

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
All degree levels³							
All degree fields, total	13,050,800	12,612,200	11,561,800	1,050,400	438,600	336,100	102,500
Male	8,304,100	8,005,100	7,308,700	696,400	299,000	225,400	73,600
Female	4,746,700	4,607,100	4,253,200	354,000	139,600	110,700	28,900
S&E degree fields, total	9,614,400	9,232,700	8,402,700	830,000	381,700	283,000	98,700
Male	6,108,600	5,845,600	5,294,900	550,700	263,000	191,700	71,300
Female	3,505,800	3,387,100	3,107,800	279,200	118,700	91,300	27,400
Sciences, total	7,291,100	7,041,500	6,526,900	514,600	249,600	190,600	59,000
Male	4,008,400	3,862,200	3,590,800	271,400	146,300	109,200	37,100
Female	3,282,600	3,179,300	2,936,100	243,200	103,300	81,400	21,900
Computer/math sciences, total	1,185,600	1,114,900	988,800	126,200	70,600	47,500	23,200
Male	778,100	729,500	651,000	78,500	48,600	31,400	17,300
Female	407,400	385,400	337,800	47,600	22,000	16,100	5,900
Computer/information sciences	625,300	575,900	495,600	80,300	49,400	32,300	17,100
Male	440,300	404,100	352,200	51,800	36,200	22,800	13,500
Female	185,000	171,800	143,300	28,500	13,200	9,600	3,600
Mathematical sciences	560,300	539,000	493,200	45,900	21,200	15,200	6,100
Male	337,800	325,400	298,700	26,700	12,400	8,600	3,800
Female	222,500	213,600	194,500	19,100	8,800	6,600	2,300
Life/related sciences, total	1,582,900	1,526,800	1,404,000	122,800	56,100	43,800	12,300
Male	893,600	864,500	801,500	63,100	29,100	22,700	6,400
Female	689,300	662,300	602,600	59,800	27,000	21,100	5,900
Agricultural/food sciences	276,000	268,700	255,000	13,800	7,300	5,000	2,300
Male	202,100	197,300	188,000	9,300	4,700	3,000	1,800
Female	74,000	71,400	67,000	4,400	2,600	2,100	500
Biological sciences	1,186,600	1,138,800	1,033,300	105,500	47,800	38,100	9,700
Male	606,400	582,800	531,800	51,100	23,600	19,200	4,400
Female	580,200	555,900	501,500	54,400	24,200	18,900	5,300
Environmental life sciences	120,300	119,300	115,700	3,600	1,000	600	400
Male	85,100	84,400	81,700	2,700	800	500	200
Female	35,200	35,000	34,000	900	200	100	100
Physical/related sciences, total	777,400	732,300	658,500	73,800	45,100	36,100	9,000
Male	586,300	553,500	503,800	49,700	32,800	26,400	6,400
Female	191,100	178,800	154,700	24,200	12,300	9,700	2,500
Chemistry, except biochemistry	363,700	340,400	294,900	45,500	23,300	18,000	5,300
Male	244,300	229,200	203,100	26,100	15,100	11,700	3,400
Female	119,400	111,200	91,800	19,400	8,200	6,300	1,900
Earth science, geology and oceanography	178,900	174,100	165,600	8,500	4,800	4,000	800
Male	145,300	141,400	133,800	7,600	3,900	3,300	600
Female	33,600	32,700	31,800	900	900	700	200
Physics/astronomy	174,500	159,900	143,400	16,500	14,600	11,800	2,800
Male	155,300	142,700	128,900	13,800	12,600	10,200	2,400
Female	19,300	17,200	14,500	2,700	2,000	1,600	400

