

Table E-13. Employed U.S. scientists and engineers, by highest degree attained, occupation, and geographic region of employment: 1997

Highest degree and occupation	Employed S&Es, total ¹	Geographic region of employment								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All degree levels²										
All occupations, total³	10,585,600	803,100	1,646,800	1,537,200	723,700	1,912,700	407,700	888,800	669,700	1,974,600
S&E occupations, total	3,369,400	242,200	467,200	518,100	220,100	602,100	128,600	312,400	232,700	637,800
Scientists, total	1,995,100	154,600	292,600	281,400	135,600	379,900	69,800	171,700	137,400	368,400
Computer/math sci, total	1,039,500	83,800	150,500	142,900	66,200	204,200	28,200	91,900	66,400	203,300
Computer/information scientists	933,200	77,900	136,100	126,100	59,800	179,600	21,300	82,000	58,600	190,000
Mathematical scientists	34,700	1,900	5,100	4,100	1,600	10,200	2,500	1,100	3,100	5,000
Postsecondary teachers- computer math sci	71,500	4,000	9,300	12,700	4,800	14,400	4,400	8,900	4,700	8,300
Life/related scientists, total	321,800	25,900	45,200	42,100	32,300	56,100	14,700	26,600	18,800	59,800
Agricultural/food scientists	43,000	2,500	4,000	5,100	7,900	7,700	1,600	3,900	3,100	7,200
Biological scientists	181,900	16,000	30,400	23,500	13,700	32,800	6,200	10,500	9,700	38,800
Environmental life scientists	20,200	900	1,300	2,500	2,400	2,700	2,100	2,700	1,700	4,000
Postsecondary teachers- life/related sciences	76,600	6,600	9,400	11,000	8,300	12,900	4,900	9,400	4,200	9,800
Physical/related scientists, total ...	284,900	18,800	38,700	44,600	16,000	51,000	12,300	32,700	25,000	45,400
Chemistry, except biochemistry	119,800	7,500	22,300	23,800	7,000	21,200	5,200	9,100	6,900	16,500
Earth scientists/ geologists/oceanographers	68,600	3,200	4,200	7,000	3,000	10,400	2,700	16,800	8,500	12,900
Physicists/astronomers	31,500	2,200	3,900	4,200	1,200	5,600	1,500	1,300	4,100	7,300
Other physical/related scientists	16,700	1,400	1,100	2,400	1,800	4,800	900	1,000	2,200	1,300
Postsecondary teachers- physical/related sci	48,200	4,500	7,200	7,300	3,000	9,000	2,000	4,500	3,200	7,400

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

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Highest degree and occupation	Employed S&Es, total ¹	Geographic region of employment								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
All degree levels² — continued										
Social/related scientists, total	349,000	26,100	58,200	51,800	21,100	68,700	14,500	20,500	27,200	59,900
Economists	45,100	2,700	6,300	3,700	900	16,600	700	2,200	4,000	7,600
Political/related scientists	9,100	200	800	800	300	4,700	100	400	600	1,200
Psychologists	181,700	14,600	32,500	27,700	12,000	28,500	7,000	12,300	12,800	34,500
Sociologists/anthropologists	15,800	700	2,100	1,300	800	3,800	1,200	1,000	2,600	2,300
Other social/related scientists	11,900	200	1,500	1,700	300	4,500	600	100	1,600	1,300
Postsecondary teachers- social/related sci	85,300	7,800	15,100	16,600	6,900	10,500	5,000	4,600	5,700	13,100
Engineers, total	1,374,400	87,600	174,700	236,800	84,400	222,200	58,800	140,700	95,300	269,500
Aerospace/related engineers	72,500	2,200	2,700	4,700	4,000	12,200	3,400	8,100	6,200	29,100
Chemical engineers	76,300	5,200	12,400	12,100	5,400	10,100	4,400	13,900	5,100	7,400
Civil/architectural engineers	206,800	11,100	29,600	27,400	16,300	37,900	7,900	15,200	13,400	47,300
Electrical/related engineers	364,800	27,300	42,000	51,000	23,000	55,400	16,400	35,000	26,700	86,900
Industrial engineers	79,700	5,400	10,500	18,200	5,300	10,100	5,300	7,900	5,700	10,900
Mechanical engineers	271,100	16,700	35,500	72,600	16,600	40,200	8,900	24,000	13,800	42,400
Other engineers	269,200	17,400	37,500	45,100	11,700	49,800	10,200	33,500	21,200	41,400
Postsecondary teachers-engineers ..	33,900	2,300	4,400	5,700	2,200	6,600	2,300	3,000	3,200	4,100
Non-S&E occupations, total	7,216,200	560,900	1,179,600	1,019,000	503,700	1,310,600	279,100	576,400	437,000	1,336,800
Managers/administrators	2,019,900	161,900	328,300	284,500	119,800	392,500	88,100	177,700	121,600	342,100
Health/related	802,400	59,400	134,600	114,600	58,000	144,800	36,700	65,700	47,800	139,900
Teachers, except S&E postsecondary	779,100	65,500	128,600	107,000	55,100	119,700	33,000	65,200	45,800	158,700
Sales/marketing	920,300	74,400	159,100	131,900	67,300	160,900	29,700	61,100	55,400	177,700
Other non-S&E occupations	2,694,500	199,700	428,900	381,000	203,400	492,700	91,500	206,800	166,300	518,400

