	19.1	4.00
Early retirement incentive offer	25,350	900	17.9	1.35	19.0	1.20	16.0	1.40	47.1	1.85	2,650	325	21.3	4.55	30.6	5.95	19.7	5.65	28.4	5.15
Would have been laid off	17,950	725	18.5	1.90	24.7	1.60	16.8	1.55	40.0	1.90	1,350	250	46.6	9.35	17.6	5.55	9.1	3.65	26.7	7.00
New job duties	15,050	800	20.3	1.90	21.4	1.75	21.0	1.95	37.3	2.10	2,100	300	47.9	7.55	24.2	5.50	13.8	5.70	14.0	4.35
Experienced age discrimination	13,850	625	18.2	1.90	25.5	2.20	12.9	1.35	43.5	2.25	1,800	275	24.6	6.65	19.5	6.05	14.6	5.85	41.3	7.10
Other employment situations ^c	65,750	1,300	23.1	0.80	25.1	0.85	14.3	0.85	37.4	0.85	11,150	675	32.8	2.85	26.9	2.70	14.7	2.35	25.5	2.60
Personal factors encouraged retirement																				
Had sufficient income to retire	143,050	1,425	6.7	0.40	22.1	0.55	17.4	0.60	53.8	0.70	12,250	700	12.0	1.85	25.2	2.40	24.0	2.15	38.8	2.65
Wanted more time for personal pursuits and leisure	122,400	1,525	7.2	0.50	23.1	0.60	16.8	0.60	52.9	0.75	11,950	650	13.0	1.95	26.5	2.45	23.6	2.25	36.9	2.50
Wanted more time with family and friends	93,000	1,350	7.7	0.50	24.3	0.75	17.0	0.75	51.0	0.90	9,300	625	13.1	2.10	28.1	3.25	21.9	2.65	36.9	3.50
Became eligible for a government retirement benefit	63,850	1,350	8.1	0.55	22.6	0.85	8.2	0.65	61.0	1.10	9,200	600	23.2	2.75	24.2	3.15	15.5	2.75	37.1	3.35
Personal health	35,700	1,075	9.1	0.85	22.3	1.30	18.4	1.20	50.2	1.55	4,500	425	20.3	3.70	20.8	4.10	27.9	5.05	31.0	4.80
Other personal factors ^d	60,850	1,275	9.0	0.65	22.3	0.95	18.2	0.85	50.5	1.15	5,650	450	21.5	3.40	25.1	3.15	17.2	3.05	36.2	3.40
Overall satisfaction with retirement																				
Very satisfied	134,750	1,550	11.8	0.50	21.4	0.55	14.5	0.55	52.3	0.70	16,100	800	22.3	2.15	23.3	2.35	20.0	2.10	34.4	2.25
Somewhat satisfied	50,200	1,150	18.1	1.05	23.4	1.10	17.4	1.00	41.1	1.10	6,850	450	26.5	3.50	29.9	3.40	16.3	2.60	27.3	3.55
Somewhat dissatisfied	7,350	450	22.5	2.60	21.5	2.35	18.3	2.75	37.7	3.15	1,550	275	38.3	8.70	33.1	8.70	S	S	24.0	7.05
Very dissatisfied	2,200	275	32.1	5.10	19.9	4.05	12.7	3.50	35.3	5.00	500	125	47.1	15.30	D	D	D	D	S	S

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

SE = standard error.

^a Employed and previously retired includes individuals who were working during the survey reference week and had retired previously from any position.^b Not employed, retired individuals include those who reported not working and being retired regardless of whether they were currently seeking work or had another reason for not working.^c Other employment situations include wages reduced, hours reduced, new job location, lack of work available, and other employment situations.^d Other personal factors include spouse or partner retiring; the health of family members, relatives, or friends; providing childcare; and other personal factors.**Note(s):**

Numbers are rounded to the nearest 50. Standard errors of numbers are rounded up to the nearest 25. Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. 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 their 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE R-3
Reasons for working after retiring of doctoral scientists and engineers, by select characteristics: 2023
 (Number, percent, and SE)

Characteristic	Reasons for working after retiring															
	Working after retirement		Wanted a professional identity		Wanted additional income		Wanted social connection		Was asked to continue or return to work		Needed additional income		Health insurance ^a		Other reasons ^b	
	Total	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
U.S. residing, reported working after retiring	85,200	1,450	65.7	0.75	57.5	0.95	49.9	1.00	38.8	0.90	23.2	0.75	15.5	0.75	20.3	0.70
Employment status in 2023																
Employed, full time	27,250	850	66.0	1.45	65.6	1.85	46.5	1.80	34.8	1.60	39.4	1.65	31.3	1.55	23.7	1.50
Employed, part time	42,600	925	69.6	1.15	57.9	1.30	54.4	1.25	38.9	1.20	17.9	1.10	8.8	0.75	18.1	1.00
Not employed	15,350	600	54.4	1.95	42.0	1.90	43.6	2.10	45.6	2.10	9.3	1.20	5.9	1.10	20.2	1.80
Sex																
Male	57,900	1,200	64.3	0.95	58.2	1.15	48.3	1.15	37.6	1.15	22.7	0.95	16.5	0.95	19.4	0.90
Female	27,300	700	68.7	1.25	55.9	1.60	53.3	1.55	41.4	1.50	24.3	1.30	13.3	1.15	22.2	1.25
Ethnicity and race																
Hispanic or Latino ^c	3,150	275	62.4	4.00	60.7	3.85	53.2	3.95	33.7	3.95	34.1	2.95	19.8	3.40	27.1	3.65
Not Hispanic or Latino ^d																
American Indian or Alaska Native	250	75	56.6	11.05	48.9	11.10	37.2	10.75	24.6	9.30	36.5	11.50	S	S	33.8	11.80
Asian	10,300	675	64.8	2.95	51.5	3.35	55.5	3.70	38.5	3.15	29.4	3.20	23.4	2.90	20.2	2.60
Black or African American	2,900	275	58.0	3.95	61.3	3.45	44.3	4.15	28.7	3.70	35.2	4.45	13.1	2.65	17.5	3.05
White	67,550	1,250	66.4	0.90	58.2	1.00	49.4	1.05	39.6	0.90	21.3	0.85	14.3	0.80	19.9	0.80
Other race ^e	1,050	200	63.5	8.25	54.4	8.30	37.7	8.15	40.6	8.65	19.6	6.90	8.1	3.30	26.3	7.90
Age																
Under 55	5,550	400	67.1	3.35	68.7	3.40	55.7	4.40	25.1	3.05	43.4	3.60	21.4	2.65	30.0	3.50
55–60	8,250	525	62.5	3.00	66.3	3.15	49.6	2.80	38.7	2.75	34.6	2.55	27.0	2.65	19.6	2.30
61–65	16,200	625	63.6	1.85	62.0	2.00	50.2	2.15	36.8	2.00	29.8	1.75	24.9	2.15	19.4	1.60
66–70	26,050	825	67.4	1.30	54.5	1.50	49.8	1.65	40.9	1.60	19.5	1.35	12.3	1.20	20.8	1.25
71–75	29,150	925	66.0	1.45	53.0	1.65	48.8	1.70	40.7	1.80	15.8	1.35	8.7	1.10	18.7	1.30
Disability status																
With disability	14,250	700	67.3	2.45	62.2	2.40	49.8	2.50	40.5	2.35	28.4	2.35	20.6	1.90	20.0	1.75
Without disability	70,950	1,500	65.4	0.90	56.6	1.05	50.0	1.05	38.5	1.00	22.2	0.95	14.4	0.85	20.3	0.70
Field of study																
Science	65,200	1,250	66.2	0.90	57.6	1.05	50.2	1.10	38.0	1.00	23.3	0.85	14.5	0.85	21.0	0.85
Biological, agricultural, and environmental life sciences	18,350	625	66.6	1.75	55.1	2.00	50.2	1.85	40.5	2.00	23.8	1.65	16.5	1.55	20.9	1.80
Computer and information sciences	2,050	200	56.7	5.10	45.0	5.30	49.8	5.40	29.4	4.85	22.2	4.25	23.3	4.95	30.0	5.60
Mathematics and statistics	3,200	275	57.5	4.10	50.5	4.75	46.1	4.20	38.7	4.05	24.1	3.45	20.0	3.65	24.8	4.25
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	12,800	625	58.9	2.35	53.7	2.40	47.2	2.40	40.7	2.35	18.8	2.05	15.4	2.00	20.5	1.90
Psychology	17,150	725	75.4	2.00	65.6	1.70	54.4	2.05	36.1	2.10	26.1	1.95	10.7	1.25	17.1	1.60
Social sciences	11,550	575	64.4	2.05	58.6	2.60	48.6	2.60	34.9	2.35	23.5	2.20	13.1	1.65	25.0	2.70
Engineering	14,400	650	60.3	2.55	57.1	2.50	47.2	2.55	40.6	2.60	24.2	2.10	20.4	2.20	17.8	1.90

