

Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1997

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	12,530,700	12,104,800	11,126,000	978,700	425,900	342,500	83,400
Male	8,103,400	7,814,500	7,156,800	657,700	288,900	227,600	61,200
Female	4,427,300	4,290,300	3,969,200	321,000	137,100	114,900	22,200
S&E degree fields, total	9,269,200	8,902,500	8,127,100	775,400	366,700	286,900	79,900
Male	5,983,600	5,732,100	5,208,300	523,800	251,500	191,900	59,600
Female	3,285,600	3,170,400	2,918,700	251,700	115,200	94,900	20,300
Sciences, total	6,977,800	6,736,200	6,262,300	473,900	241,600	193,400	48,200
Male	3,897,000	3,756,000	3,501,100	254,900	141,000	109,600	31,400
Female	3,080,800	2,980,200	2,761,200	219,000	100,600	83,800	16,800
Computer/math sciences, total	1,136,000	1,069,500	953,900	115,600	66,600	49,200	17,300
Male	742,900	698,000	625,300	72,700	44,900	32,600	12,300
Female	393,100	371,500	328,500	42,900	21,700	16,700	5,000
Computer/information sciences	581,500	538,500	464,300	74,200	43,100	30,400	12,600
Male	402,400	371,600	323,900	47,700	30,900	21,000	9,900
Female	179,100	166,900	140,400	26,500	12,200	9,400	2,800
Mathematical sciences	554,500	531,000	489,600	41,400	23,500	18,800	4,700
Male	340,400	326,400	301,400	25,000	14,000	11,600	2,400
Female	214,100	204,600	188,200	16,400	9,500	7,200	2,200
Life/related sciences, total	1,475,600	1,422,800	1,312,400	110,400	52,800	43,800	9,000
Male	852,400	826,000	767,900	58,100	26,400	21,200	5,200
Female	623,200	596,900	544,600	52,300	26,400	22,600	3,700
Agricultural/food sciences	260,300	254,300	241,900	12,400	6,000	4,500	1,600
Male	193,500	190,000	181,300	8,700	3,500	2,400	1,200
Female	66,800	64,300	60,600	3,700	2,500	2,100	400
Biological sciences	1,103,800	1,058,400	963,700	94,700	45,500	38,300	7,200
Male	578,100	555,900	508,800	47,100	22,200	18,300	3,900
Female	525,700	502,500	454,900	47,500	23,300	19,900	3,300
Environmental life sciences	111,500	110,200	106,800	3,400	1,300	1,100	200
Male	80,800	80,100	77,800	2,300	700	500	200
Female	30,700	30,100	29,100	1,000	600	600	S
Physical/related sciences, total	773,200	729,600	657,000	72,500	43,600	34,800	8,800
Male	588,200	555,800	507,300	48,500	32,400	25,900	6,500
Female	185,000	173,800	149,800	24,000	11,200	9,000	2,200
Chemistry, except biochemistry	359,500	338,600	293,900	44,700	20,800	17,400	3,500
Male	246,300	233,000	206,800	26,200	13,300	11,200	2,100
Female	113,200	105,600	87,100	18,500	7,500	6,200	1,400
Earth science, geology and oceanography	174,700	169,600	161,500	8,100	5,100	4,000	1,100
Male	143,600	139,100	132,300	6,700	4,500	3,600	900
Female	31,200	30,500	29,200	1,400	600	400	200
Physics/astronomy	173,000	157,600	142,000	15,600	15,400	11,600	3,800
Male	154,000	140,800	127,900	12,900	13,300	10,100	3,200
Female	18,900	16,800	14,100	2,700	2,100	1,500	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: 1997

