

**Table E-2. Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1993**

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
<b>All degree levels<sup>1</sup></b>											
<b>All occupations, total<sup>2</sup></b> .....	9,793,500	6,661,200	5,343,100	754,400	563,800	1,761,400	906,100	855,300	1,370,900	624,600	746,200
<b>S&amp;E occupations, total</b> .....	3,303,400	2,240,600	2,018,700	116,700	105,200	588,000	472,100	116,000	474,700	278,800	195,900
<b>Scientists, total</b> .....	1,912,300	1,145,400	976,800	82,500	86,100	509,900	402,900	107,000	257,000	147,900	109,100
<b>Computer/math sci, total</b> .....	991,500	759,600	697,400	29,100	33,000	127,000	87,200	39,800	104,900	65,600	39,300
Computer/information scientists .....	870,000	734,900	676,200	28,100	30,600	46,500	35,300	11,200	88,500	53,900	34,600
Mathematical scientists .....	46,800	23,400	20,200	1,000	2,300	7,200	6,400	800	16,200	11,600	4,600
Postsecondary teachers-computer math sci .....	74,700	1,200	1,100	S	100	73,300	45,500	27,800	100	100	S
<b>Life/related scientists, total</b> ..	322,300	102,100	86,100	5,900	10,100	155,600	140,400	15,200	64,600	36,500	28,100
Agricultural/food scientists ....	44,600	27,200	25,000	2,000	100	9,100	9,000	S	8,300	5,100	3,300
Biological scientists .....	175,900	70,000	57,800	2,500	9,700	69,600	68,500	1,100	36,200	20,200	16,100
Environmental life scientists ..	24,800	3,900	2,400	1,200	300	1,300	1,300	100	19,600	11,200	8,400
Postsecondary teachers-life/related sciences .....	77,000	1,100	800	200	S	75,600	61,600	14,000	400	S	400
<b>Physical/related scientists, total</b> .....	280,900	154,900	142,600	5,800	6,500	81,700	72,200	9,500	44,300	29,100	15,200
Chemistry, except biochemistry .....	114,200	88,300	84,900	1,100	2,400	12,700	12,100	600	13,100	6,600	6,500
Earth scientists/geologists/oceanographers .....	68,700	41,300	36,400	3,800	1,100	9,200	9,200	S	18,200	12,500	5,800
Physicists/astronomers .....	34,900	14,900	11,800	700	2,300	13,800	13,600	200	6,200	6,000	300
Other physical/related scientists .....	17,700	9,800	9,400	100	300	1,800	1,600	200	6,100	4,000	2,000
Postsecondary teachers-physical/related sci .....	45,500	600	100	S	500	44,200	35,700	8,500	600	S	600

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: 1993**

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
<b>All degree levels<sup>1</sup> — continued</b>											
<b>Social/related scientists, total</b> .....	317,600	128,800	50,700	41,700	36,400	145,500	103,000	42,600	43,200	16,700	26,500
Economists .....	31,100	16,600	13,500	1,600	1,600	4,700	4,500	200	9,800	5,700	4,100
Political/related scientists .....	8,600	3,600	1,700	500	1,400	1,200	900	300	3,800	2,300	1,400
Psychologists .....	150,800	90,200	29,100	36,300	24,800	42,900	16,500	26,400	17,700	4,100	13,600
Sociologists/anthropologists ..	15,100	5,600	3,400	500	1,800	5,500	4,200	1,300	3,900	1,100	2,800
Other social/related scientists	24,000	12,100	2,900	2,600	6,600	4,600	4,000	600	7,300	3,300	4,000
Postsecondary teachers-social/related sci .....	88,100	700	200	300	100	86,800	72,900	13,900	700	200	500
<b>Engineers, total</b> .....	1,391,100	1,095,200	1,041,900	34,200	19,100	78,200	69,200	9,000	217,700	131,000	86,800
Aerospace/related engineers ..	84,100	66,400	64,400	1,100	900	2,100	2,100	S	15,600	15,500	100
Chemical engineers .....	77,700	70,900	68,700	1,700	500	3,500	3,200	300	3,400	2,500	900
Civil/architectural engineers ....	191,500	113,200	103,100	9,000	1,100	4,500	3,400	1,100	73,800	17,700	56,100
Electrical/related engineers .....	362,500	297,500	284,900	5,900	6,700	14,100	13,200	900	50,900	43,700	7,200
Industrial engineers .....	70,200	62,500	60,800	1,100	600	1,700	1,500	200	6,000	5,400	700
Mechanical engineers .....	253,300	224,600	216,600	5,600	2,500	8,000	7,900	100	20,700	16,300	4,400
Other engineers .....	318,600	259,900	243,300	9,800	6,800	11,800	10,900	900	46,900	29,800	17,100
Postsecondary teachers-engineers .....	33,100	200	200	S	S	32,500	27,000	5,500	300	100	300
<b>Non-S&amp;E occupations, total</b> .....	6,490,100	4,420,600	3,324,300	637,700	458,600	1,173,400	434,000	739,400	896,200	345,800	550,300
Managers/administrators .....	1,994,400	1,456,300	1,245,800	79,300	131,100	185,400	96,800	88,500	352,800	168,200	184,600
Health/related .....	758,000	540,000	312,200	130,400	97,400	150,900	141,000	9,900	67,100	25,100	42,000
Teachers, except S&E postsecondary .....	659,500	43,300	22,300	9,500	11,400	606,300	77,200	529,100	9,900	3,500	6,400
Sales/marketing .....	748,300	739,200	624,900	103,500	10,700	5,100	3,400	1,600	4,100	1,400	2,700
Other non-S&E occupations .....	2,330,000	1,641,900	1,119,100	314,900	207,900	225,700	115,500	110,300	462,300	147,600	314,700

