

TABLE 9

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

(Number and SE)

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

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

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

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

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Registered nursing, nursing administration, nursing research	9,000	250	8,700	275	7,800	275	850	125	300	125	200	100	S	S
Health sciences, other	10,150	225	9,050	225	7,450	225	1,600	150	1,100	150	800	150	300	75

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

SE = standard error.

Note(s):

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

Source(s):

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