TABLE R-3

Reasons for working after retiring of doctoral scientists and engineers, by select characteristics: 2023

(Number, percent, and SE)

Characteristic	Working after retirement		Reasons for working after retiring													
			Wanted a professional identity		Wanted additional income		Wanted social connection		Was asked to continue or return to work		Needed additional income		Health insurance ^a		Other reasons ^b	
	Total	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
Health	5,600	325	73.8	2.55	56.7	3.25	53.5	3.65	44.2	3.45	19.8	2.60	13.9	2.05	18.1	2.50
Non-U.S. residing, reported working after retiring	14,250	725	65.4	2.25	52.3	2.95	48.6	2.75	39.2	2.85	26.8	2.05	16.4	2.25	14.1	1.85
Employment status in 2023																
Employed, full time	6,250	475	71.7	3.35	58.9	4.70	48.9	4.25	36.4	3.95	34.4	3.65	20.2	3.45	14.3	2.55
Employed, part time	6,300	550	62.6	3.30	47.5	3.90	50.3	4.05	40.2	4.00	22.4	3.00	15.5	3.10	12.9	2.50
Not employed	1,700	225	53.0	6.95	46.1	6.45	41.4	7.10	45.8	7.85	14.8	4.55	D	D	17.4	5.85
Sex																
Male	11,200	650	64.1	2.70	50.3	3.55	45.5	3.00	36.9	3.45	27.7	2.45	16.7	2.55	12.8	1.95
Female	3,050	300	70.4	4.00	59.7	4.90	59.7	4.80	47.5	5.15	23.3	4.30	15.6	3.65	18.8	4.00
Age																
Under 55	2,100	350	61.3	7.55	70.0	6.70	49.4	6.70	22.7	5.05	48.3	7.45	16.9	5.10	15.1	4.95
55–60	1,450	250	50.1	8.35	56.2	8.90	30.0	7.15	63.4	8.00	24.5	7.60	10.6	4.55	13.3	4.95
61–65	2,900	350	75.3	3.90	58.1	5.75	53.8	5.75	36.0	5.30	25.0	4.90	18.7	4.85	12.6	2.60
66–70	4,700	475	66.9	4.45	47.7	4.25	48.2	4.35	40.7	5.10	24.1	3.70	16.8	3.90	11.1	2.85
71–75	3,100	325	63.8	4.85	40.1	4.90	52.4	5.45	39.7	5.45	18.9	4.40	16.1	4.45	19.6	4.25
Field of study																
Science	9,900	600	64.9	2.55	51.3	2.75	49.9	3.10	39.5	3.10	27.5	2.25	13.2	2.10	14.5	2.10
Engineering	3,750	400	63.2	5.30	52.5	6.35	46.0	5.80	37.8	5.85	23.4	5.10	23.4	5.10	11.4	3.65
Health	650	175	86.3	6.05	66.9	12.25	44.1	11.50	42.6	13.15	S	S	D	D	S	S

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

SE = standard error.

^a Health insurance for self or for family.^b Other reasons for working after retirement include spouse or partner changed their work status and other reasons.^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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.**Note(s):**

Numbers are rounded to the nearest 50. Standard errors of numbers are rounded up to the nearest 25. Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. Detail may not add to total because of rounding. Working after retiring includes individuals not employed in 2023 and reported last worked after the year retired as well as those currently working. 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 their 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 2023.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

TABLE R-4

Volunteering experiences among doctoral scientists and engineers ages 55–75, by retirement status and select characteristics: 2023

(Number, percent, and SE)