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

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
All degree levels³ — continued							
Other physical sciences	60,300	57,900	54,500	3,300	2,400	2,300	100
Male	41,400	40,200	38,000	2,200	1,300	1,200	100
Female	18,800	17,700	16,600	1,100	1,100	1,100	S
Social/related sciences, total	3,745,200	3,667,400	3,475,700	191,800	77,800	63,300	14,500
Male	1,750,400	1,714,700	1,634,600	80,100	35,800	28,800	7,000
Female	1,994,800	1,952,800	1,841,100	111,700	42,000	34,500	7,600
Economics	487,000	462,200	423,100	39,100	24,800	18,400	6,400
Male	359,300	342,400	317,700	24,600	16,900	13,200	3,700
Female	127,700	119,800	105,300	14,500	7,800	5,200	2,700
Political/related sciences	683,800	671,700	635,600	36,100	12,100	8,300	3,900
Male	415,700	409,100	388,500	20,600	6,600	4,900	1,700
Female	268,100	262,500	247,100	15,500	5,500	3,300	2,200
Psychology	1,408,600	1,386,700	1,324,000	62,700	21,900	19,500	2,400
Male	494,200	488,500	473,500	15,000	5,700	5,000	700
Female	914,400	898,300	850,500	47,700	16,100	14,500	1,700
Sociology/anthropology	734,900	725,100	694,000	31,100	9,800	9,200	600
Male	275,800	273,400	261,800	11,600	2,400	2,100	200
Female	459,100	451,600	432,200	19,500	7,500	7,100	400
Other social sciences	430,900	421,800	399,000	22,800	9,200	7,900	1,300
Male	205,400	201,200	193,000	8,200	4,100	3,500	600
Female	225,600	220,500	206,000	14,500	5,000	4,400	600
Engineering, total	2,323,300	2,191,200	1,875,800	315,400	132,100	92,400	39,700
Male	2,100,200	1,983,500	1,704,100	279,400	116,700	82,500	34,200
Female	223,200	207,700	171,700	36,000	15,400	9,900	5,500
Aerospace/related engineering	91,900	88,700	80,700	7,900	3,300	2,200	1,100
Male	86,300	83,200	75,800	7,400	3,100	2,100	1,000
Female	5,600	5,500	4,900	500	100	S	100
Chemical engineering	182,800	172,700	146,900	25,800	10,100	7,300	2,800
Male	149,700	141,700	121,500	20,200	8,000	6,000	2,000
Female	33,100	31,000	25,500	5,600	2,100	1,300	800
Civil/architectural engineering	386,700	367,500	305,500	62,000	19,200	14,700	4,500
Male	346,300	329,200	275,500	53,700	17,100	13,400	3,700
Female	40,400	38,400	30,000	8,300	2,100	1,300	800
Electrical/related engineering	696,900	648,100	537,600	110,500	48,800	32,000	16,700
Male	646,300	602,800	504,000	98,700	43,500	28,500	15,000
Female	50,600	45,300	33,600	11,800	5,200	3,500	1,700
Industrial engineering	129,900	121,800	110,300	11,500	8,100	5,800	2,300
Male	106,100	99,100	89,800	9,300	7,000	5,000	2,000
Female	23,800	22,700	20,500	2,200	1,100	800	300
Mechanical engineering	469,300	448,600	393,600	55,000	20,700	15,000	5,700
Male	442,200	422,500	370,200	52,300	19,800	14,700	5,100
Female	27,000	26,100	23,400	2,700	900	400	600

