

TABLE 45-2

## U.S. residing employed doctoral scientists and engineers, by occupation and primary work activity: 2023

(Number and SE)

Occupation	All employed		Research and development								Computer applications		Design		Management, sales, or administration <sup>a</sup>		Professional services		Teaching		Other <sup>b</sup>	
			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	908,700	2,300	355,450	2,700	91,150	1,400	187,350	2,350	76,950	1,400	53,200	1,225	28,350	1,000	185,550	1,975	90,900	1,650	153,800	1,875	41,400	1,025
Science occupations	489,300	2,625	240,550	2,450	76,050	1,300	128,650	1,825	35,900	1,050	42,000	1,075	9,450	550	60,800	1,150	13,200	600	105,200	1,600	18,050	775
Biological, agricultural, and other life scientists	168,150	1,575	103,500	1,475	36,500	925	51,850	1,125	15,150	725	2,000	225	1,600	250	26,150	775	4,150	375	23,650	675	7,050	475
Agricultural, food scientists	11,250	475	7,650	400	700	150	5,350	325	1,650	200	150	75	50	50	2,100	200	200	75	300	150	700	150
Biochemists, biophysicists	17,100	575	13,500	550	5,350	350	5,500	350	2,600	325	200	100	350	125	2,250	275	250	125	50	50	500	100
Biological scientists	30,000	700	21,400	600	9,350	475	10,200	425	1,850	225	450	100	250	75	5,300	350	700	125	400	125	1,550	225
Forestry, conservation scientists	2,900	225	1,450	175	150	50	1,100	175	200	75	D	D	S	S	900	125	50	50	*	*	350	100
Medical scientists	46,600	975	32,550	875	8,450	500	18,750	725	5,350	400	450	100	500	125	8,250	425	1,900	225	500	150	2,450	300
Postsecondary teachers, agricultural, other natural sciences	5,100	325	2,450	250	500	150	1,900	250	50	25	D	D	D	D	300	75	D	D	2,250	200	50	25
Postsecondary teachers, biological sciences	33,000	875	9,900	500	8,200	450	1,650	225	S	S	D	D	D	D	2,750	275	100	50	19,950	625	250	100
Other biological, agricultural, life scientists	22,250	750	14,600	625	3,800	325	7,450	400	3,400	350	750	150	400	125	4,250	325	900	200	150	50	1,200	175
Computer and information scientists	76,900	1,250	24,950	800	3,800	300	13,900	700	7,250	500	30,150	1,000	3,100	350	9,100	475	650	150	6,950	475	2,050	300
Computer and information scientists	66,200	1,300	21,900	750	2,300	275	12,350	650	7,250	500	30,000	1,000	3,100	350	8,400	475	650	150	250	75	1,950	300
Postsecondary teachers, computer science	10,700	525	3,000	300	1,500	225	1,500	225	D	D	200	75	D	D	700	175	D	D	6,700	450	100	50
