

TABLE A-7. Standard errors for U.S. scientists and engineers, by field and level of highest degree: 2003

Field of highest degree	Level of highest degree			
	All degree levels ^a	Bachelor's	Master's	Doctorate
All degree fields	84,000	73,000	50,000	11,000
S&E fields	73,000	66,000	33,000	5,000
Sciences	69,000	64,000	30,000	5,000
Biological/agricultural/environmental life sciences	31,000	29,000	11,000	4,000
Agricultural/food sciences	13,000	13,000	4,000	1,000
Animal sciences	10,000	10,000	1,000	500
Food sciences/technology	4,000	4,000	1,000	500
Plant sciences	7,000	6,000	2,000	1,000
Other agricultural sciences	6,000	5,000	3,000	500
Biological sciences	28,000	27,000	9,000	4,000
Biochemistry/biophysics	8,000	8,000	2,000	2,000
Biology, general	21,000	21,000	4,000	1,000
Botany	5,000	4,000	2,000	500
Cell/molecular biology	6,000	5,000	3,000	1,000
Ecology	5,000	5,000	3,000	500
Genetics, animal/plant	2,000	2,000	2,000	1,000
Microbiological sciences/immunology	9,000	8,000	3,000	2,000
Nutritional science	6,000	5,000	2,000	500
Pharmacology, human/animal	2,000	2,000	2,000	1,000
Physiology/pathology/human/animal	7,000	6,000	2,000	1,000
Zoology, general	7,000	7,000	2,000	1,000
Other biological sciences	7,000	7,000	3,000	2,000
Environmental life sciences	10,000	9,000	5,000	500
Environmental science studies	8,000	6,000	5,000	500
Forestry sciences	7,000	6,000	3,000	500
Computer/mathematical sciences	26,000	24,000	12,000	2,000
Computer/information sciences	19,000	17,000	11,000	1,000
Computer/information sciences	9,000	7,000	5,000	500
Computer science	16,000	14,000	7,000	1,000
Computer systems analysis	4,000	4,000	2,000	S
Information services/systems	9,000	8,000	4,000	500
Other computer/information sciences	7,000	6,000	4,000	500
Mathematics/statistics	19,000	18,000	7,000	2,000
Applied mathematics	11,000	10,000	3,000	2,000
Mathematics, general	15,000	15,000	4,000	1,000
Operations research	4,000	2,000	3,000	500
Statistics	4,000	3,000	3,000	500
Other mathematics	3,000	3,000	1,000	500
Physical/related sciences	18,000	16,000	7,000	2,000
Chemistry, except biochemistry	14,000	13,000	5,000	2,000
Earth/atmospheric/ocean sciences	10,000	9,000	5,000	1,000
Atmospheric sciences/meteorology	3,000	3,000	1,000	500
Earth sciences	3,000	3,000	2,000	*
Geology	9,000	8,000	4,000	500
Other geological sciences	2,000	2,000	2,000	500
Oceanography	2,000	2,000	1,000	500
Physics/astronomy	7,000	7,000	4,000	1,000
Astronomy/astrophysics	1,000	1,000	1,000	500
Physics	7,000	7,000	3,000	1,000
Other physical sciences	6,000	6,000	2,000	1,000

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	All degree levels ^a	Bachelor's	Master's	Doctorate
Social/related sciences	56,000	52,000	22,000	2,000
Economics	21,000	20,000	7,000	1,000
Agricultural economics	11,000	10,000	3,000	500
Economics	19,000	17,000	6,000	1,000
Political/related sciences	27,000	25,000	9,000	1,000
Public policy studies	4,000	2,000	4,000	1,000
International relations	11,000	8,000	5,000	500
Political science/government	24,000	24,000	6,000	1,000
Psychology	34,000	31,000	16,000	1,000
Educational psychology	11,000	7,000	8,000	500
Clinical psychology	9,000	7,000	6,000	1,000
Counseling psychology	15,000	9,000	12,000	500
Experimental psychology	6,000	6,000	1,000	500
Psychology, general	25,000	24,000	5,000	500
Industrial/organizational psychology	7,000	5,000	4,000	500
Social psychology	6,000	5,000	2,000	500
Other psychology	10,000	9,000	4,000	1,000
Sociology/anthropology	24,000	24,000	6,000	1,000
Anthropology/archeology	10,000	10,000	3,000	500
Criminology	8,000	8,000	2,000	500
Sociology	22,000	21,000	5,000	1,000
Other social sciences	19,000	18,000	7,000	1,000
Area/ethnic studies	8,000	7,000	4,000	500
Linguistics	5,000	5,000	2,000	500
Philosophy of science	5,000	5,000	1,000	500
Geography	9,000	8,000	3,000	500
History of science	5,000	5,000	1,000	500
Other social sciences	11,000	11,000	4,000	1,000
Engineering	33,000	31,000	13,000	2,000
Aerospace/related engineering	8,000	7,000	2,000	1,000
Chemical engineering	9,000	8,000	4,000	1,000
Civil/architectural engineering	13,000	12,000	5,000	1,000
Architectural engineering	5,000	5,000	2,000	S
Civil engineering	12,000	10,000	5,000	1,000
Electrical/computer engineering	16,000	14,000	8,000	1,000
Computer/systems engineering	8,000	6,000	4,000	500
Other electrical/related engineering	15,000	13,000	7,000	1,000
Industrial engineering	10,000	10,000	3,000	500
Mechanical engineering	16,000	15,000	5,000	1,000
Other engineering	13,000	11,000	6,000	1,000
Agricultural engineering	4,000	4,000	1,000	500
Bioengineering/biomedical engineering	2,000	1,000	2,000	500
Engineering science, mechanical/physics	4,000	4,000	2,000	500
Environmental engineering	3,000	2,000	2,000	500
Engineering, general	5,000	5,000	1,000	500
Geophysical/geological engineering	2,000	2,000	500	*
Materials engineering	3,000	3,000	2,000	500
Metallurgical engineering	3,000	3,000	1,000	500
Mining/minerals engineering	3,000	3,000	2,000	500
Naval architecture/marine engineering	2,000	2,000	500	S