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: 1993**

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
<b>Bachelor's</b>											
<b>All occupations, total<sup>2</sup></b> .....	5,727,200	4,242,600	3,600,000	362,000	280,700	653,100	290,100	363,000	831,500	369,900	461,600
<b>S&amp;E occupations, total</b> .....	1,980,300	1,509,200	1,400,800	54,100	54,200	162,400	128,600	33,800	308,700	172,700	136,000
<b>Scientists, total</b> .....	1,007,000	725,600	653,200	29,300	43,100	135,500	106,500	29,000	145,900	79,800	66,100
<b>Computer/math sci, total</b> .....	676,200	555,000	508,700	20,800	25,500	49,200	31,700	17,500	72,000	44,200	27,900
Computer/information scientists .....	637,300	544,000	498,300	20,600	25,100	30,200	21,900	8,300	63,100	37,700	25,400
Mathematical scientists .....	21,200	10,400	9,800	100	400	1,900	1,700	200	8,900	6,400	2,500
Postsecondary teachers-computer math sci .....	17,800	600	600	S	S	17,100	8,100	9,000	100	100	S
<b>Life/related scientists, total</b> ..	131,600	56,200	48,500	3,800	3,900	39,000	33,700	5,200	36,500	16,700	19,900
Agricultural/food scientists ....	27,000	19,600	17,900	1,700	S	2,400	2,400	S	5,000	2,700	2,300
Biological scientists .....	72,300	32,600	28,000	900	3,700	22,900	22,000	800	16,800	6,300	10,500
Environmental life scientists ..	18,000	3,200	1,900	1,100	100	200	200	S	14,600	7,600	7,000
Postsecondary teachers-life/related sciences .....	14,400	700	600	100	S	13,500	9,100	4,400	200	S	200
<b>Physical/related scientists, total</b> .....	130,700	85,200	80,800	2,800	1,600	21,800	19,100	2,700	23,600	13,900	9,800
Chemistry, except biochemistry .....	66,500	52,300	51,000	300	1,000	5,700	5,200	500	8,500	3,700	4,800
Earth scientists/geologists/oceanographers .....	35,100	23,400	20,900	2,400	100	2,400	2,400	S	9,300	6,400	2,900
Physicists/astronomers .....	8,900	3,700	3,700	S	S	3,600	3,400	200	1,600	1,400	200
Other physical/related scientists .....	9,200	5,300	5,200	100	S	100	100	S	3,700	2,300	1,400
Postsecondary teachers-physical/related sci .....	11,000	500	100	S	400	10,000	8,000	2,000	500	S	500

