

Table E-2. Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1999

Highest degree and occupation	Employed S&Es, total	Business/industry				Educational institution			Government		
		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
All degree levels¹											
All occupations, total	10,981,600	7,556,000	6,120,700	726,600	708,700	2,022,400	961,500	1,060,900	1,403,300	573,000	830,200
S&E occupations, total	3,540,800	2,482,400	2,263,300	105,200	114,000	608,500	496,400	112,100	449,900	241,100	208,800
Scientists, total	2,170,500	1,373,600	1,197,400	80,200	96,000	541,800	434,200	107,600	255,100	137,300	117,800
Computer/math sci, total	1,167,400	943,800	886,800	21,500	35,600	132,200	95,000	37,300	91,300	52,600	38,600
Computer/information scientists	1,058,100	925,900	871,900	21,200	32,900	52,100	40,000	12,100	80,100	44,300	35,800
Mathematical scientists	36,200	17,300	14,300	300	2,700	7,800	7,500	400	11,100	8,400	2,700
Postsecondary teachers-computer math sci	73,000	600	600	S	S	72,300	47,500	24,800	100	S	100
Life/related scientists, total ..	341,900	113,400	92,600	8,000	12,800	163,300	148,900	14,400	65,300	36,700	28,500
Agricultural/food scientists	39,700	26,000	22,800	2,600	600	6,100	5,300	700	7,700	4,800	2,900
Biological scientists	206,500	80,900	66,000	3,700	11,200	81,200	79,100	2,100	44,400	24,600	19,900
Environmental life scientists ..	19,800	5,500	3,400	1,600	400	1,200	700	500	13,100	7,400	5,700
Postsecondary teachers-life/related sciences	75,800	1,100	500	S	600	74,800	63,800	11,000	S	S	S
Physical/related scientists, total	297,900	161,200	148,800	6,300	6,100	82,400	73,200	9,100	54,300	31,300	23,000
Chemistry, except biochemistry	121,700	94,400	90,900	1,100	2,500	11,400	11,400	S	15,900	6,000	9,900
Earth scientists/geologists/oceanographers	72,800	43,100	38,700	3,500	900	9,100	8,300	700	20,700	14,100	6,600
Physicists/astronomers	30,400	13,600	11,100	200	2,400	10,000	9,900	100	6,800	5,900	900
Other physical/related scientists	22,200	9,900	8,200	1,500	300	1,600	1,600	S	10,700	5,000	5,700
Postsecondary teachers-physical/related sci	50,700	100	S	S	S	50,300	42,000	8,300	200	200	S

See explanatory information, if any, and SOURCE at end of table.

Table E-2. Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1999

Highest degree and occupation	Employed S&Es, total	Business/industry				Educational institution			Government		
		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
All degree levels¹ — continued											
Social/related scientists, total	363,400	155,200	69,200	44,500	41,600	163,900	117,100	46,800	44,300	16,600	27,700
Economists	35,400	21,800	17,400	2,100	2,300	2,200	2,200	S	11,400	6,600	4,800
Political/related scientists	11,600	4,500	900	900	2,600	2,600	2,600	S	4,600	2,500	2,000
Psychologists	197,000	116,000	45,100	39,800	31,100	59,400	23,000	36,400	21,600	4,400	17,200
Sociologists/anthropologists ..	17,600	5,500	2,800	300	2,400	7,300	6,900	300	4,800	1,900	2,900
Other social/related scientists	13,600	7,100	2,900	1,100	3,100	4,600	4,000	700	1,900	1,200	700
Postsecondary teachers-social/related sci	88,100	300	S	200	S	87,900	78,400	9,500	S	S	S
Engineers, total	1,370,300	1,108,800	1,065,900	25,000	18,000	66,700	62,100	4,500	194,800	103,800	90,900
Aerospace/related engineers ..	67,400	50,800	49,900	300	600	2,500	2,500	S	14,100	14,000	S
Chemical engineers	79,900	74,900	72,800	1,300	800	2,000	1,900	100	3,000	2,600	400
Civil/architectural engineers	223,700	142,400	132,700	7,600	2,000	3,600	3,400	200	77,700	17,200	60,500
Electrical/related engineers	362,300	310,300	300,600	4,300	5,400	10,700	9,700	1,000	41,300	33,300	8,000
Industrial engineers	81,200	75,900	73,200	1,100	1,500	1,500	1,500	S	3,800	3,100	700
Mechanical engineers	265,800	245,200	237,100	5,400	2,700	5,300	5,200	S	15,300	12,100	3,200
Other engineers	258,700	209,400	199,600	4,900	4,900	9,700	9,600	200	39,600	21,500	18,100
Postsecondary teachers-engineers	31,400	S	S	S	S	31,400	28,300	3,100	100	S	S
Non-S&E occupations, total	7,440,800	5,073,500	3,857,400	621,400	594,700	1,413,900	465,100	948,800	953,400	331,900	621,400
Managers/administrators	2,035,600	1,543,800	1,327,300	74,500	142,000	193,500	86,500	107,000	298,300	122,300	175,900
Health/related	848,100	616,000	371,100	95,300	149,600	159,700	143,500	16,200	72,400	25,600	46,800
Teachers, except S&E postsecondary	807,700	39,300	16,900	8,700	13,700	754,200	100,000	654,200	14,200	3,700	10,500
Sales/marketing	943,800	926,800	794,800	115,600	16,300	10,000	5,500	4,500	7,000	1,700	5,300
Other non-S&E occupations	2,805,600	1,947,500	1,347,300	327,300	273,000	296,500	129,600	166,900	561,500	178,600	382,900

