TABLE 45-2

U.S. residing employed doctoral scientists and engineers, by occupation and primary 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	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 occupations	502,250	2,725	223,100	2,150	76,450	1,375	118,800	1,725	27,850	900	34,550	1,050	7,700	500	56,700	1,250	53,300	1,100	109,950	1,600	16,900	750
Biological, agricultural, and other life scientists	160,850	1,700	99,000	1,525	39,150	1,025	48,800	1,250	11,100	525	1,600	225	1,400	250	22,700	825	5,250	450	24,550	750	6,350	450
Agricultural, food scientists	10,650	550	7,150	450	650	100	5,350	425	1,150	125	100	50	200	75	1,900	225	350	75	300	75	600	150
Biochemists, biophysicists	18,000	750	14,550	675	6,100	425	6,300	500	2,150	275	200	75	300	100	2,250	300	200	75	50	50	450	125
Biological scientists	26,050	850	18,700	700	9,100	525	8,300	450	1,300	175	150	50	150	75	3,800	350	800	150	950	150	1,450	250
Forestry, conservation scientists	2,400	225	1,200	150	150	75	1,050	150	50	25	S	S	D	D	600	125	150	50	100	50	250	125
Medical scientists	41,550	975	29,300	875	8,450	475	16,950	675	3,900	300	450	100	350	150	6,450	450	2,350	300	850	175	1,800	225
Postsecondary teachers, agricultural, other natural sciences	5,200	350	1,900	200	600	150	1,250	175	S	S	D	D	D	D	550	100	150	50	2,550	250	100	50
Postsecondary teachers, biological sciences	34,400	975	11,050	625	8,900	600	2,000	275	S	S	D	D	D	D	2,900	275	200	75	19,700	650	550	125
Other biological, agricultural, life scientists	22,600	825	15,100	625	5,150	425	7,550	450	2,400	225	550	175	350	100	4,250	350	1,100	200	D	D	1,150	175
Computer and information scientists	65,450	1,025	20,150	675	3,450	350	11,500	600	5,150	375	26,050	900	2,600	275	7,500	425	900	175	6,650	400	1,650	250
Computer and information scientists	55,100	1,125	17,000	650	1,700	275	10,100	550	5,150	375	25,850	900	2,600	275	6,800	400	800	150	500	125	1,550	250
Postsecondary teachers, computer science	10,350	550	3,150	350	1,750	250	1,400	250	D	D	200	75	D	D	650	150	S	S	6,200	400	S	S
Mathematical scientists	43,950	875	19,450	650	5,650	450	11,800	525	2,000	250	4,850	325	1,750	200	3,750	375	600	125	12,400	450	1,150	200
Mathematical scientists	24,900	750	13,500	650	1,200	200	10,350	525	1,950	250	4,800	325	1,750	200	3,000	300	600	125	300	75	950	200
Postsecondary teachers, mathematics, statistics	19,050	625	5,950	425	4,450	375	1,450	200	D	D	D	D	D	D	750	150	D	D	12,100	450	200	75
Physical scientists	85,100	1,375	43,750	925	14,950	500	21,100	700	7,750	475	1,500	200	1,400	200	10,200	500	1,250	175	23,650	700	3,350	325
Chemists, except biochemists	21,250	675	14,550	600	2,100	250	7,550	450	4,850	375	200	75	300	100	3,950	375	400	125	300	75	1,600	225
Earth, atmospheric, ocean scientists	11,500	400	7,550	300	2,450	175	4,550	275	500	100	600	125	150	50	1,800	175	400	100	500	75	600	125
Physicists, astronomers	13,550	625	9,950	525	3,300	250	5,100	400	1,600	275	500	125	750	175	1,450	225	300	75	300	150	350	100
Postsecondary teachers, chemistry	17,200	700	3,450	350	2,800	300	600	175	D	D	D	D	D	D	850	150	D	D	12,600	575	150	75
Postsecondary teachers, physics	10,100	550	3,250	350	2,550	275	650	225	D	D	D	D	D	D	750	150	50	25	5,750	450	200	125
Postsecondary teachers, other physical science	6,700	350	1,700	200	1,150	150	550	100	D	D	D	D	D	D	750	125	D	D	4,100	250	150	75
Other physical scientists	4,800	350	3,350	300	600	150	2,050	250	700	150	S	S	100	50	750	125	100	50	100	50	350	100
Psychologists	78,400	1,025	13,600	600	4,000	325	8,700	500	900	150	100	50	200	75	6,050	475	43,300	975	13,550	625	1,700	275
Psychologists	58,300	1,050	8,350	475	1,350	200	6,150	400	850	150	100	50	200	75	4,650	425	42,700	975	850	200	1,450	275
Postsecondary teachers, psychology	20,150	725	5,200	425	2,650	275	2,550	300	D	D	D	D	D	D	1,400	225	600	125	12,700	575	250	75