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Table E-13. Employed U.S. scientists and engineers, by highest degree attained, occupation, and geographic region of employment: 1997

Highest degree and occupation	Employed S&Es, total ¹	Geographic region of employment								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Bachelor's										
All occupations, total³	6,193,700	449,500	887,700	907,000	459,400	1,115,800	242,400	547,900	399,100	1,170,000
S&E occupations, total	1,916,800	126,200	242,300	302,000	137,600	342,900	73,500	189,100	133,300	365,000
Scientists, total	1,000,200	71,800	136,700	137,800	77,300	192,600	31,000	90,200	69,700	191,500
Computer/math sci, total	675,300	52,000	94,800	93,800	50,000	130,500	15,700	60,800	42,200	134,500
Computer/information scientists	649,900	50,900	91,100	90,900	48,100	122,900	14,100	59,200	39,700	131,800
Mathematical scientists	11,900	800	1,900	600	500	4,400	1,200	S	1,300	1,400
Postsecondary teachers- computer math sci	13,500	300	1,900	2,300	1,400	3,200	400	1,500	1,200	1,300
Life/related scientists, total	125,200	7,500	16,000	13,800	16,900	22,900	5,700	9,600	6,700	25,800
Agricultural/food scientists	22,200	1,000	1,500	2,200	3,900	4,700	600	1,900	1,600	5,000
Biological scientists	73,300	4,300	11,700	7,600	8,700	13,500	2,300	4,100	3,900	16,800
Environmental life scientists	14,600	600	1,100	1,800	2,000	1,900	2,000	2,100	600	2,500
Postsecondary teachers- life/related sciences	15,000	1,700	1,600	2,300	2,300	2,800	800	1,500	600	1,500
Physical/related scientists, total ...	131,700	7,700	15,200	22,100	7,300	23,800	6,400	16,400	11,700	21,000
Chemistry, except biochemistry	70,600	3,800	11,100	13,800	4,100	13,300	3,900	5,800	4,800	10,000
Earth scientists/ geologists/oceanographers	34,900	1,400	1,900	4,300	1,400	4,800	1,100	9,500	4,300	6,100
Physicists/astronomers	7,400	700	700	1,100	300	1,300	600	100	300	2,200
Other physical/related scientists	8,100	600	700	1,100	800	2,100	500	300	1,600	400
Postsecondary teachers- physical/related sci	10,700	1,200	800	1,800	800	2,200	300	600	700	2,200

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Table E-13. Employed U.S. scientists and engineers, by highest degree attained, occupation, and geographic region of employment: 1997

