TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2021

(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	872,100	2,425	333,250	2,225	92,050	1,500	174,150	2,025	67,050	1,250	44,800	1,150	24,850	900	171,700	2,175	98,900	1,575	159,750	1,825	38,850	1,150
Science	647,300	2,000	235,500	2,025	80,150	1,425	122,500	1,650	32,850	875	28,700	975	10,050	600	126,000	1,825	86,800	1,450	130,750	1,725	29,500	975
Biological, agricultural, and environmental life sciences	226,850	1,275	101,250	1,575	38,900	1,000	50,300	1,325	12,100	550	4,600	350	2,300	300	48,300	1,150	25,400	875	33,400	925	11,600	575
Agricultural and food sciences	16,600	350	7,700	350	1,250	150	5,100	325	1,350	150	250	75	150	50	4,100	275	750	125	2,850	250	800	100
Agricultural sciences	900	75	400	75	*	*	300	75	50	25	50	25	D	D	200	50	50	25	150	50	50	25
Animal sciences	4,650	200	1,750	150	300	75	1,050	125	400	100	50	50	D	D	1,250	150	200	75	1,050	200	250	75
Food sciences and technology	3,300	200	1,650	150	200	75	1,000	150	450	100	D	D	S	S	850	125	150	75	450	150	150	50
Plant sciences	5,800	250	2,900	225	500	100	2,000	225	400	100	100	50	S	S	1,450	200	250	75	850	175	200	50
Soil sciences	2,000	150	1,000	150	250	100	700	125	50	25	50	25	50	25	350	75	50	25	300	75	150	50
Biochemistry and biophysics	29,550	600	14,500	625	6,450	450	5,850	475	2,150	275	900	175	400	125	6,450	425	2,500	325	3,350	300	1,500	250
Biochemistry	24,350	550	11,750	600	5,250	425	4,750	425	1,800	275	600	175	150	75	5,350	375	2,150	325	3,000	300	1,350	250
Biophysics	5,200	200	2,750	200	1,250	150	1,100	175	400	100	300	75	200	125	1,050	150	350	75	350	75	150	50
Cell, cellular biology, and molecular biology	32,300	450	14,350	525	6,800	450	5,700	475	1,850	225	400	125	200	75	6,600	525	4,900	400	4,300	425	1,500	250
Microbiological sciences and immunology	24,750	425	11,400	475	4,100	350	5,550	400	1,750	275	50	50	50	50	5,800	425	3,400	300	2,550	250	1,500	225
Immunology	9,150	225	4,500	325	1,550	225	2,200	225	750	200	D	D	D	D	1,950	250	1,450	200	650	150	550	125
Microbiological sciences	15,650	350	6,900	400	2,550	300	3,350	350	950	175	50	50	50	25	3,800	300	1,950	250	1,900	225	950	200
Natural resources and conservation	9,000	225	3,100	150	350	75	2,500	125	300	50	300	75	200	75	2,200	150	500	100	2,000	175	700	125