Characteristic	Total		Annual time spent volunteering for religious, educational, health-related, or other charitable organizations						Annual time spent helping friends, neighbors, or relatives					
			None		Less than 50 hours		50 hours or more		None		Less than 50 hours		50 hours or more	
	Number	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
U.S. residing doctorate recipient, ages 55–75	432,100	1,850	54.7	0.45	23.6	0.40	21.8	0.35	32.9	0.40	37.5	0.40	29.6	0.40
Employment and retirement status														
Employed, never retired	236,250	2,175	58.7	0.60	24.9	0.50	16.4	0.45	34.8	0.55	39.8	0.55	25.4	0.50
Employed, previously retired ^a	64,350	1,300	50.6	1.10	24.5	0.95	24.9	1.00	30.2	1.15	36.9	1.15	32.9	1.10
Not employed, not retired ^b	8,450	575	52.8	2.75	25.6	2.70	21.6	2.00	33.3	3.00	35.1	2.95	31.6	3.15
Not employed, retired	123,100	1,225	49.1	0.80	20.5	0.65	30.4	0.70	30.7	0.70	33.7	0.70	35.6	0.75
Sex														
Male	291,800	1,625	58.4	0.55	21.0	0.45	20.6	0.45	35.2	0.50	37.0	0.50	27.8	0.45
Female	140,300	1,200	46.9	0.65	28.9	0.50	24.2	0.55	28.3	0.55	38.5	0.60	33.2	0.60
Ethnicity and race														
Hispanic or Latino ^c	15,900	475	59.0	1.85	24.9	1.45	16.1	1.40	35.6	1.65	38.0	1.65	26.5	1.45
Not Hispanic or Latino ^d														
American Indian or Alaska Native	950	125	34.0	5.60	21.9	4.75	44.1	7.00	22.2	6.20	45.0	7.20	32.9	6.25
Asian	76,400	1,275	63.8	1.10	20.3	0.95	15.9	0.95	41.9	1.10	36.4	1.15	21.7	1.00
Black or African American	14,400	425	47.5	1.85	30.3	1.60	22.1	1.45	24.1	1.65	45.9	1.75	30.0	1.70
White	319,450	1,775	52.7	0.50	24.0	0.40	23.3	0.40	31.2	0.45	37.3	0.45	31.5	0.45
Other race ^e	5,000	400	51.6	4.15	23.7	2.80	24.7	3.80	25.1	3.35	40.1	4.30	34.8	4.15
Age														
55–60	128,600	1,550	56.3	0.80	26.4	0.65	17.3	0.65	33.6	0.80	40.1	0.80	26.3	0.75
61–65	101,500	1,350	56.2	0.90	24.1	0.80	19.7	0.70	31.3	0.95	39.9	0.85	28.9	0.80
66–70	103,800	1,325	54.7	0.85	21.1	0.75	24.2	0.75	32.7	0.90	35.0	0.80	32.3	0.85
71–75	98,200	1,200	50.9	0.90	22.0	0.80	27.2	0.75	33.9	0.80	34.3	0.85	31.8	0.80
Years since doctorate														
≤ 10	12,600	475	45.9	1.85	32.2	1.80	21.9	1.65	26.0	1.70	39.8	1.90	34.2	1.95
11–20	35,550	875	51.2	1.45	27.3	1.30	21.6	1.15	29.8	1.35	39.9	1.35	30.3	1.25
> 20	384,000	1,450	55.3	0.50	22.9	0.40	21.8	0.40	33.4	0.40	37.2	0.40	29.4	0.40
Disability status														
With disability	64,850	1,250	53.6	0.95	23.9	0.85	22.5	0.80	33.3	0.95	36.1	1.00	30.6	1.05
Without disability	367,250	2,025	54.8	0.50	23.5	0.40	21.7	0.40	32.9	0.40	37.8	0.45	29.4	0.35
Field of study														
Science	331,300	1,675	54.5	0.50	23.7	0.45	21.8	0.45	32.6	0.40	37.7	0.45	29.7	0.40
Biological, agricultural, and environmental life sciences	106,050	1,025	52.3	0.80	24.3	0.80	23.4	0.75	31.4	0.75	38.5	0.75	30.1	0.75
Computer and information sciences	11,350	350	55.5	2.50	22.2	2.20	22.3	2.00	34.3	2.55	36.1	2.75	29.6	2.15

TABLE R-4
Volunteering experiences among doctoral scientists and engineers ages 55–75, by retirement status and select characteristics: 2023

(Number, percent, and SE)

Characteristic	Total		Annual time spent volunteering for religious, educational, health-related, or other charitable organizations						Annual time spent helping friends, neighbors, or relatives					
			None		Less than 50 hours		50 hours or more		None		Less than 50 hours		50 hours or more	
	Number	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
Mathematics and statistics	16,750	425	64.8	1.95	16.2	1.40	19.0	1.50	41.3	2.15	33.4	1.95	25.3	1.60
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	70,600	850	61.1	1.00	20.0	0.85	19.0	0.75	36.9	0.95	34.8	1.00	28.3	0.80
Psychology	68,950	725	51.3	1.05	27.3	1.00	21.4	0.75	28.2	0.90	40.2	1.00	31.5	0.90
Social sciences	57,550	775	51.4	1.20	25.3	0.95	23.4	1.05	31.6	1.00	38.4	1.00	29.9	1.05
Engineering	76,200	1,025	58.2	1.15	21.4	0.95	20.4	0.85	36.3	1.00	36.8	0.90	26.9	1.05
Health	24,600	500	45.5	1.50	28.3	1.20	26.1	1.55	27.3	1.15	36.8	1.30	36.0	1.45
Non-U.S. residing doctorate recipient, ages 55–75	66,400	1,300	66.9	1.25	18.0	1.00	15.2	1.00	38.9	1.20	35.8	1.30	25.3	1.10
Employment and retirement status														
Employed, never retired	42,350	1,075	71.4	1.65	17.5	1.10	11.2	1.25	41.4	1.60	35.2	1.55	23.4	1.30
Employed, previously retired ^a	10,500	600	59.8	3.20	20.3	2.70	19.9	2.30	32.6	3.15	41.3	3.45	26.1	3.00
Not employed, not retired ^b	1,250	225	55.4	8.85	20.9	6.35	23.7	6.60	32.7	8.40	45.1	9.30	22.2	8.25
Not employed, retired	12,300	750	58.5	2.70	17.4	2.25	24.1	2.25	36.4	2.75	32.3	3.00	31.4	2.90
Sex														
Male	52,450	1,175	68.1	1.40	17.0	1.05	14.9	1.10	40.0	1.45	35.6	1.55	24.5	1.30
Female	13,950	675	62.2	2.40	21.5	2.10	16.3	2.05	34.8	2.45	36.8	2.45	28.4	2.30
Age														
55–60	23,600	925	68.6	1.85	18.6	1.60	12.8	1.55	36.6	2.05	37.6	2.20	25.8	1.75
61–65	21,100	875	70.5	2.05	17.9	2.05	11.6	1.55	43.3	2.20	34.6	2.25	22.1	2.00
66–70	13,050	625	63.7	2.60	14.7	2.00	21.7	2.00	37.5	2.65	32.7	2.70	29.8	2.55
71–75	8,650	550	58.2	3.30	21.3	2.75	20.5	2.60	36.4	3.35	38.8	3.55	24.9	2.55
Field of study														
Science	46,300	1,250	65.7	1.55	19.5	1.25	14.8	1.15	37.9	1.25	36.1	1.45	26.0	1.25
Engineering	17,700	725	71.1	2.15	14.5	1.90	14.4	1.95	41.9	3.10	35.0	2.80	23.1	2.60
Health	2,400	250	58.1	5.75	14.1	3.45	27.8	5.45	35.6	6.20	36.1	5.15	28.3	6.00

SE = standard error.