Highest degree and occupation	Employed S&Es, total ¹	Geographic region of employment								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Bachelor's — continued										
Social/related scientists, total	68,000	4,500	10,800	8,200	3,000	15,400	3,200	3,500	9,100	10,300
Economists	15,900	600	2,800	1,200	200	5,300	400	600	1,900	2,900
Political/related scientists	5,100	100	700	300	300	2,500	S	S	500	700
Psychologists	26,200	2,700	4,300	2,900	1,200	3,900	1,800	1,900	4,100	3,400
Sociologists/anthropologists	7,000	600	1,000	400	300	1,700	600	400	1,100	900
Other social/related scientists	4,500	S	500	1,300	100	1,500	S	S	1,000	200
Postsecondary teachers- social/related sci	9,300	500	1,400	2,100	1,000	400	400	600	600	2,100
Engineers, total	916,600	54,500	105,600	164,100	60,200	150,300	42,500	98,900	63,700	173,400
Aerospace/related engineers	40,900	900	1,300	2,000	2,200	6,100	2,500	5,400	3,700	16,900
Chemical engineers	49,300	3,300	7,200	8,400	3,700	6,300	3,300	9,000	3,900	4,300
Civil/architectural engineers	150,500	7,900	19,200	21,800	11,700	29,300	5,300	11,700	9,600	33,100
Electrical/related engineers	239,600	16,900	22,400	37,400	17,000	37,000	13,700	23,700	17,800	53,000
Industrial engineers	58,700	3,400	7,300	13,900	4,700	7,100	3,900	6,100	4,100	8,000
Mechanical engineers	200,300	11,000	26,400	52,300	12,200	31,000	6,900	19,300	9,700	30,900
Other engineers	171,800	10,600	21,100	27,600	8,300	32,400	6,400	23,200	14,400	26,600
Postsecondary teachers-engineers ..	5,400	400	600	800	200	1,100	500	500	500	700
Non-S&E occupations, total	4,276,900	323,200	645,400	605,100	321,800	773,000	168,900	358,900	265,800	805,100
Managers/administrators	1,141,100	86,400	176,400	169,400	75,200	216,900	54,700	109,300	64,400	186,600
Health/related	280,400	23,500	42,700	38,800	21,500	47,300	12,500	24,100	19,400	49,900
Teachers, except S&E postsecondary	380,700	30,500	53,400	48,800	25,900	60,700	14,800	38,200	21,400	86,500
Sales/marketing	718,800	60,100	117,300	104,600	56,300	122,800	24,500	46,900	47,400	136,500
Other non-S&E occupations	1,755,900	122,700	255,600	243,400	142,900	325,300	62,400	140,400	113,200	345,600

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

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Highest degree and occupation	Employed S&Es, total ¹	Geographic region of employment								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Master's										
All occupations, total³	2,819,800	232,200	486,500	401,400	161,700	510,000	104,000	226,000	176,100	517,000
S&E occupations, total	967,900	76,500	144,900	147,100	52,600	174,000	34,000	84,900	67,000	184,400
Scientists, total	592,000	49,400	87,600	87,300	32,500	113,900	20,900	51,100	41,700	106,200
Computer/math sci, total	301,600	27,200	43,400	41,900	12,900	62,300	10,100	27,000	20,500	55,500
Computer/information scientists	254,200	24,400	37,900	32,900	10,400	52,300	6,700	21,300	17,400	50,200
Mathematical scientists	15,900	600	2,000	2,900	900	4,000	1,100	700	1,200	2,400
Postsecondary teachers- computer math sci	31,500	2,100	3,500	6,100	1,600	6,000	2,300	5,000	1,800	3,000
Life/related scientists, total	70,300	6,900	10,600	11,100	6,100	9,500	2,800	6,000	5,500	12,100
Agricultural/food scientists	10,900	1,300	1,400	1,600	2,300	1,200	300	1,100	800	900
Biological scientists	37,600	3,600	7,100	6,600	1,800	4,600	1,200	1,500	2,700	8,500
Environmental life scientists	4,200	200	100	400	300	500	100	500	1,000	1,200
Postsecondary teachers- life/related sciences	17,600	1,800	2,000	2,500	1,700	3,200	1,200	2,900	900	1,500
Physical/related scientists, total ...	69,100	4,500	9,900	9,900	4,400	12,200	3,000	9,400	5,500	10,300
Chemistry, except biochemistry	20,200	1,700	4,600	4,200	1,200	3,200	600	1,300	700	2,600
Earth scientists/ geologists/oceanographers	23,100	1,100	1,900	2,000	1,300	3,500	1,200	5,700	2,200	4,100
Physicists/astronomers	9,000	400	1,300	1,500	400	1,500	400	600	1,400	1,600
Other physical/related scientists	7,100	700	200	1,300	900	2,300	300	600	400	500
Postsecondary teachers- physical/related sci	9,700	600	1,900	1,000	500	1,700	500	1,300	700	1,500