Mathematical scientists	48,650	1,000	20,600	750	5,700	375	12,500	650	2,400	300	7,400	450	2,450	250	4,350	350	450	100	12,200	525	1,200	175
Mathematical scientists	30,100	800	15,100	650	1,600	225	11,100	600	2,400	300	7,350	425	2,450	250	3,600	325	450	100	150	75	1,000	175
Postsecondary teachers, mathematics, statistics	18,550	675	5,500	375	4,100	300	1,400	175	D	D	D	D	D	D	800	150	D	D	12,050	550	200	75
Physical scientists	88,350	1,325	47,300	1,100	15,850	725	22,600	675	8,800	575	1,850	250	1,850	250	10,350	450	1,000	175	22,300	800	3,750	300
Chemists, except biochemists	21,850	775	15,700	625	2,300	225	8,050	450	5,350	450	300	125	450	150	3,500	300	300	125	150	50	1,450	225
Earth, atmospheric, ocean scientists	13,550	550	9,150	475	2,800	200	5,500	350	900	175	650	125	300	100	2,100	200	350	100	100	50	900	150
Physicists, astronomers	14,650	650	10,500	575	3,800	350	5,350	425	1,350	250	700	200	600	150	1,900	250	300	100	100	50	500	125
Postsecondary teachers, chemistry	16,250	700	3,000	350	2,300	300	600	175	D	D	D	D	D	D	1,050	200	D	D	12,000	575	200	75
Postsecondary teachers, physics	9,350	525	2,900	375	2,550	350	300	100	D	D	D	D	D	D	550	100	S	S	5,750	425	D	D
Postsecondary teachers, other physical science	6,750	275	1,950	175	1,450	150	500	100	D	D	D	D	D	D	550	75	D	D	4,150	250	100	50
Other physical scientists	5,950	400	4,000	350	650	175	2,300	250	1,100	200	100	50	400	125	750	150	50	50	S	S	550	150
Psychologists	36,450	850	13,150	650	3,500	275	8,750	550	900	200	150	75	150	75	3,650	325	5,300	425	12,800	525	1,300	250
Psychologists	17,550	725	8,650	575	1,250	200	6,550	475	850	200	150	75	100	50	2,500	250	4,700	425	500	150	1,000	225
Postsecondary teachers, psychology	18,900	675	4,500	350	2,250	225	2,200	275	D	D	D	D	D	D	1,150	175	600	150	12,300	525	300	100
Social scientists	70,750	1,175	31,050	900	10,700	600	19,050	625	1,300	175	400	100	350	100	7,250	350	1,650	250	27,350	775	2,700	300
Economists	9,700	475	6,200	400	750	175	5,050	350	400	125	200	75	100	50	1,600	200	1,000	175	D	D	550	150
Political scientists	2,100	225	1,600	225	650	150	900	175	S	S	D	D	D	D	300	100	D	D	D	D	150	50
Postsecondary teachers, economics	10,200	475	4,650	325	2,400	300	2,200	250	D	D	D	D	D	D	450	125	D	D	4,950	325	D	D
Postsecondary teachers, political science	9,700	500	2,700	300	2,100	275	600	125	D	D	D	D	D	D	450	125	D	D	6,400	400	S	S
Postsecondary teachers, sociology	7,450	375	1,650	225	1,350	225	300	75	D	D	D	D	D	D	300	100	D	D	5,200	325	250	125