^a Employed and previously retired includes individuals who were working during the survey reference week and had retired previously from any position.

^b Not employed and not retired includes individuals who were unemployed or not seeking work because of reasons other than retired.

^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 individuals who reported being Native Hawaiian or Other Pacific Islander, single race, and those who reported being more than one race.

Note(s):

Numbers are rounded to the nearest 50. Standard errors of numbers are rounded up to the nearest 25. Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. Detail may not add to total because of rounding. Residence location is based on reported living location on 1 February 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

Technical Notes

Survey Overview (2023 Survey Cycle)

Purpose. The Survey of Doctorate Recipients (SDR) provides data on the characteristics of science, engineering, and health (SEH) research 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 younger than 76 years. The SDR provides data useful in assessing the supply and characteristics of the U.S.-trained SEH doctorates employed in educational institutions, private industry, professional organizations, and governments in the United States, as well as in other countries worldwide.

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. The SDR is closely related to the [National Survey of College Graduates](#) (NSCG). 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), 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 2023 SDR. Complete details are provided in the 2023 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 2018. The Office of Management and Budget control number is 3145-0020 and expires on 31 July 2026. The disclosure review number is NCSSES-DRN24-056.

Survey contractor. NORC at the University of Chicago, Chicago, IL.

Survey sponsor. The National Center for Science and Engineering Statistics (NCSES) within the U.S. National Science Foundation, with support from the National Institutes of Health.

Major changes to the recent cycle. In 2023, NCSES made several changes to the SDR. The most significant change was the inclusion of a new survey module about retirement asked of individuals currently retired or those who returned to work after previously retiring. The module captured details about their job prior to retirement, factors that influenced the decision to retire, and reasons for working after retirement. Respondents ages 55 to 75 were asked about their volunteering experiences with charitable organizations and to support family and friends. Nonworking respondents ages 55 to 75 were also asked about their physical health and capacity to work either full or part time. As a part of the retirement module, the survey also captured additional detail about the last job held for those not working, whether the individual was retired or not. Specifically, individuals not working were asked to what extent their last held job's work was related to their first U.S. doctoral degree and the typical weekly hours worked on that last job.

Additionally, questions modified for the 2021 SDR to understand the impact of the COVID-19 pandemic on SDR measures were restored to their pre-pandemic form used in the 2019 SDR cycle, eliminating references or response options related to the pandemic. Questions added to the 2021 SDR to understand how income and earnings were affected by the pandemic were removed. Questions added in 2021 SDR about telecommuting and remote work due to the pandemic were updated to collect information about remote work in general.

The Web and computer-assisted telephone interview (CATI) instruments expanded dependent interviewing (DI) methods for a targeted number of items within the current and last employment question series to reduce respondent burden. With DI, sample member responses from 2021 were preloaded into the 2023 SDR questionnaire and displayed for the respondent. For each of the DI questions, sample members confirmed if the information displayed from their 2021 response still applied to the 2023 reference period. If not, the sample member provided updated information on the subsequent screen. Only sample members who reported a consistent work status in both the 2021 and 2023 cycles and reported complete information for the DI items in 2021 were eligible for DI in 2023. The paper version of the survey did not reflect DI methods.

Key Survey Information

Frequency. Biennial.

Initial survey year. 1973.

Reference period. The week of 1 February 2023.

Response unit. Individuals with an SEH research doctorate from a U.S. academic institution.

Sample or census. Sample.

Population size. Approximately 1,222,400 individuals: 1,058,950 residing in the United States and 163,450 residing outside the United States.

Sample size. 125,262 individuals.

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 2021
- Were not institutionalized or terminally ill on 1 February 2023
- Were less than 76 years of age as of 1 February 2023

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 or without an SEH research doctorate were dropped from the frame. For individuals who completed more than one SEH research doctorate, only the information on the first degree earned was used for sampling.

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 2023 SDR, all sample members from the 2021 cycle who remained age eligible were retained for the 2023 cycle apart from the following types of cases which were dropped:

- Cases selected to supplement the panel in the 2019 SDR who did not respond in the 2019 and 2021 cycles; and
- New cohort cases selected in the 2017 SDR who did not respond in the 2017, 2019, and 2021 cycles.

As with prior survey cycles, a sample of 10,000 new doctoral graduates who had earned their degrees from 1 July 2019 to 30 June 2021 was added. The sample design for the new graduates followed the same sample design and sample stratification first introduced in 2019, defined by detailed fields of study, gender, and underrepresented minority status. The underrepresented minority status definition was revised for the 2023 SDR sample selection. Multi-race individuals who were not Hispanic were no longer classified in the underrepresented minority category.

The resulting 2023 SDR sample of 125,262 cases consisted of 115,262 age-eligible cases from the 2021 SDR and 10,000 cases from the new cohort of graduates from academic years 2020 and 2021. The overall sampling rate was about 1 in 10 (10.1%), although sampling rates varied across strata.

Data Collection and Processing Methods

Data collection. The 2023 data collection period was slightly longer than 6 months (i.e., 27 weeks) beginning in mid-September 2023. 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). All individuals in the sample were started in the Web mode if a mail or e-mail address was available. 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 sent by alternating contacting methods.

Quality assurance procedures were in place at each data collection step (address updating, printing, package assembly and mailing, e-mail sending, questionnaire receipt, data entry, coding, CATI, and post-data collection processing). Active data collection ended the last week of March 2024. The online survey closed 1 April 2024, and receipt of hard-copy questionnaires ended on 25 April 2024.

Mode. Almost 96.5% of the participants completed the survey through the Web, 2.3% through mail, and 1.3% through CATI.

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 65%; the weighted response rate was also 65%. These response rates are consistent with those achieved in the 2021 SDR.