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: 1993**

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
<b>Bachelor's — continued</b>											
<b>Social/related scientists, total</b> .....	68,500	29,300	15,300	2,000	12,100	25,500	22,000	3,500	13,800	5,100	8,600
Economists .....	10,800	5,300	4,800	400	100	2,200	2,100	100	3,300	1,300	1,900
Political/related scientists .....	5,400	2,400	1,200	100	1,000	500	300	200	2,500	1,200	1,300
Psychologists .....	25,800	14,400	6,400	1,100	6,900	8,500	7,500	1,000	2,900	700	2,200
Sociologists/anthropologists ..	5,700	2,400	1,400	S	1,000	1,400	1,200	200	1,800	300	1,500
Other social/related scientists	8,700	4,500	1,300	300	2,900	1,100	1,000	100	3,100	1,600	1,500
Postsecondary teachers-social/related sci .....	12,100	200	100	S	100	11,800	9,800	2,000	100	S	100
<b>Engineers, total</b> .....	973,300	783,600	747,600	24,800	11,100	26,900	22,100	4,900	162,800	92,900	69,900
Aerospace/related engineers ..	54,200	43,900	42,600	800	500	600	600	S	9,700	9,700	100
Chemical engineers .....	49,900	46,200	45,100	800	200	1,000	1,000	100	2,700	1,900	800
Civil/architectural engineers ....	139,700	78,700	71,100	6,900	700	2,300	1,600	600	58,700	12,600	46,200
Electrical/related engineers .....	251,800	208,600	200,800	4,100	3,700	6,800	6,200	600	36,500	30,600	5,800
Industrial engineers .....	54,700	49,200	47,900	1,000	300	900	900	100	4,500	4,100	500
Mechanical engineers .....	194,400	173,000	167,800	4,200	1,000	4,300	4,300	S	17,000	13,100	3,900
Other engineers .....	222,300	183,800	172,100	7,100	4,600	5,000	4,300	800	33,500	20,900	12,600
Postsecondary teachers-engineers .....	6,200	200	200	S	S	5,900	3,100	2,800	100	S	100
<b>Non-S&amp;E occupations, total</b> .....	3,746,900	2,733,400	2,199,100	307,800	226,500	490,700	161,500	329,100	522,800	197,200	325,600
Managers/administrators .....	1,134,700	898,200	801,700	44,400	52,100	50,800	32,300	18,500	185,700	86,800	98,900
Health/related .....	235,700	160,500	95,600	10,700	54,200	44,800	40,200	4,600	30,400	8,000	22,400
Teachers, except S&E postsecondary .....	299,700	30,600	16,500	6,500	7,700	263,300	8,700	254,600	5,800	1,700	4,000
Sales/marketing .....	600,000	592,800	505,000	78,600	9,200	3,900	2,900	1,000	3,300	800	2,500
Other non-S&E occupations .....	1,476,800	1,051,300	780,400	167,700	103,200	127,800	77,400	50,400	297,700	99,800	197,800

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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
<b>Master's</b>											
<b>All occupations, total<sup>2</sup></b> .....	2,575,600	1,523,200	1,172,500	146,100	204,600	671,600	224,500	447,200	380,800	176,500	204,200
<b>S&amp;E occupations, total</b> .....	891,300	571,800	501,900	37,400	32,500	190,900	121,500	69,500	128,600	78,200	50,300
<b>Scientists, total</b> .....	541,400	299,800	242,400	30,800	26,600	163,400	97,900	65,400	78,300	44,000	34,300
<b>Computer/math sci, total</b> .....	263,600	184,300	171,000	7,300	6,000	50,100	29,400	20,800	29,200	18,900	10,300
Computer/information scientists .....	212,400	174,000	162,600	6,700	4,600	14,600	11,900	2,700	23,800	15,100	8,700
Mathematical scientists .....	18,200	9,700	7,800	500	1,300	3,200	2,600	600	5,300	3,700	1,600
Postsecondary teachers-computer math sci .....	33,000	600	500	S	100	32,300	14,800	17,500	100	100	S
<b>Life/related scientists, total</b> ..	70,400	19,800	17,800	900	1,100	34,100	26,300	7,800	16,500	10,100	6,500
Agricultural/food scientists ....	9,700	4,700	4,400	300	S	3,300	3,300	S	1,700	900	800
Biological scientists .....	37,100	14,500	13,100	400	1,000	12,500	12,300	200	10,100	6,000	4,100
Environmental life scientists ..	6,000	500	300	S	100	900	900	100	4,600	3,200	1,300
Postsecondary teachers-life/related sciences .....	17,700	100	S	100	S	17,300	9,800	7,500	200	S	200
<b>Physical/related scientists, total</b> .....	72,600	38,000	33,800	1,800	2,400	21,500	16,600	4,900	13,100	8,500	4,600
Chemistry, except biochemistry .....	21,100	15,500	14,800	100	700	3,100	3,000	100	2,600	1,300	1,200
Earth scientists/geologists/oceanographers .....	23,900	14,400	12,600	1,200	700	3,400	3,400	S	6,000	3,500	2,600
Physicists/astronomers .....	11,000	4,500	3,100	500	900	4,200	4,200	S	2,200	2,200	100
Other physical/related scientists .....	6,400	3,400	3,300	S	100	900	900	S	2,100	1,500	600
Postsecondary teachers-physical/related sci .....	10,200	100	S	S	S	9,900	5,200	4,800	200	S	100