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Highest degree and occupation	Employed S&Es, total ¹	Geographic region of employment								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Master's — continued										
Social/related scientists, total	151,100	10,800	23,700	24,400	9,200	30,000	5,100	8,700	10,300	28,200
Economists	21,100	1,400	2,200	1,800	300	8,400	100	1,300	1,900	3,100
Political/related scientists	3,200	S	100	400	S	1,900	100	300	100	300
Psychologists	95,000	7,000	16,500	16,400	6,900	14,400	2,800	6,100	5,100	19,700
Sociologists/anthropologists	5,200	S	400	500	300	1,200	500	300	1,200	800
Other social/related scientists	3,700	100	700	300	200	1,800	500	S	S	200
Postsecondary teachers- social/related sci	22,900	2,300	3,800	5,100	1,600	2,300	1,100	700	2,000	4,100
Engineers, total	375,900	27,200	57,300	59,800	20,100	60,100	13,100	33,800	25,300	78,300
Aerospace/related engineers	27,300	1,000	1,300	2,400	1,500	5,300	600	2,500	2,300	10,400
Chemical engineers	19,900	1,500	3,500	2,600	1,200	2,900	1,000	3,700	800	2,400
Civil/architectural engineers	51,700	2,900	10,000	5,200	3,900	7,900	2,400	3,100	3,500	12,900
Electrical/related engineers	107,400	8,900	16,600	12,200	5,500	16,000	2,500	9,100	7,700	28,200
Industrial engineers	19,300	1,800	2,900	4,100	400	2,700	1,400	1,700	1,600	2,500
Mechanical engineers	61,600	4,900	7,800	17,300	4,100	8,200	1,500	4,200	3,500	10,000
Other engineers	79,500	5,700	13,700	14,700	2,800	14,600	3,300	8,700	5,100	10,900
Postsecondary teachers-engineers ..	9,300	500	1,500	1,200	600	2,500	400	800	700	1,000
Non-S&E occupations, total	1,851,900	155,700	341,600	254,300	109,100	336,000	70,000	141,200	109,100	332,600
Managers/administrators	724,800	61,200	125,400	94,400	35,100	144,400	25,900	59,200	48,900	128,900
Health/related	92,500	7,200	18,800	12,500	4,500	18,700	4,700	6,000	4,600	15,400
Teachers, except S&E postsecondary	323,300	29,400	62,300	45,700	23,700	47,200	14,800	22,300	19,100	58,800
Sales/marketing	183,100	13,000	37,100	25,500	10,100	34,700	4,800	13,200	7,400	37,100
Other non-S&E occupations	528,200	45,000	98,100	76,200	35,700	91,000	19,700	40,400	29,100	92,300

