

TABLE 10

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

(Number and SE)

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

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

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

SE = standard error.

**Note(s):**

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

**Source(s):**

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