



## **Characteristics of Doctoral Scientists and Engineers in the United States: 2008**

Detailed Statistical Tables | NSF 13-302 | December 2012

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### **General Notes**

This report presents data from the 2008 Survey of Doctorate Recipients (SDR). The SDR is a biennial panel survey that collects longitudinal data on demographic and general employment characteristics of individuals who have received a research doctorate in a science, engineering, or health field from a U.S. academic institution. Starting shortly after they receive their doctorate, sampled individuals are eligible for inclusion in the survey until they reach age 76. The SDR sample is augmented each cycle with new samples of the most recent cohorts of science, engineering, and health doctorate recipients, identified by the Survey of Earned Doctorates, an annual census of research doctorates awarded in the United States.

The National Science Foundation, through its National Center for Science and Engineering Statistics (NCSES), is the primary sponsor of the SDR, with additional funding provided by the National Institutes of Health. The 2008 SDR is the 18th in a series of surveys initiated in 1973 in response to the needs of the federal government for demographic and employment information on scientists and engineers trained at the doctoral level.

The number of detailed tables published in this edition of the series has been reduced. The complete list of tables produced for the 2008 SDR is shown in exhibit 1 of appendix A. The published tables are designated by table number in the first column. The remaining tabulations, designated as "supplemental," are available on request from the SDR Project Officer. NCSES has under development a new system for delivering tabular data. When fully implemented, it will provide online access to the expanded set of detailed tabulations associated with this series. This system will also provide the opportunity for table customization. Select data tables will continue to be published, together with the survey's technical documentation.

The published tables provide information on the number and median salaries of doctoral scientists and engineers by field of doctorate and occupation; by demographic characteristics, such as sex, race/ethnicity, citizenship, and age; and by employment-related characteristics, such as sector of employment and labor-force rates.

Appendix A provides technical information about the survey methodology, coverage, concepts, definitions, sampling errors, and standard error tables. Appendix B provides crosswalks defining field of doctorate and occupation classifications used in survey sampling. Appendix C provides the 2008 SDR mail questionnaire.

## **Errata**

The following errors were discovered after posting Excel and PDF formats of the publication, *Characteristics of Doctoral Scientists and Engineers in the United States: 2008*. These errors have been corrected.

### **March 27, 2013**

Tables 6 and A-6 contained errors in data reported for doctorate recipients receiving or not receiving federal support. These tables have been replaced with corrected versions.

## Data Tables

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TABLE 1. Doctoral scientists and engineers, by field of doctorate and employment status: 2008

Field	Total	Employed			Unemployed	Retired	Not employed/ not seeking
		All	Full time	Part time			work
All fields	752,000	651,200	578,700	72,400	11,400	75,900	13,500
Science	588,000	506,300	445,900	60,400	8,900	61,300	11,500
Biological/agricultural/environmental life sciences	187,900	164,000	150,800	13,200	3,200	16,700	4,100
Agricultural/food sciences	19,800	17,000	15,700	1,300	300	2,200	300
Biochemistry/biophysics	29,100	25,100	23,200	2,000	600	2,700	700
Cell/molecular biology	20,600	19,500	18,200	1,200	200	500	500
Environmental life sciences	7,800	6,400	5,900	600	100	1,200	100
Microbiology	14,000	12,000	10,800	1,200	300	1,500	200
Zoology	12,300	9,500	8,600	900	300	2,200	300
Other biological sciences	84,300	74,500	68,400	6,000	1,500	6,400	2,000
Computer/information sciences	16,900	16,200	15,400	700	200	400	200
Mathematics/statistics	35,800	30,000	27,100	3,000	300	4,800	700
Physical sciences	139,200	115,400	105,700	9,600	2,800	19,000	2,000
Astronomy/astrophysics	5,000	4,500	4,300	200	D	400	D
Chemistry, except biochemistry	71,800	57,800	53,100	4,700	1,800	11,000	1,200
Earth/atmospheric/ocean sciences <sup>a</sup>	20,900	18,300	16,600	1,700	200	2,200	200
Physics	41,500	34,800	31,800	3,000	800	5,400	500
Psychology	112,200	99,200	75,400	23,700	1,300	9,100	2,700
Social sciences	96,000	81,600	71,500	10,100	1,100	11,400	1,900
Economics	25,700	22,200	19,600	2,600	100	3,000	300
Political sciences	22,700	19,300	17,700	1,600	200	2,700	500
Sociology	17,400	14,700	12,600	2,100	200	2,100	400
Other social sciences	30,300	25,400	21,600	3,800	600	3,600	700
Engineering	131,900	116,000	107,700	8,300	2,100	12,200	1,500
Aerospace/aeronautical/astronautical engineering	5,800	5,200	4,800	400	D	500	D
Chemical engineering	17,100	14,300	13,200	1,100	400	2,200	200
Civil engineering	11,600	10,400	9,600	800	100	900	100
Electrical/computer engineering	37,000	33,400	31,400	2,000	400	3,000	200
Materials/metallurgical engineering	13,500	12,000	11,200	800	300	1,000	300
Mechanical engineering	18,100	16,200	15,100	1,000	200	1,600	100
Other engineering	28,700	24,600	22,400	2,200	600	3,000	500
Health	32,100	28,900	25,200	3,700	300	2,400	500

D = suppressed for confidentiality.

<sup>a</sup> Includes other physical sciences.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding. Designation of full time and part time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his/her principal job but full time in labor force. Prior to 2006 SDR, designation of full time and part time status was for all jobs held; thus data for 2003 and earlier are not comparable to data for 2006 and later.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 2. Employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2008

Field	All employed	4-year educational institution <sup>a</sup>	Other educational institution <sup>b</sup>	Private, for-profit <sup>c</sup>	Private, nonprofit	Federal government	State/local government	Self-employed <sup>d</sup>	Other <sup>e</sup>
All fields	651,200	269,400	21,800	212,200	42,900	43,700	18,900	41,000	1,200
Science	506,300	223,200	19,900	139,900	36,500	34,600	15,900	35,100	1,200
Biological/agricultural/environmental life sciences	164,000	77,100	5,500	43,200	13,900	14,200	4,500	5,600	D
Agricultural/food sciences	17,000	6,900	600	6,100	600	1,700	500	600	D
Biochemistry/biophysics	25,100	11,400	600	8,500	1,600	1,500	500	1,000	D
Cell/molecular biology	19,500	9,200	700	4,900	2,500	1,500	300	400	D
Environmental life sciences	6,400	2,700	200	1,000	500	1,200	600	200	D
Microbiology	12,000	4,900	500	3,900	800	1,100	300	600	D
Zoology	9,500	4,900	500	1,600	300	1,300	600	400	D
Other biological sciences	74,500	37,100	2,500	17,200	7,500	6,000	1,700	2,400	D
Computer/information sciences	16,200	6,800	300	7,400	600	500	200	400	D
Mathematics/statistics	30,000	17,200	1,000	8,100	1,000	1,500	200	900	D
Physical sciences	115,400	38,800	4,100	50,800	6,300	8,700	2,500	4,200	D
Astronomy/astrophysics	4,500	2,400	D	800	500	500	D	D	D
Chemistry, except biochemistry	57,800	15,800	2,300	31,300	2,300	2,800	1,200	2,000	D
Earth/atmospheric/ocean sciences <sup>f</sup>	18,300	8,600	600	4,100	1,000	2,400	700	900	D
Physics	34,800	11,900	1,100	14,600	2,600	3,000	500	1,200	D
Psychology	99,200	33,200	5,700	19,700	9,600	5,100	5,700	20,000	D
Social sciences	81,600	50,100	3,300	10,700	5,100	4,700	2,700	4,000	1,000
Economics	22,200	11,600	500	4,100	1,100	2,300	500	1,200	800
Political sciences	19,300	12,400	800	2,300	1,100	900	600	1,000	100
Sociology	14,700	10,400	800	1,100	1,100	400	400	500	D
Other social sciences	25,400	15,600	1,300	3,200	1,700	1,100	1,200	1,100	D
Engineering	116,000	30,400	1,100	66,400	3,700	7,100	2,300	5,000	D
Aerospace/aeronautical/astronautical engineering	5,200	1,200	D	2,600	300	700	D	300	D
Chemical engineering	14,300	2,600	100	9,900	300	700	200	500	D
Civil engineering	10,400	3,800	D	4,600	200	500	800	500	D
Electrical/computer engineering	33,400	8,900	300	20,600	1,000	1,300	100	1,200	D
Materials/metallurgical engineering	12,000	1,900	200	8,000	400	900	D	500	D
Mechanical engineering	16,200	4,000	100	9,700	400	1,000	D	800	D
Other engineering	24,600	8,000	300	11,000	1,100	2,100	1,000	1,100	D
Health	28,900	15,800	900	5,900	2,700	1,900	800	900	D

D = suppressed for confidentiality.

<sup>a</sup> Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

<sup>b</sup> Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

<sup>c</sup> Includes those self-employed in an incorporated business.

<sup>d</sup> Self-employed or business owner in a nonincorporated business.

<sup>e</sup> Includes employers not broken out separately.

<sup>f</sup> Includes other physical sciences.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 3. Employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, faculty rank, and years since doctorate: 2008

Field and sex	All employed		Full professor		Associate professor		Assistant professor		Instructor/lecturer		All other faculty		Rank not applicable	
	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10
All fields	96,300	173,000	1,800	92,300	15,100	43,300	41,800	12,900	5,000	6,100	300	1,400	32,300	17,000
Male	53,900	124,700	1,000	74,000	9,000	27,700	23,400	7,800	2,500	3,400	D	900	17,900	10,900
Female	42,400	48,300	800	18,300	6,100	15,700	18,400	5,100	2,500	2,700	200	400	14,400	6,100
Science	77,600	145,500	1,200	76,600	11,400	36,400	33,300	11,200	4,400	5,300	200	1,200	27,100	14,900
Male	43,100	103,700	700	61,000	6,900	22,800	18,900	6,800	2,200	2,800	D	800	14,400	9,400
Female	34,500	41,900	500	15,600	4,600	13,600	14,400	4,400	2,200	2,400	100	400	12,700	5,500
Biological/agricultural/ environmental life sciences	27,800	49,300	200	23,400	2,000	12,400	9,300	5,900	1,500	1,400	D	400	14,700	5,900
Male	15,300	34,300	100	18,200	1,400	8,300	5,300	3,500	800	600	D	300	7,700	3,500
Female	12,500	14,900	S	5,200	600	4,100	4,100	2,400	700	800	D	D	7,000	2,400
Computer/information sciences	3,400	3,400	D	1,800	800	1,100	1,800	200	D	200	D	D	700	200
Male	2,600	2,800	D	1,500	600	900	1,300	100	D	200	D	D	600	D
Female	800	600	D	300	200	200	500	D	D	D	D	D	100	D
Mathematics/statistics	5,400	11,800	200	7,200	1,300	2,900	2,900	500	100	700	D	D	1,000	500
Male	3,600	9,900	100	6,300	800	2,300	2,000	300	D	500	D	D	700	400
Female	1,800	2,000	D	800	500	600	900	200	100	200	D	D	300	100
Physical sciences	12,100	26,700	D	14,600	1,400	5,400	4,900	1,700	500	1,100	D	400	5,100	3,500
Male	8,600	22,800	D	13,200	1,000	4,100	3,400	1,400	400	800	D	300	3,700	3,000
Female	3,500	4,000	D	1,400	400	1,300	1,500	300	100	300	D	D	1,400	600
Psychology	12,200	21,000	200	10,500	2,000	5,600	5,300	1,500	900	900	D	100	3,800	2,400
Male	4,100	11,100	D	6,800	800	2,200	1,800	700	300	200	D	D	1,000	1,100
Female	8,100	9,900	100	3,700	1,100	3,400	3,500	800	600	700	D	D	2,700	1,300
Social sciences	16,800	33,300	500	19,100	4,000	9,100	9,100	1,500	1,400	1,000	D	200	1,800	2,400
Male	8,900	22,800	300	14,900	2,200	5,000	5,100	800	700	600	D	D	700	1,400
Female	7,900	10,500	200	4,100	1,800	4,100	4,100	700	700	400	D	D	1,100	1,100
Engineering	10,900	19,500	300	12,000	1,900	4,300	4,500	1,000	400	600	D	100	3,800	1,400
Male	8,400	18,100	300	11,500	1,600	3,800	3,300	800	200	500	D	D	3,000	1,300
Female	2,500	1,400	D	600	300	400	1,200	200	200	D	D	D	800	100
Health	7,700	8,000	300	3,700	1,800	2,600	4,000	700	200	200	D	D	1,400	700
Male	2,300	3,000	D	1,500	600	1,000	1,200	200	D	D	D	D	400	200
Female	5,400	5,000	300	2,200	1,200	1,600	2,800	500	100	100	D	D	1,000	500

D = suppressed for confidentiality. S = suppressed for reliability; coefficient of variation exceeds publication standards for this survey.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding. 4-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 4. Employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2008

Characteristic	Science									
	All employed	All sciences	Biological/ agricultural/ environmental life sciences	Computer/ information sciences	Mathematics/ statistics	Physical sciences	Psychology	Social sciences	Engineering	Health
Doctorate recipient	651,200	506,300	164,000	16,200	30,000	115,400	99,200	81,600	116,000	28,900
Sex										
Male	451,200	336,900	107,300	13,300	24,200	94,500	45,800	51,700	103,200	11,200
Female	199,900	169,400	56,700	2,800	5,900	20,800	53,300	29,800	12,800	17,700
Ethnicity/race										
Hispanic or Latino	20,300	16,500	5,400	400	800	2,900	4,000	3,000	2,900	800
Not Hispanic or Latino										
American Indian or Alaska Native	1,300	1,200	300	D	D	200	300	400	100	100
Asian	117,300	71,400	27,300	5,400	6,600	21,800	3,200	7,000	42,100	3,800
Black or African American	19,400	15,400	3,900	300	600	1,900	4,400	4,200	2,200	1,800
White	484,900	395,300	124,900	9,800	21,800	87,200	85,900	65,700	67,500	22,000
Other race <sup>a</sup>	8,000	6,500	2,200	200	200	1,300	1,300	1,300	1,100	400
Age										
Under 35	67,800	49,500	18,900	2,500	3,600	12,700	7,200	4,700	16,200	2,000
35–39	85,900	64,900	22,600	2,800	4,100	14,800	11,100	9,400	17,500	3,400
40–44	87,400	66,200	23,500	2,700	4,000	15,600	10,700	9,700	17,800	3,400
45–49	89,700	68,000	22,200	3,100	3,500	16,900	12,400	10,000	18,400	3,300
50–54	93,900	74,800	25,700	2,400	3,500	16,900	14,900	11,400	14,400	4,700
55–59	88,700	72,100	21,800	1,500	3,400	13,600	17,900	13,800	11,000	5,600
60–64	75,600	62,100	16,700	900	3,700	13,100	15,400	12,300	9,500	4,000
65–75	62,200	48,500	12,500	100	4,100	11,800	9,600	10,400	11,200	2,400
Citizenship status										
U.S. citizen	577,300	459,300	148,300	12,100	24,800	102,500	96,800	74,800	91,800	26,100
Native-born	474,900	393,400	125,800	8,300	19,100	82,900	91,400	65,900	58,500	23,000
Naturalized	102,400	66,000	22,600	3,800	5,700	19,600	5,400	8,900	33,300	3,100
Non-U.S. citizen	73,900	47,000	15,600	4,000	5,200	12,900	2,300	6,800	24,200	2,800
Permanent resident	47,600	30,900	9,900	2,600	3,400	8,400	1,900	4,700	14,800	1,900
Temporary resident	26,200	16,000	5,700	1,400	1,800	4,500	500	2,100	9,400	800
Years since doctorate										
≤5	124,800	91,500	31,900	5,000	5,500	18,200	16,100	14,800	25,200	8,100
6–10	107,100	80,500	27,600	3,200	4,400	16,500	15,500	13,200	20,600	6,100
11–15	100,300	75,300	24,700	3,600	4,100	17,000	14,200	11,700	20,100	4,900
16–20	83,200	64,400	20,600	2,400	3,200	15,400	13,200	9,600	15,300	3,500
21–25	73,200	60,200	18,500	1,200	2,800	14,300	13,700	9,600	10,400	2,500
>25	162,600	134,400	40,700	700	9,900	34,000	26,500	22,600	24,400	3,800
Place of birth <sup>b</sup>										
United States	467,800	387,700	123,800	8,000	18,800	82,000	90,300	64,800	57,600	22,600
Europe	31,600	25,100	6,700	1,400	2,700	7,100	3,000	4,200	5,500	900
Asia	121,800	71,600	26,300	5,800	7,000	21,600	3,000	7,900	46,500	3,700
North America <sup>c</sup>	6,200	4,900	1,500	100	300	900	1,000	1,000	900	400
Central America <sup>d</sup>	2,800	2,200	800	D	100	500	400	400	500	100
Caribbean	2,800	2,100	500	*	200	400	500	500	500	200

TABLE 4. Employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2008

Characteristic	Science									
	All employed	All sciences	Biological/ agricultural/ environmental life sciences	Computer/ information sciences	Mathematics/ statistics	Physical sciences	Psychology	Social sciences	Engineering	Health
South America	6,000	4,500	1,700	200	400	800	600	900	1,300	200
Africa	8,600	5,700	1,900	400	500	1,300	300	1,400	2,300	600
Oceania	1,100	900	200	D	100	100	D	300	200	100

\* = value < 50; D = suppressed for confidentiality.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, respondents reporting 2 or more races.

<sup>b</sup> Numbers are based on persons who reported place of birth. Persons who did not specify place of birth are included in total but not shown separately.

<sup>c</sup> Excludes United States.

<sup>d</sup> Includes Mexico.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.



TABLE 5. Employed doctoral scientists and engineers, by selected demographic characteristics and citizenship status: 2008

Characteristic	All employed	U.S. citizen			Non-U.S. citizen		
		All	Native-born	Naturalized	All	Permanent resident	Temporary resident
Doctorate recipient	651,200	577,300	474,900	102,400	73,900	47,600	26,200
Sex							
Male	451,200	397,900	320,800	77,100	53,400	34,000	19,300
Female	199,900	179,400	154,100	25,300	20,500	13,600	6,900
Ethnicity/race							
Hispanic or Latino	20,300	17,200	11,700	5,500	3,100	2,200	900
Not Hispanic or Latino							
American Indian or Alaska Native	1,300	1,300	1,300	D	D	D	D
Asian	117,300	70,200	9,000	61,200	47,000	28,000	19,100
Black or African American	19,400	17,300	13,000	4,300	2,100	1,500	600
White	484,900	463,500	433,400	30,100	21,400	15,800	5,500
Other race <sup>a</sup>	8,000	7,700	6,500	1,300	200	100	100
Age							
Under 35	67,800	43,500	39,600	3,900	24,200	9,000	15,300
35–39	85,900	62,200	53,100	9,100	23,700	15,900	7,800
40–44	87,400	74,500	57,300	17,200	12,900	11,000	2,000
45–49	89,700	83,200	62,100	21,100	6,500	5,700	800
50–54	93,900	90,500	72,300	18,200	3,400	3,100	300
55–59	88,700	87,200	73,400	13,800	1,500	1,400	S
60–64	75,600	74,600	65,100	9,500	900	800	D
65–75	62,200	61,500	52,100	9,400	700	700	D
Years since doctorate							
≤5	124,800	82,500	73,500	9,000	42,300	18,500	23,800
6–10	107,100	88,000	71,700	16,300	19,100	17,300	1,800
11–15	100,300	93,600	68,700	24,900	6,700	6,300	400
16–20	83,200	80,100	61,900	18,300	3,100	2,900	100
21–25	73,200	72,000	59,500	12,500	1,200	1,200	D
>25	162,600	161,100	139,600	21,400	1,500	1,400	D
Place of birth <sup>b</sup>							
United States	467,800	467,500	466,500	900	400	200	200
Europe	31,600	18,600	3,300	15,300	12,900	9,800	3,200
Asia	121,800	72,300	2,300	70,000	49,500	29,800	19,600
North America <sup>c</sup>	6,200	3,400	1,100	2,200	2,900	2,100	800
Central America <sup>d</sup>	2,800	1,800	300	1,500	1,000	700	300
Caribbean	2,800	2,300	100	2,200	500	400	100
South America	6,000	3,700	500	3,100	2,400	1,600	800
Africa	8,600	5,900	400	5,500	2,600	1,800	800
Oceania	1,100	500	D	400	600	400	200

D = suppressed for confidentiality. S = suppressed for reliability; coefficient of variation exceeds publication standards for this survey.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

<sup>b</sup> Numbers are based on persons who reported place of birth. Persons who did not specify place of birth are included in total but not shown separately.

<sup>c</sup> Excludes United States.