Of the 125,262 persons in the 2023 SDR sample, 80,143 completed the survey. Among those who completed the survey, 71,161 respondents were residing in the United States on the survey reference date and contributed to the U.S. SEH doctoral population estimates. An additional 8,982 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. All survey data collected in the 2023 SDR were captured in a single survey instrument with mode specific interfaces. Using a unified instrument supported efficient post-data collection processing and facilitated data harmonization. Prior to entry, mail questionnaire data were reviewed and edited to resolve unclear or inconsistent responses (e.g., multiple responses in a select-one type question) following pre-entry editing procedures. Telephone callbacks were used to obtain additional information for incomplete mail responses. Captured data were exported to a single database for subsequent coding, editing, and imputation needed to create an analytical database.

Following established NCSES guidelines for coding SDR survey data, including verbatim responses, staff were trained in conducting a standardized review and coding of occupation and education information, "other/specify" verbatim responses including verbatim items pertaining to the new retirement items, state and country geographical information, and postsecondary institution information. For standardized coding of occupation, the respondent's reported job title, duties and responsibilities, the extent the work was related to the first U.S. doctoral degree earned, and other work-related information from the questionnaire were first autocoded using a programmed algorithm. Any remaining uncoded occupations were reviewed by 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 2.6%. Nonresponse to questions about income was higher: nonresponse to salary was 6.7%, and nonresponse to earned income was 15.3%. 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 0.5%, marital status at 10.1%, citizenship at 6.6%, ethnicity at 0.2%, and race at 0.7%. Item nonresponse was addressed using random or hot-deck imputation methods.

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 the SED or by using other existing information from the sampling frame. All sample members with imputed values for sex, race, or ethnicity were given the opportunity to report these data during data collection 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 and did not have imputed race or ethnicity values from prior SDR rounds or from the SED were assigned values for race or ethnicity through hot-deck procedures during post-data collection processing.

Most SDR variables were subjected to hot-deck imputation, with each variable having its own class and sort variables. Hot-deck imputation was implemented using sort variables as specified by statistical modeling to identify important variables with respect to the imputed information.

However, imputation was not performed on verbatim-based variables, personal contact information, or a few other system variables such as mother's and father's education. For some variables, no set of class and sort variables 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 population distribution with respect to gender, race and ethnicity, degree year, degree field, U.S. citizenship status, postgraduation location, and birthplace
- Adjustment to reduce large weights

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 2023 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), Fay and Train (1995), and Ash (2014). 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 squared error of the replicate estimates around their corresponding full sample estimate provides an estimate of the sampling variance of the statistic of interest. The 2023 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 the successive difference replication method and are included in each table of estimates. Data table estimates with coefficients 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. This 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. Although minor, reporting errors in the SED could lead to incorrect classification of doctorates as having or not having earned an SEH research doctorate, which could result in either overcoverage or undercoverage.

Nonresponse error. The weighted and unweighted response rates for the 2023 SDR were each 65%. 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

Year-to-year comparisons can be made among the 1993 to 2023 survey cycles because many of the core questions remained the same. 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 target population and the survey coverage have experienced the following changes over time.

Changes in survey coverage and population.

- Beginning with the 2015 SDR and continuing through the 2023 cycle, the SDR improved population coverage and 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, beginning in 2015, the SDR sample represents all U.S.-trained research doctorate holders with a first SEH doctoral 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.
- In 2010 and 2013, coverage of SEH doctorates residing outside of the United States included those having graduated since 2001.
- Surveys conducted prior to 2010 did not cover SEH doctorates residing outside of the United States.

Caution is recommended when interpreting or analyzing trends that span pre- and post-2010 surveys and pre- and post-2015 surveys given the noted changes in the survey design and target population.

Overlap in sample cases across survey cycles allows for longitudinal analysis using SDR data. To evaluate the SDR data over multiple survey cycles, request the longitudinal analysis file from the Survey Manager.

Changes in questionnaire.

- 2023. The 2023 survey included new questions about retirement to capture details about the job prior to retirement, factors that influenced the decision to retire, and reasons for working after retirement if it occurred. Respondents ages 55–75 were asked about their volunteering experiences with charitable organizations and to support family and friends. Nonworking respondents ages 55–75 were also asked about their general health and capacity to work either full or part time. To logically incorporate the new questions about retirement experiences and other items for sample members ages 55–75, the presentation order of the employment situation survey items was revised so questions asked of working respondents preceded those asked of nonworking respondents. Questions modified for the 2021 SDR to understand the impact of the COVID-19 pandemic on SDR measures were restored to their pre-pandemic form used in the 2019 SDR cycle. Questions added to the 2021 SDR to understand how income and earnings were affected by the pandemic were removed. Questions added in 2021 SDR about telecommuting and remote work due to the pandemic were updated to collect information about remote work in general. The Web and CATI instruments expanded dependent interviewing methods implemented in the prior cycle for a targeted number of items within the employment question series.
- 2021. The 2021 survey included two significant questionnaire changes. First, the 2021 SDR reflected modifications to some questions and the addition of new questions in order to collect information on how the COVID-19 pandemic may have affected salary, income, labor force status, and benefits. Each of the COVID-19 pandemic-related changes made to the 2021 SDR were also included in the related NCSES survey, the NSCG. The second change introduced in 2021 reflected a change in survey methodology. For the electronic modes of response, eligible sample members could respond to a targeted set of six employment items via a dependent interview approach. With dependent interviewing, the survey instrument displayed the unedited response from the 2019 cycle for the targeted survey questions and asked the sample member if that response was still correct as of the reference date (1 February 2021). If yes, the instrument moved to the next applicable survey question. If the sample member indicated the response was no longer correct as of the reference date, the instrument presented the traditional (nondependent) interviewing.
- 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 the 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 an 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 data processing.

- 2023. Editing and imputation procedures were developed and introduced for the new survey items associated with retirement experiences (i.e., A44 through A51 and B4 through B17). Missing data for most of these new survey items were imputed using hot-deck procedures and specifications developed using a random forest modeling approach. A consistency check was added to review all employed respondents who reported working for a non-U.S. government while also reporting an employer location inside the United States. Where it was clear the respondent worked for a U.S. employer, the employment sector variable was edited to conform to the appropriate U.S.-located sector. As a result of this additional editing, the estimate of U.S.-located, U.S.-trained SEH doctorates working in the non-U.S. government sector declined from the 2021 and earlier cycles’ estimates.
- 2019. Updates to improve the accuracy of post-data 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 to refer to the working status reported in the prior cycle. Previously, the edits did not refer to prior cycle response data. As a result of

the 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 response

Changes in reporting procedures or classification.