Fish, fisheries, wildlife, and wildlands science and management	2,000	125	900	100	150	75	700	75	50	25	50	25	D	D	550	75	100	50	350	50	100	25
Forestry	2,550	150	950	100	50	25	750	100	100	25	150	50	50	25	600	100	200	75	500	75	150	50
Natural resource conservation, research, management, and policy	4,400	175	1,300	125	150	50	1,050	100	150	50	100	50	100	75	1,050	125	200	75	1,150	150	400	125
Zoology	6,850	250	2,450	225	800	150	1,500	175	200	75	150	50	D	D	1,700	200	500	125	1,650	175	350	75
Other biological sciences	107,800	850	47,750	950	19,150	650	24,050	775	4,550	325	2,550	275	1,250	250	21,450	625	12,850	575	16,650	575	5,300	375
Biomathematics, bioinformatics, and computational biology	6,200	150	3,800	200	550	75	2,700	175	550	150	750	75	100	50	750	100	200	50	400	75	150	50
Botany and plant biology	6,150	250	2,250	200	850	125	1,150	150	200	75	100	50	D	D	1,350	150	400	100	1,350	150	600	150
Epidemiology, ecology, and population biology	16,950	350	7,900	400	1,950	225	5,700	400	200	75	250	75	250	125	2,700	250	850	200	4,000	275	1,000	200
Genetics	8,750	225	4,200	225	2,050	200	1,700	175	450	100	200	75	S	S	2,150	200	850	175	1,000	125	300	75
Neurobiology and neuroscience	18,850	300	8,600	450	5,000	375	3,150	300	450	100	700	175	250	100	3,550	350	3,100	325	1,900	225	800	150
Nutrition sciences	4,100	150	1,450	150	350	75	950	125	150	50	50	25	D	D	900	125	500	100	1,000	125	150	50
Pharmacology and toxicology	13,100	300	5,800	350	2,050	275	2,850	275	900	150	D	D	S	S	3,050	325	2,100	275	1,250	200	700	175
Physiology, pathology, and related sciences	15,350	300	5,750	350	2,450	225	2,650	275	650	100	150	75	100	50	3,100	300	2,950	275	2,550	250	700	125
Biological and biomedical sciences, general	13,650	325	5,950	350	3,000	250	2,200	225	800	150	250	125	150	75	2,950	250	1,500	225	2,150	250	700	175
Biological and biomedical sciences, other	4,700	225	2,050	200	900	150	1,000	150	200	75	50	50	S	S	950	150	350	100	1,050	150	150	75
Computer and information sciences	33,600	425	11,650	450	3,200	350	6,300	400	2,100	225	8,050	525	850	150	6,050	400	550	125	5,550	325	950	200
Computer science	29,100	400	10,050	450	2,900	325	5,200	375	1,950	225	7,400	500	700	150	5,300	375	350	100	4,500	350	850	200