<sup>d</sup> Includes Mexico.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 6. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, ethnicity, race, and sex: 2008 (corrected March 2013)

Characteristic	Not Hispanic or Latino																				
	All employed			Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Doctorate recipient	651,200	451,200	199,900	20,300	12,200	8,100	1,300	900	500	117,300	86,600	30,700	19,400	10,600	8,800	484,900	336,000	148,900	8,000	5,000	2,900
Age																					
Under 35	67,800	40,900	26,900	2,900	1,500	1,300	100	D	D	20,400	13,600	6,700	2,100	900	1,200	41,400	24,300	17,100	1,000	500	500
35-39	85,900	54,300	31,600	3,700	2,000	1,700	200	200	100	23,300	16,200	7,100	3,000	1,500	1,500	54,700	33,800	20,900	1,100	600	400
40-44	87,400	57,000	30,400	3,000	1,700	1,300	100	D	100	21,100	14,900	6,200	2,800	1,300	1,500	59,400	38,400	21,000	1,100	600	500
45-49	89,700	61,800	27,900	3,300	2,100	1,200	100	D	100	19,100	14,200	4,900	2,500	1,500	1,000	63,500	43,200	20,300	1,200	700	500
50-54	93,900	65,300	28,600	3,000	1,800	1,100	200	100	100	13,600	10,900	2,700	2,900	1,600	1,300	73,200	50,100	23,100	900	600	300
55-59	88,700	62,800	25,900	2,000	1,100	800	200	100	D	8,800	7,200	1,600	2,900	1,800	1,100	73,800	51,800	22,000	1,100	700	300
60-64	75,600	57,200	18,400	1,300	900	400	300	200	100	5,400	4,400	1,000	2,000	1,100	900	65,800	50,000	15,800	800	500	200
65-75	62,200	52,100	10,200	1,200	1,100	200	D	D	D	5,600	5,100	500	1,300	900	400	53,200	44,300	8,800	900	700	200
Years since doctorate																					
≤5	124,800	73,800	51,000	5,800	3,000	2,700	300	200	100	35,700	24,400	11,300	5,300	2,500	2,800	75,900	42,900	33,100	1,800	900	900
6-10	107,100	66,000	41,100	4,400	2,500	1,900	300	200	100	23,400	16,200	7,200	4,400	2,200	2,200	73,400	44,300	29,100	1,300	800	500
11-15	100,300	65,300	34,900	3,100	1,700	1,400	200	200	100	23,500	17,100	6,400	2,800	1,600	1,200	69,400	44,100	25,300	1,300	700	600
16-20	83,200	56,900	26,300	2,900	1,900	1,000	200	D	100	13,900	11,000	2,900	2,200	1,300	900	62,800	41,800	21,000	1,200	800	400
21-25	73,200	52,700	20,500	1,700	1,100	600	200	100	100	7,600	6,300	1,300	1,900	1,200	700	61,200	43,600	17,500	600	400	200
>25	162,600	136,400	26,200	2,400	2,100	400	100	D	D	13,100	11,500	1,600	2,800	1,900	900	142,200	119,200	22,900	1,900	1,600	300
Citizenship status																					
U.S. citizen	577,300	397,900	179,400	17,200	10,000	7,200	1,300	900	500	70,200	52,100	18,100	17,300	9,000	8,300	463,500	321,100	142,400	7,700	4,800	2,900
Native-born	474,900	320,800	154,100	11,700	6,500	5,200	1,300	800	500	9,000	5,800	3,200	13,000	5,600	7,500	433,400	298,300	135,200	6,500	3,800	2,600
Naturalized	102,400	77,100	25,300	5,500	3,500	2,000	D	D	D	61,200	46,300	14,900	4,300	3,400	900	30,100	22,900	7,200	1,300	1,000	300
Non-U.S. citizen	73,900	53,400	20,500	3,100	2,200	900	D	D	D	47,000	34,500	12,600	2,100	1,600	500	21,400	14,800	6,500	200	200	D
Permanent resident	47,600	34,000	13,600	2,200	1,500	700	D	D	D	28,000	20,400	7,600	1,500	1,200	300	15,800	10,800	5,000	100	D	D
Temporary resident	26,200	19,300	6,900	900	700	300	D	D	D	19,100	14,100	5,000	600	400	200	5,500	4,000	1,500	100	100	D
Employer location																					
New England	55,400	37,300	18,100	1,200	700	500	D	D	D	9,900	7,300	2,700	800	400	300	42,900	28,500	14,400	600	400	300
Middle Atlantic	100,300	68,200	32,100	2,400	1,300	1,000	100	D	D	19,800	14,600	5,200	2,600	1,500	1,100	74,500	50,200	24,300	900	500	400
East North Central	81,800	57,000	24,800	1,800	1,200	600	200	200	100	13,600	10,300	3,300	2,400	1,300	1,100	62,800	43,300	19,500	900	700	300
West North Central	37,500	26,000	11,500	1,000	700	300	S	D	D	4,900	3,600	1,300	700	400	300	30,300	20,800	9,500	500	400	100
South Atlantic	126,200	84,500	41,700	3,600	2,100	1,500	300	200	100	18,400	13,000	5,400	7,000	3,500	3,500	95,600	65,000	30,600	1,400	800	600
East South Central	24,100	17,300	6,800	500	300	100	D	D	D	2,800	2,100	700	1,300	800	600	19,300	13,900	5,400	300	200	S
West South Central	52,100	38,500	13,600	2,300	1,400	900	200	100	100	11,400	8,800	2,600	1,800	1,000	800	35,700	26,600	9,100	800	500	200
Mountain	43,700	31,500	12,200	1,700	1,000	700	200	100	*	4,600	3,400	1,200	400	200	100	36,200	26,200	10,000	600	400	200
Pacific	126,400	88,500	37,900	4,000	2,300	1,700	300	200	100	31,400	23,000	8,400	2,400	1,300	1,100	86,500	60,600	25,900	1,900	1,200	800
U.S. territories/other areas	3,600	2,400	1,300	1,800	1,000	800	D	D	D	500	500	S	D	D	D	1,200	800	400	D	D	D

TABLE 6. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, ethnicity, race, and sex: 2008 (corrected March 2013)

Characteristic	Not Hispanic or Latino																				
	All employed			Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Sector of employment																					
4-year educational institution <sup>b</sup>	269,400	178,600	90,700	9,900	6,000	3,900	600	400	200	38,600	26,400	12,100	9,800	5,300	4,500	207,100	138,400	68,700	3,500	2,100	1,400
Other educational institution <sup>c</sup>	21,800	11,600	10,200	1,100	400	700	D	D	D	1,400	900	500	1,400	700	700	17,700	9,600	8,100	100	*	100
Private, for-profit <sup>d</sup>	212,200	167,800	44,400	4,900	3,600	1,300	400	200	100	59,300	47,300	12,000	3,800	2,400	1,400	141,500	112,400	29,100	2,300	1,800	500
Private, nonprofit	42,900	25,500	17,400	1,200	500	700	D	D	D	6,800	4,500	2,200	1,000	500	600	33,200	19,600	13,600	700	300	300
Federal government	43,700	30,300	13,400	1,200	700	500	100	D	D	5,800	3,900	1,900	1,400	700	700	34,500	24,500	10,000	600	400	200
State/local government	18,900	12,100	6,800	800	400	400	S	D	*	2,900	1,700	1,100	1,000	500	600	13,800	9,300	4,500	300	200	200
Self-employed <sup>e</sup>	41,000	24,400	16,600	1,000	400	600	100	D	100	2,300	1,700	600	900	600	400	36,300	21,600	14,700	400	200	200
Other <sup>f</sup>	1,200	800	400	100	100	D	D	D	D	200	D	D	D	D	D	800	500	300	D	D	D
Primary/secondary work activity <sup>g</sup>																					
Any R&D	409,100	298,600	110,500	12,800	8,200	4,700	900	600	300	88,400	66,400	22,000	10,200	6,100	4,000	292,200	214,300	77,900	4,600	2,900	1,700
Applied research	220,600	157,300	63,300	7,100	4,400	2,700	400	200	200	46,300	33,500	12,800	6,200	3,600	2,500	158,100	114,000	44,100	2,600	1,500	1,100
Basic research	148,800	104,900	43,800	5,400	3,600	1,900	400	300	100	29,000	20,400	8,600	3,800	2,400	1,400	108,200	77,000	31,200	2,000	1,300	700
Design	44,800	37,900	6,900	1,100	800	300	100	D	D	13,500	11,300	2,200	600	400	200	29,200	25,000	4,100	300	200	100
Development	95,600	76,000	19,600	2,100	1,300	800	200	200	D	30,600	24,700	5,900	1,700	1,100	500	60,400	48,200	12,200	700	600	200
Computer applications	52,800	45,000	7,800	1,000	800	200	D	D	D	17,100	13,900	3,200	800	600	200	33,400	29,200	4,200	500	500	*
Management/sales/administration	277,100	188,300	88,800	8,200	4,700	3,500	500	300	200	39,400	28,900	10,500	8,300	4,100	4,200	217,000	147,900	69,200	3,700	2,400	1,300
Professional services	102,000	57,300	44,700	3,200	1,600	1,700	200	D	100	9,700	6,100	3,600	3,800	1,600	2,100	83,700	47,200	36,500	1,500	800	700
Teaching	196,100	128,500	67,600	7,500	4,500	3,000	500	300	100	21,800	15,800	6,100	8,100	4,400	3,700	155,800	102,100	53,700	2,400	1,400	1,000
Teaching	51,600	32,700	18,800	1,600	1,000	600	200	D	100	9,000	6,100	2,900	1,700	700	1,000	38,300	24,300	13,900	800	500	300
Federal support																					
Receiving support	201,200	142,400	58,700	6,700	4,100	2,600	500	300	100	32,400	23,500	8,900	5,200	3,000	2,200	153,400	109,500	43,800	3,000	1,900	1,100
Not receiving support	447,700	307,900	139,800	13,500	8,100	5,500	900	500	300	84,200	62,700	21,500	14,200	7,600	6,600	330,000	225,800	104,200	4,900	3,100	1,800

TABLE 6. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, ethnicity, race, and sex: 2008 (corrected March 2013)

Characteristic	Not Hispanic or Latino																				
	All employed			Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Degree – job relationship																					
Closely related	427,600	290,800	136,800	14,300	8,700	5,600	900	500	400	73,200	54,200	19,000	13,900	7,700	6,300	320,300	216,800	103,400	5,000	3,000	2,100
Somewhat related	169,400	121,300	48,100	4,600	2,800	1,900	400	300	100	34,500	25,600	9,000	4,000	2,000	1,900	123,700	89,100	34,600	2,200	1,500	700
Not related	54,200	39,200	15,100	1,400	800	600	100	D	S	9,600	6,900	2,700	1,500	900	600	40,900	30,000	10,900	700	500	200

\* = value < 50. D = suppressed for confidentiality. S = suppressed for reliability; coefficient of variation exceeds publication standards for this survey.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

<sup>b</sup> Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

<sup>c</sup> Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

<sup>d</sup> Includes those self-employed in an incorporated business.

<sup>e</sup> Self-employed or business owner in a nonincorporated business.

<sup>f</sup> Includes employers not broken out separately.

<sup>g</sup> Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Detail may exceed total due to multiple responses.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 7. Doctoral scientists and engineers, by occupation and employment status: 2008

Occupation	Total	Employed			Unemployed	Retired	Not employed, not seeking work
		All	Full time	Part time			
All occupations	751,500	651,200	578,700	72,400	11,300	75,900	13,200
Science occupations	437,200	380,500	336,100	44,400	5,700	43,000	8,100
Biological/agricultural/other life scientists	135,200	118,700	110,300	8,400	2,100	11,400	3,000
Agricultural/food scientists	11,100	9,400	8,600	700	100	1,500	200
Biochemists/biophysicists	15,800	13,700	13,100	600	500	1,100	600
Biological scientists	23,700	20,800	19,400	1,400	400	2,000	600
Forestry/conservation scientists	1,900	1,500	1,400	100	D	300	D
Medical scientists	43,600	39,800	37,200	2,600	800	2,100	900
Postsecondary teachers, agricultural/other natural sciences	3,900	3,100	3,000	S	D	700	D
Postsecondary teachers, biological sciences	29,400	25,300	22,900	2,400	200	3,400	500
Other biological/agricultural/life scientists	5,800	5,100	4,600	500	S	400	200
Computer and information scientists	41,400	36,300	34,400	1,900	800	3,800	500
Computer/information scientists	33,400	29,200	27,700	1,500	800	3,000	400
Postsecondary teachers, computer science	7,900	7,100	6,700	300	D	800	D
Mathematical scientists	31,600	27,600	24,700	2,800	200	3,200	600
Mathematical scientists	14,500	13,100	12,000	1,100	200	900	300
Postsecondary teachers, mathematics/statistics	17,100	14,500	12,700	1,700	D	2,300	300
Physical scientists	90,800	76,900	70,600	6,400	1,500	11,200	1,300
Chemists, except biochemists	28,100	23,100	21,400	1,600	700	3,700	500
Earth/atmospheric/ocean scientists	12,200	10,500	9,600	900	200	1,300	200
Physicists/astronomers	15,500	13,300	12,200	1,100	300	1,700	200
Postsecondary teachers, chemistry	14,400	12,200	10,900	1,300	D	1,900	300
Postsecondary teachers, physics	9,700	8,400	7,600	700	D	1,300	D
Postsecondary teachers, other physical sciences	7,200	6,400	5,900	400	D	700	D
Other physical scientists	3,700	3,100	2,900	200	D	500	D
Psychologists	76,600	68,200	49,100	19,100	600	6,000	1,800
Psychologists	56,300	50,400	33,800	16,600	500	3,900	1,500
Postsecondary teachers, psychology	20,300	17,800	15,300	2,500	200	2,100	300
Social scientists	61,600	52,800	47,000	5,800	500	7,400	900
Economists	9,200	8,000	7,000	1,000	D	900	200
Political scientists	1,900	1,300	1,200	D	D	500	D
Postsecondary teachers, economics	8,800	7,600	6,700	900	D	1,100	D
Postsecondary teachers, political science	10,000	8,900	8,300	600	D	1,000	S
Postsecondary teachers, sociology	9,100	7,500	6,600	900	D	1,400	200
Postsecondary teachers, other social sciences	10,800	9,100	8,200	900	100	1,500	200
Sociologists/anthropologists	4,200	3,600	3,000	500	100	500	D
Other social scientists	7,700	7,000	6,000	1,000	D	500	100
Engineering occupations	96,200	84,500	78,700	5,700	1,400	9,200	1,100
Aerospace/aeronautical/astronautical engineers	6,200	5,400	5,000	400	D	600	D
Chemical engineers	8,700	7,100	6,700	400	300	1,200	100
Civil/architectural/sanitary engineers	5,200	4,700	4,400	300	D	300	100
Electrical engineers	20,700	18,900	17,800	1,100	300	1,400	200
Materials/metallurgical engineers	1,500	1,200	1,100	D	D	D	D
Mechanical engineers	10,500	9,300	8,500	800	S	1,100	D
Postsecondary teachers, engineering	18,700	16,400	15,700	700	D	2,100	S
Other engineers	24,700	21,500	19,600	2,000	400	2,500	300
Science/engineering-related occupations	85,300	75,200	68,800	6,400	1,400	7,600	1,100
Health occupations, except postsecondary teachers and managers	26,400	23,200	19,700	3,500	600	2,300	400
Postsecondary teachers, health and related sciences	19,800	17,800	16,300	1,500	200	1,600	200
Managers, including health	31,200	27,900	27,200	700	500	2,700	D
Precollege teachers	4,900	4,000	3,400	500	200	500	300

TABLE 7. Doctoral scientists and engineers, by occupation and employment status: 2008

Occupation	Total	Employed			Unemployed	Retired	Not employed, not seeking work
		All	Full time	Part time			
Technicians/technologists	2,400	2,000	1,800	300	D	200	D
Other S&E-related occupations	500	400	400	D	D	D	D
Non-science/non-engineering occupations	132,900	111,000	95,100	15,900	2,800	16,100	2,900
Arts/humanities-related occupations	7,400	5,900	3,500	2,400	200	900	400
Management-related occupations	23,600	20,600	17,000	3,700	500	2,000	400
Managers	54,100	45,000	43,500	1,500	900	7,900	300
Postsecondary teachers	15,000	12,900	11,000	1,900	100	1,700	300
Precollege/other teachers	1,900	1,400	1,000	400	D	200	200
Sales/marketing occupations	10,200	8,500	6,700	1,700	300	1,100	300
Social service-related occupations	5,900	5,100	3,600	1,500	D	500	200
Other non-S&E occupations	14,900	11,500	8,800	2,700	700	1,900	800

D = suppressed for confidentiality. S = suppressed for reliability; coefficient of variation exceeds publication standards.

S&E = science and engineering.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 400 individuals who reported never having worked so could not be classified by occupation. Designation of full time and part time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his/her principal job but full time in labor force. Prior to 2006 SDR, designation of full time and part time status was for all jobs held; thus data for 2003 and earlier are not comparable to data for 2006 and later.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 8. Doctoral scientists and engineers, by occupation and disability status: 2008

Occupation	All	With disability	Without disability
All occupations	751,500	61,800	689,800
Science occupations	437,200	36,100	401,100
Biological/agricultural/other life scientists	135,200	10,500	124,800
Agricultural/food scientists	11,100	1,100	10,000
Biochemists/biophysicists	15,800	1,200	14,600
Biological scientists	23,700	1,600	22,100
Forestry/conservation scientists	1,900	200	1,600
Medical scientists	43,600	2,800	40,700
Postsecondary teachers, agricultural/other natural sciences	3,900	400	3,600
Postsecondary teachers, biological sciences	29,400	2,800	26,600
Other biological/agricultural/life scientists	5,800	300	5,500
Computer and information scientists	41,400	3,000	38,300
Computer/information scientists	33,400	2,400	31,000
Postsecondary teachers, computer science	7,900	600	7,300
Mathematical scientists	31,600	2,600	29,000
Mathematical scientists	14,500	1,200	13,300
Postsecondary teachers, mathematics/statistics	17,100	1,400	15,700
Physical scientists	90,800	7,400	83,400
Chemists, except biochemists	28,100	2,000	26,000
Earth/atmospheric/ocean scientists	12,200	900	11,200
Physicists/astronomers	15,500	1,600	13,900
Postsecondary teachers, chemistry	14,400	1,000	13,400
Postsecondary teachers, physics	9,700	800	9,000
Postsecondary teachers, other physical sciences	7,200	600	6,600
Other physical scientists	3,700	500	3,200
Psychologists	76,600	6,400	70,200
Psychologists	56,300	4,700	51,600
Postsecondary teachers, psychology	20,300	1,700	18,600
Social scientists	61,600	6,200	55,400
Economists	9,200	1,000	8,200
Political scientists	1,900	200	1,600
Postsecondary teachers, economics	8,800	1,000	7,800
Postsecondary teachers, political science	10,000	1,100	8,900
Postsecondary teachers, sociology	9,100	1,100	8,000
Postsecondary teachers, other social sciences	10,800	1,100	9,800
Sociologists/anthropologists	4,200	400	3,800
Other social scientists	7,700	400	7,300
Engineering occupations	96,200	7,300	88,900
Aerospace/aeronautical/astronautical engineers	6,200	500	5,700
Chemical engineers	8,700	500	8,100
Civil/architectural/sanitary engineers	5,200	400	4,800
Electrical engineers	20,700	1,100	19,700
Materials/metallurgical engineers	1,500	D	1,400
Mechanical engineers	10,500	800	9,800
Postsecondary teachers, engineering	18,700	1,600	17,100
Other engineers	24,700	2,400	22,300
Science/engineering-related occupations	85,300	6,600	78,700
Health occupations, except postsecondary teachers and managers	26,400	2,200	24,200
Postsecondary teachers, health and related sciences	19,800	1,800	17,900
Managers, including health	31,200	2000	29,200
Precollege teachers	4,900	300	4,600
Technicians/technologists	2,400	300	2,200
Other S&E-related occupations	500	D	500

TABLE 8. Doctoral scientists and engineers, by occupation and disability status: 2008

Occupation	All	With disability	Without disability
Non-science/non-engineering occupations	132,900	11,800	121,100
Arts/humanities-related occupations	7,400	800	6,600
Management-related occupations	23,600	2,300	21,200
Managers	54,100	3,900	50,200
Postsecondary teachers	15,000	1,600	13,400
Precollege/other teachers	1,900	100	1,800
Sales/marketing occupations	10,200	1,100	9,100
Social service-related occupations	5,900	400	5,500
Other non-S&E occupations	14,900	1,500	13,400

D = suppressed for confidentiality.

S&E = science and engineering.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 400 individuals who reported never having worked so could not be classified by occupation. Survey asks degree of difficulty—none, slight, moderate, severe, or unable to do—an individual has in seeing (with glasses), hearing (with hearing aid), walking without assistance, or lifting 10 pounds. Those respondents who answered "moderate," "severe," or "unable to do" for any activity were classified as having a disability.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.