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		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Doctorate										
All occupations, total³	696,000	54,100	115,100	98,600	46,300	128,300	29,800	51,800	46,900	124,100
S&E occupations, total	454,700	36,200	73,400	65,300	28,500	81,400	19,600	35,600	31,300	82,800
Scientists, total	375,300	30,500	61,700	52,700	24,900	70,000	16,500	28,000	24,900	65,500
Computer/math sci, total	59,000	4,400	10,700	7,100	3,100	11,400	2,400	4,000	3,600	12,100
Computer/information scientists	25,700	2,400	5,600	2,200	1,200	4,300	400	1,300	1,300	6,900
Mathematical scientists	6,900	600	1,300	600	200	1,900	200	400	600	1,200
Postsecondary teachers-computer math sci	26,300	1,400	3,800	4,300	1,700	5,200	1,700	2,300	1,700	4,000
Life/related scientists, total	111,800	9,700	16,000	15,100	8,500	22,200	5,500	9,300	6,200	19,300
Agricultural/food scientists	9,800	200	1,100	1,400	1,700	1,800	600	900	700	1,300
Biological scientists	64,100	6,500	10,200	8,400	2,900	14,400	2,100	4,100	2,800	12,500
Environmental life scientists	1,200	100	100	100	100	300	S	100	100	300
Postsecondary teachers-life/related sciences	36,700	2,800	4,700	5,200	3,800	5,700	2,700	4,100	2,600	5,100
Physical/related scientists, total ...	83,700	6,500	13,500	12,600	4,300	15,100	3,000	6,900	7,700	14,000
Chemistry, except biochemistry	28,900	2,000	6,600	5,800	1,700	4,700	800	2,000	1,400	3,900
Earth scientists/										
geologists/oceanographers	10,500	700	400	700	300	2,000	400	1,600	1,900	2,600
Physicists/astronomers	15,100	1,100	1,900	1,600	400	2,800	600	700	2,400	3,500
Other physical/related scientists	1,400	200	100	100	100	400	100	100	200	300
Postsecondary teachers-physical/related sci	27,800	2,600	4,500	4,400	1,800	5,200	1,200	2,600	1,800	3,700

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		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Doctorate — continued										
Social/related scientists, total	120,800	9,900	21,500	17,900	8,900	21,300	5,600	7,800	7,500	20,100
Economists	7,800	600	1,100	700	400	2,700	200	300	300	1,600
Political/related scientists	900	S	S	200	S	400	S	S	S	200
Psychologists	54,300	4,300	10,000	7,300	3,900	8,800	1,900	3,900	3,300	10,900
Sociologists/anthropologists	3,600	100	700	500	200	800	100	300	200	600
Other social/related scientists	2,700	200	300	200	100	800	100	S	600	400
Postsecondary teachers-social/related sci	51,600	4,700	9,300	9,100	4,300	7,800	3,300	3,300	3,100	6,500
Engineers, total	79,400	5,700	11,700	12,700	3,600	11,400	3,100	7,600	6,300	17,300
Aerospace/related engineers	4,300	200	100	400	200	800	300	200	200	1,900
Chemical engineers	7,100	400	1,800	1,100	500	900	200	1,200	300	600
Civil/architectural engineers	4,000	300	400	400	200	700	200	400	300	1,300
Electrical/related engineers	16,800	1,500	3,000	1,100	400	2,200	200	1,700	1,200	5,500
Industrial engineers	1,400	S	300	200	100	300	S	200	S	300
Mechanical engineers	9,000	700	1,100	3,000	200	900	500	500	600	1,500
Other engineers	17,700	1,200	2,700	2,800	600	2,700	500	1,700	1,600	3,800
Postsecondary teachers-engineers ..	19,200	1,400	2,300	3,700	1,400	3,000	1,300	1,700	2,000	2,400
Non-S&E occupations, total	241,300	17,900	41,700	33,300	17,800	46,900	10,200	16,200	15,600	41,400
Managers/administrators	102,400	8,400	16,800	13,000	6,600	21,800	3,800	7,100	6,100	18,600
Health/related	21,800	1,100	4,500	3,500	1,700	3,700	800	1,800	1,500	3,100
Teachers, except S&E postsecondary ..	57,900	3,900	11,100	9,600	4,600	9,800	3,300	3,600	3,800	8,200
Sales/marketing	8,300	400	2,200	1,200	600	1,000	S	400	600	1,900
Other non-S&E occupations	51,000	4,100	7,000	6,000	4,300	10,600	2,300	3,300	3,600	9,700

1 Includes individuals employed in the U.S. who reported employer address outside the U.S., not shown separately

2 Includes professional degrees

3 Total excludes 18,700 individuals who reported never having worked.

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 or 1997 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 Studies Division, 1997 SESTAT (Scientists and Engineers Statistical Data System)