TABLE 45-1

U.S. residing employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2021

(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	Number	SE
All occupations	872,100	2,425	523,500	2,725	184,350	2,075	307,900	2,750	135,750	1,925	92,500	1,525	68,450	1,425	369,000	2,700	124,600	1,575	241,550	2,375	62,100	1,350
Science occupations	502,250	2,725	336,200	2,650	148,400	1,800	198,200	2,350	61,750	1,350	67,900	1,300	28,950	875	169,700	2,025	64,600	1,125	161,550	2,000	29,250	950
Biological, agricultural, and other life scientists	160,850	1,700	129,350	1,625	64,950	1,225	76,300	1,350	23,900	800	7,650	450	7,500	450	64,900	1,375	8,450	500	36,850	925	11,100	625
Agricultural, food scientists	10,650	550	8,900	475	2,300	200	7,350	450	2,650	250	400	75	650	125	4,400	325	650	150	900	200	850	175
Biochemists, biophysicists	18,000	750	16,700	725	8,700	475	9,800	600	4,150	375	900	175	1,600	225	6,850	600	450	150	200	75	1,250	225
Biological scientists	26,050	850	21,900	750	13,150	600	13,000	600	2,600	225	1,650	175	1,150	150	11,200	625	1,150	200	1,850	250	2,250	325
Forestry, conservation scientists	2,400	225	1,850	200	350	75	1,650	200	200	75	250	100	200	75	1,300	175	200	50	200	50	300	125
Medical scientists	41,550	975	35,600	900	14,000	600	24,750	725	8,100	450	2,300	225	2,200	300	18,050	700	3,750	350	2,100	250	2,750	300
Postsecondary teachers, agricultural, other natural sciences	5,200	350	3,700	300	1,100	175	2,650	250	300	75	50	25	D	D	1,650	250	150	75	3,950	300	150	50
Postsecondary teachers, biological sciences	34,400	975	21,500	850	17,600	850	4,850	400	500	125	150	75	150	50	11,950	575	450	100	27,350	850	1,650	225
Other biological, agricultural, life scientists	22,600	825	19,150	725	7,750	500	12,200	625	5,400	375	1,950	250	1,550	225	9,550	500	1,600	275	350	125	1,850	250
Computer and information scientists	65,450	1,025	35,850	875	6,550	450	21,750	800	13,250	525	37,850	1,000	8,800	525	19,100	700	1,550	225	10,150	475	2,950	325
Computer and information scientists	55,100	1,125	29,450	875	3,650	375	18,050	750	12,950	525	36,450	1,000	8,750	525	16,900	700	1,400	225	1,250	200	2,750	325
Postsecondary teachers, computer science	10,350	550	6,350	450	2,900	300	3,700	375	250	100	1,450	225	S	S	2,200	250	100	75	8,950	475	200	100
Mathematical scientists	43,950	875	30,900	825	12,300	625	18,900	625	4,600	375	12,150	575	4,100	300	10,000	475	1,250	150	17,850	600	2,050	225
Mathematical scientists	24,900	750	18,300	725	3,300	350	14,800	625	4,350	350	11,250	550	4,000	300	6,800	400	1,150	150	550	100	1,250	225
Postsecondary teachers, mathematics, statistics	19,050	625	12,650	550	9,000	525	4,100	350	250	75	900	175	100	50	3,200	275	50	50	17,300	600	800	125
Physical scientists	85,100	1,375	62,550	1,250	29,750	850	34,800	950	14,100	650	6,950	425	6,050	500	26,950	750	1,800	200	31,950	875	6,000	425
Chemists, except biochemists	21,250	675	17,750	650	3,850	325	12,650	625	8,900	550	1,000	225	1,900	250	8,200	500	500	125	550	150	2,450	250
Earth, atmospheric, ocean scientists	11,500	400	9,500	325	4,450	225	6,550	300	1,200	150	2,150	150	800	125	4,100	225	500	100	900	100	700	125
Physicists, astronomers	13,550	625	11,700	550	5,200	350	7,250	500	2,500	300	3,050	300	2,500	325	3,750	325	400	100	500	175	850	200
Postsecondary teachers, chemistry	17,200	700	9,000	525	7,100	475	2,150	275	200	75	50	50	250	100	4,700	325	100	50	15,250	650	650	125
Postsecondary teachers, physics	10,100	550	6,150	450	5,000	375	1,500	275	50	50	300	125	D	D	2,500	250	100	50	8,550	500	400	125
Postsecondary teachers, other physical science	6,700	350	4,450	300	2,850	250	1,800	200	D	D	100	50	50	25	1,850	175	D	D	6,000	325	350	125
Other physical scientists	4,800	350	3,950	325	1,250	200	2,950	300	1,200	200	250	75	450	125	1,850	225	150	75	300	75	600	150
Psychologists	78,400	1,025	27,250	850	9,850	525	17,850	700	2,900	325	500	125	950	150	29,050	800	48,000	950	23,800	800	3,350	375
Psychologists	58,300	1,050	15,350	650	3,650	350	11,700	525	2,600	325	500	125	850	150	23,700	750	46,400	975	6,150	475	2,650	350
Postsecondary teachers, psychology	20,150	725	11,900	575	6,200	400	6,150	425	300	75	S	S	100	50	5,350	350	1,600	250	17,650	650	700	150