TABLE 9. Employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 2008

Characteristic	Science occupations										
	All employed	All science occupations	Biological/ agricultural/ other life scientists	Computer/ information scientists	Mathematical scientists	Physical scientists	Psychologists	Social scientists	Engineering occupations	Science/ engineering- related occupations	Non-science/ non- engineering occupations
Doctorate recipient	651,200	380,500	118,700	36,300	27,600	76,900	68,200	52,800	84,500	75,200	111,000
Sex											
Male	451,200	254,900	76,400	31,200	21,000	63,100	30,400	32,800	74,900	47,800	73,600
Female	199,900	125,500	42,300	5,200	6,500	13,800	37,800	20,000	9,600	27,400	37,400
Ethnicity/race											
Hispanic or Latino	20,300	12,600	4,200	600	800	2,100	2,700	2,100	2,000	2,000	3,600
Not Hispanic or Latino											
American Indian or Alaska Native	1,300	800	100	D	D	200	200	200	100	200	200
Asian	117,300	61,800	22,400	12,600	7,100	13,100	1,900	4,700	28,700	13,300	13,600
Black or African American	19,400	10,700	2,600	500	600	1,400	3,000	2,600	1,500	2,900	4,400
White	484,900	289,800	87,600	22,200	18,900	59,500	59,400	42,200	51,500	56,000	87,600
Other race <sup>a</sup>	8,000	4,700	1,600	400	200	800	900	800	700	1,000	1,600
Age											
Under 35	67,800	44,800	17,200	4,000	4,200	9,900	5,200	4,300	12,700	4,900	5,400
35–39	85,900	54,300	18,600	5,200	4,500	10,700	7,900	7,500	12,800	8,700	10,100
40–44	87,400	52,200	18,000	5,900	4,000	10,100	7,300	6,900	12,500	10,100	12,600
45–49	89,700	51,100	15,900	6,100	3,200	10,500	8,500	6,800	12,600	11,600	14,300
50–54	93,900	53,300	17,100	5,200	3,100	10,900	9,800	7,400	10,100	13,300	17,200
55–59	88,700	49,400	13,800	4,100	3,100	9,200	11,700	7,400	9,000	11,300	19,000
60–64	75,600	42,000	10,000	3,700	2,700	8,200	10,700	6,700	6,800	9,000	17,700
65–75	62,200	33,300	8,000	2,100	2,800	7,500	6,900	5,900	8,000	6,200	14,700
Citizenship status											
U.S. citizen	577,300	336,000	103,600	28,900	21,800	67,400	66,800	47,500	66,600	69,800	105,000
Native-born	474,900	284,600	87,300	19,300	16,400	56,600	62,700	42,300	44,700	56,600	88,900
Naturalized	102,400	51,400	16,300	9,600	5,400	10,900	4,000	5,200	21,800	13,100	16,000
Non-U.S. citizen	73,900	44,500	15,100	7,400	5,700	9,500	1,400	5,300	17,900	5,500	6,100
Permanent resident	47,600	28,400	9,300	5,000	3,500	5,900	1,100	3,600	10,700	4,100	4,500
Temporary resident	26,200	16,100	5,800	2,400	2,300	3,600	300	1,700	7,200	1,400	1,600
Years since doctorate											
≤5	124,800	80,800	29,000	7,400	6,700	15,000	11,000	11,800	19,500	12,300	12,200
6–10	107,100	64,900	21,700	7,100	5,000	11,700	10,400	9,100	14,300	12,500	15,400
11–15	100,300	56,700	17,700	7,300	3,700	10,600	9,900	7,500	13,900	13,700	16,000
16–20	83,200	46,700	14,400	4,400	2,900	9,600	9,500	6,000	10,700	10,600	15,200
21–25	73,200	41,300	11,500	3,200	2,500	9,300	9,200	5,500	8,000	9,300	14,600
>25	162,600	90,000	24,500	6,900	6,800	20,700	18,100	12,900	17,900	17,000	37,700
Place of birth <sup>b</sup>											
United States	467,800	280,200	85,800	18,900	16,100	56,200	61,900	41,500	44,200	55,600	87,800

TABLE 9. Employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 2008

Characteristic	Science occupations										Non-science/ non- engineering occupations
	All employed	All science occupations	Biological/ agricultural/ other life scientists	Computer/ information scientists	Mathematical scientists	Physical scientists	Psychologists	Social scientists	Engineering occupations	Science/ engineering- related occupations	
Europe	31,600	20,600	5,600	2,800	2,500	4,700	2,200	2,800	3,900	2,800	4,300
Asia	121,800	63,100	22,200	13,200	7,400	12,900	2,100	5,400	31,700	12,900	14,100
North America <sup>c</sup>	6,200	3,600	1,000	300	400	600	700	700	700	1,000	900
Central America <sup>d</sup>	2,800	1,700	700	100	100	300	200	300	300	300	500
Caribbean	2,800	1,600	400	100	100	300	400	300	400	400	500
South America	6,000	3,600	1,100	400	400	600	600	600	900	600	1,000
Africa	8,600	4,400	1,400	500	500	900	100	900	1,600	1,200	1,300
Oceania	1,100	700	200	D	D	100	D	200	200	S	200

D = suppressed for confidentiality. S = suppressed for reliability; coefficient of variation exceeds publication standards for this survey.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

<sup>b</sup> Numbers are based on persons who reported place of birth. Persons who did not specify place of birth are included in total but not shown separately.

<sup>c</sup> Excludes United States.

<sup>d</sup> Includes Mexico.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 10. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2008 (Dollars)

Field	All full-time employed	4-year educational institution <sup>a</sup>	Other educational institution <sup>b</sup>	Private, for-profit <sup>c</sup>	Private, nonprofit	Federal government	State/local government	Self-employed <sup>d</sup>	Other <sup>e</sup>
All fields	98,000	80,000	68,000	117,000	100,000	107,000	82,000	99,000	177,000
Science	92,000	80,000	67,000	115,000	95,000	105,000	81,000	93,000	178,000
Biological/agricultural/environmental life sciences	91,000	78,000	60,000	115,000	90,000	100,000	82,000	99,000	D
Agricultural/food sciences	89,000	80,000	53,000	100,000	90,000	98,000	81,000	43,000	D
Biochemistry/biophysics	98,000	85,000	54,000	118,000	109,000	101,000	89,000	100,000	D
Cell/molecular biology	85,000	65,000	60,000	117,000	79,000	93,000	D	S	D
Environmental life sciences	81,000	70,000	D	93,000	92,000	95,000	79,000	D	D
Microbiology	99,000	75,000	60,000	129,000	128,000	102,000	81,000	D	D
Zoology	87,000	81,000	51,000	107,000	85,000	107,000	69,000	D	D
Other biological sciences	91,000	78,000	65,000	119,000	85,000	104,000	83,000	102,000	D
Computer/information sciences	107,000	87,000	83,000	130,000	112,000	121,000	D	D	D
Mathematics/statistics	95,000	80,000	63,000	120,000	119,000	119,000	D	83,000	D
Physical sciences	100,000	80,000	63,000	115,000	113,000	110,000	75,000	89,000	D
Astronomy/astrophysics	90,000	79,000	D	120,000	106,000	107,000	D	D	D
Chemistry, except biochemistry	100,000	74,000	61,000	110,000	114,000	103,000	74,000	104,000	D
Earth/atmospheric/ocean sciences <sup>f</sup>	89,000	78,000	58,000	109,000	93,000	111,000	75,000	65,000	D
Physics	108,000	85,000	70,000	120,000	113,000	130,000	78,000	108,000	D
Psychology	84,000	75,000	74,000	100,000	81,000	101,000	82,000	92,000	D
Social sciences	88,000	80,000	69,000	124,000	104,000	113,000	81,000	88,000	179,000
Economics	112,000	102,000	65,000	147,000	113,000	119,000	101,000	86,000	188,000
Political sciences	84,000	76,000	74,000	119,000	95,000	130,000	89,000	118,000	D
Sociology	79,000	75,000	62,000	94,000	100,000	116,000	75,000	49,000	D
Other social sciences	77,000	70,000	68,000	109,000	90,000	97,000	74,000	89,000	D
Engineering	110,000	100,000	66,000	119,000	120,000	117,000	87,000	116,000	D
Aerospace/aeronautical/astronautical engineering	112,000	98,000	D	119,000	D	120,000	D	D	D
Chemical engineering	119,000	95,000	D	119,000	159,000	114,000	D	151,000	D
Civil engineering	100,000	96,000	D	100,000	D	103,000	77,000	D	D
Electrical/computer engineering	119,000	100,000	D	122,000	119,000	118,000	D	137,000	D
Materials/metallurgical engineering	110,000	92,000	D	114,000	81,000	114,000	D	D	D
Mechanical engineering	105,000	99,000	D	109,000	128,000	114,000	D	75,000	D
Other engineering	110,000	100,000	D	115,000	119,000	111,000	90,000	80,000	D
Health	90,000	82,000	76,000	119,000	101,000	104,000	79,000	95,000	D

D = suppressed for confidentiality. S = suppressed for reliability; coefficient of variation exceeds publication standards for this survey.

<sup>a</sup> Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

<sup>b</sup> Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

<sup>c</sup> Includes those self-employed in an incorporated business.

<sup>d</sup> Self-employed or business owner in a nonincorporated business.

<sup>e</sup> Includes employers not broken out separately.

<sup>f</sup> Includes other physical sciences.

NOTE: Median annual salaries are for principal job and are rounded to nearest \$1,000.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 11. Median annual salaries of full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, faculty rank, and years since doctorate: 2008  
(Dollars)

Field and sex	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor/lecturer		All other faculty		Rank not applicable	
	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10
All fields	61,000	95,000	81,000	110,000	74,000	81,000	66,000	72,000	55,000	59,000	64,000	82,000	47,000	80,000
Male	63,000	100,000	92,000	113,000	75,000	83,000	69,000	73,000	58,000	64,000	D	81,000	48,000	82,000
Female	60,000	85,000	75,000	102,000	71,000	79,000	64,000	72,000	50,000	57,000	63,000	83,000	46,000	77,000
Science	58,000	92,000	80,000	108,000	71,000	80,000	63,000	70,000	54,000	57,000	63,000	80,000	46,000	79,000
Male	60,000	97,000	93,000	109,000	73,000	80,000	65,000	70,000	55,000	59,000	D	81,000	46,000	80,000
Female	56,000	85,000	71,000	101,000	69,000	77,000	60,000	70,000	50,000	54,000	D	80,000	45,000	76,000
Biological/agricultural/environmental life sciences	52,000	95,000	63,000	117,000	73,000	85,000	68,000	75,000	54,000	56,000	D	D	43,000	69,000
Male	54,000	98,000	D	118,000	72,000	84,000	71,000	75,000	58,000	55,000	D	D	43,000	70,000
Female	50,000	88,000	D	113,000	71,000	85,000	65,000	75,000	47,000	57,000	D	D	43,000	63,000
Computer/information sciences	81,000	99,000	D	110,000	83,000	92,000	79,000	D	D	D	D	D	80,000	D
Male	81,000	100,000	D	110,000	83,000	93,000	79,000	D	D	D	D	D	79,000	D
Female	82,000	90,000	D	91,000	83,000	90,000	81,000	D	D	D	D	D	80,000	D
Mathematics/statistics	64,000	90,000	D	104,000	74,000	70,000	64,000	67,000	D	65,000	D	D	50,000	81,000
Male	63,000	91,000	D	105,000	71,000	71,000	64,000	62,000	D	65,000	D	D	50,000	89,000
Female	65,000	78,000	D	96,000	76,000	68,000	63,000	D	D	D	D	D	52,000	D
Physical sciences	55,000	93,000	D	105,000	64,000	76,000	60,000	62,000	53,000	55,000	D	D	47,000	93,000
Male	55,000	96,000	D	108,000	66,000	78,000	63,000	69,000	52,000	56,000	D	D	47,000	94,000
Female	52,000	77,000	D	90,000	56,000	66,000	58,000	55,000	D	D	D	D	47,000	78,000
Psychology	58,000	88,000	D	102,000	65,000	79,000	58,000	70,000	59,000	48,000	D	D	52,000	76,000
Male	59,000	95,000	D	103,000	62,000	80,000	58,000	67,000	D	D	D	D	52,000	72,000
Female	58,000	84,000	D	96,000	67,000	78,000	58,000	71,000	57,000	45,000	D	D	51,000	84,000
Social sciences	62,000	90,000	120,000	104,000	69,000	75,000	60,000	60,000	52,000	39,000	D	D	60,000	87,000
Male	64,000	97,000	141,000	105,000	72,000	78,000	60,000	59,000	57,000	35,000	D	D	61,000	86,000
Female	60,000	84,000	D	95,000	65,000	74,000	58,000	63,000	49,000	39,000	D	D	59,000	88,000
Engineering	76,000	113,000	88,000	122,000	99,000	95,000	78,000	85,000	68,000	70,000	D	D	53,000	109,000
Male	76,000	114,000	88,000	122,000	97,000	95,000	78,000	85,000	D	67,000	D	D	55,000	108,000
Female	75,000	97,000	D	121,000	100,000	89,000	77,000	D	D	D	D	D	48,000	D
Health	74,000	97,000	76,000	115,000	74,000	85,000	75,000	74,000	D	D	D	D	62,000	89,000
Male	73,000	102,000	D	134,000	76,000	93,000	80,000	D	D	D	D	D	53,000	D
Female	73,000	93,000	75,000	105,000	74,000	82,000	74,000	74,000	D	D	D	D	63,000	90,000

D = suppressed for confidentiality.

NOTES: Median annual salaries are for principal job and are rounded to nearest \$1,000. 4-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 12. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2008  
(Thousands of dollars)

Occupation	All full-time employed			Not Hispanic or Latino																	
				Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All occupations	98	101	82	83	91	75	80	81	70	100	100	85	82	86	76	99	103	82	90	99	75
Science occupations	88	93	76	77	80	70	80	82	72	90	95	79	75	75	72	90	95	76	79	81	73
Biological/agricultural/other life scientists	85	90	75	75	79	74	D	D	D	81	86	70	68	68	64	86	91	76	81	83	76
Agricultural/food scientists	88	90	74	80	81	D	D	D	D	74	74	74	83	82	D	91	94	74	D	D	D
Biochemists/biophysicists	90	89	84	80	82	76	D	D	D	85	80	87	51	D	D	91	93	83	48	D	D
Biological scientists	82	87	70	68	68	67	D	D	D	75	84	63	54	49	79	85	90	78	75	61	75
Forestry/conservation scientists	82	87	72	D	D	D	D	D	D	D	D	D	D	D	D	86	91	76	D	D	D
Medical scientists	96	102	85	96	102	82	D	D	D	89	98	72	68	66	71	100	106	90	92	91	90
Postsecondary teachers, agricultural/other natural sciences	79	80	64	78	D	D	D	D	D	62	D	D	D	D	D	80	80	65	D	D	D
Postsecondary teachers, biological sciences	72	75	65	69	69	72	D	D	D	75	79	64	70	72	64	72	76	65	71	69	D
Other biological/agricultural/life scientists	83	93	72	75	D	81	D	D	D	75	97	66	D	D	D	85	92	82	D	D	D
Computer/information scientists	104	105	95	85	86	82	D	D	D	100	100	96	95	97	86	107	109	94	100	96	D
Computer/information scientists	110	109	100	102	102	92	D	D	D	103	104	98	98	100	89	111	114	103	106	104	D
Postsecondary teachers, computer science	90	90	83	70	71	D	D	D	D	88	88	84	83	86	78	90	91	83	D	D	D
Mathematical scientists	89	91	85	79	80	73	D	D	D	90	91	89	72	71	72	90	93	84	91	D	86
Mathematical scientists	104	109	100	90	90	87	D	D	D	96	96	96	95	93	95	118	119	106	D	D	D
Postsecondary teachers, mathematics/statistics	73	75	71	72	74	63	D	D	D	71	75	67	67	67	58	75	75	73	D	D	D
Physical scientists	93	98	75	82	88	72	D	D	D	91	95	81	78	87	60	95	99	74	79	79	74
Chemists, except biochemists	100	102	96	96	99	88	D	D	D	99	99	97	87	95	68	104	106	97	94	99	D
Earth/atmospheric/ocean scientists	99	100	84	80	80	D	D	D	D	82	84	76	D	D	D	100	105	88	72	D	D
Physicists/astronomers	111	113	84	94	119	D	D	D	D	99	104	73	112	112	D	114	115	103	D	D	D
Postsecondary teachers, chemistry	69	73	59	72	72	70	D	D	D	66	75	55	67	68	55	69	73	60	71	D	D
Postsecondary teachers, physics	77	79	68	73	74	D	D	D	D	80	83	D	D	D	D	76	78	69	D	D	D
Postsecondary teachers, other physical sciences	76	82	65	77	D	D	D	D	D	80	D	64	D	D	D	76	81	65	D	D	D
Other physical scientists	98	104	88	D	D	D	D	D	D	91	90	D	D	D	D	100	107	86	D	D	D
Psychologists	80	87	74	70	75	68	80	D	D	72	75	69	75	80	72	80	89	75	72	72	70
Psychologists	85	95	79	79	80	70	79	D	D	78	71	78	79	88	74	88	96	80	72	84	72
Postsecondary teachers, psychology	70	74	65	63	63	63	D	D	D	62	77	60	68	67	68	70	74	65	69	D	65
Social scientists	82	87	75	73	78	66	69	D	69	80	84	75	72	70	75	84	89	75	65	69	64
Economists	130	134	121	126	126	D	D	D	D	111	110	110	92	86	D	138	143	132	D	D	D
Political scientists	95	100	82	D	D	D	D	D	D	D	D	D	D	D	D	97	106	81	D	D	D
Postsecondary teachers, economics	91	95	85	107	111	D	D	D	D	87	88	75	71	70	D	98	99	87	D	D	D
Postsecondary teachers, political science	72	72	69	62	60	63	D	D	D	68	69	D	71	72	69	74	74	72	D	D	D
Postsecondary teachers, sociology	67	72	64	60	60	60	D	D	D	66	70	60	63	63	63	68	73	64	D	D	D

TABLE 12. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2008  
(Thousands of dollars)

Occupation	All full-time employed			Not Hispanic or Latino																	
				Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Postsecondary teachers, other social sciences	68	70	66	64	65	59	D	D	D	65	67	62	68	61	76	69	74	67	57	D	D
Sociologists/anthropologists	85	88	83	94	D	D	D	D	D	79	D	71	D	D	D	85	88	85	65	D	D
Other social scientists	85	88	82	83	D	82	D	D	D	73	71	73	87	D	90	87	89	82	D	D	D
Engineering occupations	109	110	99	99	100	90	D	D	D	101	103	92	94	93	98	112	114	101	113	120	98
Aerospace/aeronautical/astronautical engineers	120	120	111	98	D	D	D	D	D	119	120	D	D	D	D	120	122	111	D	D	D
Chemical engineers	112	113	100	94	118	D	D	D	D	112	114	93	107	109	D	112	113	106	D	D	D
Civil/architectural/sanitary engineers	96	99	75	101	102	D	D	D	D	79	88	67	D	D	D	102	101	101	D	D	D
Electrical engineers	120	120	110	113	114	D	D	D	D	115	115	110	100	101	D	125	125	108	116	D	D
Materials/metallurgical engineers	119	136	109	D	D	D	D	D	D	123	D	D	D	D	D	119	146	106	D	D	D
Mechanical engineers	102	102	91	99	D	D	D	D	D	97	98	85	D	D	D	111	112	D	D	D	D
Postsecondary teachers, engineering	97	99	83	90	92	D	D	D	D	90	95	78	82	83	78	100	100	89	D	D	D
Other engineers	109	110	100	99	99	D	D	D	D	99	100	95	88	81	102	112	114	103	112	117	D
Science/engineering-related occupations	110	127	87	94	105	80	67	D	D	117	126	97	88	100	79	110	129	86	103	116	84
Health occupations, except postsecondary teachers and managers	105	137	89	95	98	86	D	D	D	100	126	88	87	101	81	109	149	90	100	101	84
Postsecondary teachers, health and related sciences	87	102	80	78	88	76	D	D	D	92	105	80	84	97	77	88	103	80	94	D	82
Managers, including health	136	140	119	137	141	118	D	D	D	133	135	120	104	122	94	140	140	120	103	104	D
Precollege teachers	57	59	54	61	D	D	D	D	D	61	D	D	65	64	D	55	56	53	D	D	D
Technicians/technologists	98	99	80	D	D	D	D	D	D	99	100	96	D	D	D	83	92	D	D	D	D
Other S&E-related occupations	84	85	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Non-science/non-engineering occupations	114	124	93	102	115	90	70	D	60	112	120	90	96	105	83	117	125	95	102	119	73
Arts/humanities-related occupations	72	63	79	D	D	D	D	D	D	90	D	86	D	D	D	71	63	78	D	D	D
Management-related occupations	109	116	99	102	113	83	D	D	D	110	112	100	100	110	98	109	118	100	102	120	D
Managers	150	160	125	129	149	110	D	D	D	147	148	119	120	125	100	153	160	130	159	164	D
Postsecondary teachers	76	91	68	69	80	63	D	D	D	76	100	70	69	71	64	79	94	68	68	D	D
Precollege/other teachers	58	58	55	D	D	D	D	D	D	D	D	D	D	D	D	55	D	53	D	D	D
Sales/marketing occupations	102	106	84	129	D	D	D	D	D	99	100	75	48	D	D	104	108	88	D	D	D
Social service-related occupations	62	63	59	65	D	D	D	D	D	62	D	D	53	D	57	63	63	59	D	D	D
Other non-S&E occupations	91	96	79	82	93	73	D	D	D	97	119	79	80	77	79	91	95	79	D	D	D

D = suppressed for confidentiality.

S&E = science and engineering.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

NOTE: Median annual salaries are for principal job and are rounded to nearest \$1,000.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 13. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activities: 2008 (Dollars)

Occupation	All full-time employed	Computer applications	Management/sales/administration	Professional services	R&D <sup>a</sup>	Teaching	Other
All occupations	98,000	100,000	107,000	98,000	100,000	78,000	88,000
Science occupations	88,000	100,000	95,000	88,000	90,000	75,000	80,000
Biological/agricultural/other life scientists	85,000	77,000	95,000	97,000	86,000	74,000	75,000
Agricultural/food scientists	88,000	D	95,000	91,000	88,000	D	73,000
Biochemists/biophysicists	90,000	74,000	103,000	103,000	90,000	D	76,000
Biological scientists	82,000	78,000	88,000	92,000	80,000	99,000	77,000
Forestry/conservation scientists	82,000	D	85,000	D	82,000	D	D
Medical scientists	96,000	87,000	103,000	100,000	95,000	110,000	91,000
Postsecondary teachers, agricultural/other natural sciences	79,000	D	78,000	D	80,000	79,000	D
Postsecondary teachers, biological sciences	72,000	D	70,000	78,000	75,000	72,000	60,000
Other biological/agricultural/life scientists	83,000	60,000	93,000	61,000	83,000	D	75,000
Computer and information scientists	104,000	104,000	107,000	115,000	107,000	90,000	89,000
Computer/information scientists	110,000	105,000	110,000	119,000	110,000	80,000	95,000
Postsecondary teachers, computer science	90,000	74,000	89,000	D	90,000	90,000	87,000
Mathematical scientists	89,000	100,000	99,000	92,000	93,000	73,000	84,000
Mathematical scientists	104,000	100,000	125,000	94,000	105,000	105,000	99,000
Postsecondary teachers, mathematics/statistics	73,000	70,000	75,000	D	75,000	73,000	75,000
Physical scientists	93,000	91,000	104,000	99,000	99,000	74,000	83,000
Chemists, except biochemists	100,000	84,000	108,000	119,000	102,000	83,000	92,000
Earth/atmospheric/ocean scientists	99,000	85,000	110,000	88,000	98,000	D	96,000
Physicists/astronomers	111,000	101,000	126,000	D	110,000	D	97,000
Postsecondary teachers, chemistry	69,000	D	63,000	D	78,000	69,000	65,000
Postsecondary teachers, physics	77,000	D	76,000	D	80,000	77,000	65,000
Postsecondary teachers, other physical sciences	76,000	D	78,000	D	77,000	76,000	59,000
Other physical scientists	98,000	97,000	102,000	D	97,000	D	100,000
Psychologists	80,000	76,000	83,000	85,000	79,000	71,000	72,000
Psychologists	85,000	75,000	85,000	85,000	90,000	92,000	75,000
Postsecondary teachers, psychology	70,000	D	69,000	70,000	70,000	70,000	60,000
Social scientists	82,000	95,000	90,000	96,000	85,000	74,000	82,000
Economists	130,000	104,000	147,000	138,000	128,000	D	117,000
Political scientists	95,000	D	103,000	D	95,000	D	D
Postsecondary teachers, economics	91,000	D	99,000	D	96,000	91,000	71,000
Postsecondary teachers, political science	72,000	D	73,000	D	74,000	72,000	65,000
Postsecondary teachers, sociology	67,000	D	70,000	D	67,000	67,000	59,000
Postsecondary teachers, other social sciences	68,000	D	70,000	D	67,000	67,000	76,000
Sociologists/anthropologists	85,000	D	85,000	D	85,000	D	100,000
Other social scientists	85,000	87,000	87,000	85,000	87,000	73,000	92,000
Engineering occupations	109,000	106,000	119,000	116,000	109,000	98,000	103,000
Aerospace/aeronautical/astronautical engineers	120,000	112,000	122,000	D	119,000	D	D
Chemical engineers	112,000	106,000	116,000	D	111,000	D	102,000
Civil/architectural/sanitary engineers	96,000	87,000	103,000	103,000	94,000	D	71,000
Electrical engineers	120,000	116,000	126,000	D	120,000	D	110,000
Materials/metallurgical engineers	119,000	D	140,000	D	119,000	D	D
Mechanical engineers	102,000	94,000	119,000	D	101,000	D	102,000
Postsecondary teachers, engineering	97,000	69,000	99,000	D	99,000	97,000	80,000
Other engineers	109,000	94,000	116,000	115,000	106,000	116,000	105,000
Science/engineering-related occupations	110,000	112,000	125,000	121,000	112,000	84,000	99,000
Health occupations, except postsecondary teachers and managers	105,000	78,000	104,000	128,000	100,000	108,000	92,000
Postsecondary teachers, health and related sciences	87,000	D	85,000	105,000	86,000	88,000	82,000
Managers, including health	136,000	127,000	135,000	130,000	138,000	126,000	140,000

TABLE 13. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activities: 2008 (Dollars)

Occupation	All full-time employed	Computer applications	Management/sales/administration	Professional services	R&D <sup>a</sup>	Teaching	Other
Precollege teachers	57,000	D	55,000	D	69,000	56,000	53,000
Technicians/technologists	98,000	101,000	99,000	D	98,000	D	76,000
Other S&E-related occupations	84,000	D	D	D	D	D	D
Non-science/non-engineering occupations	114,000	112,000	124,000	104,000	117,000	73,000	95,000
Arts/humanities-related occupations	72,000	D	80,000	70,000	75,000	46,000	65,000
Management-related occupations	109,000	117,000	110,000	114,000	114,000	99,000	106,000
Managers	150,000	139,000	150,000	130,000	160,000	90,000	149,000
Postsecondary teachers	76,000	D	70,000	85,000	82,000	76,000	63,000
Precollege/other teachers	58,000	D	58,000	D	D	54,000	D
Sales/marketing occupations	102,000	110,000	102,000	111,000	107,000	D	77,000
Social service-related occupations	62,000	D	60,000	63,000	77,000	60,000	52,000
Other non-S&E occupations	91,000	D	85,000	132,000	79,000	51,000	54,000

D = suppressed for confidentiality.