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	66,000	63,800	59,600	4,100	2,300	1,900	400
Male	44,300	43,000	40,200	2,700	1,300	1,000	400
Female	21,700	20,800	19,400	1,400	900	900	S
Social/related sciences, total	3,593,000	3,514,400	3,339,000	175,300	78,600	65,500	13,200
Male	1,713,500	1,676,200	1,600,700	75,600	37,300	29,900	7,300
Female	1,879,500	1,838,100	1,738,300	99,800	41,400	35,500	5,800
Economics	485,600	462,100	422,000	40,100	23,500	17,800	5,700
Male	361,900	344,900	321,800	23,100	17,000	12,600	4,400
Female	123,700	117,200	100,200	17,000	6,500	5,200	1,300
Political/related sciences	664,400	649,800	617,400	32,400	14,600	11,400	3,300
Male	409,300	401,600	382,400	19,200	7,700	6,000	1,700
Female	255,100	248,200	235,000	13,200	6,900	5,400	1,500
Psychology	1,339,800	1,318,200	1,264,400	53,800	21,600	20,300	1,300
Male	485,200	479,900	463,600	16,200	5,300	5,000	300
Female	854,600	838,300	800,800	37,500	16,300	15,200	1,000
Sociology/anthropology	699,300	688,200	663,800	24,400	11,100	9,200	1,800
Male	260,900	257,900	249,900	8,000	3,000	2,600	400
Female	438,400	430,300	414,000	16,300	8,100	6,600	1,500
Other social sciences	403,900	396,100	371,400	24,700	7,800	6,800	1,000
Male	196,200	192,000	183,000	9,000	4,200	3,800	500
Female	207,700	204,100	188,400	15,700	3,600	3,000	500
Engineering, total	2,291,400	2,166,300	1,864,700	301,500	125,100	93,500	31,700
Male	2,086,600	1,976,100	1,707,200	268,900	110,500	82,300	28,200
Female	204,800	190,200	157,500	32,700	14,600	11,100	3,500
Aerospace/related engineering	95,500	92,400	83,400	9,100	3,100	2,300	800
Male	89,700	86,700	78,200	8,500	3,100	2,200	800
Female	5,800	5,800	5,200	600	S	S	S
Chemical engineering	172,000	161,700	137,400	24,300	10,300	8,000	2,400
Male	144,600	136,000	116,600	19,500	8,600	6,600	2,000
Female	27,400	25,700	20,800	4,900	1,700	1,300	400
Civil/architectural engineering	380,700	360,800	303,500	57,200	19,900	15,700	4,200
Male	342,900	324,700	275,500	49,200	18,200	14,300	3,900
Female	37,800	36,000	28,000	8,000	1,700	1,500	300
Electrical/related engineering	686,500	640,700	539,900	100,800	45,700	32,700	13,000
Male	636,600	596,600	506,200	90,400	40,000	28,500	11,500
Female	49,900	44,100	33,700	10,400	5,700	4,200	1,500
Industrial engineering	130,600	123,000	111,500	11,400	7,700	6,000	1,700
Male	109,500	103,300	94,000	9,300	6,200	4,700	1,500
Female	21,200	19,700	17,600	2,100	1,500	1,300	200
Mechanical engineering	468,800	449,800	391,700	58,100	18,900	14,100	4,800
Male	443,100	424,900	369,100	55,800	18,200	13,700	4,500
Female	25,600	24,900	22,600	2,300	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: 1997