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**Table E-2. Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1993**

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
<b>Master's — continued</b>											
<b>Social/related scientists, total</b> .....	134,900	57,700	19,800	20,900	17,000	57,600	25,600	32,000	19,500	6,600	12,900
Economists .....	13,500	7,300	5,500	700	1,100	1,600	1,500	100	4,600	2,900	1,800
Political/related scientists .....	1,900	600	300	100	200	200	200	100	1,000	1,000	S
Psychologists .....	76,400	42,000	11,400	18,100	12,500	25,800	4,400	21,400	8,600	1,000	7,600
Sociologists/anthropologists ..	6,300	2,100	1,500	400	300	2,600	1,600	1,000	1,600	500	1,100
Other social/related scientists	11,200	5,500	1,000	1,600	2,900	2,500	2,300	300	3,200	1,100	2,000
Postsecondary teachers-social/related sci .....	25,600	200	100	100	S	24,900	15,800	9,100	500	100	400
<b>Engineers, total</b> .....	349,900	272,000	259,600	6,600	5,900	27,600	23,500	4,000	50,300	34,200	16,100
Aerospace/related engineers ..	26,200	19,700	19,300	200	200	1,000	1,000	S	5,400	5,400	S
Chemical engineers .....	21,800	19,300	18,600	600	100	1,900	1,700	200	500	400	100
Civil/architectural engineers ....	47,800	31,700	29,700	1,700	200	2,000	1,500	500	14,200	4,700	9,500
Electrical/related engineers .....	98,500	79,100	75,100	1,400	2,600	6,100	5,800	300	13,300	11,900	1,400
Industrial engineers .....	15,100	12,800	12,500	100	300	800	600	100	1,500	1,300	200
Mechanical engineers .....	51,800	46,200	44,200	1,000	1,100	2,400	2,300	100	3,200	2,700	500
Other engineers .....	79,600	63,100	60,100	1,600	1,400	4,500	4,300	200	12,000	7,700	4,300
Postsecondary teachers-engineers .....	9,100	S	S	S	S	8,900	6,300	2,600	200	100	100
<b>Non-S&amp;E occupations, total</b> .....	1,684,300	951,400	670,500	108,700	172,100	480,700	103,000	377,700	252,200	98,300	153,900
Managers/administrators .....	693,200	466,700	374,200	28,000	64,500	87,800	30,900	56,900	138,700	65,000	73,700
Health/related .....	83,600	54,300	27,900	7,700	18,700	16,000	12,100	3,900	13,200	2,700	10,500
Teachers, except S&E postsecondary .....	301,900	10,900	5,000	2,900	3,000	287,200	26,500	260,700	3,800	1,700	2,100
Sales/marketing .....	132,400	130,400	107,900	21,100	1,500	1,100	500	600	800	600	200
Other non-S&E occupations .....	473,200	289,000	155,500	49,000	84,500	88,500	32,900	55,700	95,600	28,200	67,500