S&E = science and engineering.

<sup>a</sup> R&D includes applied and basic research, design, and development.

NOTES: Median annual salaries are for principal job and are rounded to nearest \$1,000. If respondent reported more than one category of activity as primary or secondary work activity, respondent's salary appears in both categories.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.



TABLE 14. Doctoral scientists and engineers on postdoctoral appointments, by selected demographic characteristics and broad field of doctorate: 2008

Characteristic	Science									
	All fields	All sciences	Biological/ agricultural/ environmental life sciences	Computer/ information sciences	Mathematics/ statistics	Physical sciences	Psychology	Social sciences	Engineering	Health
On postdoc in October 2008	27,300	23,600	14,900	300	600	5,100	2,200	500	3,000	700
Years since doctorate										
≤5	23,500	20,300	12,800	300	500	4,600	1,700	300	2,600	600
6–10	2,400	2,100	1,500	D	D	200	200	100	200	100
11–15	600	500	300	D	D	D	D	D	D	D
>15	800	700	200	D	D	100	300	D	D	D
Sex										
Male	16,200	13,800	8,300	300	500	3,800	800	200	2,100	300
Female	11,000	9,800	6,600	D	100	1,300	1,400	300	800	400
Ethnicity/race										
Hispanic or Latino	1,100	900	600	D	D	200	100	D	100	D
Not Hispanic or Latino										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	9,400	7,300	4,700	200	100	1,900	200	100	1,800	300
Black or African American	800	600	400	D	D	100	D	100	100	100
White	15,700	14,400	9,000	100	400	2,900	1,800	200	1,000	300
Other race <sup>a</sup>	300	300	200	D	D	D	D	D	D	D
Age										
Under 35	15,300	13,200	8,300	200	400	3,400	900	100	1,800	400
35–44	9,600	8,300	5,800	100	200	1,400	700	200	1,000	300
45–75	2,400	2,100	800	D	D	400	700	200	200	100
Citizenship										
U.S. citizen	16,700	15,200	9,900	D	200	2,600	2,000	300	1,100	500
Non-U.S. citizen	10,500	8,400	5,000	300	300	2,500	100	100	1,800	300
Employment sector										
Business/industry	5,600	5,000	3,200	D	D	800	700	D	500	D
Educational institution	18,200	15,600	10,000	200	500	3,300	1,100	400	2,100	500
Government	3,500	3,000	1,600	D	D	1,000	300	D	400	100

D = suppressed for confidentiality.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

NOTES: Numbers are rounded to nearest 100. Detail may not add to total because of rounding. A postdoc is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc status is reported for principal job as of survey reference date (1 October 2008).

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

## Appendix A. Technical Notes

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### Survey Overview

The SDR is a panel study conducted every 2 years on a nationally representative cohort of individuals who have received a research doctorate in a science, engineering, or health (SEH) field. The National Science Foundation (NSF), through its National Center for Science and Engineering Statistics (NCSES), is the primary sponsor of the SDR. The National Institutes of Health also provides funding for the survey. The reference date for the 2008 SDR was 1 October 2008. The 2008 SDR was conducted by the National Opinion Research Center (NORC) at the University of Chicago.

The SDR is designed to complement two other surveys of scientists and engineers conducted by NCSES: the National Survey of College Graduates (<http://www.nsf.gov/statistics/srvygrads/>) and the National Survey of Recent College Graduates (<http://www.nsf.gov/statistics/srvyrecentgrads/>). These three surveys share a reference date and have overlapping and compatible questionnaires. Results from the three surveys are combined in the Scientists and Engineers Statistical Data System (SESTAT) database (see "Data Availability").

Additional data on education and demographic information in the SDR come from the Survey of Earned Doctorates (SED), an annual census of research doctorates earned in the United States that began in 1957 (<http://www.nsf.gov/statistics/doctorates/>). The SED provided a sampling frame for establishing the SDR in 1973 and continues to provide a sampling frame to replenish the SDR panel with new doctorate recipients for each new SDR survey cycle.

This appendix provides an overview of the SDR protocol. More thorough discussion is provided in the 2008 SDR methodology report, available upon request from the project officer.

### Target Population

The 2008 SDR target population consisted of individuals with the following characteristics:

- Earned a research doctoral degree from a U.S. college or university in an SEH field by 30 June 2007
- A U.S. citizen or a non-citizen who indicated in response to the SED a plan to reside in the United States after degree award
- Under 76 years of age on 1 October 2008
- Lived in the United States or its territories in a noninstitutionalized setting during the week of 1 October 2008.

As in previous cycles, the 2008 SDR sampling frame was constructed from two separate listings: the existing 2006 SDR cohort and a new cohort frame. The cohorts are defined by the year of receipt of the first U.S.-granted SEH doctoral degree. (See appendix B-1 for SEH fields included in the 2008 SDR sampling frame.) The existing cohort frame represents individuals who received their SEH doctorate before 1 July 2005; the new cohort frame represents individuals who received their SEH doctorate between 1 July 2005 and 30 June 2007. The existing cohort frame is a *secondary frame*—it consists of the SDR sample selected for the previous survey cycle, and each frame member carried a sampling weight from the previous cycle. The new cohort frame is a *primary frame*, including all known eligible cases from the two most recent doctoral award years.

The cases within the existing and new cohort frames were analyzed individually for SDR eligibility requirements. Individuals who did not meet the age criterion or who were known to be deceased, terminally ill, incapacitated, or permanently institutionalized in a correctional or health care facility were dropped from the sampling frames. Sample persons who were not

U.S. citizens and were known to be residing outside the United States or one of its territories during at least two prior consecutive survey cycles were also eliminated from the existing frame. After ineligible cases were removed from consideration, remaining cases from the two frame sources were combined to create the 2008 SDR sampling frame. In total, there were 102,579 eligible cases in the 2008 SDR frame; 41,612 existing cohort cases and 60,967 new cohort cases.

## **Sample Design**

The 2008 SDR sample design reduced the number of sampling strata from 164 (in 2006 and 2003) to 150 through the elimination of strata for race and ethnicity values that were missing. Missing race and ethnicity values were logically imputed from surname or place of birth.

The frame was stratified into the 150 strata by three variables—demographic group, degree field, and sex. The sample was then systematically selected from each stratum. The demographic group variable included nine categories defined by race/ethnicity, disability status, and citizenship at birth. To ensure higher selection probability for rarer population groups, classification of frame cases into these categories was done hierarchically. The goal of the 2008 sample stratification design was to create strata that conformed as closely as possible to the reporting domains used by analysts, provided that the associated subpopulations were large enough to be suitable for separate estimation and reporting.

The 2008 SDR sample selection was carried out independently for each stratum and cohort-substratum. For existing cohort strata, the past practice of selecting the sample with probability proportional to size continued, where the measure of size was the base weight associated with the previous survey cycle. For each stratum, the sampling algorithm started by identifying and removing self-representing cases (i.e., those with a base weight = 1) through an iterative procedure. Next, the non-self-representing cases (i.e., those with a base weight > 1) within each stratum were sorted by citizenship, disability status, Doctorate Records File degree field, and year of doctoral degree award. Finally, the balance of the sample (i.e., the total allocation minus the number of self-representing cases) was selected from each stratum systematically with probability proportional to size.

The new cohort sample was selected using the same algorithm used to select the existing cohort sample. However, since the base weight for every case in the new cohort frame was identical, each stratum sample from the new cohort was actually an equal-probability or self-weighting sample.

Thus, the 2008 SDR sample of 40,093 cases consisted of 36,644 cases from the existing cohort frame and 3,449 cases from the new cohort frame. The overall sampling rate was about 1 in 20 (5.0%), although sampling rates varied considerably across strata. Of these 40,093 sampled cases, 29,974 completed the survey and were eligible for inclusion in SESTAT. All critical items must be provided for a case to be considered complete. These completed eligible cases consisted of 27,252 cases from the existing cohort frame and 2,722 cases from the new cohort frame.

## **Survey Instrument**

The questionnaire comprises a large set of core data items that are retained in each survey round to enable trend comparisons and several sets of module questions asked intermittently on special topics of interest. The module for the 2008 SDR gathered information on sample members' second job (previously asked on the 2001 SDR). Two sets of questions from the 2003 questionnaire were also reinstated: (1) questions measuring the technical expertise required for the primary job held by respondents and by respondents' spouses; and (2) questions measuring respondents' research productivity (authorships or co-authorships of papers, articles, books or monographs and number and type of patents earned). The modules

on history of postdoctoral appointments and international collaboration among doctorate recipients from the 2006 SDR were not used. (See appendix C for the questionnaire.)

As noted, critical items are required for a case to be considered complete. After indicating their residence location (in or out of the United States) and employment status (working or not working on the reference date), all respondents must provide the title, description, and category of their current or most recent job, and non-working respondents must also indicate whether they were looking for employment during the four weeks prior to the reference date.

## **Data Collection**

Data collection for the 2008 SDR employed three protocols. Each protocol used a different initial mode for data capture based primarily on the existing cohort's prior indication of mode preference:

- Self-administered paper questionnaire (SAQ)
- Computer-assisted telephone interview (CATI)
- Self-administered online questionnaire (Web)

After initial contact, each protocol included sequential contacts by postal mail, telephone, and e-mail that ran in parallel throughout the data collection period. In addition, sample members were encouraged to participate in the mode that was most convenient for them.

**SAQ protocol** (38% of sample members; 15,119). Initial contact was an advance notification letter from NSF. The first questionnaire was mailed 1 week after initial contact, followed by a thank you/reminder postcard mailed 1 week later. Approximately 6 weeks after the first questionnaire mailing, sample members who had not returned a completed questionnaire (by any mode) were sent a second questionnaire by U.S. priority mail. Three weeks later, any cases still not responding received a prompting notice via e-mail to verify receipt of the paper form and encourage cooperation. Telephone follow-up calls began 2 weeks later for all outstanding mail-start mode nonrespondents and requested participation, preferably by the CATI mode.

**CATI protocol** (5% of sample members; 1,788). Initial contact was an advance notification letter from NSF. Telephone contact and interviewing began 1 week after initial contact. Approximately 6 weeks later, sample members who had not yet responded were sent an e-mail prompt to solicit survey participation in any mode. Three weeks later, any cases still not responding received a first questionnaire mailing sent via U.S. mail, followed by a thank you/reminder postcard one week later. Seven weeks after the first questionnaire mailing, a second questionnaire was mailed to the remaining nonrespondents.

**Web protocol** (57% of sample members; 22,826). Initial contact was a survey notification letter via U.S. mail and e-mail. Two and one-half weeks after initial contact, sample members who had not yet responded were sent a follow-up letter via U.S. mail and e-mail. Two weeks later, any cases still not responding received a prompting telephone call to verify receipt of the Web-survey access information and encourage cooperation. Telephone follow-up calls to complete the CATI for all Web-start mode nonrespondents began 2 weeks later. Four weeks after the start of telephone contact, any cases still not responding received a first paper questionnaire via U.S. mail, followed by a thank you/reminder postcard 1 week later. Seven weeks after the first questionnaire mailing, a second questionnaire was mailed to the remaining nonrespondents. At the end of the field period, an additional notice to gain cooperation was sent via U.S. mail and e-mail to all remaining nonrespondents regardless of their initial start-mode protocol.

Quality assurance procedures were in place at each step (address updating, printing, package assembly and mailing, questionnaire receipt, data entry, coding, CATI, and post-data-collection processing). Active data collection ended in July 2009. The telephone contact and data entry processes ended on 15 July 2009. However, the Web-survey access remained available until 17 August 2009 to capture any last-minute responses. Overall, 30.1% of the responses were SAQ, 11.7% were CATI, and 55.1% were Web-surveys, with approximately 28% of the respondents choosing to respond in a mode other than their initial start mode.

### **Response Rates**

Response rates were calculated on complete responses, as determined by the presence of critical items. The overall unweighted response rate was 80.7%; the weighted response rate was 80.5%. The 2008 SDR unweighted and weighted response rates are comparable to the response rates obtained in past survey cycles. Lower response rates generally occurred among groups of non-U.S. citizens (unweighted response rate = 71.0%) and among persons with missing demographic data (unweighted response rate = 47.2%). Missing demographic data typically indicated incomplete records from the SED. These cases typically are more difficult to locate. Prior experience has shown that sample members who are located usually complete the survey. Individuals who could not be located accounted for a high proportion of nonresponse cases (42.7%).

### **Data Editing and Coding**

Complete case data were captured and edited under the three separate data collection modes for the 2008 SDR. A computer assisted data-entry system was used to process the SAQ paper forms. The CATI system, including an additional CATI instrument used to collect critical-item follow-up data, and the Web survey had internal editing controls. Mail questionnaire data and Web-based returns were reviewed for any missing critical items (working status, job code, and resident status in the United States). Telephone callbacks were used to obtain this information for a complete response. (All completed CATI responses included critical items.) Complete responses from the three separate modes were merged into a single database for all subsequent coding, editing, and cleaning.

Following established SESTAT guidelines, staff were trained in conducting a standardized review and coding of occupation and education information, "Other/Specify" verbatim responses, state and country geographical information, and postsecondary institution information. For standardized coding of occupation, the respondent's occupational and other work-related data from the questionnaire were reviewed by specially trained coders who corrected known respondent self-reporting problems to obtain the best occupation codes. The education code for a newly earned degree or first bachelor's degree earned was assigned solely on the basis of the verbatim response for degree field.

### **Imputation of Missing Data**

Item nonresponse for key employment items, such as employment status, sector of employment, and primary work activity, ranged from 0.0% to 2.7%. Nonresponse to a few questions deemed somewhat sensitive, such as salary or earned income, had values between 8.6% and 11.7%. Personal demographic data, such as marital status, citizenship, ethnicity, and race, had item nonresponse rates ranging from 0.0% to 3.7%. Item nonresponse was imputed using logical imputation and hot-deck imputation methods.

For the most part, logical imputation was accomplished as part of editing. In the editing phase, the answer to a question with missing data was sometimes determined by the answer to another question. In some circumstances, editing procedures found inconsistent data that

were blanked out and therefore subject to statistical imputation. During sample frame building for the SDR, some missing demographic variables, such as race and ethnicity, were imputed before sample selection by using other existing information from the sampling frame.

The 2008 SDR primary method for statistical imputation was hot-deck imputation. Almost all SDR variables were subjected to hot-deck imputation, with each variable having its own class and sort variables structured by a multiple regression analysis. However, imputation was not performed on critical items or on text variables. For some variables, there was no set of class and sort variables that were reliably related to or suitable for predicting the missing value. In these instances, consistency was better achieved outside of hot-deck procedures using random imputation.

## **Weights**

To enable weighted analyses of the 2008 SDR data, a final weight was calculated for every person in the sample. In general, a final weight approximates the number of persons in the population of recipients of U.S. doctorates that a sampled person represents. The primary purpose of weights is to adjust statistical estimates for potential bias due to unequal selection probabilities and nonresponse. The first step of the weighting process calculated a base weight for all cases selected into the 2008 SDR sample. The base weight accounts for sample design, and it is defined as the reciprocal of the probability of selection under the sample design. In the next step, an adjustment for nonresponse was performed on completed cases to account for the sample cases that did not complete the survey. Nonresponse-adjusted weights were assigned to both respondents and to known ineligible cases (i.e., cases who were deceased, institutionalized, over 75 years of age, or living abroad during the survey reference period), but eligible nonrespondents and cases with unknown eligibility received a weight of zero. The total weight carried by unknown-eligibility cases was distributed to respondents assuming the same eligibility rate as observed among the respondents. Thus, the sum of weights equals the frame size.

## **Reliability of Estimates**

### **Sampling Error**

The particular sample that was used to estimate the 2008 population of SEH doctorate recipients in the United States is one of a large number of samples that could have been selected using the same sample design and sample size. Estimates based on each of these samples would likely be apt to vary, and such random variation across all possible samples is called the sampling error. Sampling error is measured by the variance or standard error of the survey estimate.

The 2008 SDR sample is a systematic sample selected independently from each sampling stratum. The successive difference replication method (SUD) was used to estimate sampling errors. The theoretical basis for the SUD is described in Wolter (1984) and in Fay and Train (1995). As with any replication method, successive differences replication involves constructing a number of subsamples (replicates) from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around their corresponding full sample estimate provides an estimate of the sampling variance of the statistic of interest.

Each statistical data table in this report has a corresponding standard error table included in this appendix based on the method described above. For example, table A-1 is the standard error table that corresponds to table 1. The standard error of an estimate can be used to construct a confidence interval for the estimate. To construct a 95% confidence interval for an estimate, the corresponding standard error of the estimate is first multiplied by a z-score of 1.96 (i.e., by the reliability coefficient) and then added to the estimate to establish the upper

bound of the confidence interval and then subtracted from the estimate to establish the lower bound of the confidence interval.

### **Nonsampling Error**

Sources of nonsampling error include (1) nonresponse error, which arises when the characteristics of respondents differ systematically from nonrespondents; (2) measurement error, which arises when the variables of interest cannot be precisely measured; (3) coverage error, which arises when some members of the target population are excluded from the frame and therefore do not have a chance to be selected for the sample; (4) respondent error, which occurs when respondents provide incorrect data; and (5) processing error, which can occur at the point of data editing, coding, or data entry. The analyst should be aware of potential nonsampling errors, but these errors are far harder to quantify than sampling errors. Quality assurance procedures were included throughout the stages of data collection and data processing to reduce the possibilities of nonsampling error.

### **Changes in the Detailed Statistical Tables**

The number of detailed tables published in this edition of the series has been reduced. The complete list of tables produced for the 2008 SDR is shown in exhibit 1. The published tables are designated by table number in the first column. The remaining tabulations, designated as "supplemental," are available on request from the SDR Project Officer. NCSES has under development a new system for delivering tabular data. When fully implemented, it will provide online access to the expanded set of detailed tabulations associated with this series. This system will also provide the opportunity for table customization. Select data tables will continue to be published, together with the survey's technical documentation.

The 2008 SDR questionnaire did not include extensive questions regarding respondents' postdoctoral (postdoc) history; thus, three postdoc tables from 2006 were dropped: (1) Number of postdocs ever held by doctoral scientists and engineers, by years since doctorate and broad field of doctorate; (2) Primary reason for holding postdoc for doctoral scientists and engineers, by number of postdocs and broad field of doctorate; and (3) Benefit of current postdoc to doctoral scientists and engineers, by broad field of doctorate.

Four new tables have been added, which report on data from reinstated modules and questions: (1) Employed doctoral scientists and engineers engaged in patent-related activities, by field of doctorate and employment sector; (2) Employed doctoral scientists and engineers engaged in publication-related activities, by field of doctorate and employment sector; (3) Employed doctoral scientists and engineers working in second jobs, by field of doctorate and principal job employment sector; and (4) Employed doctoral scientists and engineers working in second jobs, by selected demographic characteristics and broad occupation of principal job.

To reduce redundancy, tables that previously reported both counts and percentages, now report only counts. The rest of the changes to the 2008 report were made to labels and headers of existing tables.