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	357,300	337,900	297,300	40,500	19,400	14,700	4,700
Male	320,200	303,900	267,700	36,300	16,200	12,300	4,000
Female	37,200	33,900	29,700	4,300	3,200	2,400	800
Non-S&E degrees, total	3,261,500	3,202,300	2,999,000	203,300	59,200	55,600	3,600
Male	2,119,700	2,082,400	1,948,400	134,000	37,300	35,700	1,700
Female	1,141,800	1,119,900	1,050,500	69,300	21,900	20,000	1,900
Bachelor's							
All degree fields, total	7,469,000	7,293,500	6,761,100	532,400	175,500	151,900	23,600
Male	4,734,100	4,626,500	4,287,800	338,700	107,700	92,000	15,600
Female	2,734,900	2,667,000	2,473,300	193,700	67,800	59,800	8,000
S&E degree fields, total	6,906,400	6,741,000	6,249,200	491,800	165,400	142,100	23,300
Male	4,360,800	4,259,000	3,947,000	312,000	101,800	86,500	15,300
Female	2,545,600	2,482,000	2,302,100	179,900	63,600	55,700	7,900
Sciences, total	5,212,100	5,097,500	4,791,500	306,100	114,600	98,300	16,300
Male	2,816,600	2,760,500	2,611,900	148,600	56,100	46,900	9,200
Female	2,395,500	2,337,000	2,179,600	157,500	58,400	51,400	7,100
Computer/math sciences, total	817,000	787,600	715,200	72,500	29,300	24,200	5,100
Male	516,600	499,700	457,700	42,000	16,900	14,100	2,800
Female	300,400	288,000	257,500	30,500	12,400	10,100	2,300
Computer/information sciences	410,600	394,000	347,100	46,900	16,600	12,700	3,900
Male	276,100	266,100	237,600	28,500	10,000	7,500	2,500
Female	134,500	127,800	109,500	18,400	6,600	5,300	1,400
Mathematical sciences	406,400	393,700	368,100	25,600	12,700	11,500	1,200
Male	240,500	233,500	220,100	13,500	6,900	6,600	300
Female	165,900	160,100	148,000	12,100	5,800	4,900	900
Life/related sciences, total	1,090,600	1,066,400	999,400	67,000	24,200	20,800	3,400
Male	608,900	599,200	567,600	31,600	9,600	7,700	1,900
Female	481,800	467,200	431,800	35,400	14,600	13,100	1,500
Agricultural/food sciences	208,600	206,200	199,000	7,300	2,300	1,900	500
Male	154,900	153,500	148,100	5,400	1,400	1,000	400
Female	53,700	52,700	50,800	1,900	900	800	100
Biological sciences	796,400	774,700	717,000	57,700	21,700	18,700	2,900
Male	390,800	382,600	357,600	25,000	8,200	6,700	1,500
Female	405,600	392,200	359,400	32,800	13,500	12,000	1,400
Environmental life sciences	85,600	85,400	83,500	2,000	200	200	S
Male	63,200	63,200	61,900	1,300	S	S	S
Female	22,500	22,200	21,500	700	200	200	S
Physical/related sciences, total	489,000	473,500	435,200	38,300	15,500	12,500	3,000
Male	356,100	346,000	323,800	22,200	10,100	8,000	2,100
Female	133,000	127,500	111,400	16,100	5,400	4,500	900
Chemistry, except biochemistry	239,200	230,400	205,100	25,300	8,800	7,200	1,600
Male	153,600	148,900	136,700	12,200	4,700	3,900	900
Female	85,600	81,500	68,400	13,100	4,100	3,400	700

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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	114,400	113,100	108,600	4,500	1,300	1,200	100
Male	94,600	93,300	90,000	3,300	1,300	1,200	100
Female	19,800	19,700	18,600	1,200	100	S	S
Physics/astronomy	86,100	82,100	76,800	5,300	4,000	2,900	1,100
Male	75,800	72,400	67,900	4,500	3,400	2,500	900
Female	10,300	9,700	8,900	800	600	400	100
Other physical sciences	49,300	47,900	44,800	3,200	1,300	1,200	200
Male	32,000	31,400	29,200	2,200	600	500	200
Female	17,300	16,600	15,600	1,000	700	700	S
Social/related sciences, total	2,815,500	2,769,900	2,641,700	128,300	45,500	40,800	4,800
Male	1,335,100	1,315,600	1,262,800	52,700	19,500	17,200	2,400
Female	1,480,400	1,454,400	1,378,800	75,600	26,000	23,600	2,400
Economics	408,200	394,600	363,500	31,100	13,500	11,700	1,900
Male	301,600	291,900	274,700	17,200	9,600	8,100	1,500
Female	106,600	102,700	88,800	13,900	3,900	3,600	300
Political/related sciences	563,300	554,300	528,400	25,900	8,900	7,600	1,300
Male	342,900	338,200	323,100	15,000	4,700	3,900	800
Female	220,400	216,200	205,300	10,900	4,200	3,600	600
Psychology	910,900	897,500	862,200	35,200	13,500	13,100	400
Male	318,100	315,700	305,300	10,500	2,400	2,400	S
Female	592,800	581,700	557,000	24,800	11,100	10,700	400
Sociology/anthropology	623,000	616,800	598,000	18,900	6,200	5,400	800
Male	223,200	222,100	217,200	4,900	1,100	1,100	S
Female	399,800	394,700	380,800	13,900	5,100	4,200	800
Other social sciences	310,100	306,700	289,600	17,100	3,400	3,000	400
Male	149,400	147,700	142,600	5,100	1,700	1,700	100
Female	160,700	159,000	147,000	12,000	1,700	1,400	300
Engineering, total	1,694,300	1,643,500	1,457,700	185,800	50,800	43,800	7,000
Male	1,544,200	1,498,500	1,335,100	163,400	45,700	39,500	6,200
Female	150,100	145,000	122,600	22,400	5,200	4,300	800
Aerospace/related engineering	69,000	67,900	61,600	6,400	1,100	1,000	100
Male	64,100	63,000	57,100	5,900	1,100	900	100
Female	4,900	4,900	4,500	400	S	S	S
Chemical engineering	128,100	123,400	109,200	14,200	4,700	4,000	700
Male	104,900	101,100	90,500	10,600	3,800	3,200	600
Female	23,200	22,300	18,700	3,600	900	800	100
Civil/architectural engineering	293,500	283,900	248,100	35,800	9,700	9,000	600
Male	264,600	255,900	225,100	30,800	8,700	8,200	500
Female	28,900	28,000	22,900	5,000	1,000	800	100
Electrical/related engineering	496,100	477,600	412,900	64,800	18,400	15,200	3,200
Male	460,800	444,300	387,000	57,300	16,500	13,500	3,000
Female	35,300	33,300	25,900	7,500	2,000	1,800	200