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		Total	Profit	Self-employed	Non-profit	Total	4 yr. College/university	Other	Total	Federal	State/local
<b>Doctorate</b>											
<b>All occupations, total<sup>2</sup></b> .....	634,800	263,500	186,500	41,600	35,500	312,100	280,100	32,000	59,100	39,900	19,200
<b>S&amp;E occupations, total</b> .....	395,600	147,200	108,200	22,700	16,400	214,700	204,100	10,600	33,600	25,300	8,400
<b>Scientists, total</b> .....	330,500	110,000	75,400	20,400	14,300	191,100	180,600	10,500	29,400	21,700	7,700
<b>Computer/math sci, total</b> .....	48,700	18,000	15,600	900	1,500	27,300	25,900	1,400	3,400	2,300	1,100
Computer/information scientists .....	17,500	14,600	13,000	600	1,000	1,500	1,300	200	1,400	900	500
Mathematical scientists .....	7,400	3,400	2,600	300	500	2,000	2,000	S	2,000	1,400	600
Postsecondary teachers-computer math sci .....	23,800	S	S	S	S	23,800	22,600	1,200	S	S	S
<b>Life/related scientists, total</b> ..	98,100	22,600	17,600	800	4,200	65,800	64,200	1,600	9,700	8,300	1,400
Agricultural/food scientists ....	7,800	2,900	2,700	100	100	3,300	3,300	S	1,600	1,500	100
Biological scientists .....	56,400	19,500	14,800	700	4,000	29,300	29,300	S	7,500	6,400	1,100
Environmental life scientists ..	900	200	100	S	S	200	200	S	500	400	100
Postsecondary teachers-life/related sciences .....	33,000	S	S	S	S	32,900	31,400	1,600	S	S	S
<b>Physical/related scientists, total</b> .....	77,000	31,200	27,500	1,200	2,600	38,400	36,500	1,900	7,400	6,700	700
Chemistry, except biochemistry .....	25,800	20,100	18,700	700	700	3,900	3,900	S	1,900	1,500	400
Earth scientists/geologists/oceanographers .....	9,800	3,500	2,900	200	400	3,400	3,400	S	2,800	2,600	300
Physicists/astronomers .....	15,000	6,600	5,000	300	1,300	6,000	6,000	S	2,400	2,400	S
Other physical/related scientists .....	2,000	1,000	900	S	100	800	600	200	300	200	S
Postsecondary teachers-physical/related sci .....	24,300	100	S	S	100	24,300	22,600	1,700	S	S	S

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**Table E-2. Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1993**

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
<b>Doctorate — continued</b>											
<b>Social/related scientists, total</b> .....	106,700	38,200	14,700	17,400	6,100	59,500	54,000	5,500	9,000	4,500	4,500
Economists .....	6,300	3,600	2,800	400	300	900	900	S	1,800	1,300	400
Political/related scientists .....	1,200	500	100	300	100	400	400	S	200	200	100
Psychologists .....	44,300	31,600	10,700	16,100	4,800	7,200	4,600	2,700	5,500	2,100	3,400
Sociologists/anthropologists ..	3,100	1,100	400	100	500	1,500	1,400	100	500	300	200
Other social/related scientists	3,000	1,200	600	300	300	900	600	200	900	500	500
Postsecondary teachers-social/related sci .....	48,900	300	100	200	S	48,600	46,100	2,500	S	S	S
<b>Engineers, total</b> .....	65,000	37,200	32,800	2,300	2,100	23,700	23,600	100	4,200	3,500	600
Aerospace/related engineers ..	3,600	2,700	2,400	100	100	400	400	S	500	500	S
Chemical engineers .....	6,000	5,300	4,900	200	200	600	600	S	200	200	S
Civil/architectural engineers ....	3,200	2,200	1,800	300	100	200	200	S	700	300	400
Electrical/related engineers .....	11,600	9,400	8,500	400	500	1,200	1,200	S	1,000	1,000	S
Industrial engineers .....	400	400	300	S	S	S	S	S	S	S	S
Mechanical engineers .....	6,500	4,700	4,100	200	400	1,300	1,300	S	400	400	100
Other engineers .....	16,000	12,500	10,700	1,000	700	2,300	2,300	S	1,300	1,100	200
Postsecondary teachers-engineers .....	17,700	S	S	S	S	17,700	17,600	100	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: 1993**

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
<b>Doctorate — continued</b>											
<b>Non-S&amp;E occupations, total</b> .....	239,200	116,300	78,300	18,900	19,100	97,400	76,000	21,400	25,500	14,700	10,900
Managers/administrators .....	119,000	61,400	48,500	3,300	9,600	40,400	29,400	11,000	17,200	10,900	6,300
Health/related .....	21,100	13,000	7,500	3,600	1,900	5,700	5,400	300	2,400	1,300	1,200
Teachers, except S&E postsecondary .....	46,900	1,200	900	200	200	45,400	37,300	8,100	300	100	200
Sales/marketing .....	7,400	7,400	5,400	1,900	100	S	S	S	S	S	S
Other non-S&E occupations .....	44,800	33,300	16,100	9,900	7,300	5,900	3,900	2,100	5,500	2,400	3,200

- 1 Includes professional degrees
- 2 Total excludes 37,000 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 are employed in an S&E occupation. 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, 1993 SESTAT (Scientists and Engineers Statistical Data System)