TABLE A-5. Standard errors for U.S. scientists and engineers, by detailed field and level of highest degree: 2008

Field of highest degree	Level of highest degree			
	All degree levels[a]	Bachelor's	Master's	Doctorate
All degree fields	86,000	71,000	54,500	10,500
S&E fields	71,500	66,500	31,000	5,500
Sciences	66,500	63,500	27,500	5,000
Biological/agricultural/environmental life sciences	29,000	28,500	10,000	3,000
Agricultural/food sciences	14,000	13,500	4,000	1,000
Animal sciences	10,500	10,500	1,000	500
Food sciences/technology	5,000	4,500	2,000	500
Plant sciences	7,500	7,000	2,500	1,000
Other agricultural sciences	6,000	5,500	2,000	1,000
Biological sciences	25,000	24,500	8,500	3,000
Biochemistry/biophysics	7,500	7,000	2,500	2,000
Biology, general	20,500	20,500	4,500	1,000
Botany	5,000	4,500	2,500	1,000
Cell/molecular biology	5,000	4,500	2,000	1,500
Ecology	6,000	4,500	3,500	1,000
Genetics, animal/plant	2,500	2,000	1,500	1,000
Microbiological sciences/immunology	8,000	7,000	3,000	1,500
Nutritional science	6,500	5,500	2,500	500
Pharmacology, human/animal	3,000	2,000	2,000	1,000
Physiology/pathology/human/animal	5,500	5,000	2,000	1,000
Zoology, general	7,000	6,500	2,500	1,000
Other biological sciences	7,000	6,000	3,000	1,500
Environmental life sciences	11,000	10,000	4,500	500
Environmental science studies	8,500	8,000	3,500	500
Forestry sciences	7,500	7,000	3,000	500
Computer/mathematical sciences	25,500	23,500	11,500	2,000
Computer/information sciences	18,500	16,000	10,000	1,500
Computer/information sciences	11,000	9,500	5,500	1,500
Computer science	20,000	18,000	7,500	1,000
Computer systems analysis	6,500	6,000	2,500	D
Information services/systems	9,500	8,500	5,000	D
Other computer/information sciences	10,500	10,000	3,500	500
Mathematics/statistics	19,000	18,000	6,500	1,500
Applied mathematics	8,500	8,000	2,500	1,000
Mathematics, general	15,000	14,500	4,500	1,000
Operations research	4,000	3,000	3,000	500
Statistics	4,500	4,000	2,500	500
Other mathematics	4,500	3,500	2,000	1,000
Physical/related sciences	16,000	15,000	7,000	2,500
Chemistry, except biochemistry	12,000	11,000	4,000	1,500
Earth/atmospheric/ocean sciences	9,500	8,000	4,500	1,000
Atmospheric sciences/meteorology	2,500	2,000	1,500	500
Earth sciences	4,000	3,500	2,000	*
Geology	8,000	7,000	3,000	500
Other geological sciences	2,500	2,000	2,000	1,000
Oceanography	2,500	2,000	1,500	500
Physics/astronomy	7,500	7,000	3,500	1,500
Astronomy/astrophysics	1,500	500	1,500	500
Physics	7,500	7,000	3,500	1,500
Other physical sciences	6,000	6,000	2,000	1,000

TABLE A-5. Standard errors for U.S. scientists and engineers, by detailed field and level of highest degree: 2008