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Highest degree and occupation	Employed S&Es, total	Business/industry				Educational institution			Government		
		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
Bachelor's											
All occupations, total	6,350,100	4,694,100	3,982,800	347,000	364,300	806,800	327,100	479,700	849,300	337,700	511,600
S&E occupations, total	1,994,400	1,555,000	1,465,300	37,200	52,500	171,800	142,500	29,300	267,600	130,200	137,500
Scientists, total	1,087,100	802,300	738,000	22,000	42,300	150,400	123,500	26,900	134,300	66,100	68,200
Computer/math sci, total	740,500	630,000	592,300	13,300	24,400	51,000	36,100	14,900	59,500	31,900	27,600
Computer/information scientists	715,400	624,800	587,900	13,100	23,800	35,600	26,100	9,500	55,000	28,600	26,400
Mathematical scientists	12,400	4,900	4,200	100	600	3,000	2,800	200	4,500	3,300	1,200
Postsecondary teachers-computer math sci	12,700	200	200	S	S	12,500	7,300	5,200	S	S	S
Life/related scientists, total ..	135,500	55,600	47,500	3,800	4,300	47,300	43,000	4,300	32,500	15,900	16,700
Agricultural/food scientists	20,100	15,500	13,900	1,000	500	1,200	1,200	S	3,400	2,500	900
Biological scientists	87,900	36,600	31,300	1,700	3,700	32,700	31,500	1,200	18,600	7,300	11,300
Environmental life scientists ..	14,600	3,300	2,000	1,100	100	900	300	500	10,500	6,100	4,400
Postsecondary teachers-life/related sciences	12,800	300	300	S	S	12,500	10,000	2,500	S	S	S
Physical/related scientists, total	139,600	87,200	82,400	2,800	2,000	22,300	21,200	1,100	30,200	14,000	16,200
Chemistry, except biochemistry	70,500	55,000	53,300	200	1,500	5,300	5,300	S	10,100	2,700	7,500
Earth scientists/geologists/oceanographers	38,000	24,000	21,800	2,000	300	2,800	2,800	S	11,100	7,300	3,800
Physicists/astronomers	7,200	2,400	2,200	S	200	3,400	3,400	S	1,500	1,100	400
Other physical/related scientists	13,100	5,700	5,100	600	S	100	100	S	7,300	2,800	4,500
Postsecondary teachers-physical/related sci	10,900	S	S	S	S	10,700	9,700	1,100	200	200	S

See explanatory information, if any, and SOURCE at end of table.