TABLE 15-2

U.S. residing employed doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2021

(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	2,500	125	850	125	200	75	550	100	100	25	200	50	100	50	450	75	200	75	650	100	50	25
Computer and information sciences, other	2,000	100	750	75	150	50	500	75	100	25	450	50	50	25	350	50	*	*	400	75	S	S
Mathematics and statistics	36,600	575	12,900	525	5,300	400	6,450	425	1,100	175	4,200	350	800	125	4,850	375	600	125	12,450	425	850	150
Applied mathematics	7,850	300	2,650	200	1,050	200	1,300	150	250	75	1,150	200	100	50	700	125	150	75	2,950	250	150	50
Mathematics	16,850	400	5,100	375	3,050	325	1,550	225	500	125	1,900	225	450	100	2,100	200	150	75	6,700	350	450	125
Statistics	7,450	325	3,750	350	850	200	2,600	325	300	100	450	125	250	75	1,450	275	150	75	1,200	150	150	75
Mathematics and statistics, other	4,450	150	1,400	175	350	75	1,000	150	50	25	650	125	50	25	550	100	100	50	1,650	125	100	50
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	137,050	1,025	57,750	1,075	17,450	600	26,800	875	13,550	650	9,050	575	4,250	375	29,000	800	6,550	475	23,800	675	6,600	425
Astronomy and astrophysics	6,350	175	2,650	200	1,700	175	750	125	200	75	700	100	200	75	1,050	125	250	75	1,300	200	200	75
Chemistry, except biochemistry	66,350	800	28,050	850	6,800	475	12,800	675	8,450	500	2,050	250	1,400	200	15,550	575	3,700	375	12,150	525	3,450	300
Inorganic chemistry	8,500	275	3,300	250	1,000	175	1,100	125	1,200	175	150	75	150	75	2,050	225	300	125	1,950	200	550	125
Organic chemistry	17,650	400	8,000	425	1,600	250	4,150	350	2,250	275	150	75	150	75	3,800	300	1,500	275	3,300	275	800	175
Chemistry, other, except biochemistry	40,200	625	16,700	675	4,200	350	7,600	500	4,950	400	1,750	225	1,100	200	9,700	525	1,900	225	6,900	400	2,100	225
Geosciences, atmospheric sciences, and ocean sciences	22,050	325	9,450	275	3,550	200	5,200	275	700	125	1,250	125	400	75	4,500	225	750	125	4,400	250	1,300	125
Atmospheric sciences and meteorology	4,150	100	2,100	100	850	75	1,100	100	150	50	450	75	100	50	750	75	50	25	450	50	200	50
Geological and earth sciences, geosciences	13,550	300	5,450	250	1,900	175	3,150	225	450	125	650	125	250	75	2,700	200	500	100	3,200	250	750	125
Ocean sciences and marine sciences	2,400	75	950	75	400	50	500	50	50	25	50	25	*	*	600	75	50	25	500	75	200	50
Oceanography, chemical and physical	2,000	125	950	100	450	75	500	75	50	25	100	50	D	D	500	75	100	75	250	75	100	25
Physics	42,300	675	17,600	650	5,400	375	8,050	500	4,200	425	5,050	500	2,300	300	7,900	600	1,800	300	5,950	450	1,650	275
Psychology	113,500	825	21,250	675	4,950	350	14,000	525	2,300	275	900	175	700	125	19,000	725	48,300	1,025	19,300	675	4,050	400
Clinical psychology	40,650	600	4,550	425	650	200	3,300	350	550	200	D	D	200	100	5,300	500	26,150	775	3,250	350	1,200	275
Counseling and applied psychology	14,600	300	900	175	150	75	650	150	50	50	D	D	D	D	2,400	300	9,000	375	1,750	225	550	175
Educational and school psychology	13,300	325	1,850	175	150	50	1,300	150	400	100	D	D	D	D	2,500	250	4,900	300	3,350	275	650	125
Industrial and organizational psychology	4,950	175	1,050	150	100	50	850	150	150	50	D	D	100	50	2,200	200	750	125	700	125	150	50
Research and experimental psychology	27,700	425	9,900	400	3,300	275	5,750	325	800	150	650	150	300	75	4,650	350	3,200	300	7,900	375	1,150	175
Psychology, general	7,600	275	1,900	250	400	100	1,350	225	200	75	S	S	D	D	1,000	150	3,000	300	1,350	225	150	75
Psychology, other	4,700	150	1,100	125	200	75	750	125	100	50	D	D	D	D	950	125	1,350	150	1,050	175	200	75
Social sciences	99,700	1,000	30,750	800	10,350	575	18,650	700	1,700	200	1,900	225	1,100	150	18,850	725	5,450	325	36,250	875	5,400	425
Economics	27,300	550	11,600	525	3,300	375	7,850	450	400	125	900	175	450	100	4,900	375	1,600	250	6,800	425	1,100	200
Political science and government	20,500	550	5,750	375	2,150	250	3,350	325	250	100	100	50	200	75	4,450	325	950	150	7,850	475	1,150	225
Political science and government	16,150	550	4,350	350	2,000	250	2,150	275	150	75	50	50	100	50	3,100	300	600	150	7,000	475	950	225
Public policy analysis	4,300	150	1,400	125	150	50	1,200	125	100	50	50	25	100	50	1,350	150	350	75	850	125	250	75
Sociology, demography, and population studies	15,650	375	4,650	325	2,000	250	2,500	250	150	75	200	75	200	75	2,700	250	600	125	6,200	375	1,100	200
Other social sciences	36,300	575	8,750	325	2,900	275	4,950	275	850	125	700	150	300	75	6,800	375	2,250	200	15,400	475	2,050	175

