

TABLE 1-1

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

(Number and SE)

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

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Epidemiology, ecology, and population biology	18,400	225	15,950	275	14,500	325	1,450	175	300	125	1,800	200	400	100
Genetics	9,950	125	8,750	250	8,000	250	750	150	100	50	1,000	175	150	50
Neurobiology and neuroscience	17,700	250	16,800	275	16,050	300	750	125	150	75	250	100	450	125
Nutrition sciences	5,000	100	4,150	125	3,600	150	550	100	100	50	600	100	150	50
Pharmacology and toxicology	14,850	175	12,700	300	11,500	325	1,200	175	300	100	1,550	200	300	100
Physiology, pathology, and related sciences	17,950	250	15,400	300	13,450	325	2,000	200	250	75	2,000	200	300	100
Biological and biomedical sciences, general	14,350	250	12,750	300	11,650	325	1,100	175	150	75	1,250	175	250	75
Biological and biomedical sciences, other	6,250	100	4,950	200	4,400	200	600	100	100	50	1,050	175	150	75
Computer and information sciences	33,650	375	31,100	400	29,350	450	1,750	200	300	75	1,750	200	500	125
Computer science	28,700	375	26,750	400	25,350	450	1,350	200	200	75	1,300	200	450	125
Information science, studies	3,050	75	2,600	75	2,300	100	300	50	50	25	400	50	D	D
Computer and information sciences, other	1,900	50	1,800	50	1,700	50	100	25	50	25	50	25	*	*
Mathematics and statistics	43,800	375	36,650	450	33,450	475	3,250	300	550	125	5,900	350	700	150
Applied mathematics	9,500	175	8,500	200	7,700	250	750	150	100	50	750	150	200	50
Mathematics	20,750	300	16,500	375	15,000	375	1,550	200	350	125	3,550	275	350	125
Statistics	8,700	225	7,450	225	6,850	225	600	150	100	50	1,100	175	D	D
Mathematics and statistics, other	4,800	125	4,200	125	3,850	125	350	75	D	D	500	75	100	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	161,450	825	133,750	950	121,600	1,000	12,200	500	2,450	300	22,700	650	2,500	275
Astronomy and astrophysics	6,700	150	5,850	175	5,400	175	450	100	100	50	650	100	100	50
Chemistry, except biochemistry	80,650	475	65,300	700	59,300	700	6,050	350	1,500	225	12,350	525	1,500	225
Inorganic chemistry	10,550	200	8,750	225	7,800	275	900	175	250	100	1,450	150	150	50
Organic chemistry	22,850	300	17,600	375	16,000	375	1,600	200	500	150	4,250	325	500	150
Chemistry, other, except biochemistry	47,300	350	39,000	575	35,450	550	3,500	300	800	150	6,650	400	850	150
Geosciences, atmospheric sciences, and ocean sciences	26,250	275	22,050	300	19,500	300	2,550	175	350	100	3,500	175	350	75

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Atmospheric sciences and meteorology	4,450	75	3,900	75	3,600	100	300	50	50	25	450	50	50	25
Geological and earth sciences, geosciences	16,450	250	13,550	275	11,850	275	1,750	175	200	50	2,450	150	250	75
Ocean sciences and marine sciences	2,400	75	2,150	75	1,900	75	200	50	50	25	200	50	*	*
Oceanography, chemical and physical	2,950	125	2,450	125	2,150	100	300	75	D	D	400	75	50	25
Physics	47,850	550	40,550	575	37,400	600	3,150	275	500	125	6,250	425	500	125
Psychology	139,450	575	115,350	825	87,050	975	28,250	800	1,100	175	19,850	650	3,150	275
Clinical psychology	47,500	325	41,100	525	28,650	700	12,450	650	200	100	4,950	425	1,200	225
Counseling and applied psychology	17,200	175	14,850	275	10,950	325	3,950	325	100	50	1,900	250	350	100
Educational and school psychology	18,350	225	14,100	275	10,450	350	3,650	275	150	50	3,800	250	300	100
Industrial and organizational psychology	5,800	150	4,850	150	4,100	150	750	125	200	75	600	125	150	50
Research and experimental psychology	34,950	275	27,800	400	23,100	425	4,650	275	300	75	6,150	300	700	100
Psychology, general	9,650	150	7,900	250	6,100	275	1,750	225	150	75	1,400	200	250	75
Psychology, other	6,050	100	4,750	175	3,700	175	1,050	150	50	25	1,050	150	200	75
Social sciences	124,950	800	102,700	900	89,550	800	13,200	575	1,800	200	18,300	525	2,200	200
Economics	32,450	525	26,900	550	23,750	525	3,150	300	300	100	4,850	350	450	125
Political science and government	25,800	350	22,450	425	20,150	450	2,300	300	300	100	2,650	250	400	100
Political science and government	21,200	300	18,350	400	16,550	400	1,800	300	200	100	2,300	250	300	100
Public policy analysis	4,600	150	4,100	175	3,600	175	500	75	100	50	350	75	100	50
Sociology, demography, and population studies	19,850	300	15,200	325	13,150	350	2,100	225	500	125	3,900	300	300	100
Other social sciences	46,800	450	38,150	500	32,500	450	5,700	325	700	100	6,900	325	1,050	125
Anthropology	13,950	225	11,400	300	9,900	275	1,500	200	200	75	2,100	225	300	75
Area, ethnic, cultural, gender, and group studies	4,650	125	3,900	125	3,300	125	600	75	150	50	450	75	150	50
Geography and cartography	5,750	175	4,750	175	4,200	175	550	100	100	50	750	100	150	50
International relations and national security studies	2,800	150	2,350	150	2,000	125	350	75	50	25	350	75	50	25
Linguistics	6,200	250	4,950	250	4,200	225	750	125	100	50	950	150	200	75