Table E-2. Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1999

Highest degree and occupation	Employed S&Es, total	Business/industry				Educational institution			Government		
		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
Bachelor's — continued											
Social/related scientists, total	71,400	29,600	15,800	2,200	11,600	29,800	23,100	6,700	12,100	4,300	7,800
Economists	11,800	6,200	5,400	700	200	700	700	S	4,900	1,600	3,300
Political/related scientists	5,800	2,000	400	600	1,000	1,000	1,000	S	2,800	1,400	1,300
Psychologists	32,100	16,500	7,900	800	7,800	13,000	7,800	5,200	2,700	400	2,300
Sociologists/anthropologists ..	6,900	2,400	1,400	S	1,000	3,100	3,000	100	1,400	600	800
Other social/related scientists	4,500	2,500	700	200	1,600	1,700	1,400	300	400	400	S
Postsecondary teachers-social/related sci	10,400	S	S	S	S	10,400	9,200	1,100	S	S	S
Engineers, total	907,400	752,700	727,200	15,200	10,300	21,400	19,000	2,400	133,300	64,100	69,300
Aerospace/related engineers ..	36,300	29,000	28,700	100	200	600	600	S	6,800	6,800	S
Chemical engineers	51,100	47,800	46,800	800	300	1,200	1,200	S	2,100	1,700	400
Civil/architectural engineers	160,800	98,100	92,800	4,000	1,400	1,900	1,800	200	60,800	11,700	49,100
Electrical/related engineers	233,500	202,100	196,300	2,700	3,100	4,400	3,600	800	27,100	20,400	6,700
Industrial engineers	62,700	58,600	56,800	1,100	700	1,200	1,200	S	2,900	2,400	500
Mechanical engineers	194,300	181,000	175,600	3,800	1,600	2,300	2,300	S	11,000	8,700	2,300
Other engineers	163,000	136,000	130,200	2,700	3,100	4,300	4,200	100	22,700	12,500	10,200
Postsecondary teachers-engineers	5,600	S	S	S	S	5,500	4,200	1,300	S	S	S
Non-S&E occupations, total	4,355,700	3,139,100	2,517,600	309,700	311,800	635,000	184,600	450,400	581,600	207,500	374,100
Managers/administrators	1,156,800	936,900	831,400	41,600	63,900	54,600	30,900	23,600	165,300	71,400	93,900
Health/related	304,300	211,500	124,500	9,000	78,000	57,300	51,300	5,900	35,600	8,600	27,000
Teachers, except S&E postsecondary	379,700	26,200	12,400	5,500	8,200	345,900	11,700	334,300	7,600	2,600	5,000
Sales/marketing	723,700	711,700	620,700	80,200	10,800	6,900	4,200	2,700	5,100	1,500	3,600
Other non-S&E occupations	1,791,000	1,252,800	928,600	173,300	150,900	170,300	86,400	83,800	368,000	123,500	244,500

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Highest degree and occupation	Employed S&Es, total	Business/industry				Educational institution			Government		
		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
Master's											
All occupations, total	2,982,000	1,851,000	1,454,500	159,700	236,700	744,000	226,000	518,000	387,000	153,400	233,600
S&E occupations, total	1,032,100	719,400	639,100	41,200	39,100	178,400	111,800	66,600	134,300	75,500	58,800
Scientists, total	655,500	415,600	348,300	33,300	34,000	159,200	94,100	65,100	80,800	42,500	38,300
Computer/math sci, total	354,100	276,400	260,300	7,000	9,000	50,200	29,900	20,300	27,600	17,800	9,800
Computer/information scientists	304,800	268,400	253,500	7,000	7,900	13,600	11,200	2,400	22,800	14,100	8,800
Mathematical scientists	16,000	8,000	6,800	S	1,200	3,300	3,300	S	4,700	3,700	1,000
Postsecondary teachers-computer math sci	33,300	S	S	S	S	33,300	15,500	17,800	S	S	S
Life/related scientists, total ..	72,500	25,000	19,100	2,100	3,900	27,800	20,900	6,900	19,700	9,800	9,900
Agricultural/food scientists	10,400	5,600	4,400	1,200	S	2,200	1,500	700	2,600	700	1,900
Biological scientists	42,700	17,000	13,300	400	3,200	10,900	10,700	200	14,800	8,100	6,800
Environmental life scientists ..	4,000	1,700	1,200	400	100	S	S	S	2,200	1,000	1,200
Postsecondary teachers-life/related sciences	15,500	700	200	S	500	14,800	8,700	6,100	S	S	S
Physical/related scientists, total	73,000	40,100	36,200	2,300	1,600	19,400	14,200	5,200	13,500	8,200	5,300
Chemistry, except biochemistry	23,000	16,800	16,100	400	300	3,100	3,100	S	3,100	1,400	1,800
Earth scientists/geologists/oceanographers	24,300	15,400	14,100	1,200	100	2,900	2,700	300	5,900	3,700	2,200
Physicists/astronomers	8,500	4,700	3,700	S	1,000	2,300	2,300	S	1,500	1,300	200
Other physical/related scientists	7,300	3,200	2,200	800	200	1,200	1,200	S	2,900	1,800	1,200
Postsecondary teachers-physical/related sci	9,800	S	S	S	S	9,800	4,900	4,900	S	S	S