EXHIBIT 1. Published tables, crosswalk to prior-year tables, and supplemental tabulations available for the 2008 Survey of Doctorate Recipients

2008 SDR published table	Prior-year crosswalk and supplemental data	Table title
<b>Doctoral scientists and engineers: 2008</b>		
by field of doctorate		
1	1	by employment status
	S-2	by employment status and sex
	S-3	by employment status, ethnicity, and race
	S-4	selected employment characteristics
	S-5	by sex
	S-6	by ethnicity and race
	S-7	by disability status
<b>Employed doctoral scientists and engineers: 2008</b>		
by field of doctorate		
	S-8	by race/ethnicity, and sex
	S-9	by citizenship status
	S-10	by age
	S-11	by years since doctorate
2	12	by sector of employment
	S-13	by sector of employment and sex
	S-14	by sector of employment and race/ethnicity
	S-15	by primary or secondary work activity
	S-16	by employer location
		in universities and 4-year colleges, by field of doctorate
	S-17	by sex and faculty rank
3	18	by sex, faculty rank, and years since doctorate
	S-19	by race/ethnicity and faculty rank
	S-20	by sex, and tenure status
	S-21	by sex, tenure status, and years since doctorate
	S-22	by race/ethnicity and tenure status
	S-23	by primary and secondary work activity
		by selected demographic characteristics
4	24	by broad field of doctorate
5	25	by citizenship status
		by selected demographic and employment-related characteristics
	S-26	by sector of employment
6	27	by race/ethnicity and sex
	S-28	by primary or secondary work activity
<b>Occupations of doctoral scientists and engineers: 2008</b>		
by employment status		
7	29	by occupation
	S-30	by broad occupation and sex
	S-31	by broad occupation and race/ethnicity
	S-32	Selected employment characteristics of doctoral scientists and engineers, by occupation
		by occupation
	S-33	by sex
	S-34	by race/ethnicity
8	35	by disability status
	S-36	employed in postdocs, by occupation [this should be in postdoc section but hold change for next cycle]
		by employment
	S-37	by race/ethnicity and sex
	S-38	minority U.S. citizens, by race/ethnicity and sex
	S-39	by citizenship status
	S-40	by age
	S-41	by years since doctorate



	S-42	by sector of employment
	S-43	by sector of employment and sex
	S-44	by sector of employment and race/ethnicity
	S-45	by primary or secondary work activity
	S-46	by employer location
<b>9</b>	<b>47</b>	by selected demographic characteristics
	S-48	by field of doctorate
	S-49	in science occupations, by field of doctorate

**Median annual salaries of full-time employed doctoral scientists and engineers: 2008**

by field of doctorate

	S-50	by race/ethnicity and sex
	S-51	by field of doctorate and citizenship status
	S-52	by field of doctorate and age
	S-53	by field of doctorate and years since doctorate
<b>10</b>	<b>54</b>	by field of doctorate and sector of employment
	S-55	by sector of employment, broad field of doctorate, and sex
	S-56	by sector of employment, broad field of doctorate, and race/ethnicity
	S-57	by field of doctorate and primary or secondary work activity
	S-58	by employer location and broad field of doctorate
		in universities and 4-year colleges, by field of doctorate
	S-59	by broad field of doctorate, sex, and faculty rank
<b>11</b>	<b>60</b>	by broad field of doctorate, sex, faculty rank, and years since doctorate
	S-61	by broad field of doctorate, race/ethnicity, and faculty rank
	S-62	by broad field of doctorate, sex, and tenure status
	S-63	by broad field of doctorate, sex, tenure status, and years since doctorate
	S-64	by broad field of doctorate, race/ethnicity, and tenure status

by occupation

<b>12</b>	<b>65</b>	by race/ethnicity and sex
	S-66	by citizenship status
	S-67	by age
	S-68	by years since doctorate
	S-69	by sector of employment
	S-70	by disability status
	S-71	by sector of employment and sex
	S-72	by sector of employment and race/ethnicity
<b>13</b>	<b>73</b>	by primary or secondary work activities
	S-74	by employer location

**Postdoctoral appointments of doctoral scientists and engineers**

	S-75	employed in postdocs, by field of doctorate
	S-76	Postdoc status, by years since doctorate and broad field of doctorate
<b>14</b>	<b>77</b>	employed in postdocs, by selected demographic characteristics and broad field of doctorate

**Other work-related activities of employed doctoral scientists and engineers: 2008**

patents and publications

	S-78	patent-related activities, by field of doctorate and employment sector
	S-79	publication-related activities, by field of doctorate and employment sector

second jobs

	S-80	by field of doctorate and principal job employment sector
	S-81	by selected demographic characteristics and broad occupation of principal job

NOTES: Prior-year numbering for tables published in this report are in boldface. Tables designated by "S" are available on request from project officer.

## Changes in the Survey

Caution should be exercised when making comparisons with previous SDR results. In all previous cycles of the SDR, the new cohort consisted of graduates from the 2 academic years immediately preceding the survey year, as is the case for SDR 2008. However, in 2006, SDR collected data from graduates in the 3 previous academic years.

## Data Presentation

**2003.** Data on employed doctorate recipients was expanded to include the category "S&E-related occupations." S&E-related occupations include health-related occupations, S&E managers, S&E precollege teachers, and S&E technicians and technologists.

**2002 and prior.** Data on employed doctorate recipients were presented in two categories: employment in an S&E occupation and employment in a non-S&E occupation.

## Questionnaire

**2006.** The questionnaire included a module on history of postdoctoral appointments, awarded primarily for gaining additional education and training in research, as a follow-up to a similar module included in the 1995 SDR, plus a module on international collaboration among doctorate recipients.

## Survey Frame

**2003.** Beginning with 2003, the new cohort frame includes all SEH doctorate recipients except those who earned an SEH doctorate in a prior year. The SDR frame is based on the first U.S. research doctorate earned in an SEH field.

**2002 and prior.** Recipients of two doctorates whose first degree was in a non-SEH field were not included in the SDR frame, even if their second doctorate was in an SEH field. Based on information collected annually by the SED on the number and characteristics of those earning two doctorates, this exclusion resulted in a slight undercoverage bias. Between 1983 and 2000, for example, the total number of double doctorate recipients with a non-SEH first doctorate and an SEH second doctorate was 154, representing 0.046% of the total number of SEH doctorates awarded in that period.

## Definitions and Explanations

*Employer location.* Survey question A8 includes location of the principal employer, and data were based primarily on responses to this question. Individuals not reporting place of employment were classified by their last mailing address

*Field of doctorate.* The doctoral field is as specified by the respondent in the SED at the time of degree conferral. These codes were subsequently recoded to the field of study codes used in SESTAT questionnaires. (See appendix table B-1 for field-of-study codes.)

*Full-time and part-time employment.* Full-time (working 35 hours or more per week) and part-time (working less than 35 hours per week) employment status is for principal job only, not for all jobs held in the labor force. For example, an individual could work part time in his/her principal job, but full time in the labor force. Full-time and part-time employment status is not comparable to data reported in previous years when no distinction was made between the principal job and other jobs held by the individual.

*Involuntarily out-of-field rate.* Involuntarily-out-of-field is the percentage of employed individuals who reported, for their principal job, working in an area not related to the first doctoral degree at least partially because a job in their doctoral field was not available.

*Labor force participation rate.* The labor force participation rate ( $R_{LF}$ ) is the ratio  $(E + U) / P$ , where  $E$  (employed) +  $U$  (unemployed; those not-employed persons actively seeking work) = the total labor force, and  $P$  = population, defined as all SEH doctorate holders less than 76 years of age who resided in the United States during the week of 1 October 2008 and who earned their doctorate from a U.S. institution.

*Non-U.S. citizen, temporary resident.* This citizenship status category does not include individuals who, at the time they received their doctorate, reported plans to leave the United States, and who therefore were excluded from the sampling frame.

*Occupation data.* Occupation data were derived from responses to several questions about the kind of work primarily performed by the respondent. The occupational classification of the respondent was based on his/her principal job (including job title) held during the reference week—or on his/her last job held, if not employed in the reference week (survey questions A19/A20 or A5/A6). Also used in the occupational classification was a respondent-selected job code (survey question A21 or A7). (See appendix table B-2 for a list of occupations.)

*Race and ethnicity.* Values include American Indian/Alaska Native, Asian, black, Native Hawaiian/Other Pacific Islander, and white; those persons who report multiple races refer only to individuals not of Hispanic origin. Race and ethnicity data are from prior rounds of the SDR and the SED. The most recently reported race and ethnicity data are given precedence.

*Salary.* Median annual salaries are reported for the principal job, rounded to the nearest \$100, and computed for full-time employed scientists and engineers. For individuals employed by educational institutions, no accommodation was made to convert academic-year salaries to calendar-year salaries. Users are advised that due to changes in the salary question after 1993, salary data for 1995–2008 are not strictly comparable with 1993 salary data.

*Sector of employment.* "Employment sector" is a derived variable based on responses to survey questions A13 and A15. In the detailed tables, the category "4-year educational institutions" includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes. "Other educational institutions" include 2-year colleges, community colleges, technical institutes, precollege institutions, and "other" educational institutions. Users should note that prior to 2008, "other" educational institutions were grouped with 4-year educational institutions. "Private-for-profit" includes respondents who were self-employed in an incorporated business. "Self-employed" includes respondents who were self-employed or were a business owner in a non-incorporated business.

*Unemployment rate.* The unemployment rate ( $R_u$ ) is the ratio  $U / (E + U)$ , where  $U$  = unemployed (those not-employed persons actively seeking work), and  $E$  (employed) +  $U$  = the total labor force.

## **Data Availability**

Additional data and reports from the SDR are available at <http://www.nsf.gov/statistics/doctoratework/>. Data from the SDR are also available in the Scientists and Engineers Statistical Data System (SESTAT) at <http://www.nsf.gov/statistics/sestat/>. SESTAT provides an integrated database of information on employment, education, and demographic characteristics of scientists and engineers in the United States collected through the SDR, the National Survey of College Graduates (<http://www.nsf.gov/statistics/srvygrads/>), and the National Survey of Recent College Graduates (<http://www.nsf.gov/statistics/srvyrecentgrads/>).

## References

Fay RE, Train GF. 1995. Aspects of survey and model-based postcensal estimation of income and poverty characteristics for states and counties. *ASA Proceedings of the Section on Government Statistics*: 154–159.

Wolter K. 1984. An investigation of some estimators of variance for systematic sampling. *Journal of the American Statistical Association* 79(388): 781–790.

## Standard Error Tables

### Table **Doctoral scientists and engineers**

A-1 by field of doctorate and employment status

#### **Employed doctoral scientists and engineers**

by field of doctorate

A-2 by sector of employment

A-3 in 4-year educational institutions, by sex, faculty rank, and years since doctorate

by selected demographic characteristics

A-4 by broad field of doctorate

A-5 by citizenship status

A-6 by employment-related characteristics

#### **Occupations of doctoral scientists and engineers**

A-7 by employment status

A-8 by disability status

A-9 by broad occupation of employment and selected demographic characteristics

median annual salaries, full-time employed

A-10 by field of doctorate and sector of employment

A-11 in 4-year educational institutions, by broad field of doctorate, sex, faculty rank, and years since doctorate

A-12 by occupation, ethnicity, race, and sex

A-13 by occupation and primary or secondary work activities

#### **Postdoctoral appointments**

A-14 by selected demographic characteristics and broad field of doctorate

TABLE A-1. Standard errors for doctoral scientists and engineers, by field of doctorate and employment status: 2008

Field	Total	Employed			Unemployed	Retired	Not employed/ not seeking work
		All	Full time	Part time			
All fields	1,200	1,600	2,100	1,500	600	1,200	600
Science	1,000	1,500	1,800	1,300	500	1,000	500
Biological/agricultural/environmental life sciences	600	900	1,000	700	300	600	400
Agricultural/food sciences	400	400	400	200	100	300	100
Biochemistry/biophysics	800	700	700	300	200	300	200
Cell/molecular biology	700	700	700	200	100	200	200
Environmental life sciences	400	400	400	200	100	300	100
Microbiology	600	600	600	200	200	300	100
Zoology	600	600	600	200	100	300	100
Other biological sciences	1,100	1,100	1,000	500	200	500	300
Computer/information sciences	300	300	300	200	100	100	100
Mathematics/statistics	300	500	500	300	200	300	200
Physical sciences	500	800	900	600	300	600	200
Astronomy/astrophysics	400	400	400	100	D	200	D
Chemistry, except biochemistry	400	600	700	400	300	400	200
Earth/atmospheric/ocean sciences <sup>a</sup>	200	300	300	300	100	200	100
Physics	600	600	600	300	200	400	200
Psychology	400	700	1,000	800	300	500	400
Social sciences	500	800	900	600	200	600	300
Economics	400	400	400	300	100	300	200
Political sciences	600	600	600	300	100	300	200
Sociology	500	500	400	300	100	300	200
Other social sciences	700	800	700	300	200	300	200
Engineering	600	700	800	500	300	500	300
Aerospace/aeronautical/astronautical engineering	500	500	500	200	D	200	D
Chemical engineering	700	600	600	200	200	300	100
Civil engineering	600	600	600	200	100	200	100
Electrical/computer engineering	400	400	400	300	200	300	100
Materials/metallurgical engineering	700	700	700	200	100	200	100
Mechanical engineering	700	600	600	200	100	300	100
Other engineering	900	900	800	300	200	400	200
Health	300	400	500	300	100	300	200

D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

<sup>a</sup> Includes other physical sciences.

NOTES: Standard errors are rounded up to nearest 100. Designation of full time and part time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his/her principal job, but full time in labor force. Prior to 2006 SDR, designation of full time and part time status was for all jobs held; thus data for 2003 and earlier are not comparable to data for 2006 and later.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-2. Standard errors for employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2008

Field	All employed	4-year educational institution <sup>a</sup>	Other educational institution <sup>b</sup>	Private, for-profit <sup>c</sup>	Private, nonprofit	Federal government	State/local government	Self-employed <sup>d</sup>	Other <sup>e</sup>
All fields	1,600	2,200	900	2,100	1,100	1,200	800	1,000	200
Science	1,500	1,900	800	1,700	1,000	1,000	700	1,000	200
Biological/agricultural/environmental life sciences	900	1,400	400	1,100	600	700	400	400	D
Agricultural/food sciences	400	500	200	400	200	300	200	200	D
Biochemistry/biophysics	700	500	200	500	300	300	200	200	D
Cell/molecular biology	700	500	200	400	300	300	100	100	D
Environmental life sciences	400	300	100	200	200	200	200	100	D
Microbiology	600	300	200	400	200	200	100	200	D
Zoology	600	400	200	200	100	300	200	100	D
Other biological sciences	1,100	1,000	300	700	500	400	200	300	D
Computer/information sciences	300	400	100	400	200	200	100	100	D
Mathematics/statistics	500	600	200	500	200	300	100	200	D
Physical sciences	800	900	400	1,000	500	500	300	400	D
Astronomy/astrophysics	400	300	D	200	200	200	D	D	D
Chemistry, except biochemistry	600	600	300	700	300	300	200	300	D
Earth/atmospheric/ocean sciences <sup>f</sup>	300	400	200	400	200	300	200	200	D
Physics	600	500	200	600	300	300	200	200	D
Psychology	700	800	500	700	500	400	500	700	D
Social sciences	800	800	300	600	400	400	300	400	200
Economics	400	500	100	400	200	300	200	300	200
Political sciences	600	500	200	300	200	200	200	200	100
Sociology	500	400	200	200	200	100	100	200	D
Other social sciences	800	600	200	400	300	200	200	200	D
Engineering	700	800	200	1,000	400	500	300	400	D
Aerospace/aeronautical/astronautical engineering	500	200	D	300	100	200	D	200	D
Chemical engineering	600	300	100	500	100	200	100	200	D
Civil engineering	600	400	D	400	100	200	200	200	D
Electrical/computer engineering	400	500	100	600	200	200	100	200	D
Materials/metallurgical engineering	700	300	100	600	200	200	D	200	D
Mechanical engineering	600	400	100	500	200	200	D	200	D
Other engineering	900	500	100	600	200	300	200	200	D
Health	400	500	200	400	300	300	200	200	D

D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

<sup>a</sup> Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

<sup>b</sup> Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

<sup>c</sup> Includes those self-employed in an incorporated business.

<sup>d</sup> Self-employed or business owner in a nonincorporated business.

<sup>e</sup> Includes employers not broken out separately.

<sup>f</sup> Includes other physical sciences.

NOTE: Standard errors are rounded up to nearest 100.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-3. Standard errors for employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, faculty rank, and years since doctorate: 2008

Field and sex	All employed		Full professor		Associate professor		Assistant professor		Instructor/lecturer		All other faculty		Rank not applicable	
	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10
All fields	1,400	1,800	300	1,500	600	1,100	1,000	600	400	500	100	300	800	700
Male	1,000	1,600	200	1,400	500	1,000	700	500	300	400	D	200	600	600
Female	800	1,000	200	700	400	600	700	400	300	300	100	200	500	400
Science	1,200	1,600	200	1,300	600	1,000	800	600	400	500	100	200	700	700
Male	900	1,400	200	1,200	500	900	600	400	300	400	D	200	600	500
Female	700	900	200	700	300	600	600	400	300	300	100	200	500	400
Biological/agricultural/ environmental life sciences	700	1,100	100	800	300	600	500	400	200	200	D	100	500	500
Male	500	900	100	700	200	500	400	300	200	200	D	100	400	400
Female	500	600	S	400	200	300	300	300	200	200	D	D	400	300
Computer/information sciences	300	300	D	200	200	200	200	100	D	100	D	D	200	100
Male	300	300	D	200	200	200	200	100	D	100	D	D	200	D
Female	100	100	D	100	100	100	100	D	D	D	D	D	100	D
Mathematics/statistics	300	500	100	400	200	400	300	200	100	200	D	D	200	200
Male	300	500	100	400	200	300	300	100	D	200	D	D	200	100
Female	200	200	D	200	100	200	200	100	100	100	D	D	100	100
Physical sciences	500	700	D	600	200	400	400	300	200	200	D	200	400	400
Male	400	700	D	600	200	400	300	200	100	200	D	200	300	300
Female	300	300	D	200	200	200	200	100	100	100	D	D	200	200
Psychology	500	700	100	500	200	500	400	300	200	200	D	100	300	300
Male	300	500	D	400	200	300	300	200	100	100	D	D	200	200
Female	400	500	100	400	200	400	300	200	200	200	D	D	300	200
Social sciences	500	700	200	700	300	500	400	200	200	200	D	100	300	300
Male	400	700	100	600	300	400	300	200	200	200	D	D	200	200
Female	300	400	100	300	200	300	300	200	200	100	D	D	200	200
Engineering	500	600	100	600	300	400	400	200	200	200	D	100	300	200
Male	500	600	100	600	200	400	300	200	100	200	D	D	300	200
Female	200	200	D	200	100	100	200	100	100	D	D	D	200	100
Health	400	400	100	300	300	300	300	200	100	100	D	D	200	200
Male	200	300	D	200	200	200	200	100	D	D	D	D	100	100
Female	300	300	100	300	200	200	300	200	100	100	D	D	200	200

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

NOTES: Standard errors are rounded up to nearest 100. 4-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-4. Standard errors for employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2008

Characteristic	Science									
	All employed	All sciences	Biological/ agricultural/ environmental life sciences	Computer/ information sciences	Mathematics/ statistics	Physical sciences	Psychology	Social sciences	Engineering	Health
Doctorate recipient	1,600	1,500	900	300	500	800	700	800	700	400
Sex										
Male	1,300	1,200	700	300	400	700	500	700	700	300
Female	900	800	500	200	200	300	500	500	300	300
Ethnicity/race										
Hispanic or Latino	400	300	200	100	100	200	200	200	200	100
Not Hispanic or Latino										
American Indian or Alaska Native	200	200	100	D	D	100	100	100	100	100
Asian	800	700	500	200	200	400	200	300	500	200
Black or African American	300	300	200	100	100	100	200	200	100	100
White	1,600	1,400	800	200	400	700	700	700	600	400
Other race <sup>a</sup>	400	300	200	100	100	200	200	200	200	100
Age										
Under 35	1,000	800	500	200	300	400	400	300	500	200
35–39	1,200	1,000	600	300	300	600	500	400	600	300
40–44	1,300	1,200	700	300	300	500	500	500	600	300
45–49	1,400	1,100	700	300	300	500	600	500	600	300
50–54	1,400	1,200	600	300	300	600	600	500	700	300
55–59	1,400	1,300	700	200	300	500	600	600	500	400
60–64	1,300	1,100	600	200	400	500	600	500	500	300
65–75	1,100	1,000	500	100	300	400	500	500	500	300
Citizenship status										
U.S. citizen	1,700	1,600	900	300	500	800	700	800	800	400
Native-born	1,500	1,400	800	200	400	700	700	700	600	300
Naturalized	1,100	900	500	300	300	500	300	400	600	200
Non-U.S. citizen	900	800	500	300	300	500	300	300	500	200
Permanent resident	1,000	900	600	300	300	500	300	300	500	200
Temporary resident	700	600	400	200	200	300	100	200	500	200
Years since doctorate										
≤5	900	800	500	200	300	400	300	300	500	300
6–10	900	800	500	200	200	400	400	300	400	200
11–15	1,000	800	500	200	300	400	400	300	400	300
16–20	900	800	500	200	200	400	400	300	400	200
21–25	900	800	400	200	200	400	400	400	300	200
>25	1,300	1,200	600	100	400	600	600	600	600	300
Place of birth <sup>b</sup>										
United States	1,500	1,400	800	200	400	700	700	700	600	300
Europe	800	700	400	200	200	300	400	300	400	200
Asia	1,000	800	500	200	300	400	200	300	600	200
North America <sup>c</sup>	400	400	200	100	100	200	200	200	200	100
Central America <sup>d</sup>	300	200	200	D	100	100	100	100	100	100
Caribbean	300	300	200	*	100	100	200	100	200	100



TABLE A-4. Standard errors for employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 2008

Characteristic	Science									
	All employed	All sciences	Biological/ agricultural/ environmental life sciences	Computer/ information sciences	Mathematics/ statistics	Physical sciences	Psychology	Social sciences	Engineering	Health
South America	300	300	200	100	100	200	200	200	200	100
Africa	500	400	200	100	100	200	100	200	300	100
Oceania	200	200	100	D	100	100	D	200	100	100

\* = standard error is not computed when value < 50; D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

<sup>b</sup> Numbers are based on persons who reported place of birth. Persons who did not specify place of birth are included in total but not shown separately.