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Urban studies, affairs	2,150	75	1,600	100	1,300	75	300	50	50	25	500	75	50	25
Social sciences, other	11,300	225	9,250	250	7,650	250	1,600	175	100	50	1,800	175	200	50
Engineering	199,500	975	176,700	1,175	166,300	1,250	10,400	575	3,350	325	16,750	725	2,750	275
Aerospace, aeronautical, and astronautical engineering	7,900	200	7,050	225	6,750	225	300	75	150	50	650	100	50	25
Chemical engineering	24,450	400	20,800	500	19,650	500	1,150	250	550	200	2,650	300	500	125
Civil engineering	21,400	400	19,250	400	17,850	425	1,400	225	350	125	1,550	225	250	100
Electrical and computer engineering	53,950	525	48,550	650	46,300	675	2,250	275	950	175	3,850	425	600	175
Computer engineering	7,600	175	7,000	175	6,750	200	250	75	D	D	450	100	150	50
Electrical, electronics, and communications engineering	46,350	525	41,550	625	39,550	625	2,000	250	900	175	3,450	400	450	150
Mechanical engineering	29,300	400	26,550	425	25,350	425	1,200	200	350	125	2,100	275	350	125
Metallurgical and materials engineering	19,100	300	16,450	350	15,550	350	900	150	200	75	2,000	200	450	125
Other engineering	43,400	450	38,050	450	34,850	525	3,200	275	850	150	3,950	275	600	100
Agricultural engineering	2,300	75	1,900	75	1,750	75	200	50	50	25	300	75	D	D
Bioengineering and biomedical engineering	14,200	225	13,200	250	12,200	325	1,000	225	250	100	500	125	250	75
Engineering mechanics, physics, and science	5,200	150	4,400	150	3,900	150	450	75	S	S	700	125	50	25
Industrial and manufacturing engineering	10,300	250	8,800	275	8,000	250	800	125	150	50	1,200	150	150	50
Nuclear engineering	3,650	125	3,100	125	2,850	125	300	75	50	25	500	75	D	D
Engineering, other	7,800	175	6,600	200	6,150	200	450	75	350	100	700	125	150	50
Health	47,600	400	40,200	475	35,150	525	5,050	325	550	125	6,050	300	750	100
Communication disorders sciences and services	4,150	100	3,100	125	2,650	125	500	75	50	25	900	100	100	50
Hospital and medical administration services	2,000	75	1,550	100	1,350	75	200	50	S	S	400	75	*	*
Pharmacy, pharmaceutical sciences, and administration	8,950	150	8,050	175	7,100	200	950	150	100	50	750	125	50	50
Public health	9,350	200	8,400	225	7,400	250	950	150	50	50	750	125	150	50
Registered nursing, nursing administration, nursing research	11,350	200	9,000	250	7,700	250	1,300	175	100	75	2,100	200	150	50

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Health sciences, other	11,850	200	10,150	225	9,000	250	1,150	175	200	75	1,250	175	250	75

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

SE = standard error.

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

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

Note(s):

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

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2019.