TABLE A-7. Standard errors for U.S. scientists and engineers, by field and level of highest degree: 2003

Field of highest degree	Level of highest degree			
	All degree levels ^a	Bachelor's	Master's	Doctorate
Nuclear engineering	2,000	1,000	1,000	500
Petroleum engineering	4,000	4,000	1,000	*
Other engineering	6,000	5,000	4,000	500
S&E-related fields	42,000	40,000	22,000	5,000
Health	36,000	34,000	17,000	3,000
Audiology/speech pathology	12,000	9,000	8,000	500
Health services administration	11,000	7,000	9,000	1,000
Health/medical assistants	2,000	2,000	S	S
Health/medical technologies	8,000	7,000	2,000	1,000
Medical preparatory programs	7,000	7,000	1,000	S
Medicine	17,000	7,000	4,000	2,000
Nursing	26,000	25,000	10,000	500
Pharmacy	10,000	8,000	2,000	1,000
Physical therapy/other rehabilitation/therapeutic services	15,000	13,000	8,000	1,000
Public health	9,000	5,000	6,000	1,000
Other health/medical sciences	15,000	13,000	7,000	1,000
Science/mathematics teacher education	17,000	14,000	9,000	3,000
Computer teacher education	6,000	3,000	5,000	S
Mathematics teacher education	10,000	8,000	6,000	1,000
Science teacher education	9,000	7,000	6,000	2,000
Social science teacher education	10,000	9,000	5,000	500
Technology/technical fields	15,000	14,000	4,000	1,000
Computer programming	6,000	6,000	2,000	S
Data processing	2,000	2,000	S	S
Electrical/electronic technologies	6,000	6,000	1,000	500
Industrial production technologies	11,000	10,000	3,000	S
Mechanical engineering-related technologies	5,000	5,000	2,000	500
Other engineering-related technologies	8,000	7,000	3,000	500
Other S&E-related fields	15,000	13,000	7,000	3,000
Architecture/environmental design	15,000	13,000	7,000	3,000
Actuarial science	2,000	2,000	1,000	S
Non-S&E fields	52,000	29,000	40,000	8,000
Arts/humanities	16,000	15,000	9,000	2,000
Education, except science/mathematics teacher education	28,000	11,000	24,000	7,000
Management/administration	30,000	19,000	23,000	3,000
Sales/marketing	10,000	5,000	9,000	500
Social services/related	13,000	5,000	11,000	3,000
Other non-S&E fields	24,000	11,000	13,000	4,000

* = standard error is not calculated when estimate is less than 500; S = standard error is not calculated when estimate is suppressed for reliability or confidentiality.

S&E = science and engineering.

^a Total includes professional degrees not broken out separately.

NOTES: Scientists and engineers include any person who has ever received a bachelor's or higher degree in a science or engineering (S&E) or S&E-related field, plus any person holding a non-S&E bachelor's or higher degree who was employed in a S&E or S&E-related occupation in 2003. See <http://sestat.nsf.gov/docs/ed03maj.html> for a detailed description of the educational field classification. Standard errors of less than 500 are rounded up to 500, and standard errors equal to or greater than 500 are rounded up to the nearest thousand.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Scientists and Engineers Statistical Data System (SESTAT): 2003.