<sup>c</sup> Excludes United States.

<sup>d</sup> Includes Mexico.

NOTE: Standard errors are rounded up to nearest 100.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-5. Standard errors for employed doctoral scientists and engineers, by selected demographic characteristics and citizenship status: 2008

Characteristic	All employed	U.S. citizen			Non-U.S. citizen		
		All	Native-born	Naturalized	All	Permanent resident	Temporary resident
Doctorate recipient	1,600	1,700	1,500	1,100	900	1,000	700
Sex							
Male	1,300	1,400	1,200	1,000	800	800	600
Female	900	1,000	800	600	600	600	400
Ethnicity/race							
Hispanic or Latino	400	400	300	300	200	200	100
Not Hispanic or Latino							
American Indian or Alaska Native	200	200	200	D	D	D	D
Asian	800	800	200	800	800	800	600
Black or African American	300	300	300	300	200	200	100
White	1,600	1,500	1,400	800	700	600	400
Other race <sup>a</sup>	400	400	300	200	100	100	100
Age							
Under 35	1,000	800	700	300	700	500	600
35–39	1,200	1,100	900	500	800	700	500
40–44	1,300	1,200	1,000	700	700	600	300
45–49	1,400	1,300	1,200	700	400	400	200
50–54	1,400	1,300	1,100	700	400	400	100
55–59	1,400	1,300	1,300	600	300	300	S
60–64	1,300	1,300	1,200	500	200	200	D
65–75	1,100	1,100	1,100	500	200	200	D
Years since doctorate							
≤5	900	800	700	600	700	600	700
6–10	900	1,000	700	700	700	700	300
11–15	1,000	1,000	700	700	500	500	200
16–20	900	900	800	600	300	300	100
21–25	900	900	700	400	200	200	D
>25	1,300	1,400	1,200	600	300	300	D
Place of birth <sup>b</sup>							
United States	1,500	1,500	1,500	200	100	100	100
Europe	800	800	300	700	500	500	300
Asia	1,000	1,000	300	1,000	800	800	600
North America <sup>c</sup>	400	300	200	300	300	300	200
Central America <sup>d</sup>	300	200	100	200	200	200	100
Caribbean	300	300	100	300	200	200	100
South America	300	300	200	300	200	200	200
Africa	500	400	200	400	300	200	200
Oceania	200	200	D	200	200	100	100

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

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

<sup>b</sup> Numbers are based on persons who reported place of birth. Persons who did not specify place of birth are included in total but not shown separately.

<sup>c</sup> Excludes United States.

<sup>d</sup> Includes Mexico.

NOTE: Standard errors are rounded up to nearest 100.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-6. Standard errors for employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, ethnicity, race, and sex: 2008 (corrected March 2013)

Characteristic	Not Hispanic or Latino																				
	All employed			Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Doctorate recipient	1,600	1,300	900	400	300	200	200	200	100	800	700	400	300	300	200	1,600	1,300	800	400	300	200
Age																					
Under 35	1,000	800	600	200	200	100	100	D	D	600	500	300	200	100	100	800	600	500	100	100	100
35-39	1,200	1,000	700	200	200	100	100	100	100	700	600	400	200	200	200	1,000	700	600	200	200	100
40-44	1,300	1,100	700	200	200	200	100	D	100	700	600	400	200	200	200	1,000	800	600	200	200	100
45-49	1,400	1,200	800	300	200	200	100	D	100	600	500	300	200	200	200	1,200	1,000	700	200	200	200
50-54	1,400	1,200	700	200	200	200	100	100	100	500	500	300	200	200	200	1,200	1,100	700	200	200	100
55-59	1,400	1,100	800	200	200	100	100	100	D	400	400	200	300	200	200	1,300	1,000	800	200	200	100
60-64	1,300	1,100	600	200	200	100	100	100	100	400	400	200	200	200	200	1,200	1,000	600	200	200	100
65-75	1,100	1,100	500	200	200	100	D	D	D	400	400	200	200	200	100	1,100	1,000	400	200	200	100
Years since doctorate																					
≤5	900	800	600	200	100	100	100	100	100	600	500	400	200	200	100	700	600	500	200	100	100
6-10	900	700	500	200	200	100	100	100	100	600	500	300	200	100	200	800	600	500	200	200	100
11-15	1,000	700	700	200	200	200	100	100	100	500	400	300	200	200	100	800	600	500	200	200	100
16-20	900	700	600	200	200	100	100	D	100	400	400	200	200	200	100	700	500	500	200	200	100
21-25	900	700	500	200	200	100	100	100	100	300	300	200	200	200	100	800	600	500	100	100	100
>25	1,300	1,200	600	200	200	100	100	D	D	500	400	200	200	200	100	1,300	1,100	500	200	200	100
Citizenship status																					
U.S. citizen	1,700	1,400	1,000	400	300	200	200	200	100	800	800	500	300	300	200	1,500	1,300	800	400	300	200
Native-born	1,500	1,200	800	300	300	200	200	200	100	200	200	200	300	200	200	1,400	1,200	800	300	300	200
Naturalized	1,100	1,000	600	300	300	200	D	D	D	800	800	500	300	300	100	800	700	400	200	200	100
Non-U.S. citizen	900	800	600	200	200	100	D	D	D	800	700	500	200	200	100	700	600	400	100	100	D
Permanent resident	1,000	800	600	200	200	100	D	D	D	800	700	400	200	200	100	600	500	400	100	D	D
Temporary resident	700	600	400	100	100	100	D	D	D	600	600	300	100	100	100	400	400	200	100	100	D
Employer location																					
New England	1,200	1,000	700	200	100	100	D	D	D	500	500	300	100	100	100	1,100	1,000	600	100	100	100
Middle Atlantic	1,600	1,400	800	300	200	200	100	D	D	700	700	400	200	200	200	1,300	1,100	800	200	100	100
East North Central	1,600	1,300	800	200	200	100	100	100	100	600	600	300	200	200	200	1,400	1,100	800	200	200	100
West North Central	1,100	900	600	200	200	100	S	D	D	400	400	200	100	100	100	1,000	800	600	100	100	100
South Atlantic	1,900	1,500	1,000	300	200	200	100	100	100	700	700	400	400	300	300	1,500	1,200	900	200	200	100
East South Central	800	800	400	100	100	100	D	D	D	400	300	200	200	200	100	700	700	400	100	100	S
West South Central	1,100	1,000	600	200	200	200	100	100	100	600	600	300	200	200	200	900	800	500	200	200	100
Mountain	1,100	1,000	500	200	200	100	100	100	*	400	400	200	100	100	100	900	800	500	100	100	100
Pacific	1,800	1,600	800	300	200	200	100	100	100	900	800	500	300	200	200	1,500	1,200	800	200	200	200
U.S. territories/other areas	300	300	200	200	200	100	D	D	D	200	200	S	D	D	D	200	200	200	D	D	D
Sector of employment																					
4-year educational institution <sup>b</sup>	2,200	1,900	1,300	300	300	200	100	100	100	1,000	900	500	400	300	200	2,200	1,700	1,200	300	200	200

TABLE A-6. Standard errors for employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, ethnicity, race, and sex: 2008 (corrected March 2013)

Characteristic	Not Hispanic or Latino																				
	All employed			Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Other educational institution <sup>c</sup>	900	600	500	200	100	200	D	D	D	300	200	200	200	200	200	800	600	500	100	*	100
Private, for-profit <sup>d</sup>	2,100	1,900	1,000	300	300	200	100	100	100	1,000	900	500	300	200	200	1,700	1,600	900	300	200	100
Private, nonprofit	1,100	900	700	200	100	100	D	D	D	400	400	200	200	100	100	1,100	800	700	200	100	100
Federal government	1,200	900	700	200	100	100	100	D	D	400	300	200	200	200	100	1,100	900	600	200	100	100
State/local government	800	700	400	200	100	100	S	D	*	300	300	200	200	100	100	700	600	400	100	100	100
Self-employed <sup>e</sup>	1,000	900	700	200	100	100	100	D	100	300	300	200	200	200	100	1,000	800	600	100	100	100
Other <sup>f</sup>	200	200	200	100	100	D	D	D	D	100	D	D	D	D	D	200	200	100	D	D	D
Primary/secondary work activity <sup>g</sup>																					
Any R&D	2,400	1,900	1,300	400	300	200	200	200	100	1,200	1,000	500	300	300	200	2,200	1,700	1,200	300	300	200
Applied research	2,000	1,700	1,100	300	300	200	100	100	100	1,100	900	600	300	300	200	1,900	1,700	1,100	300	200	200
Basic research	1,800	1,600	1,000	300	300	200	100	100	100	900	700	400	200	200	200	1,600	1,400	900	200	200	100
Design	1,100	1,000	500	200	200	100	100	D	D	700	600	300	200	100	100	800	800	400	100	100	100
Development	1,600	1,300	700	200	200	200	100	100	D	1,000	900	400	200	200	100	1,200	1,100	600	200	200	100
Computer applications	1,400	1,300	500	200	200	100	D	D	D	700	700	300	200	100	100	1,000	1,000	400	200	200	*
Management/sales/administration	2,300	1,900	1,200	400	300	200	100	100	100	900	800	400	400	300	300	2,100	1,800	1,100	300	300	200
Professional services	1,500	1,200	900	300	200	200	100	D	100	500	400	300	300	200	200	1,500	1,200	900	200	200	200
Teaching	2,200	1,700	1,100	400	300	200	100	100	100	700	600	400	400	300	200	2,100	1,600	1,000	300	200	200
Other activities	1,200	1,000	800	200	200	100	100	D	100	500	400	300	200	100	200	1,100	800	700	200	100	100
Federal support																					
Receiving support	2,100	1,900	900	300	300	200	100	100	100	1,000	800	500	300	300	200	1,800	1,700	800	300	200	200
Not receiving support	2,300	2,100	1,100	400	300	200	200	200	100	1,100	900	500	300	300	200	2,100	1,900	1,100	300	300	200
Degree – job relationship																					
Closely related	2,200	1,900	1,000	400	300	300	200	100	100	1,000	900	500	400	300	200	2,000	1,800	1,000	300	300	200
Somewhat related	2,100	1,800	1,000	300	200	200	100	100	100	1,000	900	500	300	200	200	1,700	1,500	800	200	200	100
Not related	1,200	1,000	700	200	200	100	100	D	S	500	500	300	200	200	100	1,100	900	600	200	200	100

\* = standard error is not computed when value < 50. D = standard error is not computed when value is suppressed to avoid disclosure of confidential information. S = suppressed; data cell not published.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

<sup>b</sup> Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

<sup>c</sup> Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

<sup>d</sup> Includes those self-employed in an incorporated business.

<sup>e</sup> Self-employed or business owner in a nonincorporated business.

<sup>f</sup> Includes employers not broken out separately.

<sup>g</sup> Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?"

NOTE: Standard errors are rounded up to nearest 100.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-7. Standard errors for doctoral scientists and engineers, by occupation and employment status: 2008

Occupation	Total	Employed			Unemployed	Retired	Not employed, not seeking work
		All	Full time	Part time			
All occupations	1,200	1,600	2,100	1,500	600	1,200	600
Science occupations	2,100	2,100	2,000	1,200	400	1,100	500
Biological/agricultural/other life scientists	1,500	1,400	1,300	500	300	600	300
Agricultural/food scientists	500	500	500	200	100	200	100
Biochemists/biophysicists	700	700	700	200	200	200	200
Biological scientists	800	700	700	300	200	300	200
Forestry/conservation scientists	300	300	300	100	D	100	D
Medical scientists	1,200	1,100	1,100	300	200	300	200
Postsecondary teachers, agricultural/other natural sciences	300	300	300	S	D	200	D
Postsecondary teachers, biological sciences	900	800	800	300	100	400	200
Other biological/agricultural/life scientists	500	400	400	200	S	200	100
Computer and information scientists	1,000	900	900	300	200	400	200
Computer/information scientists	900	800	800	200	200	300	100
Postsecondary teachers, computer science	500	500	500	200	D	200	D
Mathematical scientists	700	800	700	300	100	300	200
Mathematical scientists	600	600	600	200	100	200	100
Postsecondary teachers, mathematics/statistics	600	600	600	200	D	300	100
Physical scientists	1,300	1,200	1,200	400	200	600	200
Chemists, except biochemists	800	700	700	300	200	400	200
Earth/atmospheric/ocean scientists	500	500	500	200	100	200	100
Physicists/astronomers	600	600	600	200	100	300	100
Postsecondary teachers, chemistry	600	600	500	200	D	300	100
Postsecondary teachers, physics	500	500	400	200	D	200	D
Postsecondary teachers, other physical sciences	400	400	400	200	D	200	D
Other physical scientists	400	300	300	100	D	200	D
Psychologists	1,000	1,000	900	800	200	500	300
Psychologists	1,000	1,000	800	700	200	400	300
Postsecondary teachers, psychology	600	600	600	300	100	300	200
Social scientists	900	900	900	500	100	500	200
Economists	400	400	400	200	D	200	100
Political scientists	300	200	200	D	D	200	D
Postsecondary teachers, economics	500	500	500	200	D	200	D
Postsecondary teachers, political science	500	500	500	200	D	200	S
Postsecondary teachers, sociology	500	500	400	200	D	300	100
Postsecondary teachers, other social sciences	600	500	500	200	100	300	100
Sociologists/anthropologists	400	300	300	200	100	200	D
Other social scientists	500	500	400	200	D	200	100
Engineering occupations	1,300	1,200	1,200	500	300	500	200
Aerospace/aeronautical/astronautical engineers	400	400	400	200	D	200	D
Chemical engineers	500	500	500	200	100	200	100
Civil/architectural/sanitary engineers	400	400	400	100	D	100	100
Electrical engineers	700	700	600	200	100	200	100
Materials/metallurgical engineers	300	200	200	D	D	D	D
Mechanical engineers	600	500	600	200	S	200	D
Postsecondary teachers, engineering	700	600	600	200	D	300	S
Other engineers	900	800	800	300	200	300	100
Science/engineering-related occupations	1,400	1,300	1,300	400	200	500	200
Health occupations, except postsecondary teachers and managers	800	700	700	300	200	300	200
Postsecondary teachers, health and related sciences	700	700	700	200	100	200	100
Managers, including health	1,000	900	900	200	200	400	D
Precollege teachers	400	400	300	200	100	200	100

TABLE A-7. Standard errors for doctoral scientists and engineers, by occupation and employment status: 2008

Occupation	Total	Employed			Unemployed	Retired	Not employed, not seeking work
		All	Full time	Part time			
Technicians/technologists	300	300	200	100	D	100	D
Other S&E-related occupations	200	200	200	D	D	D	D
Non-science/non-engineering occupations	1,500	1,500	1,500	700	300	700	300
Arts/humanities-related occupations	500	500	400	300	100	200	200
Management-related occupations	900	800	800	400	200	300	200
Managers	1,100	1,100	1,100	300	200	500	100
Postsecondary teachers	700	600	600	300	100	300	100
Precollege/other teachers	300	300	200	200	D	100	100
Sales/marketing occupations	600	500	500	200	100	200	100
Social service-related occupations	500	500	400	300	D	100	100
Other non-S&E occupations	700	600	500	300	200	300	200

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.

NOTES: Standard errors are rounded up to nearest 100. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 400 individuals who reported never having worked so could not be classified by occupation. Designation of full time and part time employment status is based on principal job only, not on all jobs held in labor force. For example, an individual could work part time in his/her principal job but full time in labor force. Prior to 2006 SDR, designation of full time and part time status was for all jobs held; thus data for 2003 and earlier are not comparable to data for 2006 and later.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-8. Standard errors for doctoral scientists and engineers, by occupation and disability status: 2008

Occupation	All	With disability	Without disability
All occupations	1,200	1,200	1,500
Science occupations	2,100	900	2,100
Biological/agricultural/other life scientists	1,500	600	1,400
Agricultural/food scientists	500	200	500
Biochemists/biophysicists	700	200	700
Biological scientists	800	300	800
Forestry/conservation scientists	300	100	300
Medical scientists	1,200	300	1,100
Postsecondary teachers, agricultural/other natural sciences	300	100	300
Postsecondary teachers, biological sciences	900	300	800
Other biological/agricultural/life scientists	500	100	400
Computer and information scientists	1,000	300	1,000
Computer/information scientists	900	300	900
Postsecondary teachers, computer science	500	200	500
Mathematical scientists	700	300	700
Mathematical scientists	600	200	600
Postsecondary teachers, mathematics/statistics	600	200	600
Physical scientists	1,300	400	1,200
Chemists, except biochemists	800	300	800
Earth/atmospheric/ocean scientists	500	200	500
Physicists/astronomers	600	300	600
Postsecondary teachers, chemistry	600	200	600
Postsecondary teachers, physics	500	200	500
Postsecondary teachers, other physical sciences	400	200	400
Other physical scientists	400	200	300
Psychologists	1,000	400	1,000
Psychologists	1,000	300	1,000
Postsecondary teachers, psychology	600	200	600
Social scientists	900	400	900
Economists	400	200	400
Political scientists	300	100	300
Postsecondary teachers, economics	500	200	400
Postsecondary teachers, political science	500	200	500
Postsecondary teachers, sociology	500	200	500
Postsecondary teachers, other social sciences	600	200	600
Sociologists/anthropologists	400	200	300
Other social scientists	500	200	500
Engineering occupations	1,300	500	1,300
Aerospace/aeronautical/astronautical engineers	400	200	400
Chemical engineers	500	200	600
Civil/architectural/sanitary engineers	400	200	400
Electrical engineers	700	200	700
Materials/metallurgical engineers	300	D	300
Mechanical engineers	600	200	600
Postsecondary teachers, engineering	700	300	700
Other engineers	900	300	800
Science/engineering-related occupations	1,400	400	1,300
Health occupations, except postsecondary teachers and managers	800	300	700
Postsecondary teachers, health and related sciences	700	300	700
Managers, including health	1,000	300	900
Precollege teachers	400	100	400
Technicians/technologists	300	100	300
Other S&E-related occupations	200	D	200

TABLE A-8. Standard errors for doctoral scientists and engineers, by occupation and disability status: 2008

Occupation	All	With disability	Without disability
Non-science/non-engineering occupations	1,500	600	1,500
Arts/humanities-related occupations	500	200	500
Management-related occupations	900	300	800
Managers	1,100	400	1,100
Postsecondary teachers	700	200	600
Precollege/other teachers	300	100	300
Sales/marketing occupations	600	300	500
Social service-related occupations	500	100	500
Other non-S&E occupations	700	200	600

D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

S&E = science and engineering.

NOTES: Standard errors are rounded up to nearest 100. If respondent was not employed during survey reference period, occupation when last employed was reported. Excludes 400 individuals who reported never having worked so could not be classified by occupation. Survey asks degree of difficulty—none, slight, moderate, severe, or unable to do—an individual has in seeing (with glasses), hearing (with hearing aid), walking without assistance, or lifting 10 pounds. Those respondents who answered "moderate," "severe," or "unable to do" for any activity were classified as having a disability.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.



TABLE A-9. Standard errors for employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 2008

Characteristic	Science occupations										
	All employed	All science occupations	Biological/agricultural/other life scientists	Computer/information scientists	Mathematical scientists	Physical scientists	Psychologists	Social scientists	Engineering occupations	Science/engineering-related occupations	Non-science/non-engineering occupations
Doctorate recipient	1,600	2,100	1,400	900	800	1,200	1,000	900	1,200	1,300	1,500
Sex											
Male	1,300	1,800	1,200	900	700	1,100	700	700	1,200	1,100	1,200
Female	900	1,100	700	300	400	500	700	600	400	800	900
Ethnicity/race											
Hispanic or Latino	400	400	300	100	100	200	200	200	200	200	200
Not Hispanic or Latino											
American Indian or Alaska Native	200	200	100	D	D	100	100	100	100	100	100
Asian	800	1,000	600	600	400	500	200	300	700	600	600
Black or African American	300	400	200	100	100	200	200	200	200	200	300
White	1,600	1,900	1,200	700	600	1,000	1,000	900	1,000	1,200	1,400
Other race <sup>a</sup>	400	300	200	100	100	200	200	100	200	200	200
Age											
Under 35	1,000	900	600	300	300	400	400	300	500	400	400
35-39	1,200	1,100	700	400	300	600	400	400	600	500	600
40-44	1,300	1,100	600	400	300	500	500	500	600	600	600
45-49	1,400	1,100	700	500	400	500	500	400	500	600	700
50-54	1,400	1,200	700	400	300	600	600	500	600	600	700
55-59	1,400	1,200	700	400	300	500	600	500	500	600	600
60-64	1,300	1,100	600	400	300	400	500	400	400	500	800
65-75	1,100	900	500	300	300	500	400	500	500	400	700
Citizenship status											
U.S. citizen	1,700	2,000	1,300	900	700	1,100	1,000	900	1,100	1,300	1,400
Native-born	1,500	1,800	1,300	700	600	1,000	1,000	900	900	1,100	1,300
Naturalized	1,100	1,000	600	600	400	500	300	400	700	600	700
Non-U.S. citizen	900	900	600	400	400	500	200	400	600	400	400
Permanent resident	1,000	800	500	400	300	400	200	300	600	400	400
Temporary resident	700	700	400	300	300	300	100	200	400	300	200
Years since doctorate											
≤5	900	1,000	800	400	400	600	400	400	600	500	500
6-10	900	1,000	600	400	300	500	400	400	600	600	700
11-15	1,000	1,000	600	400	300	500	500	400	500	600	700
16-20	900	900	600	400	300	400	500	400	500	500	600
21-25	900	800	500	300	300	400	400	300	400	500	700
>25	1,300	1,300	800	500	400	700	600	500	600	700	1,000

TABLE A-9. Standard errors for employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 2008

Characteristic	Science occupations										Non-science/ non- engineering occupations	
	All employed	All science occupations	Biological/ agricultural/ other life scientists	Computer/ information scientists	Mathematical scientists	Physical scientists	Psychologists	Social scientists	Engineering occupations	Science/ engineering- related occupations		
Place of birth <sup>b</sup>												
United States	1,500	1,800	1,200	700	600	1,000	1,000	800	900	1,100	1,200	
Europe	800	700	400	300	200	300	300	300	300	300	400	
Asia	1,000	1,000	600	600	400	500	200	400	700	600	600	
North America <sup>c</sup>	400	400	200	100	200	200	200	200	200	200	200	
Central America <sup>d</sup>	300	200	200	100	100	100	100	100	100	100	200	
Caribbean	300	200	200	100	100	100	100	100	100	100	200	
South America	300	300	200	100	100	200	200	100	200	200	200	
Africa	500	400	200	200	100	200	100	200	200	200	300	
Oceania	200	200	100	D	D	100	D	100	100	S	100	

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

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

<sup>b</sup> Numbers are based on persons who reported place of birth. Persons who did not specify place of birth are included in total but not shown separately.