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

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
All degree levels³ — continued							
Other engineering	365,800	343,800	301,100	42,700	22,000	15,300	6,600
Male	323,200	305,100	267,400	37,700	18,100	12,800	5,300
Female	42,600	38,700	33,700	5,000	3,900	2,500	1,300
Non-S&E degrees, total	3,436,400	3,379,500	3,159,100	220,400	56,900	53,100	3,800
Male	2,195,400	2,159,400	2,013,800	145,700	36,000	33,700	2,300
Female	1,240,900	1,220,100	1,145,300	74,700	20,900	19,400	1,500
Bachelor's							
All degree fields, total	7,682,100	7,514,100	6,955,600	558,500	168,000	141,000	27,000
Male	4,789,600	4,687,800	4,339,700	348,100	101,800	84,900	16,900
Female	2,892,500	2,826,300	2,615,900	210,400	66,200	56,000	10,100
S&E degree fields, total	7,131,300	6,972,200	6,454,200	518,100	159,100	132,500	26,600
Male	4,422,100	4,325,300	4,004,000	321,300	96,800	80,400	16,500
Female	2,709,200	2,646,900	2,450,200	196,800	62,200	52,100	10,100
Sciences, total	5,441,700	5,332,300	5,001,300	330,900	109,500	91,300	18,100
Male	2,893,900	2,841,400	2,683,900	157,600	52,400	43,200	9,200
Female	2,547,900	2,490,800	2,317,500	173,400	57,000	48,200	8,900
Computer/math sciences, total	845,300	819,400	741,300	78,100	25,900	20,500	5,400
Male	539,100	522,900	478,400	44,500	16,200	12,700	3,400
Female	306,200	296,500	262,900	33,700	9,700	7,800	1,900
Computer/information sciences	440,300	424,300	375,200	49,100	16,100	12,200	3,900
Male	304,100	292,600	263,000	29,600	11,500	8,600	2,900
Female	136,300	131,700	112,200	19,500	4,600	3,600	1,000
Mathematical sciences	404,900	395,100	366,100	29,000	9,800	8,300	1,500
Male	235,000	230,300	215,400	14,800	4,700	4,200	500
Female	170,000	164,900	150,700	14,200	5,100	4,100	1,000
Life/related sciences, total	1,177,300	1,154,600	1,078,000	76,500	22,800	18,000	4,700
Male	640,400	632,000	596,400	35,600	8,300	6,300	2,000
Female	536,900	522,500	481,600	40,900	14,400	11,700	2,700
Agricultural/food sciences	220,100	217,300	208,900	8,400	2,800	2,000	700
Male	160,600	158,600	152,400	6,200	2,000	1,300	700
Female	59,400	58,600	56,500	2,100	800	800	S
Biological sciences	863,900	843,900	777,700	66,200	20,000	16,000	4,000
Male	413,000	406,600	378,700	27,900	6,400	5,100	1,300
Female	450,900	437,300	399,000	38,300	13,600	10,900	2,700
Environmental life sciences	93,400	93,400	91,400	1,900	S	S	S
Male	66,800	66,800	65,400	1,400	S	S	S
Female	26,600	26,600	26,100	500	S	S	S
Physical/related sciences, total	486,200	470,700	434,200	36,600	15,500	13,200	2,300
Male	350,400	340,900	320,000	20,900	9,500	8,100	1,400
Female	135,800	129,800	114,200	15,700	6,000	5,200	800
Chemistry, except biochemistry	238,800	229,400	204,400	25,000	9,500	7,500	2,000
Male	148,900	143,400	132,100	11,300	5,400	4,300	1,100
Female	90,000	85,900	72,300	13,700	4,100	3,200	800

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Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
Bachelor's — continued							
Earth science, geology and oceanography	117,900	116,600	112,200	4,400	1,300	1,300	S
Male	97,000	96,100	92,300	3,800	900	900	S
Female	21,000	20,600	20,000	600	400	400	S
Physics/astronomy	84,900	81,700	76,800	4,900	3,100	2,800	300
Male	74,600	72,100	67,700	4,400	2,500	2,200	300
Female	10,300	9,600	9,100	600	700	700	S
Other physical sciences	44,600	42,900	40,700	2,200	1,600	1,600	S
Male	30,000	29,300	27,800	1,400	800	800	S
Female	14,600	13,700	12,900	800	900	900	S
Social/related sciences, total	2,932,900	2,887,600	2,747,900	139,700	45,300	39,600	5,800
Male	1,364,000	1,345,600	1,289,000	56,600	18,400	16,000	2,300
Female	1,568,900	1,542,000	1,458,800	83,100	26,900	23,500	3,400
Economics	407,800	393,900	364,100	29,800	13,900	11,600	2,300
Male	299,000	290,100	271,700	18,400	8,900	7,900	1,000
Female	108,800	103,900	92,500	11,400	5,000	3,700	1,300
Political/related sciences	578,200	571,200	543,200	27,900	7,100	4,900	2,200
Male	349,100	344,800	329,400	15,400	4,300	3,200	1,100
Female	229,100	226,400	213,800	12,500	2,700	1,700	1,100
Psychology	963,800	949,300	908,000	41,300	14,500	13,300	1,100
Male	322,500	319,700	310,400	9,300	2,800	2,500	300
Female	641,300	629,600	597,600	32,000	11,700	10,800	900
Sociology/anthropology	653,600	647,800	622,500	25,300	5,800	5,800	S
Male	236,700	236,000	227,100	8,800	700	700	S
Female	417,000	411,800	395,400	16,400	5,200	5,200	S
Other social sciences	329,400	325,300	309,900	15,400	4,100	3,900	200
Male	156,700	155,000	150,400	4,700	1,700	1,700	S
Female	172,700	170,300	159,500	10,700	2,400	2,300	200
Engineering, total	1,689,600	1,640,000	1,452,900	187,100	49,600	41,100	8,500
Male	1,528,300	1,483,900	1,320,100	163,700	44,400	37,200	7,200
Female	161,300	156,100	132,700	23,400	5,200	3,900	1,300
Aerospace/related engineering	64,400	63,000	57,900	5,100	1,400	1,100	200
Male	59,800	58,500	53,900	4,600	1,300	1,100	200
Female	4,500	4,500	4,100	400	S	S	S
Chemical engineering	138,500	134,100	118,800	15,300	4,400	3,500	900
Male	110,200	106,900	95,900	11,000	3,300	2,700	600
Female	28,300	27,200	22,800	4,300	1,100	800	300
Civil/architectural engineering	294,300	284,900	247,400	37,500	9,400	8,200	1,200
Male	264,300	256,200	223,400	32,800	8,100	7,300	800
Female	30,000	28,800	24,000	4,700	1,200	900	400
Electrical/related engineering	496,100	478,000	407,900	70,100	18,100	14,200	3,800
Male	461,500	444,800	382,400	62,400	16,700	13,100	3,700
Female	34,500	33,200	25,500	7,700	1,300	1,200	100