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Table B-11. U.S. scientists and engineers, by level and field of highest degree attained, sex, and citizenship status: 1997

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	101,700	98,500	91,900	6,600	3,200	2,800	500
Male	85,600	82,900	77,800	5,200	2,700	2,300	400
Female	16,100	15,600	14,200	1,400	500	500	100
Mechanical engineering	381,700	373,200	333,900	39,200	8,500	7,300	1,200
Male	360,800	352,500	315,100	37,400	8,300	7,200	1,100
Female	20,900	20,600	18,800	1,800	200	100	100
Other engineering	224,200	219,000	200,100	18,900	5,200	4,600	600
Male	203,400	198,700	182,600	16,100	4,600	4,200	400
Female	20,800	20,300	17,500	2,700	600	300	200
Non-S&E degrees, total	562,600	552,500	511,900	40,600	10,100	9,700	300
Male	373,300	367,400	340,700	26,700	5,900	5,600	300
Female	189,300	185,100	171,200	13,900	4,200	4,200	S
Master's							
All degree fields, total	3,316,800	3,157,900	2,874,600	283,300	158,900	112,000	47,000
Male	2,068,000	1,956,900	1,762,100	194,800	111,100	75,700	35,400
Female	1,248,800	1,200,900	1,112,500	88,500	47,900	36,300	11,600
S&E degree fields, total	1,698,100	1,569,500	1,382,600	186,900	128,600	84,200	44,400
Male	1,114,100	1,021,900	888,300	133,700	92,100	57,600	34,500
Female	584,100	547,600	494,300	53,200	36,500	26,600	9,900
Sciences, total	1,209,600	1,135,400	1,037,600	97,800	74,200	50,300	23,900
Male	673,300	627,800	574,300	53,500	45,500	29,200	16,300
Female	536,300	507,700	463,300	44,400	28,700	21,000	7,700
Computer/math sciences, total	278,900	249,400	212,600	36,900	29,400	18,600	10,900
Male	191,900	170,600	145,200	25,400	21,300	13,000	8,300
Female	86,900	78,800	67,300	11,500	8,100	5,600	2,500
Computer/information sciences	160,800	138,000	112,200	25,700	22,800	14,600	8,100
Male	117,700	100,100	82,300	17,800	17,600	10,800	6,800
Female	43,000	37,800	29,900	7,900	5,200	3,800	1,400
Mathematical sciences	118,100	111,500	100,300	11,100	6,700	3,900	2,700
Male	74,200	70,500	62,900	7,500	3,700	2,200	1,500
Female	43,900	41,000	37,400	3,600	2,900	1,800	1,200
Life/related sciences, total	197,000	187,000	171,100	15,900	10,000	7,200	2,800
Male	110,000	105,300	98,600	6,700	4,600	3,100	1,500
Female	87,000	81,600	72,500	9,100	5,400	4,100	1,300
Agricultural/food sciences	31,900	29,800	27,100	2,700	2,100	1,300	800
Male	21,900	20,800	19,600	1,200	1,100	500	600
Female	10,000	9,000	7,500	1,500	1,000	800	200
Biological sciences	144,700	137,400	125,400	12,000	7,200	5,400	1,900
Male	75,300	72,200	67,500	4,700	3,100	2,400	800
Female	69,300	65,200	57,900	7,300	4,100	3,000	1,100
Environmental life sciences	20,400	19,700	18,600	1,100	700	600	100
Male	12,700	12,300	11,500	800	400	300	100
Female	7,700	7,400	7,100	300	300	300	S