TABLE 15-2

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(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	10,900	275	2,900	225	1,150	200	1,500	175	250	100	S	S	D	D	1,800	200	650	175	4,650	250	750	125
Area, ethnic, cultural, gender, and group studies	4,050	150	500	100	200	75	150	50	100	50	D	D	D	D	850	125	250	75	2,000	150	350	75
Geography and cartography	4,400	225	1,350	125	200	50	1,050	125	150	50	100	50	50	25	800	150	150	50	1,700	175	200	50
International relations and national security studies	2,150	125	500	100	150	50	350	75	50	25	D	D	D	D	400	75	150	50	950	100	150	50
Linguistics	4,500	250	800	150	450	125	300	75	50	50	200	75	100	50	700	125	250	100	2,350	225	150	50
Urban studies, affairs	1,200	100	300	50	50	25	250	50	D	D	50	25	D	D	350	75	150	50	350	50	50	25
Social sciences, other	9,150	275	2,400	175	750	100	1,400	150	200	50	150	50	50	25	1,950	200	700	125	3,400	225	500	100
Engineering	183,100	1,325	82,950	1,200	10,300	550	40,800	1,075	31,850	975	15,850	600	14,350	675	37,250	925	6,450	450	18,400	575	7,900	475
Aerospace, aeronautical, and astronautical engineering	7,150	250	2,650	200	350	75	1,400	150	900	125	1,000	200	600	100	1,650	175	150	50	600	125	500	150
Chemical engineering	21,650	500	10,250	500	1,200	200	4,850	400	4,200	400	1,450	275	1,250	225	5,150	425	600	150	1,500	225	1,450	275
Civil engineering	19,750	575	5,800	400	800	150	3,900	350	1,100	225	1,100	175	3,000	350	4,850	400	1,150	200	3,050	300	750	125
Electrical and computer engineering	50,400	650	24,250	650	2,650	300	10,200	575	11,350	600	6,650	350	3,800	400	8,500	500	1,200	225	4,450	350	1,600	250
Computer engineering	7,150	275	3,000	250	450	75	1,600	200	950	150	1,900	175	400	125	900	125	100	50	800	150	100	50
Electrical, electronics, and communications engineering	43,250	600	21,250	625	2,200	325	8,600	525	10,450	575	4,800	350	3,400	375	7,550	475	1,100	225	3,650	300	1,550	250
Mechanical engineering	27,500	450	13,050	550	1,500	225	6,150	450	5,350	425	2,000	250	2,950	350	4,850	400	600	175	3,000	300	1,100	225
Metallurgical and materials engineering	17,450	400	9,150	450	1,250	225	4,100	350	3,800	350	650	175	650	175	4,300	325	600	125	1,050	200	1,000	200
Other engineering	39,250	525	17,800	525	2,500	275	10,150	475	5,150	350	3,000	250	2,100	200	8,000	325	2,100	225	4,700	300	1,550	200
Agricultural engineering	1,700	100	750	100	50	25	500	75	150	50	100	50	100	50	300	50	50	25	300	50	100	50
Bioengineering and biomedical engineering	14,900	275	7,700	375	1,000	175	4,550	325	2,200	250	900	200	550	125	2,850	225	1,300	200	850	150	750	150
Engineering mechanics, physics, and science	3,900	200	1,900	150	300	75	950	125	700	100	300	75	250	75	750	100	100	50	450	100	100	50
Industrial and manufacturing engineering	8,700	325	3,050	250	650	175	1,700	175	700	125	900	150	550	150	1,900	175	300	100	1,850	200	200	75
Nuclear engineering	3,100	125	1,400	125	100	50	900	100	350	75	250	50	200	50	700	100	150	50	250	75	150	50
Engineering, other	6,900	250	3,050	225	400	125	1,550	175	1,100	175	500	125	400	75	1,500	150	200	75	1,000	125	250	75
Health	41,650	525	14,800	500	1,600	225	10,850	425	2,350	250	250	75	450	150	8,450	450	5,600	350	10,600	450	1,450	200
Communication disorders sciences and services	3,100	125	900	125	S	S	700	125	150	50	D	D	D	D	550	100	650	100	900	125	100	50
Hospital and medical administration services	1,300	100	450	50	D	D	350	50	50	25	D	D	*	*	400	50	100	25	300	75	50	25
Pharmacy, pharmaceutical sciences, and administration	7,850	250	3,800	225	500	100	1,900	200	1,350	175	100	50	100	50	1,650	200	800	175	1,000	200	400	150
Public health	9,400	225	4,450	250	250	75	3,900	250	300	75	50	25	S	S	2,000	200	1,000	150	1,400	175	350	75
Registered nursing, nursing administration, nursing research	8,550	375	1,650	225	S	S	1,450	200	50	50	D	D	S	S	2,100	225	1,350	200	3,150	300	200	75
Health sciences, other	11,500	275	3,600	275	600	150	2,550	200	450	150	50	25	S	S	1,800	200	1,750	200	3,850	250	350	75

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

SE = standard error.

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

Note(s):
Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2021.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2021.