TABLE 45-2

## U.S. residing employed doctoral scientists and engineers, by occupation and primary work activity: 2023

(Number and SE)

Occupation	All employed		Research and development								Computer applications		Design		Management, sales, or administration <sup>a</sup>		Professional services		Teaching		Other <sup>b</sup>	
			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		
Postsecondary teachers, other social sciences	16,450	600	4,350	350	1,950	200	2,300	275	100	50	D	D	D	D	1,200	175	150	75	10,450	475	250	75
Sociologists, anthropologists	3,950	275	2,700	250	650	150	1,850	200	150	75	D	D	D	D	650	125	100	50	150	50	350	100
Other social scientists	11,200	500	7,200	375	800	175	5,850	350	500	75	200	75	250	75	2,250	225	300	75	100	50	900	150
Engineering occupations	127,550	1,600	64,800	1,250	6,750	450	28,950	950	29,100	1,000	5,200	375	14,950	700	20,050	800	2,800	375	13,800	575	5,900	450
Aerospace, aeronautical, astronautical engineers	7,500	425	4,350	325	350	125	2,050	200	2,000	225	550	125	1,000	150	1,250	175	D	D	100	50	250	75
Chemical engineers	8,050	500	5,100	425	200	75	1,700	250	3,200	350	150	75	900	200	1,250	250	S	S	D	D	450	125
Civil, architectural, sanitary engineers	7,800	500	2,050	275	200	75	1,500	250	350	100	450	125	1,950	250	1,800	275	1,050	200	D	D	500	125
Electrical engineers	29,900	1,000	17,350	750	450	100	6,050	425	10,850	650	2,200	275	4,600	475	4,300	425	100	75	S	S	1,150	200
Industrial engineers	1,300	225	400	100	S	S	150	75	150	75	D	D	S	S	300	100	S	S	D	D	300	100
Mechanical engineers	13,050	725	7,100	500	400	125	3,450	375	3,250	350	500	125	2,500	325	2,000	300	200	75	D	D	600	200
Postsecondary teachers, engineering	24,750	850	9,350	600	3,800	375	5,300	425	250	125	S	S	D	D	1,900	250	D	D	13,200	550	S	S
Other engineers	35,300	1,075	19,150	750	1,300	225	8,800	500	9,050	575	1,250	200	3,750	350	7,200	425	1,200	275	200	75	2,550	275
S&E-related occupations	135,450	1,825	24,350	800	4,350	400	15,750	650	4,250	425	4,050	375	1,400	225	31,050	925	54,750	1,200	15,800	625	4,000	350
Health occupations, except postsecondary teachers and managers	72,400	1,300	8,950	450	1,300	200	6,400	350	1,300	200	150	75	350	100	7,600	500	51,000	1,175	1,550	225	2,750	325
Postsecondary teachers, health and related science	19,900	725	5,750	375	1,350	225	4,250	325	150	50	D	D	D	D	1,900	250	2,000	250	9,850	500	300	100
S&E managers, including health	33,200	1,050	8,400	575	1,600	275	4,350	375	2,450	325	750	175	800	175	20,850	800	1,500	250	50	50	800	175
S&E precollege teachers	4,500	375	S	S	D	D	D	D	D	D	D	D	D	D	100	50	D	D	4,300	375	D	D
S&E technicians and technologists	4,550	400	1,100	200	50	50	700	150	300	125	2,800	325	150	75	350	100	D	D	D	D	S	S
Other S&E-related occupations	950	175	100	75	D	D	D	D	D	D	200	75	S	S	250	75	250	100	D	D	D	D
Non-S&E occupations	156,400	2,025	25,700	850	4,000	275	14,000	625	7,750	550	2,000	200	2,500	250	73,650	1,325	20,150	850	18,950	750	13,450	650
Arts, humanities-related occupations	9,950	475	2,500	225	500	125	800	150	1,200	150	50	50	100	50	2,850	275	2,000	225	450	100	2,050	225
Management-related occupations	35,000	1,025	5,600	450	500	100	2,850	300	2,250	325	800	150	1,350	225	18,950	775	4,000	325	500	100	3,800	325
Non-S&E managers	55,600	1,275	9,750	550	600	125	5,950	400	3,200	350	850	150	800	150	38,650	1,075	2,500	325	350	100	2,700	275
Non-S&E postsecondary teachers	19,500	725	4,300	275	1,950	200	2,250	225	100	50	D	D	D	D	1,450	200	200	75	12,900	625	550	150
Non-S&E precollege and other teachers	5,450	400	650	150	200	100	350	100	S	S	D	D	D	D	600	125	150	75	3,700	300	250	100
Sales, marketing occupations	6,950	450	900	150	D	D	400	100	400	125	D	D	*	*	5,250	400	300	100	S	S	450	100
Social service-related occupations	7,750	475	450	125	D	D	250	100	200	75	D	D	D	D	1,800	250	3,950	325	500	125	950	200
Other non-S&E occupations	16,200	675	1,600	175	100	50	1,150	175	350	75	50	50	200	100	4,100	325	6,950	525	550	175	2,700	250

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

S&amp;E = science and engineering; SE = standard error.

<sup>a</sup> Administration includes accounting, finance, contracts, and human resources.<sup>b</sup> Other work activities include 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 not add to total because of rounding. 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 2023.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.