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Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
Bachelor's — continued							
Industrial engineering	100,500	97,000	90,500	6,400	3,500	2,800	800
Male	82,000	78,700	73,800	4,900	3,300	2,700	700
Female	18,500	18,300	16,700	1,500	200	100	100
Mechanical engineering	375,500	366,900	333,300	33,600	8,600	7,500	1,000
Male	353,900	345,700	314,100	31,500	8,200	7,300	900
Female	21,500	21,200	19,100	2,100	300	200	100
Other engineering	220,400	216,100	197,000	19,100	4,300	3,800	600
Male	196,400	193,100	176,600	16,500	3,400	3,000	400
Female	24,000	23,000	20,400	2,600	1,000	800	200
Non-S&E degrees, total	550,800	541,800	501,400	40,400	8,900	8,500	400
Male	367,500	362,500	335,700	26,800	5,000	4,600	400
Female	183,300	179,300	165,700	13,600	4,000	4,000	S
Master's							
All degree fields, total	3,535,900	3,369,700	3,052,300	317,400	166,100	108,500	57,700
Male	2,169,900	2,052,900	1,837,600	215,300	116,900	74,600	42,300
Female	1,366,000	1,316,800	1,214,700	102,100	49,200	33,900	15,300
S&E degree fields, total	1,775,600	1,637,500	1,428,500	209,000	138,000	83,100	54,900
Male	1,151,700	1,052,600	905,800	146,800	99,100	58,100	41,100
Female	623,800	584,900	522,800	62,200	38,900	25,100	13,800
Sciences, total	1,259,900	1,181,300	1,071,500	109,900	78,500	48,800	29,700
Male	689,500	641,400	583,000	58,400	48,100	28,500	19,600
Female	570,400	539,900	488,500	51,400	30,500	20,300	10,200
Computer/math sciences, total	295,600	259,200	218,700	40,500	36,400	20,500	15,900
Male	201,000	175,500	147,900	27,600	25,500	13,300	12,200
Female	94,600	83,700	70,800	12,900	10,900	7,200	3,700
Computer/information sciences	172,400	142,500	113,800	28,700	29,900	17,300	12,600
Male	125,500	103,700	83,700	20,000	21,800	11,800	10,000
Female	46,900	38,800	30,100	8,700	8,100	5,500	2,600
Mathematical sciences	123,200	116,700	104,900	11,800	6,500	3,200	3,300
Male	75,500	71,800	64,200	7,600	3,700	1,500	2,200
Female	47,700	44,900	40,700	4,200	2,800	1,700	1,100
Life/related sciences, total	203,100	193,200	175,800	17,400	9,900	6,700	3,200
Male	112,400	107,500	100,400	7,100	4,900	3,500	1,300
Female	90,700	85,700	75,400	10,400	5,000	3,200	1,800
Agricultural/food sciences	35,000	32,700	29,800	2,900	2,300	1,400	900
Male	23,600	22,500	21,600	900	1,100	600	600
Female	11,400	10,200	8,200	2,000	1,200	800	400
Biological sciences	147,300	140,400	127,100	13,200	7,000	5,000	2,000
Male	75,800	72,500	67,400	5,100	3,300	2,700	600
Female	71,500	67,800	59,700	8,100	3,700	2,300	1,400
Environmental life sciences	20,800	20,200	18,800	1,400	600	300	300
Male	13,000	12,500	11,500	1,000	500	300	200
Female	7,800	7,700	7,400	300	100	100	100