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: 1997

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	142,700	131,600	119,500	12,200	11,100	7,000	4,100
Male	107,700	99,500	91,800	7,700	8,200	5,200	3,000
Female	35,000	32,100	27,600	4,500	2,900	1,800	1,100
Chemistry, except biochemistry	46,200	42,100	35,500	6,600	4,100	2,900	1,200
Male	29,800	27,400	23,800	3,600	2,400	1,700	700
Female	16,400	14,700	11,700	3,000	1,700	1,300	500
Earth science, geology and oceanography	41,700	39,800	37,900	1,900	2,000	1,300	700
Male	32,300	30,600	28,800	1,800	1,700	1,200	500
Female	9,400	9,200	9,100	100	300	100	200
Physics/astronomy	40,000	35,600	32,600	3,000	4,400	2,400	2,000
Male	34,800	31,100	29,100	2,000	3,600	2,000	1,600
Female	5,200	4,500	3,400	1,000	700	300	400
Other physical sciences	14,800	14,100	13,500	600	600	400	200
Male	10,900	10,300	10,000	300	500	300	200
Female	3,900	3,800	3,500	400	100	100	S
Social/related sciences, total	591,100	567,400	534,500	32,900	23,600	17,400	6,200
Male	263,700	252,400	238,700	13,700	11,300	7,900	3,400
Female	327,400	315,100	295,800	19,300	12,300	9,500	2,800
Economics	52,800	46,000	40,000	6,000	6,800	4,100	2,700
Male	39,500	34,800	31,400	3,400	4,700	2,800	1,900
Female	13,300	11,200	8,600	2,600	2,100	1,200	800
Political/related sciences	82,700	78,000	73,400	4,700	4,700	3,000	1,700
Male	51,600	49,500	46,800	2,600	2,100	1,300	800
Female	31,100	28,600	26,500	2,000	2,600	1,700	900
Psychology	328,800	322,800	309,400	13,400	5,900	5,200	800
Male	114,500	112,600	109,200	3,500	1,800	1,600	200
Female	214,300	210,200	200,200	10,000	4,100	3,600	500
Sociology/anthropology	50,200	46,900	43,400	3,500	3,300	2,700	600
Male	21,900	20,900	19,100	1,700	1,000	800	200
Female	28,300	26,000	24,300	1,800	2,300	1,900	400
Other social sciences	76,600	73,600	68,300	5,300	2,900	2,500	400
Male	36,300	34,600	32,200	2,400	1,700	1,300	300
Female	40,300	39,000	36,200	2,900	1,300	1,200	100
Engineering, total	488,500	434,100	345,000	89,100	54,400	34,000	20,500
Male	440,800	394,200	313,900	80,200	46,600	28,400	18,200
Female	47,700	39,900	31,000	8,900	7,800	5,600	2,200
Aerospace/related engineering	22,000	20,600	18,900	1,700	1,400	900	600
Male	21,200	19,800	18,300	1,500	1,400	800	600
Female	800	800	600	200	S	S	S
Chemical engineering	28,700	25,500	18,800	6,700	3,200	2,200	1,100
Male	25,400	22,800	17,300	5,500	2,600	1,700	900
Female	3,300	2,700	1,500	1,100	600	400	200