TABLE 45-2

U.S. residing employed doctoral scientists and engineers, by occupation and primary 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	27,150	775	9,250	550	16,950	600	950	150	500	125	400	100	6,550	400	2,000	225	29,150	850	2,700	275
Economists	9,150	375	5,850	350	650	150	4,900	350	300	100	250	75	200	75	1,350	175	800	175	150	75	600	150
Political scientists	1,750	250	1,000	200	200	75	750	200	D	D	D	D	D	D	300	100	100	50	100	50	250	75
Postsecondary teachers, economics	10,900	600	4,650	375	2,550	350	2,100	200	D	D	D	D	D	D	550	175	D	D	5,500	425	D	D
Postsecondary teachers, political science	10,000	525	2,300	225	1,700	200	600	150	D	D	D	D	D	D	500	125	D	D	7,050	475	D	D
Postsecondary teachers, sociology	7,950	425	2,000	275	1,600	225	400	100	D	D	D	D	D	D	450	125	D	D	5,300	375	100	50
Postsecondary teachers, other social sciences	15,550	500	3,300	275	1,600	200	1,650	200	S	S	D	D	D	D	1,100	150	50	50	10,750	475	300	75
Sociologists, anthropologists	3,800	300	2,450	250	400	125	1,900	225	150	50	D	D	50	25	700	150	200	100	50	50	300	75
Other social scientists	9,400	475	5,650	375	500	100	4,650	300	450	100	150	50	150	50	1,600	175	650	125	250	100	1,000	200
Engineering occupations	122,800	1,575	62,900	1,300	7,500	475	28,850	975	26,550	850	4,700	375	13,750	650	18,000	825	2,450	275	14,850	525	6,150	475
Aerospace, aeronautical, astronautical engineers	7,100	425	3,350	325	250	125	1,700	200	1,400	225	550	125	950	150	1,700	250	S	S	S	S	300	100
Chemical engineers	8,800	475	5,550	400	400	125	2,600	275	2,500	325	200	100	900	200	1,300	225	200	75	D	D	600	150
Civil, architectural, sanitary engineers	7,400	425	2,050	275	150	75	1,350	225	600	175	300	100	2,050	250	1,650	250	750	175	200	100	450	150
Electrical engineers	26,950	850	16,200	625	600	175	5,750	425	9,900	550	1,700	250	3,700	375	3,400	350	350	150	200	75	1,400	225
Industrial engineers	1,450	200	550	125	S	S	250	75	250	75	D	D	150	100	250	75	100	50	150	75	200	100
Mechanical engineers	14,250	625	7,650	500	450	125	3,550	400	3,650	350	900	225	2,750	325	2,050	275	150	75	400	125	350	100
Postsecondary teachers, engineering	26,100	750	10,250	575	4,300	375	5,700	450	250	75	S	S	D	D	1,850	225	S	S	13,400	525	400	150
Other engineers	30,750	825	17,350	750	1,250	175	8,000	475	8,050	475	950	175	3,050	300	5,850	425	800	150	300	75	2,500	275
S&E-related occupations	100,450	1,525	24,400	800	4,600	425	14,900	625	4,900	400	3,700	400	1,500	225	26,900	825	23,350	800	17,950	700	2,700	250
Health occupations, except postsecondary teachers and managers	30,750	850	4,800	350	900	175	3,400	300	500	125	100	50	350	125	3,600	250	19,600	675	1,050	200	1,200	200
Postsecondary teachers, health and related science	24,000	825	7,750	500	1,950	300	5,600	350	200	100	D	D	D	D	2,200	200	2,200	275	11,550	550	250	75
S&E managers, including health	30,550	950	7,350	550	1,350	200	3,700	375	2,350	325	900	175	650	175	19,500	775	1,400	275	D	D	700	150
S&E precollege teachers	5,300	325	D	D	D	D	D	D	D	D	D	D	D	D	150	75	D	D	5,050	325	S	S
S&E technicians/ technologists	9,100	600	4,250	400	400	150	2,100	275	1,750	250	2,600	325	350	100	1,200	175	50	25	200	75	500	150
Other S&E-related occupations	800	150	200	75	D	D	S	S	S	S	100	50	150	75	250	100	100	50	D	D	D	D
Non-S&E occupations	146,600	1,825	22,850	850	3,550	350	11,550	600	7,800	450	1,850	250	1,900	275	70,100	1,350	19,800	650	17,050	600	13,050	650
Arts, humanities-related occupations	9,150	500	2,200	250	300	75	850	200	1,050	175	S	S	S	S	1,550	225	3,150	275	150	75	1,850	275
Management-related occupations	29,100	975	3,650	325	250	100	1,900	250	1,500	200	500	125	700	125	17,200	775	3,650	300	300	100	3,100	275
Non-S&E managers	60,150	1,350	11,150	625	1,150	250	5,800	450	4,150	325	950	200	750	175	39,800	1,075	3,250	325	600	125	3,650	375

TABLE 45-2

U.S. residing employed doctoral scientists and engineers, by occupation and primary 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 postsecondary teachers	17,250	575	3,600	300	1,650	250	1,850	200	150	75	D	D	D	D	1,250	150	200	75	11,700	450	450	100
Non-S&E precollege/ other teachers	3,700	350	50	25	D	D	D	D	50	25	D	D	D	D	300	125	100	50	3,100	325	100	50
Sales, marketing occupations	8,550	525	850	175	D	D	350	100	400	125	100	75	100	50	6,250	450	500	150	250	125	550	125
Social service-related occupations	6,000	350	350	75	D	D	150	75	150	50	D	D	D	D	1,100	150	3,100	250	600	150	850	175
Other non-S&E occupations	12,750	575	1,050	175	100	50	650	125	350	100	100	50	150	75	2,700	275	5,850	425	350	100	2,500	300

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.