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

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
Master's — continued							
Physical/related sciences, total	143,100	132,600	119,100	13,500	10,400	6,600	3,800
Male	107,100	99,600	90,700	8,800	7,500	4,900	2,600
Female	36,000	33,100	28,400	4,700	2,900	1,700	1,200
Chemistry, except biochemistry	48,200	43,500	36,400	7,000	4,700	2,900	1,800
Male	31,600	28,900	24,800	4,100	2,700	1,500	1,200
Female	16,600	14,500	11,600	2,900	2,100	1,400	600
Earth science, geology and oceanography	41,700	39,900	37,700	2,300	1,700	1,100	600
Male	31,300	29,800	27,700	2,100	1,400	1,000	400
Female	10,400	10,100	10,000	100	300	100	200
Physics/astronomy	39,500	35,800	32,500	3,400	3,600	2,200	1,400
Male	34,200	31,100	29,000	2,100	3,200	2,100	1,000
Female	5,200	4,800	3,500	1,300	500	100	300
Other physical sciences	13,700	13,400	12,600	800	300	300	S
Male	9,900	9,700	9,200	500	200	200	S
Female	3,800	3,700	3,400	300	100	100	S
Social/related sciences, total	618,100	596,300	557,900	38,400	21,800	15,000	6,800
Male	269,000	258,800	243,900	14,900	10,200	6,800	3,400
Female	349,100	337,500	313,900	23,500	11,600	8,200	3,400
Economics	53,400	46,300	39,800	6,500	7,100	4,100	3,000
Male	38,700	33,800	30,000	3,800	4,900	3,000	1,900
Female	14,600	12,500	9,800	2,700	2,200	1,000	1,100
Political/related sciences	86,500	82,400	76,100	6,200	4,100	2,500	1,600
Male	51,500	50,000	46,300	3,700	1,500	1,000	500
Female	35,000	32,400	29,800	2,600	2,600	1,500	1,100
Psychology	339,500	334,500	318,300	16,200	4,900	4,100	900
Male	117,100	115,500	112,100	3,400	1,700	1,300	300
Female	222,400	219,100	206,200	12,900	3,300	2,700	500
Sociology/anthropology	54,800	52,400	48,300	4,100	2,500	1,900	500
Male	23,700	22,900	21,200	1,700	800	600	200
Female	31,100	29,500	27,100	2,400	1,600	1,300	300
Other social sciences	84,000	80,700	75,400	5,400	3,300	2,500	900
Male	38,100	36,700	34,400	2,300	1,400	800	500
Female	46,000	44,000	41,000	3,000	2,000	1,600	300
Engineering, total	515,700	456,200	357,100	99,100	59,500	34,300	25,200
Male	462,200	411,200	322,800	88,400	51,100	29,600	21,500
Female	53,500	45,000	34,300	10,700	8,400	4,800	3,700
Aerospace/related engineering	22,300	21,100	19,200	1,900	1,200	600	600
Male	21,500	20,300	18,400	1,900	1,200	600	600
Female	800	800	800	S	S	S	S
Chemical engineering	28,200	25,000	18,500	6,500	3,100	2,000	1,100
Male	24,600	22,100	16,600	5,500	2,500	1,600	900
Female	3,600	2,900	1,900	1,000	700	400	300