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Highest degree and occupation	Employed S&Es, total	Business/industry				Educational institution			Government		
		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
Master's — continued											
Social/related scientists, total	155,900	74,100	32,700	21,900	19,400	61,800	29,100	32,700	20,000	6,700	13,300
Economists	15,200	10,300	7,800	1,100	1,400	300	300	S	4,600	3,300	1,300
Political/related scientists	4,200	2,000	300	300	1,400	900	900	S	1,300	600	700
Psychologists	102,400	57,300	22,400	19,900	15,000	34,600	7,700	26,900	10,600	1,400	9,200
Sociologists/anthropologists ..	6,900	1,800	900	S	1,000	2,500	2,400	100	2,600	900	1,700
Other social/related scientists	5,700	2,700	1,300	700	700	2,000	1,800	100	1,100	600	500
Postsecondary teachers-social/related sci	21,500	S	S	S	S	21,500	16,000	5,500	S	S	S
Engineers, total	376,500	303,800	290,800	7,900	5,100	19,200	17,700	1,500	53,500	33,000	20,500
Aerospace/related engineers ..	26,300	18,600	18,400	S	200	1,500	1,500	S	6,200	6,200	S
Chemical engineers	20,700	19,800	19,200	400	300	300	300	S	500	500	S
Civil/architectural engineers	57,200	40,300	36,700	3,300	300	1,100	1,100	S	15,800	5,000	10,800
Electrical/related engineers	109,400	92,500	89,700	1,100	1,700	5,000	4,900	200	11,900	10,600	1,300
Industrial engineers	17,400	16,300	15,600	S	800	300	300	S	800	600	200
Mechanical engineers	62,000	56,600	54,600	1,300	700	1,800	1,800	S	3,600	2,800	800
Other engineers	76,900	59,600	56,600	1,800	1,200	2,600	2,600	S	14,700	7,200	7,500
Postsecondary teachers-engineers	6,600	S	S	S	S	6,600	5,200	1,400	S	S	S
Non-S&E occupations, total	1,949,900	1,131,600	815,400	118,600	197,600	565,600	114,200	451,400	252,700	77,900	174,800
Managers/administrators	726,600	512,000	424,400	26,300	61,300	100,500	33,700	66,800	114,100	43,400	70,600
Health/related	100,400	67,200	34,300	6,700	26,100	19,000	11,900	7,200	14,200	3,700	10,500
Teachers, except S&E postsecondary	345,700	11,800	4,100	2,400	5,200	327,400	29,300	298,100	6,500	1,100	5,400
Sales/marketing	196,000	192,100	157,500	29,000	5,500	2,100	1,200	900	1,900	200	1,600
Other non-S&E occupations	581,200	348,500	195,000	54,100	99,400	116,600	38,200	78,400	116,100	29,500	86,600