- 2023. The 2023 SDR fully transitioned to the NCSES Taxonomy of Geographic Areas (TOGA) for all geographic items in the data set and in reporting and eliminating the traditional Scientists and Engineers Statistical Data System (SESTAT) geographic coding taxonomy (see [table A-3](#) for a crosswalk of the U.S. and world regions used in SDR reporting aligned to the U.S. states and territories and non-U.S. countries). Updates were made to the occupation coding taxonomy in 2023 to better align with the 2018 Standard Occupational Classification (SOC) system.
- 2021. In 2021, TOGA codes were added as new variables for all geographic items, although the variables reflecting the traditional SESTAT geographic codes remained as well.
- 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 were added. Data tables that report on the non-U.S. residing population were 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 with 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 A2 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.

Ever retired. Ever retired includes both individuals not working on the survey reference date who selected “retired” as a reason for not working at question A39 and those working on the survey reference date who indicated they previously retired at question A37.

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 [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 their 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 2023 and who earned their doctorate from a U.S. institution.

Occupation data. The occupational classification of the respondent was based on their principal job (including job title) held during the reference week—or on their last job held, if not employed in the reference week (survey questions A12, A13, A41, and A42). For those who retired and subsequently returned to work (regardless of current working status on the reference date), the survey also captured the job held before retirement (survey questions A47 and A48). Also used in the occupational classification was a respondent-selected job code and the extent the work was related to the first U.S. doctoral degree earned (survey questions A14 and A15, A43 and A44, and A49 and A50 for the current job, last job, and job before retirement, respectively) as well as other work-related information from the questionnaire. (See [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.

Retired. Retired includes individuals who selected “retired” as a reason for not working at question A39. However, for the purposes of the labor force participation rate, not working, retired individuals who are also seeking work or on layoff from a job were counted as unemployed and not retired. This more restrictive definition of retired is used in data tables 1-1, 2, 3, 21, 29, and 30.

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. Changes made in 2021 to the salary series to allow sample members to identify increases or decreases in their salary or earnings due to the COVID-19 pandemic were removed.

Sector of employment. Employment sector is a derived variable based on responses to questionnaire items A3, A7, and A8. Questionnaire item A3 (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 of 4-year educational institutions includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. “Other educational institutions” includes 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.

Years since degree. Years since degree is calculated by subtracting the year of the respondent's first U.S. SEH research doctorate from the reference year of the survey.

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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
A-3	Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

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						
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a		Start year	End year
	Code	Label	Code	Label	Code	Label	Code	Label		
Science	1	Biological, agricultural, and environmental life sciences	11	Agricultural and food sciences	1101	Agricultural sciences	098	Agriculture, general	1958	Present
					1102	Animal sciences	099	Agricultural science, other	1958	Present
							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
					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	1958	Present		
					1202	Biophysics	1958	Present		
			13	Cell, cellular biology, and molecular biology	1301	Cell, cellular biology, and molecular biology	155	Structural biology	2010	Present
							130	Anatomy	1958	Present
							136	Cell/ cellular biology and histology	1959	Present
							142	Developmental biology/ embryology	1960	Present
							154	Molecular biology	1965	Present
			14	Microbiological sciences and immunology	1401	Immunology	159	Molecular medicine	2016	Present
							151	Immunology	1972	Present
							110	Bacteriology	1983	Present
							156	Microbiology/ bacteriology	1958	1982
14	Microbiological sciences and immunology	1402	Microbiological sciences	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				
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a		Start year	End year
	Code	Label	Code	Label	Code	Label	Code	Label		
							055	Fishing and fisheries sciences/ management	1983	Present
							060	Wildlife	1983	Present
							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										
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a		Start year	End year						
	Code	Label	Code	Label	Code	Label	Code	Label								
							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			
							1710	Biological and biomedical sciences, other	198	Biology/ biomedical sciences, general	1958	Present				
									107	Biotechnology	1993	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										
	3	Mathematics and statistics	31	Mathematics and statistics	419	Computer/ information sciences, other					419	Computer/ information sciences, other	1999	Present		
					3101	Applied mathematics					420	Applied mathematics	1958	Present		
					3102	Mathematics					461	Computational Mathematics	461	Computational Mathematics	2018	Present
											425	Algebra	425	Algebra	1958	Present
											430	Analysis and functional analysis	430	Analysis and functional analysis	1958	Present
											435	Geometry/ geometric analysis	435	Geometry/ geometric analysis	1958	Present
											440	Logic	440	Logic	1958	Present
							445	Number theory	445	Number theory	1958	Present				
455	Topology/ foundations	455	Topology/ foundations	1958			Present									
460	Computing theory and practice	460	Computing theory and practice	1960	Present											
498	Mathematics/ statistics, general	498	Mathematics/ statistics, general	1958	Present											
3103	Statistics	450	Statistics	1958	Present											
3104	Mathematics and statistics, other	465	Operations research (mathematics)	1973	Present											
4	Physical sciences, geosciences, atmospheric, and ocean sciences	41	Astronomy and astrophysics	499	Mathematics/ statistics, other	499	Mathematics/ statistics, other	1958	Present							
				930	Operations research (business management/ administration)	930	Operations research (business management/ administration)	1983	Present							
				4101	Astronomy and astrophysics	500	Astronomy	500	Astronomy	1969	Present					
						505	Astrophysics	505	Astrophysics	1969	Present					
						506	Astronomy and astrophysics	506	Astronomy and astrophysics	1958	1969					
						509	Astronomy, other	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					

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				
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a		Start year	End year
	Code	Label	Code	Label	Code	Label	Code	Label		
					4203	Chemistry, other, except biochemistry	520	Analytical chemistry	1958	Present
							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

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				
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a		Start year	End year
	Code	Label	Code	Label	Code	Label	Code	Label		
							562	Electron physics	1983	1991
							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/ phototonics	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

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									
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a			Start year	End year				
	Code	Label	Code	Label	Code	Label	Code	Label	Label						
6	6	Social sciences	61	Economics	5106	Psychology, general	639	Social psychology		1958	Present				
					5107	Psychology, other	648	Psychology, general		1958	Present				
					6101	Economics	649	Psychology, other		1958	Present				
							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		
							6202	Public policy analysis	679	Political science/ public administration		1958	1976		
									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		
							6402	Area, ethnic, cultural, gender, and group studies	655	Anthropology, cultural		2014	Present		
									656	Anthropology, physical and biological		2014	Present		
									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
									6406	Urban studies, affairs	676	Linguistics		1958	Present
							6407	Social sciences, other	694	Urban affairs/ studies		1959	Present		
									654	Archaeology		2018	Present		
									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				

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					
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a			Start year	End year
	Code	Label	Code	Label	Code	Label	Code	Label	Label		
			72	Chemical engineering	7201	Chemical engineering	312	Chemical engineering		1958	Present
							369	Polymer and plastics engineering		1983	Present
			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

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					
SEH group	Broad field		Minor field		Detailed field ^a		Fine field ^a		Start year	End year
	Code	Label	Code	Label	Code	Label	Code	Label		
Health	8	Health	81	Health	8101	Communication disorders sciences and services	547	Fuel technology/ petroleum engineering	1967	1979
					8102	Hospital and medical administration services	200	Speech-language pathology and audiology	1963	Present
							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					

SDR = Survey of Doctorate Recipients; SED = Survey of Earned Doctorates; NCSES = National Center for Science and Engineering Statistics; SEH = science, engineering, and health; TOD = Taxonomy of Disciplines.