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

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
Master's — continued							
Civil/architectural engineering	81,700	73,800	52,800	21,000	7,900	5,300	2,600
Male	72,100	65,000	47,300	17,700	7,100	4,900	2,200
Female	9,600	8,800	5,600	3,300	800	400	400
Electrical/related engineering	169,900	146,000	113,300	32,700	23,900	12,600	11,300
Male	155,700	135,100	106,200	28,900	20,600	10,700	9,900
Female	14,200	10,900	7,100	3,800	3,300	1,800	1,400
Industrial engineering	26,000	22,200	17,800	4,400	3,800	2,400	1,400
Male	21,100	18,200	14,400	3,900	2,900	1,600	1,300
Female	4,800	4,000	3,400	500	900	700	200
Mechanical engineering	78,700	70,200	52,600	17,600	8,500	4,900	3,600
Male	73,600	65,600	48,600	17,100	7,900	4,700	3,200
Female	5,100	4,600	4,100	500	600	100	400
Other engineering	108,900	97,800	82,600	15,100	11,100	6,600	4,500
Male	93,600	84,700	71,200	13,500	8,800	5,300	3,500
Female	15,300	13,000	11,400	1,700	2,300	1,300	1,000
Non-S&E degrees, total	1,760,300	1,732,200	1,623,800	108,400	28,100	25,300	2,800
Male	1,018,100	1,000,300	931,900	68,400	17,800	16,500	1,300
Female	742,200	731,900	691,900	40,000	10,300	8,800	1,500
Doctorate							
All degree fields, total	839,000	744,500	630,400	114,100	94,600	77,000	17,600
Male	630,600	556,300	464,600	91,700	74,300	60,100	14,200
Female	208,400	188,200	165,800	22,400	20,200	16,800	3,400
S&E degree fields, total	698,500	613,900	511,600	102,400	84,600	67,500	17,100
Male	530,800	463,800	381,400	82,400	67,000	53,300	13,700
Female	167,700	150,100	130,200	19,900	17,600	14,200	3,400
Sciences, total	580,400	518,900	445,700	73,200	61,500	50,500	11,100
Male	421,100	375,400	320,200	55,200	45,700	37,500	8,200
Female	159,300	143,500	125,500	18,000	15,800	13,000	2,900
Computer/math sciences, total	44,500	36,100	28,800	7,300	8,400	6,500	1,900
Male	37,900	30,900	24,700	6,200	7,000	5,300	1,600
Female	6,600	5,200	4,200	1,100	1,400	1,100	300
Computer/information sciences	12,400	8,900	6,600	2,300	3,500	2,800	600
Male	10,500	7,500	5,600	1,900	3,000	2,400	600
Female	1,900	1,400	1,100	300	500	400	100
Mathematical sciences	32,200	27,200	22,200	5,100	4,900	3,700	1,300
Male	27,400	23,400	19,100	4,300	4,000	3,000	1,100
Female	4,800	3,900	3,100	700	900	700	200
Life/related sciences, total	202,000	178,600	149,800	28,800	23,400	19,000	4,400
Male	140,400	124,600	104,200	20,400	15,800	12,800	3,000
Female	61,700	54,100	45,600	8,500	7,600	6,200	1,400
Agricultural/food sciences	21,000	18,800	16,200	2,500	2,200	1,600	600
Male	17,800	16,200	14,000	2,200	1,600	1,100	500
Female	3,100	2,600	2,200	300	600	500	100