<sup>c</sup> Excludes United States.

<sup>d</sup> Includes Mexico.

NOTE: Standard errors are rounded up to nearest 100.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-10. Standard errors for median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate and sector of employment: 2008

(Dollars)

Field	All full-time employed	4-year educational institution <sup>a</sup>	Other educational institution <sup>b</sup>	Private, for-profit <sup>c</sup>	Private, nonprofit	Federal government	State/local government	Self-employed <sup>d</sup>	Other <sup>e</sup>
All fields	1,000	1,000	2,000	2,000	2,000	2,000	3,000	5,000	17,000
Science	1,000	1,000	2,000	2,000	3,000	2,000	2,000	6,000	13,000
Biological/agricultural/environmental life sciences	2,000	2,000	2,000	3,000	8,000	2,000	4,000	3,000	D
Agricultural/food sciences	3,000	1,000	8,000	2,000	6,000	3,000	10,000	9,000	D
Biochemistry/biophysics	3,000	6,000	8,000	9,000	14,000	11,000	17,000	22,000	D
Cell/molecular biology	3,000	5,000	9,000	5,000	11,000	7,000	D	S	D
Environmental life sciences	3,000	3,000	D	9,000	20,000	6,000	6,000	D	D
Microbiology	3,000	6,000	5,000	11,000	25,000	10,000	13,000	D	D
Zoology	4,000	4,000	10,000	9,000	19,000	6,000	6,000	D	D
Other biological sciences	2,000	2,000	5,000	2,000	8,000	4,000	8,000	11,000	D
Computer/information sciences	3,000	2,000	10,000	5,000	14,000	14,000	D	D	D
Mathematics/statistics	4,000	1,000	9,000	2,000	11,000	11,000	D	17,000	D
Physical sciences	1,000	2,000	5,000	2,000	6,000	3,000	4,000	15,000	D
Astronomy/astrophysics	6,000	5,000	D	7,000	14,000	12,000	D	D	D
Chemistry, except biochemistry	2,000	2,000	4,000	2,000	7,000	6,000	6,000	34,000	D
Earth/atmospheric/ocean sciences <sup>f</sup>	3,000	3,000	4,000	8,000	13,000	12,000	6,000	16,000	D
Physics	3,000	3,000	9,000	2,000	6,000	8,000	13,000	23,000	D
Psychology	2,000	2,000	4,000	1,000	2,000	2,000	3,000	5,000	D
Social sciences	2,000	1,000	3,000	5,000	5,000	6,000	5,000	9,000	7,000
Economics	4,000	4,000	7,000	5,000	9,000	5,000	9,000	17,000	17,000
Political sciences	2,000	3,000	7,000	5,000	14,000	18,000	5,000	34,000	D
Sociology	3,000	2,000	11,000	11,000	7,000	8,000	5,000	20,000	D
Other social sciences	2,000	2,000	2,000	5,000	7,000	4,000	4,000	27,000	D
Engineering	1,000	2,000	7,000	1,000	5,000	5,000	8,000	13,000	D
Aerospace/aeronautical/astronautical engineering	7,000	5,000	D	4,000	D	9,000	D	D	D
Chemical engineering	3,000	7,000	D	1,000	8,000	10,000	D	25,000	D
Civil engineering	1,000	5,000	D	7,000	D	5,000	8,000	D	D
Electrical/computer engineering	1,000	2,000	D	3,000	5,000	6,000	D	18,000	D
Materials/metallurgical engineering	4,000	5,000	D	3,000	18,000	12,000	D	D	D
Mechanical engineering	3,000	6,000	D	3,000	11,000	8,000	D	25,000	D
Other engineering	1,000	3,000	D	4,000	9,000	7,000	6,000	30,000	D
Health	1,000	2,000	7,000	4,000	4,000	4,000	8,000	8,000	D

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

<sup>a</sup> Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

<sup>b</sup> Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

<sup>c</sup> Includes those self-employed in an incorporated business.

<sup>d</sup> Self-employed or business owner in a nonincorporated business.

<sup>e</sup> Includes employers not broken out separately.

<sup>f</sup> Includes other physical sciences.

NOTE: Standard errors of median annual salaries are for principal job and are rounded up to nearest \$1,000.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-11. Standard errors for median annual salaries of full-time employed doctoral scientists and engineers in 4-year educational institutions, by broad field of doctorate, sex, faculty rank, and years since doctorate: 2008

(Dollars)

Field and sex	All full-time employed		Full professor		Associate professor		Assistant professor		Instructor/lecturer		All other faculty		Rank not applicable	
	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10	<10	≥10
All fields	2,000	1,000	3,000	1,000	2,000	2,000	2,000	2,000	1,000	3,000	7,000	7,000	2,000	3,000
Male	1,000	1,000	9,000	3,000	4,000	2,000	2,000	3,000	3,000	6,000	D	6,000	1,000	3,000
Female	1,000	1,000	6,000	2,000	2,000	2,000	1,000	2,000	3,000	5,000	15,000	13,000	2,000	4,000
Science	1,000	1,000	5,000	2,000	2,000	1,000	1,000	2,000	2,000	4,000	9,000	4,000	1,000	3,000
Male	1,000	2,000	12,000	1,000	2,000	1,000	2,000	3,000	2,000	5,000	D	5,000	2,000	2,000
Female	2,000	1,000	11,000	2,000	3,000	2,000	1,000	2,000	2,000	6,000	D	16,000	1,000	2,000
Biological/agricultural/environmental life sciences	1,000	1,000	6,000	3,000	3,000	2,000	2,000	2,000	2,000	4,000	D	D	1,000	3,000
Male	2,000	3,000	D	3,000	3,000	2,000	2,000	4,000	4,000	6,000	D	D	1,000	4,000
Female	2,000	3,000	D	5,000	9,000	3,000	1,000	4,000	3,000	6,000	D	D	1,000	3,000
Computer/information sciences	2,000	3,000	D	4,000	2,000	6,000	2,000	D	D	D	D	D	5,000	D
Male	2,000	2,000	D	6,000	3,000	7,000	2,000	D	D	D	D	D	5,000	D
Female	3,000	4,000	D	11,000	3,000	9,000	4,000	D	D	D	D	D	18,000	D
Mathematics/statistics	3,000	2,000	D	3,000	3,000	4,000	2,000	8,000	D	2,000	D	D	3,000	14,000
Male	3,000	4,000	D	4,000	5,000	4,000	2,000	9,000	D	3,000	D	D	3,000	13,000
Female	7,000	5,000	D	9,000	6,000	5,000	4,000	D	D	D	D	D	4,000	D
Physical sciences	1,000	3,000	D	4,000	4,000	2,000	2,000	7,000	3,000	8,000	D	D	2,000	6,000
Male	2,000	3,000	D	3,000	6,000	3,000	3,000	8,000	7,000	12,000	D	D	3,000	6,000
Female	2,000	3,000	D	5,000	8,000	4,000	2,000	3,000	D	D	D	D	3,000	11,000
Psychology	2,000	3,000	D	2,000	5,000	2,000	2,000	4,000	11,000	10,000	D	D	2,000	3,000
Male	2,000	5,000	D	3,000	6,000	3,000	2,000	5,000	D	D	D	D	5,000	3,000
Female	2,000	3,000	D	6,000	6,000	3,000	3,000	4,000	10,000	10,000	D	D	3,000	5,000
Social sciences	2,000	2,000	24,000	2,000	2,000	2,000	1,000	3,000	4,000	5,000	D	D	4,000	5,000
Male	2,000	3,000	29,000	3,000	3,000	3,000	2,000	4,000	11,000	9,000	D	D	6,000	7,000
Female	1,000	3,000	D	3,000	2,000	2,000	2,000	5,000	3,000	14,000	D	D	6,000	5,000
Engineering	2,000	4,000	10,000	3,000	3,000	1,000	1,000	6,000	8,000	6,000	D	D	4,000	11,000
Male	2,000	3,000	15,000	3,000	6,000	2,000	2,000	6,000	D	8,000	D	D	4,000	9,000
Female	3,000	5,000	D	14,000	1,000	8,000	3,000	D	D	D	D	D	4,000	D
Health	2,000	3,000	6,000	7,000	2,000	3,000	2,000	5,000	D	D	D	D	4,000	5,000
Male	4,000	5,000	D	11,000	8,000	8,000	4,000	D	D	D	D	D	6,000	D
Female	2,000	4,000	6,000	7,000	2,000	4,000	2,000	4,000	D	D	D	D	3,000	13,000

D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

NOTES: Standard errors of median annual salaries are for principal job and are rounded up to nearest \$1,000. 4-year educational institutions include 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-12. Standard errors for median annual salaries of full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2008  
(Thousands of dollars)

Occupation	All full-time employed			Not Hispanic or Latino																		
				Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
All occupations	1	1	2	2	3	2	9	12	10	2	1	2	2	3	2	1	2	1	4	4	3	
Science occupations	1	2	1	3	1	2	12	15	9	1	2	2	2	4	4	2	1	2	3	5	5	
Biological/agricultural/other life scientists	1	1	1	3	4	4	D	D	D	4	4	2	5	6	7	2	2	3	5	5	8	
Agricultural/food scientists	3	3	3	4	10	D	D	D	3	3	19	9	11	D	3	3	3	D	D	D		
Biochemists/biophysicists	5	5	7	8	15	32	D	D	D	5	9	6	24	D	D	3	6	10	9	D	D	
Biological scientists	3	4	4	7	12	8	D	D	D	6	7	5	6	2	18	3	4	8	7	11	5	
Forestry/conservation scientists	4	6	11	D	D	D	D	D	D	D	D	D	D	D	D	6	4	10	D	D	D	
Medical scientists	2	3	4	9	11	14	D	D	D	4	5	7	10	13	16	1	5	3	5	6	13	
Postsecondary teachers, agricultural/other natural sciences	1	1	7	10	D	D	D	D	D	3	D	D	D	D	D	2	4	7	D	D	D	
Postsecondary teachers, biological sciences	2	3	4	3	5	8	D	D	D	8	10	7	4	6	7	2	4	3	11	8	D	
Other biological/agricultural/life scientists	5	10	4	6	D	5	D	D	D	6	9	14	D	D	D	4	11	6	D	D	D	
Computer/information scientists	2	2	3	10	12	21	D	D	D	1	2	5	7	7	5	3	2	4	13	14	D	
Computer/information scientists	2	1	3	10	10	34	D	D	D	3	3	4	5	10	4	3	4	5	13	14	D	
Postsecondary teachers, computer science	2	1	3	6	6	D	D	D	D	2	3	5	4	8	4	2	3	6	D	D	D	
Mathematical scientists	1	3	3	4	5	10	D	D	D	3	4	3	6	7	11	2	5	4	13	D	14	
Mathematical scientists	4	5	2	4	5	12	D	D	D	3	4	4	7	10	10	6	6	9	D	D	D	
Postsecondary teachers, mathematics/statistics	2	2	2	8	9	8	D	D	D	3	6	5	3	2	3	2	3	3	D	D	D	
Physical scientists	2	2	2	3	7	4	D	D	D	3	3	4	6	10	5	2	2	3	4	10	16	
Chemists, except biochemists	2	2	4	7	7	15	D	D	D	2	2	4	14	10	11	2	2	6	12	12	D	
Earth/atmospheric/ocean scientists	2	4	7	5	8	D	D	D	6	6	12	D	D	D	4	6	7	23	D	D		
Physicists/astronomers	3	4	15	29	32	D	D	D	8	8	13	7	10	D	4	5	13	D	D	D		
Postsecondary teachers, chemistry	2	2	2	3	3	18	D	D	D	4	7	5	6	6	2	2	3	3	9	D	D	
Postsecondary teachers, physics	4	2	3	10	11	D	D	D	9	8	D	D	D	D	3	3	2	D	D	D		
Postsecondary teachers, other physical sciences	3	3	2	17	D	D	D	D	D	13	D	3	D	D	D	3	3	3	D	D	D	
Other physical scientists	3	6	9	D	D	D	D	D	D	7	7	D	D	D	D	6	5	11	D	D	D	
Psychologists	1	3	2	3	5	3	12	D	D	7	7	7	3	7	3	2	2	1	9	19	11	
Psychologists	2	3	1	4	4	5	12	D	D	4	9	3	4	10	4	3	4	2	17	23	13	
Postsecondary teachers, psychology	1	3	2	3	6	4	D	D	D	3	11	2	5	7	4	1	3	3	8	D	17	
Social scientists	2	2	2	6	9	5	5	D	2	4	4	3	4	3	8	2	2	2	7	10	4	
Economists	7	9	9	15	25	D	D	D	D	7	24	6	12	22	D	6	9	9	D	D	D	
Political scientists	7	8	10	D	D	D	D	D	D	D	D	D	D	D	D	7	24	14	D	D	D	
Postsecondary teachers, economics	3	5	4	21	12	D	D	D	D	7	5	7	4	3	D	5	3	4	D	D	D	
Postsecondary teachers, political science	3	3	4	3	4	6	D	D	D	6	7	D	3	5	5	3	3	5	D	D	D	
Postsecondary teachers, sociology	2	3	1	5	18	4	D	D	D	5	3	3	2	7	3	2	3	2	D	D	D	

TABLE A-12. Standard errors for median annual salaries of full-time employed doctoral scientists and engineers, by occupation, ethnicity, race, and sex: 2008  
(Thousands of dollars)

Occupation	All full-time employed			Not Hispanic or Latino																	
				Hispanic or Latino			American Indian or Alaska Native			Asian			Black or African American			White			Other race <sup>a</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Postsecondary teachers, other social sciences	2	4	2	5	4	2	D	D	D	7	6	6	5	7	10	3	5	3	3	D	D
Sociologists/anthropologists	3	4	6	9	D	D	D	D	D	10	D	24	D	D	D	4	4	7	5	D	D
Other social scientists	4	5	5	6	D	8	D	D	D	5	35	5	11	D	6	4	8	5	D	D	D
Engineering occupations	2	1	2	2	4	5	D	D	D	2	3	4	5	5	4	2	2	3	7	10	15
Aerospace/aeronautical/astronautical engineers	2	3	8	7	D	D	D	D	D	6	8	D	D	D	D	4	4	11	D	D	D
Chemical engineers	3	3	7	11	19	D	D	D	D	5	5	19	6	6	D	4	5	9	D	D	D
Civil/architectural/sanitary engineers	6	4	4	9	8	D	D	D	D	6	10	5	D	D	D	4	5	5	D	D	D
Electrical engineers	1	1	4	11	11	D	D	D	D	4	5	8	4	5	D	3	3	7	9	D	D
Materials/metallurgical engineers	13	15	12	D	D	D	D	D	D	28	D	D	D	D	D	28	28	9	D	D	D
Mechanical engineers	3	3	6	7	D	D	D	D	D	3	2	5	D	D	D	4	5	D	D	D	D
Postsecondary teachers, engineering	3	2	5	5	6	D	D	D	D	5	5	4	4	4	11	2	1	4	D	D	D
Other engineers	3	1	3	7	15	D	D	D	D	3	3	5	14	19	9	3	3	3	21	24	D
Science/engineering-related occupations	2	4	3	8	12	3	8	D	D	4	6	5	6	6	4	3	4	3	3	18	7
Health occupations, except postsecondary teachers and managers	5	12	4	12	16	14	D	D	D	12	21	10	6	22	10	6	7	5	31	43	18
Postsecondary teachers, health and related sciences	4	4	1	5	9	2	D	D	D	10	17	8	7	6	3	3	5	1	18	D	11
Managers, including health	4	1	5	11	13	23	D	D	D	5	5	15	11	13	8	3	2	5	8	13	D
Precollege teachers	3	4	2	10	D	D	D	D	D	8	D	D	4	8	D	2	4	2	D	D	D
Technicians/technologists	4	5	13	D	D	D	D	D	D	5	4	19	D	D	D	13	15	D	D	D	D
Other S&E-related occupations	28	26	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Non-science/non-engineering occupations	3	2	4	5	10	5	19	D	15	5	3	6	6	7	7	4	3	3	8	14	11
Arts/humanities-related occupations	5	7	7	D	D	D	D	D	D	13	D	12	D	D	D	5	7	7	D	D	D
Management-related occupations	3	4	2	11	10	17	D	D	D	5	6	12	3	9	7	4	3	5	19	22	D
Managers	2	4	5	12	12	4	D	D	D	4	5	21	3	10	10	4	3	6	27	23	D
Postsecondary teachers	3	5	2	5	7	4	D	D	D	6	9	2	4	6	5	4	6	3	5	D	D
Precollege/other teachers	5	8	10	D	D	D	D	D	D	D	D	D	D	D	D	6	D	12	D	D	D
Sales/marketing occupations	6	7	14	22	D	D	D	D	D	5	7	12	14	D	D	7	7	24	D	D	D
Social service-related occupations	3	3	8	10	D	D	D	D	D	11	D	D	10	D	13	4	4	8	D	D	D
Other non-S&E occupations	6	6	6	13	16	14	D	D	D	12	8	12	12	18	22	7	7	9	D	D	D

D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

S&E = science and engineering.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

NOTE: Standard errors of median annual salaries are for principal job and are rounded up to nearest \$1,000.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE A-13. Standard errors for median annual salaries of full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activities: 2008

(Dollars)

Occupation	All full-time employed	Computer applications	Management/sales/administration	Professional services	R&D <sup>a</sup>	Teaching	Other
All occupations	1,000	2,000	1,000	3,000	1,000	1,000	3,000
Science occupations	1,000	1,000	2,000	2,000	1,000	1,000	2,000
Biological/agricultural/other life scientists	1,000	7,000	1,000	5,000	2,000	2,000	3,000
Agricultural/food scientists	3,000	D	4,000	5,000	3,000	D	4,000
Biochemists/biophysicists	5,000	9,000	3,000	23,000	6,000	D	4,000
Biological scientists	3,000	14,000	3,000	7,000	3,000	2,000	7,000
Forestry/conservation scientists	4,000	D	8,000	D	4,000	D	D
Medical scientists	2,000	10,000	3,000	6,000	2,000	10,000	9,000
Postsecondary teachers, agricultural/other natural sciences	1,000	D	5,000	D	2,000	1,000	D
Postsecondary teachers, biological sciences	2,000	D	2,000	8,000	3,000	2,000	2,000
Other biological/agricultural/life scientists	5,000	8,000	8,000	13,000	5,000	D	8,000
Computer and information scientists	2,000	2,000	4,000	15,000	3,000	1,000	6,000
Computer/information scientists	2,000	2,000	3,000	13,000	3,000	11,000	9,000
Postsecondary teachers, computer science	2,000	7,000	5,000	D	3,000	1,000	6,000
Mathematical scientists	1,000	3,000	3,000	5,000	3,000	2,000	5,000
Mathematical scientists	4,000	2,000	5,000	5,000	5,000	15,000	5,000
Postsecondary teachers, mathematics/statistics	2,000	3,000	5,000	D	3,000	2,000	6,000
Physical scientists	2,000	4,000	2,000	6,000	2,000	2,000	3,000
Chemists, except biochemists	2,000	9,000	2,000	21,000	2,000	24,000	6,000
Earth/atmospheric/ocean scientists	2,000	7,000	4,000	3,000	2,000	D	13,000
Physicists/astronomers	3,000	4,000	4,000	D	2,000	D	8,000
Postsecondary teachers, chemistry	2,000	D	3,000	D	4,000	2,000	5,000
Postsecondary teachers, physics	4,000	D	4,000	D	3,000	4,000	6,000
Postsecondary teachers, other physical sciences	3,000	D	4,000	D	4,000	3,000	4,000
Other physical scientists	3,000	12,000	6,000	D	5,000	D	12,000
Psychologists	1,000	7,000	2,000	2,000	2,000	2,000	3,000
Psychologists	2,000	5,000	2,000	2,000	4,000	6,000	3,000
Postsecondary teachers, psychology	1,000	D	2,000	3,000	3,000	1,000	6,000
Social scientists	2,000	6,000	3,000	7,000	2,000	2,000	6,000
Economists	7,000	17,000	6,000	15,000	6,000	D	17,000
Political scientists	7,000	D	13,000	D	8,000	D	D
Postsecondary teachers, economics	3,000	D	5,000	D	6,000	3,000	10,000
Postsecondary teachers, political science	3,000	D	7,000	D	2,000	3,000	6,000
Postsecondary teachers, sociology	2,000	D	5,000	D	3,000	2,000	9,000
Postsecondary teachers, other social sciences	2,000	D	3,000	D	3,000	2,000	9,000
Sociologists/anthropologists	3,000	D	5,000	D	4,000	D	9,000
Other social scientists	4,000	28,000	5,000	12,000	4,000	11,000	20,000
Engineering occupations	2,000	5,000	2,000	5,000	2,000	2,000	3,000
Aerospace/aeronautical/astronautical engineers	2,000	7,000	4,000	D	2,000	D	D
Chemical engineers	3,000	9,000	3,000	D	4,000	D	4,000
Civil/architectural/sanitary engineers	6,000	12,000	5,000	12,000	6,000	D	8,000
Electrical engineers	1,000	3,000	3,000	D	1,000	D	4,000
Materials/metallurgical engineers	13,000	D	19,000	D	14,000	D	D
Mechanical engineers	3,000	5,000	3,000	D	2,000	D	20,000
Postsecondary teachers, engineering	3,000	10,000	5,000	D	2,000	3,000	7,000
Other engineers	3,000	4,000	4,000	9,000	3,000	14,000	5,000
Science/engineering-related occupations	2,000	6,000	3,000	6,000	4,000	2,000	5,000
Health occupations, except postsecondary teachers and managers	5,000	14,000	5,000	9,000	2,000	17,000	5,000
Postsecondary teachers, health and related sciences	4,000	D	3,000	10,000	3,000	3,000	6,000

TABLE A-13. Standard errors for median annual salaries of full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activities: 2008

(Dollars)

Occupation	All full-time employed	Computer applications	Management/sales/administration	Professional services	R&D <sup>a</sup>	Teaching	Other
Managers, including health	4,000	12,000	3,000	13,000	4,000	21,000	7,000
Precollege teachers	3,000	D	3,000	D	3,000	3,000	7,000
Technicians/technologists	4,000	27,000	18,000	D	5,000	D	20,000
Other S&E-related occupations	28,000	D	D	D	D	D	D
Non-science/non-engineering occupations	3,000	6,000	3,000	4,000	4,000	2,000	4,000
Arts/humanities-related occupations	5,000	D	11,000	10,000	8,000	16,000	9,000
Management-related occupations	3,000	7,000	3,000	5,000	7,000	11,000	6,000
Managers	2,000	27,000	1,000	10,000	5,000	24,000	10,000
Postsecondary teachers	3,000	D	4,000	35,000	4,000	3,000	4,000
Precollege/other teachers	5,000	D	15,000	D	D	6,000	D
Sales/marketing occupations	6,000	5,000	5,000	16,000	9,000	D	26,000
Social service-related occupations	3,000	D	4,000	3,000	9,000	7,000	7,000
Other non-S&E occupations	6,000	D	11,000	9,000	4,000	8,000	5,000

D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

S&E = science and engineering.