^a Detailed field and fine field are not available in the downloadable 2023 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 2021 Doctorate Records File, respectively. Field of study reporting for the 2023 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, 2023.

TABLE A-2
Crosswalk of occupations used in the SDR data tables
 (Crosswalk)

Science and engineering classification	Major occupation		Minor occupation		Detailed occupation			
	Code	Label	Code	Label	Code	Label		
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
	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					
		382770	Postsecondary teachers: Earth, environmental, and marine sciences					

TABLE A-2
Crosswalk of occupations used in the SDR data tables
 (Crosswalk)

Science and engineering classification	Major occupation		Minor occupation		Detailed occupation	
	Code	Label	Code	Label	Code	Label
	4	Social and related scientists	38		382890	Postsecondary teachers: Physics
			41	Economists	412320	Economists
			42	Political scientists	422350	Political scientists
			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
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-related or engineering-related occupations	6	S&E-related occupations				61
			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		

TABLE A-2
Crosswalk of occupations used in the SDR data tables
 (Crosswalk)

Science and engineering classification	Major occupation		Minor occupation		Detailed occupation				
	Code	Label	Code	Label	Code	Label			
			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			
			632540	Teachers: Secondary - social sciences					
			64	S&E technicians and technologists	640260	Technologists and technicians, biological and life sciences			
			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 or 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								

TABLE A-2
Crosswalk of occupations used in the SDR data tables

(Crosswalk)

Science and engineering classification	Major occupation		Minor occupation		Detailed occupation	
	Code	Label	Code	Label	Code	Label
			75	Social services and related occupations	742990	Postsecondary teachers: Other postsecondary fields
					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
					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, 2023.

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
01	United States: New England	085	New England region, state not specified
		009	Connecticut
		023	Maine
		025	Massachusetts
		033	New Hampshire
		044	Rhode Island
		050	Vermont
02	United States: Mid-Atlantic	097	Mid-Atlantic region, state not specified
		034	New Jersey
		036	New York
		042	Pennsylvania
03	United States: East North Central	087	East North Central region, state not specified
		017	Illinois
		018	Indiana
		026	Michigan
		039	Ohio
		055	Wisconsin
04	United States: West North Central	088	West North Central region, state not specified
		019	Iowa
		020	Kansas
		027	Minnesota
		029	Missouri
		031	Nebraska
		038	North Dakota
		046	South Dakota
05	United States: South Atlantic	098	South Atlantic region, state not specified
		010	Delaware
		011	District of Columbia
		012	Florida
		013	Georgia
		024	Maryland
		037	North Carolina
		045	South Carolina
		051	Virginia
054	West Virginia		
06	United States: East South Central	090	East South Central region, state not specified
		001	Alabama
		021	Kentucky
		028	Mississippi
		047	Tennessee
07	United States: West South Central	091	West South Central region, state not specified
		005	Arkansas
		022	Louisiana
		040	Oklahoma
		048	Texas
08	United States: Mountain	092	Mountain region, state not specified
		004	Arizona
		008	Colorado
		016	Idaho
		030	Montana

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
		032	Nevada
		035	New Mexico
		049	Utah
		056	Wyoming
09	United States: Pacific and U.S. Territories	093	Pacific region, state not specified
		002	Alaska
		006	California
		015	Hawaii
		041	Oregon
		053	Washington
		096	U.S. territories and outlying areas, not specified
		060	American Samoa
		081	Baker Island
		066	Guam
		084	Howland Island
		086	Jarvis Island
		067	Johnston Atoll
		089	Kingman Reef
		071	Midway Islands
		076	Navassa Island
		069	Northern Mariana Islands
		095	Palmyra Atoll
		072	Puerto Rico
		078	U.S. Virgin Islands
		079	Wake Island
		094	Other U.S. island areas
		099	U.S. state or territory, not specified
10	Europe	166	Europe, not specified
		100	Albania
		101	Andorra
		102	Austria
		160	Belarus
		103	Belgium
		150	Bosnia and Herzegovina
		104	Bulgaria
		151	Croatia
		208	Cyprus
		148	Czechia
		106	Denmark
		155	Estonia
		107	Faroe Islands
		108	Finland
		109	France
		110	Germany
		111	Germany, West
		112	West Berlin
		114	Germany, East
		113	East Berlin
		115	Gibraltar
		116	Greece

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
		143	Guernsey
		146	Holy See (Vatican City)
		117	Hungary
		118	Iceland
		119	Ireland
		145	Isle of Man
		120	Italy
		144	Jersey
		167	Kosovo
		156	Latvia
		122	Liechtenstein
		157	Lithuania
		123	Luxembourg
		152	North Macedonia
		124	Malta
		162	Moldova
		125	Monaco
		168	Montenegro
		126	Netherlands
		127	Norway
		128	Poland
		129	Portugal
		130	Azores Islands
		131	Madeira Islands
		132	Romania
		163	Russia
		133	San Marino
		154	Serbia
		149	Slovakia
		153	Slovenia
		134	Spain
		136	Sweden
		137	Switzerland
		243	Turkey
		164	Ukraine
		138	United Kingdom
		139	England
		140	Scotland
		141	Wales
		142	Northern Ireland
		121	Jan Mayen
		135	Svalbard
		147	Yugoslavia
		105	Czechoslovakia
		185	Northern Europe, not specified
		186	Southern Europe, not specified
		187	Western Europe, not specified
		181	Baltic States, not specified
		263	Asia Minor, not specified
		184	Lapland, not specified