Field of highest degree	Level of highest degree			
	All degree levels[a]	Bachelor's	Master's	Doctorate
Social/related sciences	54,000	49,500	20,500	2,500
Economics	22,500	21,500	6,500	1,000
Agricultural economics	10,000	9,500	3,000	500
Economics	20,000	19,500	6,500	1,000
Political/related sciences	25,500	23,500	9,500	1,000
Public policy studies	5,000	2,500	4,000	500
International relations	9,500	8,500	5,500	500
Political science/government	23,500	22,500	6,500	1,000
Psychology	30,500	26,500	15,500	2,000
Educational psychology	9,500	6,000	7,500	500
Clinical psychology	9,000	6,000	5,500	1,500
Counseling psychology	13,000	8,000	11,000	1,000
Experimental psychology	5,500	5,500	1,000	500
Psychology, general	23,000	22,500	5,000	1,000
Industrial/organizational psychology	6,500	5,500	3,500	1,000
Social psychology	5,500	5,500	1,500	1,000
Other psychology	10,000	9,000	4,500	1,000
Sociology/anthropology	24,000	23,500	5,500	1,000
Anthropology/archaeology	9,500	9,500	3,000	1,000
Criminology	9,000	8,000	2,500	500
Sociology	22,500	21,500	4,500	1,000
Other social sciences	19,000	17,500	6,500	1,000
Area/ethnic studies	8,500	7,500	3,000	500
Linguistics	4,500	4,000	2,000	500
Philosophy of science	4,500	4,500	D	D
Geography	9,000	9,000	3,000	500
History of science	4,000	4,000	1,500	500
Other social sciences	12,000	11,500	4,500	500
Engineering	31,000	28,500	12,500	2,500
Aerospace/related engineering	7,000	6,000	2,000	1,000
Chemical engineering	8,500	8,000	3,000	1,000
Civil/architectural engineering	12,500	11,000	5,500	1,000
Architectural engineering	5,000	4,500	2,000	D
Civil engineering	11,500	10,500	5,000	1,000
Electrical/computer engineering	16,000	13,500	7,500	1,500
Computer/systems engineering	8,000	6,500	4,500	1,000
Other electrical/related engineering	15,000	13,000	7,000	1,500
Industrial engineering	9,500	9,000	3,500	500
Mechanical engineering	14,500	13,500	5,000	1,000
Other engineering	12,000	10,500	6,000	1,500
Agricultural engineering	4,000	3,500	1,000	500
Bioengineering/biomedical engineering	3,000	2,000	2,000	1,000
Engineering science, mechanical/physics	3,500	3,000	2,000	500
Environmental engineering	4,500	3,500	3,000	500
Engineering, general	5,000	4,500	2,000	500
Geophysical/geological engineering	1,500	1,500	1,000	D
Materials engineering	4,000	3,500	2,000	1,000
Metallurgical engineering	3,500	3,000	1,000	500
Mining/minerals engineering	3,500	3,500	1,500	500
Naval architecture/marine engineering	2,500	2,500	500	D
Nuclear engineering	2,000	1,500	1,000	500

TABLE A-5. Standard errors for U.S. scientists and engineers, by detailed field and level of highest degree: 2008

Field of highest degree	Level of highest degree			
	All degree levels[a]	Bachelor's	Master's	Doctorate
Petroleum engineering	3,000	3,000	1,000	*
Other engineering	6,000	5,000	3,500	1,000
S&E-related fields	47,500	39,500	22,000	4,000
Health	40,500	33,000	17,500	3,000
Audiology/speech pathology	11,000	7,500	8,000	500
Health services administration	12,000	8,000	8,500	500
Health/medical assistance	4,500	3,000	3,500	D
Health/medical technologies	9,500	9,000	2,000	D
Medical preparatory programs	6,000	6,000	S	D
Medicine	21,500	6,500	3,500	1,500
Nursing	27,500	24,500	11,000	1,000
Pharmacy	10,500	9,500	3,000	1,000
Physical therapy/other rehabilitation/therapeutic services	17,000	14,500	8,500	1,500
Public health	10,000	6,000	7,000	2,000
Other health/medical sciences	15,000	12,500	7,500	1,500
Science/mathematics teacher education	18,500	14,000	10,500	2,000
Computer teacher education	5,000	1,000	4,500	D
Mathematics teacher education	10,500	8,000	6,000	1,500
Science teacher education	10,000	7,000	6,500	1,500
Social science teacher education	10,500	8,500	5,000	500
Technology/technical fields	14,500	13,000	5,000	2,000
Computer programming	6,000	5,500	2,000	D
Data processing	1,500	1,500	D	D
Electrical/electronic technologies	5,000	5,000	1,000	500
Industrial production technologies	10,500	9,500	3,500	D
Mechanical engineering-related technologies	5,000	5,000	2,000	S
Other engineering-related technologies	7,500	6,500	3,000	1,000
Other S&E-related fields	15,500	13,000	7,500	1,500
Architecture/environmental design	15,500	12,500	7,500	1,500
Actuarial science	3,000	3,000	S	D
Non-S&E fields	55,000	29,000	42,000	8,500
Arts/humanities	15,500	13,000	9,500	3,000
Education, except science/mathematics teacher education	28,500	12,000	26,000	6,500
Management/administration	33,500	18,500	26,500	3,000
Sales/marketing	11,000	6,000	9,500	1,000
Social services/related	17,500	5,500	15,000	3,500
Other non-S&E fields	29,500	11,000	15,000	4,000

* = standard error is not computed when value < 500. D = standard error is not computed when value is suppressed to avoid disclosure of confidential information. S = suppressed; data cell not published.

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 bachelor's or higher degree in S&E or S&E-related field through 30 June 2007, plus any person holding non-S&E bachelor's or higher degree who was employed in S&E or S&E-related occupation on 1 October 2003. See http://sestat.nsf.gov/docs/ed03maj.html for detailed description of educational field classification. Standard errors are rounded up to nearest 500.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Scientists and Engineers Statistical Data System (SESTAT): 2008.