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Doctorate											
All occupations, total	736,700	322,000	234,700	44,700	42,600	349,100	309,400	39,700	65,600	43,100	22,500
S&E occupations, total	484,100	195,000	150,000	24,700	20,300	244,300	229,900	14,400	44,800	32,900	11,900
Scientists, total	399,900	144,000	103,200	23,000	17,700	218,300	204,400	13,800	37,700	26,900	10,800
Computer/math sci, total	67,100	32,600	29,400	1,100	2,000	30,700	28,700	2,000	3,800	2,700	1,100
Computer/information scientists	32,400	27,800	25,800	900	1,100	2,800	2,700	S	1,800	1,300	500
Mathematical scientists	7,900	4,400	3,200	200	900	1,600	1,400	100	1,900	1,400	500
Postsecondary teachers-computer math sci	26,800	300	300	S	S	26,300	24,500	1,800	100	S	100
Life/related scientists, total ..	121,100	30,400	24,200	1,900	4,300	78,500	75,600	2,900	12,200	10,200	2,000
Agricultural/food scientists	9,200	4,900	4,400	400	100	2,700	2,600	S	1,700	1,600	100
Biological scientists	70,000	25,000	19,600	1,400	4,000	34,800	34,200	600	10,100	8,300	1,800
Environmental life scientists ..	1,200	400	200	100	200	400	400	S	400	300	100
Postsecondary teachers-life/related sciences	40,800	100	S	S	S	40,700	38,300	2,300	S	S	S
Physical/related scientists, total	84,900	33,800	30,200	1,100	2,500	40,600	37,800	2,800	10,400	8,800	1,600
Chemistry, except biochemistry	28,100	22,500	21,400	500	600	3,000	2,900	S	2,600	1,900	700
Earth scientists/geologists/oceanographers	10,400	3,600	2,800	300	500	3,300	2,900	400	3,400	2,800	600
Physicists/astronomers	14,700	6,600	5,200	200	1,200	4,300	4,200	100	3,800	3,600	300
Other physical/related scientists	1,800	1,000	800	100	S	300	300	S	500	500	S
Postsecondary teachers-physical/related sci	29,800	100	S	S	S	29,700	27,400	2,300	S	S	S

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		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
Doctorate — continued											
Social/related scientists, total	126,900	47,100	19,300	18,800	8,900	68,500	62,300	6,100	11,300	5,200	6,100
Economists	8,100	5,000	3,900	400	700	1,200	1,200	S	1,900	1,700	300
Political/related scientists	1,400	500	200	100	200	600	600	S	300	300	S
Psychologists	58,000	39,200	14,400	17,500	7,300	11,100	7,500	3,500	7,700	2,500	5,200
Sociologists/anthropologists ..	3,700	1,300	600	300	400	1,600	1,500	100	900	500	400
Other social/related scientists	2,400	1,000	300	300	300	1,000	700	300	500	300	200
Postsecondary teachers-social/related sci	53,300	300	S	200	S	53,000	50,700	2,200	S	S	S
Engineers, total	84,200	51,000	46,700	1,700	2,500	26,100	25,500	600	7,100	5,900	1,200
Aerospace/related engineers ..	4,600	3,200	2,900	100	300	400	400	S	900	900	S
Chemical engineers	8,100	7,200	6,700	200	300	500	500	S	400	400	S
Civil/architectural engineers	5,100	3,400	2,700	400	400	600	600	S	1,100	500	700
Electrical/related engineers	18,400	15,300	14,100	500	700	1,300	1,200	100	1,800	1,800	S
Industrial engineers	1,000	900	800	S	S	S	S	S	100	100	S
Mechanical engineers	9,100	7,300	6,800	100	300	1,200	1,200	S	600	500	S
Other engineers	18,800	13,800	12,700	400	600	2,800	2,700	100	2,200	1,800	400
Postsecondary teachers-engineers	19,200	S	S	S	S	19,200	18,800	400	S	S	S

See explanatory information, if any, and SOURCE at end of table.

Table E-2. Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1999

Highest degree and occupation	Employed S&Es, total	Business/industry				Educational institution			Government		
		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
Doctorate — continued											
Non-S&E occupations, total	252,600	127,000	84,700	20,000	22,400	104,800	79,500	25,300	20,800	10,200	10,600
Managers/administrators	98,400	57,900	44,400	3,400	10,100	28,600	18,400	10,200	12,000	6,200	5,800
Health/related	25,000	15,000	8,800	3,200	3,000	7,600	6,800	700	2,400	1,200	1,200
Teachers, except S&E postsecondary	64,500	1,400	400	800	200	63,000	51,000	12,000	100	S	100
Sales/marketing	11,800	11,700	8,000	3,700	S	100	100	S	S	S	S
Other non-S&E occupations	52,800	41,100	23,200	8,800	9,100	5,500	3,200	2,300	6,200	2,700	3,500

1 Total includes professional degrees not broken out separately.

NOTES: The term "Scientists and Engineers" (S&Es) includes all persons who have ever received a bachelor's degree or higher in a science or engineering (S&E) field, plus persons holding a non-S&E bachelor's or higher degree who were employed in a S&E occupation during either the 1993, 1995, 1997, or 1999 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

KEY: S = Suppressed for reasons of confidentiality and/or data reliability

SOURCE: National Science Foundation/Science Resources Statistics Division, 1999 SESTAT (Scientists and Engineers Statistical Data System)