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
		182	Central Europe, not specified
		183	Eastern Europe, not specified
		165	USSR
20	Asia	249	Asia, not specified
		218	Kazakhstan
		219	Kyrgyzstan
		241	Tajikistan
		244	Turkmenistan
		246	Uzbekistan
		260	East Asia, not specified
		207	China
		209	Hong Kong
		215	Japan
		221	Korea, North
		220	Korea, South
		217	Korea, not specified
		223	Laos
		225	Macau
		228	Mongolia
		240	Taiwan
		255	Southeast Asia, not specified
		204	Brunei
		205	Burma
		206	Cambodia
		211	Indonesia
		226	Malaysia
		519	Papua New Guinea
		232	Paracel Islands
		233	Philippines
		236	Singapore
		237	Spratly Islands
		242	Thailand
		250	Timor-Leste
		247	Vietnam
		261	Indochina
		257	Southwest Asia, not specified
		158	Armenia
		159	Azerbaijan
		201	Bahrain
		601	Gaza Strip
		161	Georgia
		212	Iran
		213	Iraq
		214	Israel
		216	Jordan
		222	Kuwait
		224	Lebanon
		230	Oman
		234	Qatar
		235	Saudi Arabia

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
		239	Syria
		245	United Arab Emirates
		604	West Bank
		248	Yemen
		252	Middle East, not specified
		603	Palestinian Territories
		254	Persian Gulf States, not specified
		251	Mesopotamia
		602	Iraq-Saudi Arabia Neutral Zone
		262	Yemen, Unified (1991 and after)
		200	Afghanistan
		202	Bangladesh
		203	Bhutan
		404	British Indian Ocean Territory
		210	India
		227	Maldives
		229	Nepal
		231	Pakistan
		238	Sri Lanka
30	North America, except United States	305	North America, not specified
		300	Bermuda
		301	Canada
		503	Clipperton Island
		302	Greenland
		303	Mexico
		304	Saint Pierre and Miquelon
31	Central America	317	Central America, not specified
		310	Belize
		311	Costa Rica
		312	El Salvador
		313	Guatemala
		314	Honduras
		315	Nicaragua
		316	Panama
33	Caribbean	353	Caribbean, not specified
		320	Anguilla
		321	Antigua and Barbuda
		322	Aruba
		323	Bahamas, The
		324	Barbados
		325	British Virgin Islands
		326	Cayman Islands
		327	Cuba
		345	Curacao
		328	Dominica
		329	Dominican Republic
		330	Grenada
		332	Haiti
		333	Jamaica
		335	Montserrat

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
		337	Saint Barthelemy
		338	Saint Kitts and Nevis
		339	Saint Lucia
		349	Saint Martin
		340	Saint Vincent and the Grenadines
		348	Sint Maarten
		341	Trinidad and Tobago
		331	Guadeloupe
		334	Martinique
		344	Bonaire
		342	Turks and Caicos Islands
		346	Saba
		347	Sint Eustatius
		336	Netherlands Antilles
		356	Latin America, not specified
		357	Leeward Islands
		343	West Indies
		359	Windward Islands
		355	British West Indies
37	South America	374	South America, not specified
		360	Argentina
		361	Bolivia
		362	Brazil
		363	Chile
		364	Colombia
		365	Ecuador
		366	Falkland Islands (Islas Malvinas)
		367	French Guiana
		368	Guyana
		369	Paraguay
		370	Peru
		371	Suriname
		372	Uruguay
		373	Venezuela
40	Africa	462	Africa, not specified
		400	Algeria
		401	Angola
		402	Benin
		403	Botswana
		405	Burkina Faso
		406	Burundi
		407	Cameroon
		408	Cabo Verde
		409	Central African Republic
		410	Chad
		411	Comoros
		459	Congo, Democratic Republic of the
		412	Congo, Republic of the
		425	Cote d'Ivoire
		413	Djibouti

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
		414	Egypt
		415	Equatorial Guinea
		417	Eritrea
		416	Ethiopia
		419	Gabon
		420	Gambia, The
		421	Ghana
		423	Guinea
		424	Guinea-Bissau
		427	Kenya
		428	Lesotho
		429	Liberia
		430	Libya
		431	Madagascar
		432	Malawi
		433	Mali
		434	Mauritania
		445	Mauritius
		435	Mayotte
		436	Morocco
		437	Mozambique
		438	Namibia
		439	Niger
		440	Nigeria
		442	Rwanda
		450	Saint Helena, Ascension and Tristan Da Cunha
		443	Sao Tome and Principe
		444	Senegal
		446	Seychelles
		447	Sierra Leone
		448	Somalia
		449	South Africa
		463	South Sudan
		451	Sudan
		452	Eswatini
		453	Tanzania
		454	Togo
		456	Tunisia
		457	Uganda
		458	Western Sahara
		460	Zambia
		461	Zimbabwe
		471	Bassas da India
		418	Europa Island
		422	Glorioso Islands
		426	Juan de Nova Island
		441	Reunion Island
		455	Tromelin Island
		472	Central Africa, not specified
		464	Eastern Africa, not specified

TABLE A-3

Geographic region used in SDR reporting crosswalk to U.S. states, U.S. territories, and non-U.S. countries

(Crosswalk)

Geographic regions used in SDR reporting ^a		U.S. states and territories, or non-U.S. countries used in SDR reporting ^b	
2-digit code	Geographic label	3-digit code	Geographic label
		465	Equatorial Africa, not specified
		466	French Equatorial Africa, not specified
		467	French West Africa, not specified
		468	North Africa, not specified
		469	Western Africa, not specified
		470	Southern Africa, not specified
50	Oceania	528	Oceania, not specified
		550	Antarctica
		551	Bouvet Island
		552	French Southern and Antarctic Lands
		507	Heard Island and McDonald Islands
		500	Ashmore and Cartier Islands
		501	Australia
		502	Christmas Island
		504	Cocos (Keeling) Islands
		505	Cook Islands
		506	Coral Sea Islands
		508	Fiji
		509	French Polynesia
		510	Kiribati
		511	Marshall Islands
		512	Micronesia
		513	Nauru
		514	New Caledonia
		515	New Zealand
		516	Niue
		517	Norfolk Island
		518	Palau
		520	Pitcairn Islands
		527	Samoa
		521	Solomon Islands
		522	Tokelau
		523	Tonga
		524	Tuvalu
		525	Vanuatu
		526	Wallis and Futuna
		530	Polynesia, not specified
		529	Melanesia, not specified
55	Abroad, not specified	554	At sea
		555	Abroad, not specified

SDR = Survey of Doctorate Recipients.

^a Geographic region data variables used in SDR reporting include most current location, employer location, first U.S. doctoral degree school location, birthplace location, and non-U.S. country of citizenship.

^b Geographic area data variables used in SDR reporting include location on survey reference date, most current location, employer location, first U.S. doctoral degree school location, birthplace location, and non-U.S. country of citizenship.

Note(s):

The 2023 SDR uses an updated geographic region assignment for some geographic areas to better align with the NCSES Taxonomy of Geographic Areas (TOGA).

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.

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