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: 1997

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	77,200	69,200	50,600	18,600	8,000	5,000	3,000
Male	69,000	61,700	45,800	15,800	7,300	4,400	2,900
Female	8,200	7,500	4,800	2,700	700	600	100
Electrical/related engineering	161,500	140,500	111,300	29,200	21,100	12,700	8,300
Male	148,500	130,800	104,200	26,500	17,700	10,500	7,200
Female	13,000	9,700	7,000	2,700	3,400	2,200	1,100
Industrial engineering	25,400	22,000	17,800	4,100	3,400	2,400	1,000
Male	21,100	18,300	14,900	3,500	2,700	1,900	900
Female	4,300	3,600	3,000	700	700	600	100
Mechanical engineering	74,100	65,900	50,600	15,400	8,200	5,000	3,200
Male	69,800	62,000	47,000	15,000	7,800	4,800	3,000
Female	4,300	4,000	3,600	400	400	200	200
Other engineering	99,500	90,400	76,900	13,500	9,100	5,800	3,300
Male	85,800	78,800	66,300	12,400	7,000	4,200	2,800
Female	13,700	11,600	10,500	1,100	2,100	1,600	500
Non-S&E degrees, total	1,618,700	1,588,400	1,492,000	96,300	30,300	27,700	2,600
Male	953,900	935,000	873,900	61,100	18,900	18,100	900
Female	664,800	653,400	618,200	35,200	11,400	9,700	1,700
Doctorate							
All degree fields, total	790,500	709,900	602,900	107,000	80,600	68,300	12,300
Male	599,900	536,600	450,500	86,100	63,300	53,500	9,800
Female	190,600	173,300	152,400	20,900	17,300	14,900	2,500
S&E degree fields, total	654,900	582,300	486,600	95,700	72,600	60,400	12,200
Male	504,100	446,600	369,000	77,600	57,500	47,800	9,700
Female	150,800	135,700	117,600	18,100	15,100	12,700	2,500
Sciences, total	546,400	493,700	424,600	69,100	52,700	44,700	8,000
Male	402,500	363,200	310,900	52,300	39,200	33,300	5,900
Female	143,900	130,500	113,700	16,700	13,500	11,400	2,100
Computer/math sciences, total	39,900	32,200	26,100	6,000	7,700	6,400	1,300
Male	34,100	27,500	22,400	5,100	6,600	5,500	1,100
Female	5,800	4,700	3,700	1,000	1,100	900	200
Computer/information sciences	9,900	6,300	5,000	1,300	3,600	3,000	600
Male	8,300	5,100	4,000	1,100	3,200	2,600	600
Female	1,600	1,200	1,000	300	400	300	S
Mathematical sciences	30,000	25,900	21,200	4,700	4,200	3,400	700
Male	25,800	22,400	18,400	4,000	3,400	2,800	600
Female	4,200	3,500	2,700	700	800	600	200
Life/related sciences, total	186,500	167,900	140,600	27,400	18,500	15,800	2,700
Male	132,400	120,200	100,600	19,500	12,200	10,300	1,800
Female	54,100	47,800	39,900	7,800	6,400	5,500	900
Agricultural/food sciences	19,600	18,000	15,600	2,400	1,600	1,300	300
Male	16,700	15,700	13,600	2,100	1,000	900	200
Female	2,900	2,400	2,000	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: 1997