TABLE 45-1

U.S. residing employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2021

(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	Number	SE
Social scientists	68,450	1,150	50,300	950	25,000	750	28,650	725	2,950	250	2,750	225	1,550	175	19,650	625	3,650	325	40,900	950	3,800	350
Economists	9,150	375	7,400	375	2,000	225	6,600	375	800	150	1,350	175	600	125	3,750	325	1,350	200	200	75	600	150
Political scientists	1,750	250	1,300	225	600	150	1,050	200	100	50	50	50	D	D	750	125	150	50	S	S	300	75
Postsecondary teachers, economics	10,900	600	8,350	525	4,500	450	4,450	350	150	75	300	100	D	D	1,650	275	100	75	9,200	550	350	125
Postsecondary teachers, political science	10,000	525	7,200	475	5,400	425	1,850	250	S	S	D	D	D	D	1,600	250	D	D	9,350	525	300	100
Postsecondary teachers, sociology	7,950	425	5,150	400	4,000	375	1,400	175	S	S	D	D	D	D	1,500	175	200	125	7,100	400	350	100
Postsecondary teachers, other social sciences	15,550	500	10,450	450	6,150	350	4,250	325	350	100	100	50	D	D	3,650	275	300	125	14,150	475	450	75
Sociologists, anthropologists	3,800	300	3,050	275	1,050	175	2,450	250	400	100	150	75	200	50	2,000	250	300	125	200	75	300	75
Other social scientists	9,400	475	7,400	425	1,400	175	6,550	400	1,000	150	600	100	700	125	4,800	325	1,150	175	500	125	1,100	200
Engineering occupations	122,800	1,575	90,600	1,600	16,200	725	52,950	1,425	44,950	1,225	13,400	625	27,300	950	39,350	1,100	3,850	350	24,400	675	11,250	625
Aerospace, aeronautical, astronautical engineers	7,100	425	5,000	375	600	150	2,950	275	2,850	300	1,350	200	1,800	225	2,900	300	100	50	300	125	450	125
Chemical engineers	8,800	475	7,050	450	1,150	250	4,150	375	4,350	375	600	175	1,900	250	3,000	300	200	100	200	75	1,150	225
Civil, architectural, sanitary engineers	7,400	425	3,600	350	550	125	2,550	275	1,150	250	600	125	3,150	375	3,650	350	1,050	225	350	100	500	150
Electrical engineers	26,950	850	21,300	750	1,800	275	10,850	625	15,350	700	4,800	375	7,850	500	7,850	525	550	175	400	100	2,400	300
Industrial engineers	1,450	200	750	125	100	50	450	100	400	100	100	50	300	100	600	125	100	50	200	75	400	125
Mechanical engineers	14,250	625	11,200	575	1,100	175	6,300	500	7,050	450	1,900	275	5,150	425	3,850	375	250	100	650	150	950	200
Postsecondary teachers, engineering	26,100	750	18,550	725	7,700	475	12,200	600	700	125	700	175	500	150	5,550	350	400	125	21,500	650	1,100	250
Other engineers	30,750	825	23,100	750	3,200	275	13,500	600	13,150	650	3,350	275	6,650	425	12,000	550	1,250	175	800	150	4,350	375
S&E-related occupations	100,450	1,525	46,600	1,000	9,150	575	30,150	875	11,450	625	6,600	475	5,400	475	53,600	1,050	28,450	900	30,750	900	4,950	400
Health occupations, except postsecondary teachers and managers	30,750	850	9,650	500	2,150	275	7,150	450	1,700	250	450	125	850	175	11,450	475	22,000	725	5,950	425	1,850	300
Postsecondary teachers, health and related science	24,000	825	14,500	650	3,700	400	11,050	600	650	175	200	100	150	50	6,900	425	3,600	350	18,900	700	850	200
S&E managers, including health	30,550	950	15,250	675	1,850	250	7,650	450	5,800	500	1,850	275	2,600	325	30,250	925	2,400	325	200	75	1,250	200
S&E precollege teachers	5,300	325	550	125	300	100	150	50	150	75	150	75	150	75	1,850	200	S	S	5,250	325	350	100
S&E technicians/ technologists	9,100	600	6,250	500	1,000	225	4,000	400	3,000	300	3,750	350	1,350	200	2,700	250	250	125	400	125	650	175
Other S&E-related occupations	800	150	450	125	D	D	150	75	200	100	150	50	250	100	400	100	100	50	D	D	D	D
Non-S&E occupations	146,600	1,825	50,050	1,125	10,600	550	26,600	850	17,600	675	4,600	325	6,800	475	106,400	1,600	27,650	825	24,850	775	16,600	750
Arts, humanities-related occupations	9,150	500	3,400	275	1,000	200	1,450	225	1,700	175	250	100	350	150	5,000	375	3,750	325	450	100	1,950	275
Management-related occupations	29,100	975	7,800	475	900	175	4,200	350	3,550	325	1,450	225	2,400	275	24,350	950	5,350	375	1,000	175	3,800	325

TABLE 45-1

U.S. residing employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 2021

(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	Number	SE
Non-S&E managers	60,150	1,350	22,000	825	3,000	350	12,350	600	8,850	525	2,150	250	3,000	325	54,100	1,325	6,000	425	2,100	275	5,100	400
Non-S&E postsecondary teachers	17,250	575	10,350	475	4,650	375	5,300	375	950	150	100	50	150	50	4,200	300	600	125	15,350	550	850	125
Non-S&E precollege/ other teachers	3,700	350	650	150	100	50	300	125	300	125	150	75	D	D	1,100	175	300	100	3,450	325	300	75
Sales, marketing occupations	8,550	525	2,150	250	150	75	1,000	125	1,100	200	250	100	350	100	7,700	500	1,350	250	400	150	800	150
Social service-related occupations	6,000	350	1,200	200	300	125	550	150	450	100	D	D	D	D	2,950	250	3,850	300	1,500	200	1,000	175
Other non-S&E occupations	12,750	575	2,450	275	500	125	1,450	200	750	150	200	75	500	175	7,050	400	6,500	450	600	125	2,850	325

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] 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. Detail may exceed total due to multiple responses. 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 2021.

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