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

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
Doctorate — continued							
Biological sciences	175,400	154,500	128,500	26,000	20,800	17,100	3,700
Male	117,600	103,700	85,700	18,000	13,900	11,400	2,500
Female	57,800	50,800	42,800	8,000	7,000	5,700	1,200
Environmental life sciences	5,700	5,400	5,100	300	400	300	100
Male	5,000	4,700	4,500	200	300	300	S
Female	800	700	600	100	100	S	S
Physical/related sciences, total	147,000	127,900	104,100	23,800	19,200	16,300	2,900
Male	127,700	112,000	92,000	19,900	15,800	13,400	2,300
Female	19,300	15,900	12,100	3,800	3,400	2,900	500
Chemistry, except biochemistry	76,500	67,500	54,000	13,500	9,100	7,600	1,500
Male	63,800	56,800	46,000	10,700	7,000	5,900	1,100
Female	12,800	10,700	7,900	2,800	2,100	1,700	400
Earth science, geology and oceanography	19,100	17,300	15,500	1,800	1,800	1,600	200
Male	16,800	15,200	13,600	1,600	1,500	1,400	200
Female	2,300	2,000	1,900	100	300	200	S
Physics/astronomy	49,500	41,600	33,400	8,200	7,900	6,700	1,100
Male	45,700	38,800	31,400	7,300	6,900	5,900	1,100
Female	3,800	2,800	2,000	900	900	800	100
Other physical sciences	2,000	1,500	1,300	300	400	400	S
Male	1,500	1,200	1,000	300	300	300	S
Female	500	300	300	S	200	100	S
Social/related sciences, total	186,800	176,200	163,000	13,300	10,600	8,700	1,900
Male	115,100	108,000	99,300	8,600	7,100	5,900	1,200
Female	71,700	68,300	63,600	4,600	3,500	2,800	700
Economics	25,800	22,000	19,200	2,900	3,800	2,700	1,100
Male	21,600	18,500	16,100	2,400	3,100	2,300	800
Female	4,200	3,500	3,100	400	700	500	200
Political/related sciences	19,100	18,100	16,200	1,900	1,000	900	100
Male	15,100	14,300	12,800	1,500	800	700	100
Female	4,000	3,800	3,400	400	200	200	S
Psychology	98,000	95,500	90,700	4,800	2,500	2,100	400
Male	52,300	51,100	48,700	2,300	1,300	1,100	100
Female	45,600	44,400	42,000	2,500	1,200	1,000	200
Sociology/anthropology	26,500	24,900	23,200	1,700	1,600	1,400	100
Male	15,400	14,600	13,500	1,100	900	900	S
Female	11,000	10,300	9,700	600	700	600	100
Other social sciences	17,500	15,700	13,700	2,000	1,800	1,500	200
Male	10,600	9,500	8,300	1,200	1,100	1,000	100
Female	6,900	6,200	5,500	800	700	600	100
Engineering, total	118,100	95,000	65,900	29,200	23,000	17,000	6,000
Male	109,700	88,400	61,200	27,300	21,200	15,800	5,500
Female	8,400	6,600	4,700	1,900	1,800	1,200	500

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

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1999

Level and field of highest degree, and sex	S&Es, total	U.S. citizen			Non-U.S. citizen		
		Total ¹	Native	Naturalized	Total ²	Permanent resident	Temporary resident
Doctorate — continued							
Aerospace/related engineering	5,200	4,500	3,600	1,000	700	400	300
Male	5,000	4,400	3,500	900	600	400	200
Female	200	200	100	100	100	S	S
Chemical engineering	16,100	13,500	9,600	3,900	2,600	1,800	800
Male	14,800	12,600	8,900	3,700	2,300	1,600	600
Female	1,300	1,000	700	200	300	200	200
Civil/architectural engineering	10,700	8,800	5,300	3,500	1,900	1,200	700
Male	9,900	8,000	4,800	3,200	1,900	1,200	700
Female	800	800	500	300	S	S	S
Electrical/related engineering	30,900	24,100	16,400	7,700	6,800	5,200	1,600
Male	29,000	22,900	15,400	7,400	6,200	4,700	1,500
Female	1,900	1,200	900	300	600	500	100
Industrial engineering	3,500	2,600	2,000	700	800	700	100
Male	3,000	2,100	1,600	600	800	700	100
Female	500	500	400	100	S	S	S
Mechanical engineering	15,100	11,500	7,700	3,800	3,700	2,600	1,000
Male	14,800	11,200	7,500	3,700	3,600	2,600	1,000
Female	400	300	200	100	100	S	S
Other engineering	36,500	30,000	21,400	8,500	6,500	5,000	1,600
Male	33,200	27,300	19,500	7,800	5,900	4,500	1,400
Female	3,300	2,700	1,900	700	600	400	200
Non-S&E degrees, total	140,600	130,500	118,800	11,700	10,000	9,500	500
Male	99,800	92,500	83,200	9,300	7,400	6,800	500
Female	40,700	38,100	35,600	2,500	2,700	2,700	S

1 Includes U.S. citizens who did not specify mode of gaining citizenship

2 Includes non-citizens who did not specify visa status

3 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)