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	161,700	145,100	120,500	24,700	16,600	14,200	2,400
Male	111,100	100,300	83,000	17,200	10,900	9,300	1,600
Female	50,600	44,900	37,400	7,400	5,700	4,900	800
Environmental life sciences	5,100	4,800	4,500	300	400	300	100
Male	4,500	4,300	4,100	200	300	200	100
Female	600	500	400	100	100	100	S
Physical/related sciences, total	140,800	123,800	101,700	22,100	17,000	15,300	1,700
Male	123,800	109,700	91,100	18,600	14,100	12,600	1,500
Female	17,000	14,100	10,700	3,400	2,900	2,600	300
Chemistry, except biochemistry	74,000	66,100	53,300	12,700	7,900	7,200	700
Male	62,800	56,600	46,200	10,400	6,200	5,700	500
Female	11,100	9,400	7,100	2,300	1,700	1,600	200
Earth science, geology and oceanography	18,400	16,600	14,800	1,800	1,800	1,500	300
Male	16,500	15,000	13,300	1,600	1,500	1,300	200
Female	1,900	1,600	1,500	100	300	300	S
Physics/astronomy	46,500	39,500	32,200	7,200	7,000	6,300	800
Male	43,100	36,800	30,500	6,400	6,200	5,500	700
Female	3,400	2,600	1,800	900	800	700	100
Other physical sciences	2,000	1,700	1,300	300	300	300	S
Male	1,400	1,300	1,000	200	200	200	S
Female	500	400	300	100	100	100	S
Social/related sciences, total	179,200	169,800	156,200	13,600	9,400	7,300	2,200
Male	112,200	105,900	96,800	9,100	6,400	4,900	1,500
Female	67,000	63,900	59,400	4,500	3,100	2,400	700
Economics	24,700	21,500	18,500	3,000	3,200	2,100	1,100
Male	20,900	18,200	15,700	2,500	2,700	1,700	1,000
Female	3,800	3,300	2,800	500	500	400	100
Political/related sciences	18,400	17,400	15,600	1,800	1,000	800	200
Male	14,800	13,900	12,400	1,500	900	700	100
Female	3,600	3,400	3,200	300	100	100	100
Psychology	92,900	90,600	86,100	4,500	2,200	2,000	200
Male	50,200	49,000	46,900	2,200	1,100	1,100	100
Female	42,700	41,600	39,300	2,300	1,100	900	100
Sociology/anthropology	26,100	24,500	22,500	2,000	1,600	1,100	400
Male	15,800	15,000	13,600	1,400	800	600	200
Female	10,300	9,500	8,900	600	800	500	300
Other social sciences	17,200	15,800	13,500	2,300	1,400	1,200	200
Male	10,600	9,700	8,200	1,500	900	800	100
Female	6,600	6,100	5,300	800	600	500	100
Engineering, total	108,500	88,600	61,900	26,700	19,900	15,700	4,200
Male	101,600	83,300	58,100	25,300	18,200	14,400	3,800
Female	6,900	5,300	3,900	1,400	1,600	1,300	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: 1997

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	4,500	3,900	2,900	1,000	600	500	200
Male	4,500	3,900	2,800	1,000	600	500	200
Female	100	100	S	S	S	S	S
Chemical engineering	15,200	12,800	9,300	3,500	2,400	1,800	600
Male	14,300	12,100	8,800	3,300	2,200	1,700	500
Female	900	700	500	200	200	100	100
Civil/architectural engineering	10,000	7,700	4,800	2,900	2,300	1,700	600
Male	9,300	7,200	4,600	2,600	2,200	1,600	500
Female	600	500	300	300	100	100	S
Electrical/related engineering	28,900	22,600	15,700	6,900	6,300	4,800	1,500
Male	27,300	21,500	14,900	6,600	5,800	4,500	1,300
Female	1,500	1,100	800	300	400	300	200
Industrial engineering	3,500	2,500	1,800	700	1,000	800	200
Male	2,800	2,000	1,300	700	800	500	200
Female	700	500	400	100	300	200	S
Mechanical engineering	12,900	10,700	7,200	3,500	2,200	1,800	400
Male	12,500	10,400	7,000	3,400	2,100	1,700	400
Female	400	300	200	100	100	100	S
Other engineering	33,500	28,400	20,200	8,200	5,100	4,300	800
Male	30,900	26,300	18,600	7,700	4,500	3,800	700
Female	2,600	2,100	1,600	400	600	500	100
Non-S&E degrees, total	135,600	127,600	116,300	11,300	8,000	7,900	100
Male	95,800	90,000	81,500	8,600	5,800	5,700	100
Female	39,800	37,500	34,800	2,700	2,200	2,200	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 Includes professional degrees

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)