<sup>a</sup> R&D includes applied and basic research, design, and development.

NOTES: Standard errors of median annual salaries are for principal job and are rounded up to nearest \$1,000. If respondent reported more than one category of activity as primary or secondary work activity, respondent's salary appears in both categories.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.



TABLE A-14. Standard errors for doctoral scientists and engineers on postdoctoral appointments, by selected demographic characteristics and broad field of doctorate: 2008

Characteristic	Science									
	All fields	All sciences	Biological/ agricultural/ environmental life sciences	Computer/ information sciences	Mathematics/ statistics	Physical sciences	Psychology	Social sciences	Engineering	Health
On postdoc in October 2008	700	700	500	200	200	400	300	100	300	200
Years since doctorate										
≤5	700	700	500	100	200	400	300	100	300	200
6–10	300	300	200	D	D	100	100	100	100	100
11–15	200	200	100	D	D	D	D	D	D	D
>15	200	200	100	D	D	100	100	D	D	D
Sex										
Male	500	500	400	200	100	300	200	100	300	100
Female	500	500	400	D	100	200	300	100	200	100
Ethnicity/race										
Hispanic or Latino	100	100	100	D	D	100	100	D	100	D
Not Hispanic or Latino										
American Indian or Alaska Native	D	D	D	D	D	D	D	D	D	D
Asian	500	400	400	100	100	300	100	100	300	100
Black or African American	100	100	100	D	D	100	D	100	100	100
White	600	600	400	100	100	300	300	100	200	100
Other race <sup>a</sup>	100	100	100	D	D	D	D	D	D	D
Age										
Under 35	600	600	400	100	100	300	200	100	200	100
35–44	500	500	400	100	100	200	200	100	200	100
45–75	300	200	200	D	D	100	200	100	100	100
Citizenship										
U.S. citizen	600	500	400	D	100	300	300	100	200	100
Non-U.S. citizen	600	500	400	100	100	300	100	100	300	100
Employment sector										
Business/industry	400	400	300	D	D	200	200	D	200	D
Educational institution	600	600	400	100	200	300	200	100	300	200
Government	400	300	300	D	D	200	200	D	100	100

D = standard error is not computed when value is suppressed to avoid disclosure of confidential information.

<sup>a</sup> Includes Native Hawaiians, Other Pacific Islanders, and respondents reporting 2 or more races.

NOTES: Standard errors are rounded up to nearest 100. A postdoc is a temporary position awarded in academe, industry, nonprofit organizations, or government primarily for gaining additional education and training in research. Postdoc status is reported for principal job as of survey reference date (1 October 2008).

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

## Appendix B. Codes Used in Degree and Occupation Fields

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Table B-1 provides a comparison of the science, engineering, and health doctoral fields of study used in the data tables to those fields in both the SDR questionnaire and the Survey of Earned Doctorates (SED) questionnaire. For more information on the SED, please visit <http://www.nsf.gov/statistics/srvydoctorates/>.

Table B-2 provides a crosswalk between the major, minor, and detailed occupational categories used for reporting occupational data in the SDR data tables. The detailed occupation is reported by the respondents for their principal job held during the survey reference week of 1 October 2008—or their last job held, if not employed during the reference week.

### Table **Table Name**

- B-1 Comparison of science, engineering, and health doctoral fields of study in SDR data tables to fields coded in the SDR and SED
- B-2 Crosswalk of occupations used in the SDR data tables

TABLE B-1. Comparison of science, engineering, and health doctoral fields of study in SDR data tables to fields coded in the SDR and SED

SDR detailed statistical tables		SDR field of study code	SED field of study code
Major field	Minor field		
Biological/agricultural/ environmental life sciences	Agricultural/food sciences	605 Animal sciences	005 Animal breeding/genetics 007 Animal husbandry <sup>1</sup> 010 Animal nutrition 012 Dairy science 014 Poultry science 019 Animal sciences, other
		606 Food sciences/technology	042 Food distribution <sup>1</sup> 043 Food engineering 040 Food sciences <sup>1</sup> 044 Food sciences, other
		607 Plant sciences	020 Agronomy/crop science 050 Horticulture science 025 Plant breeding/genetics 030 Plant pathology 032 Plant protection/pest management <sup>1</sup> 039 Plant sciences, other
		608 Other agricultural sciences	098 Agricultural sciences, general 046 Soil chemistry/microbiology 045 Soil sciences <sup>1</sup> 099 Agricultural sciences, other 049 Soil sciences, other
	Biochemistry/biophysics	631 Biochemistry/biophysics	100 Biochemistry 105 Biophysics
	Cell/molecular biology	634 Cell/molecular biology	136 Cell biology 154 Molecular biology
	Environmental life sciences	680 Environmental science or studies	081 Environmental science 580 Environmental science 054 Fish and wildlife science <sup>1</sup> 055 Fisheries science/management
		681 Forestry sciences	074 Conservation/renewable natural resources 066 Forest biology 068 Forest engineering 070 Forest management 065 Forestry science <sup>1</sup> 060 Wildlife <sup>1</sup> 080 Wildlife/range management 072 Wood science and pulp/paper technology 079 Forestry and related sciences, other
	Microbiology	637 Microbiological sciences/immunology	110 Bacteriology 157 Microbiology 156 Microbiology/bacteriology <sup>1</sup>
	Zoology	641 Zoology, general	148 Entomology 189 Zoology, other
	Other biological sciences	632 Biology, general	198 Biological sciences, general
		633 Botany	120 Plant pathology 125 Plant physiology 129 Botany, other
		635 Ecology	139 Ecology
		636 Genetics, animal/plant	171 Genetics <sup>1</sup> 170 Genetics, human/animal 115 Plant genetics
		638 Nutritional sciences	163 Nutritional sciences
		639 Pharmacology, human/animal	180 Pharmacology, human/animal
		640 Physiology/pathology, human/animal	158 Cancer biology 186 Animal/plant physiology <sup>1</sup> 175 Pathology, human/animal 185 Physiology, human/animal

TABLE B-1. Comparison of science, engineering, and health doctoral fields of study in SDR data tables to fields coded in the SDR and SED

SDR detailed statistical tables		SDR field of study code	SED field of study code
Major field	Minor field		
Biological/agricultural/ environmental life sciences, continued	Other biological sciences, continued	642 Other biological sciences	102 Bioinformatics
		642 Other biological sciences, continued	130 Anatomy
			137 Evolutionary biology
			151 Biological immunology
			103 Biomedical sciences
			133 Biometrics/biostatistics
			107 Biotechnology research
			140 Hydrobiology <sup>1</sup>
			142 Developmental biology/embryology
			145 Endocrinology
			160 Neuroscience
			166 Parasitology
			169 Toxicology
	199 Biological sciences, other		
Computer/information sciences	Computer/information sciences	D67 Computer/information sciences	400 Computer science 410 Information science/systems 419 Computer/information sciences, other
Mathematics/statistics	Mathematics/statistics	841 Applied mathematics	420 Applied mathematics
		842 Mathematics, general	498 Mathematics, general
		843 Operations research	363 Operations research
			465 Operations research
			930 Operations research
		844 Statistics	450 Mathematical statistics
			690 Statistics
		845 Other mathematics	425 Algebra
			430 Analysis/functional analysis
			460 Computing theory/practice
435 Geometry			
440 Logic			
445 Number theory			
455 Topology			
499 Mathematics, other			
Physical sciences	Astronomy/astrophysics	871 Astronomy/astrophysics	500 Astronomy
			506 Astronomy/astrophysics <sup>1</sup>
			505 Astrophysics
	Chemistry, except biochemistry	873 Chemistry, except biochemistry	520 Analytical
			521 Agricultural/food <sup>1</sup>
			538 Chemistry, general
			522 Inorganic
			528 Medicinal/pharmaceutical
			524 Nuclear
			526 Organic
			530 Physical
			532 Polymer
			534 Theoretical
			539 Chemistry, other
			Earth/atmospheric/ocean sciences
512 Atmospheric dynamics			
518 Atmospheric sciences/meteorology, general			
514 Meteorology			
519 Atmospheric sciences/meteorology, other			
875 Geology	554 Applied geology <sup>1</sup>		
	555 Applied geology/geological engineering <sup>1</sup>		
	548 Mineralogy, petrology		
	549 Mineralogy/petrology/geological chemistry <sup>1</sup>		
	540 Geology		
	552 Geomorphology/glacial geology		

TABLE B-1. Comparison of science, engineering, and health doctoral fields of study in SDR data tables to fields coded in the SDR and SED

SDR detailed statistical tables		SDR field of study code	SED field of study code
Major field	Minor field		
Physical sciences, continued	Earth/atmospheric/ocean sciences, continued		550 Stratigraphy/sedimentation
		876 Geological sciences, other	547 Fuel technology/petroleum engineering <sup>1</sup>
		876 Geological sciences, other continued	542 Geochemistry
			558 Geological and related sciences, general
			559 Geological and related sciences, other
			544 Geophysics, seismology
		545 Geophysics, solid earth <sup>1</sup>	
		546 Paleontology	
		877 Oceanography	590 Oceanography
		D87 Earth sciences/other physical sciences	585 Hydrology/water resources
		595 Marine sciences	
		599 Physical sciences, other	
	Physics	878 Physics, except biophysics	560 Acoustics
			576 Applied <sup>1</sup>
			565 Biophysics <sup>1</sup>
			561 Chemical and atomic/molecular
			563 Electromagnetism <sup>1</sup>
			562 Electron physics <sup>1</sup>
			564 Elementary particle
			566 Fluids
			567 Mechanics <sup>1</sup>
			568 Nuclear
			569 Optics
			578 Physics, general
			570 Plasma/high-temperature
			572 Polymer
			574 Solid state/low-temperature
			575 Theoretical <sup>1</sup>
			573 Thermal <sup>1</sup>
			579 Physics, other
Psychology	Psychology	891 Clinical psychology	600 Clinical
		892 Counseling psychology	609 Counseling
		704 Educational psychology	618 Educational
			822 Educational psychology
		893 Experimental psychology	615 Experimental
		894 General psychology	648 Psychology, general
		895 Industrial/organizational psychology	621 Industrial/organizational
		896 Social psychology	639 Social
		897 Other psychology	603 Cognitive psychology/psycholinguistics
			606 Comparative
	612 Developmental/child		
	616 Experimental/comparative psychology/physiology <sup>1</sup>		
	620 Family/marriage counseling		
	619 Human engineering <sup>1</sup>		
	613 Human/individual and family development		
	624 Personality		
	627 Physiological/psychobiology		
	630 Psychometrics		
	633 Quantitative		
	636 School		
	649 Psychology, other		
Social sciences	Economics	601 Agriculture, economics	002 Agricultural business/management
			000 Agricultural economics
	923 Economics	666 Economics	
		667 Economics	
		668 Econometrics	
Political sciences	927 International relations	674 International relations/affairs	

TABLE B-1. Comparison of science, engineering, and health doctoral fields of study in SDR data tables to fields coded in the SDR and SED

SDR detailed statistical tables				
Major field	Minor field	SDR field of study code	SED field of study code	
Social sciences, continued	Political sciences, continued	928 Political science/government	678 Political science/government 679 Political science/public administration <sup>1</sup>	
		902 Public policy studies	682 Public policy analysis	
	Sociology	929 Sociology	686 Sociology	
	Other social sciences	921 Anthropology/archeology	650 Anthropology 773 Archeology	
		620 Area/ethnic studies	770 American studies	
		620 Area/ethnic studies, continued	652 Area studies	
		922 Criminology	658 Criminology	
		924 Geography	670 Geography	
		925 History of science	710 History/philosophy of science/technology	
		771 Linguistics	676 Linguistics 729 Linguistics	
		930 Other social sciences	662 Demography/population studies 698 Social sciences, general 694 Urban affairs/studies 699 Social sciences, other	
	Engineering	Aerospace/aeronautical/astronautical engineering	721 Aerospace, aeronautical, astronautical engineering	300 Aerospace/aeronautical/astronautical
Chemical engineering		725 Chemical engineering	312 Chemical	
Civil engineering		726 Civil engineering	315 Civil	
Electrical/computer engineering		727 Computer/systems engineering	321 Computer 372 Systems	
		728 Electrical/electronics/communications engineering	318 Communications 322 Electrical <sup>1</sup> 323 Electronics <sup>1</sup> 324 Electrical/electronics	
Materials/metallurgical engineering		734 Materials engineering, including ceramics/textiles	309 Ceramic science 342 Materials science 369 Polymer/plastics 375 Textile <sup>1</sup>	
		736 Metallurgical engineering	348 Metallurgical	
Mechanical engineering		735 Mechanical engineering	345 Mechanical	
Other engineering		722 Agricultural engineering	303 Agricultural	
		724 Bioengineering/biomedical engineering	306 Bioengineering/biomedical	
		729 Engineering sciences/mechanics/physics <sup>1</sup>	327 Engineering mechanics 330 Engineering physics 333 Engineering science	
		730 Environmental engineering	336 Environmental health engineering	
		731 Engineering, general	398 Engineering, general	
		733 Industrial/manufacturing engineering	339 Industrial/manufacturing	
		737 Mining/minerals engineering	351 Mining/mineral	
		738 Naval architecture/marine engineering	354 Naval architecture/marine engineering <sup>1</sup>	
		739 Nuclear engineering	357 Nuclear	
		740 Petroleum engineering	366 Petroleum	
		741 Other engineering	376 Engineering management and administration	
		D74 Other engineering	360 Ocean 399 Engineering, other	
Health		Health	781 Audio/speech pathology	200 Speech/language pathology, audiology
			782 Health services administration	212 Health systems/services administration
			786 Medicine (e.g., dentistry, optometry, osteopathic, podiatry, veterinary)	205 Dentistry <sup>1</sup> 225 Medical/surgery <sup>1</sup> 235 Optometry/ophthalmology <sup>1</sup> 250 Veterinary medicine
			787 Nursing (4 years or longer program)	230 Nursing
			788 Pharmacy	240 Pharmacy
			789 Physical therapy/other rehabilitation/	245 Rehabilitation/therapeutic services

TABLE B-1. Comparison of science, engineering, and health doctoral fields of study in SDR data tables to fields coded in the SDR and SED

SDR detailed statistical tables		SDR field of study code	SED field of study code
Major field	Minor field		
Health, continued	Health, continued	therapeutic services	
		790 Public health (including environmental health/epidemiology)	210 Environmental health 211 Environmental toxicology <sup>1</sup> 220 Epidemiology
		790 Public health (including environmental health/epidemiology) continued	215 Public health 219 Public health/epidemiology <sup>1</sup>
		791 Other health/medical sciences	222 Exercise physiology/science, kinesiology 298 Health sciences, general 224 Hospital administration <sup>1</sup> 299 Health sciences, other

SED = Survey of Earned Doctorates; SDR = Survey of Doctorate Recipients.

<sup>1</sup> Doctoral field dropped or replaced; no longer used in the SED as of 2007 or earlier.

NOTES: SDR is a sample survey; SED is a census. When sampling for SDR from the SED, it is not possible to sample all individual SED fields separately or to analyze SDR data by all individual SED field of study codes. SDR field of study codes provided here represent greatest level of analytic detail that sampling of SDR allows when field is the only variable used for analysis. SED field of study codes are presented as a reference. Major/minor categories used in detailed statistical tables further aggregate SDR field of study codes, necessary when SDR field of study is cross-tabulated with other data from SDR. For further information on SDR sampling, see 2008 SDR methodology report, available on request from the project officer.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE B-2. Crosswalk of occupations used in the SDR data tables

Science and engineering classification	Major occupational category	Minor occupational category	Detailed occupational category	
Science occupations	Biological/agricultural/ other life scientists	Agricultural/food scientists	021 Agricultural and food scientists	
		Biochemists/biophysicists	022 Biochemists and biophysicists	
		Biological scientists	023 Biological scientists	
		Forestry/conservation scientists	024 Forestry and conservation scientists	
		Medical scientists	025 Medical scientists (excluding practitioners)	
		Postsecondary teachers, agricultural/other natural sciences	271 Postsecondary teachers, agriculture 297 Postsecondary teachers, other natural sciences	
		Postsecondary teachers, biological sciences	273 Postsecondary teachers, biological sciences	
		Other biological/agricultural/life scientists	027 Other biological and life scientists	
	Computer and information scientists	Computer/information scientists	051 Computer and information scientists, research	
			053 Computer support specialists	
			054 Computer systems analysts	
			055 Database administrators	
			056 Network and computer systems administrators	
			057 Network systems and data communications analysts	
			058 Other computer and information science occupations	
			088 Computer engineers, software	
			276 Postsecondary teachers, computer science	
	Mathematical scientists	Mathematical scientists	172 Mathematicians	
			173 Operations research analysts, including modeling	
			174 Statisticians	
			176 Other mathematical scientists	
	286 Postsecondary teachers, mathematics and statistics			
	Physical scientists	Chemists, except biochemists	193 Chemists, except biochemists	
			Earth/atmospheric/ocean scientists	192 Atmospheric and space scientists
				194 Geologists, including earth scientists
				195 Oceanographers
			Physicists/astronomers	191 Astronomers
				196 Physicists, except biophysicists
			275 Postsecondary teachers, chemistry	
			289 Postsecondary teachers, physics	
	277 Postsecondary teachers, earth, environmental, and marine sciences			
	198 Other physical scientists			
	Psychologists	Psychologists	236 Psychologists, including clinical	
			291 Postsecondary teachers, psychology	
	Social scientists	Economists	232 Economists	
			235 Political scientists	
			278 Postsecondary teachers, economics	
			290 Postsecondary teachers, political science	
			293 Postsecondary teachers, sociology	
			298 Postsecondary teachers, other social sciences	
			231 Anthropologists	
			237 Sociologists	
238 Other social scientists				
Engineering occupations	Engineers	082 Aeronautical, aerospace and astronautical engineers		
		085 Chemical engineers		
		086 Civil engineers, including architectural and sanitary		
		Electrical engineers	087 Computer engineers, hardware	
			089 Electrical and electronics engineers	
		091 Industrial engineers		
		094 Mechanical engineers		
		280 Postsecondary teachers, engineering		
		Other engineers	083 Agricultural engineers	
			084 Bioengineers or biomedical engineers	
090 Environmental engineers				



TABLE B-2. Crosswalk of occupations used in the SDR data tables

Science and engineering classification	Major occupational category	Minor occupational category	Detailed occupational category
Engineering occupations, continued	Engineers, continued	Other engineers, continued	092 Marine engineers and naval architects 093 Materials and metallurgical engineers 095 Mining and geological engineers 096 Nuclear engineers 097 Petroleum engineers 098 Sales engineers 099 Other engineers
Science/engineering-related occupations	Science/engineering-related occupations	Health occupations, except postsecondary teachers	111 Diagnosing and treating practitioners 112 Registered nurses, pharmacists, dieticians, therapists, and physician assistants 113 Health technologists and technicians 114 Other health occupations
		Postsecondary teachers, health and related sciences	287 Postsecondary teachers, health and related sciences
		SEH managers	142 Computer and information systems managers 143 Engineering managers 144 Medical and health services managers 145 Natural sciences managers
		SEH precollege teachers	253 Teachers, secondary-computer, math, or sciences 254 Teachers, secondary-social sciences
		SEH technicians/technologists	026 Technologists and technicians, biological and life sciences 052 Computer programmers, business, scientific, and process control 100 Electrical, electronic, industrial, and mechanical 101 Drafting occupations, including computer drafting 102 Surveying and mapping technicians 103 Other engineers, technologists, and technicians 104 Surveyors, cartographers, and photogrammetrists 175 Technologists and technicians, mathematical sciences 197 Technologists and technicians, physical scientists
		Other SEH-related occupations	081 Architects 171 Actuaries
		Arts/humanities-related occupations	233 Historians 010 Writers, editors, public relations specialists, artists,
		Management-related occupations	151 Accountants, auditors, and other financial specialists 152 Personnel, training, and labor relations specialists 153 Other management-related occupations
		Non-SEH managers	141 Top-level managers, executives, and administrators 146 Education administrators 147 Other mid-level managers
		Non-SEH postsecondary teachers	272 Postsecondary teachers, art, drama, and music 274 Postsecondary teachers, business, commerce and marketing 279 Postsecondary teachers, education 281 Postsecondary teachers, English 282 Postsecondary teachers, foreign language 283 Postsecondary teachers, history 288 Postsecondary teachers, physical education 299 Postsecondary teachers, other non-science and
Non-science/non-engineering occupations	Non-science/non-engineering occupations	Non-SEH precollege/other teachers	251 Teachers, pre-kindergarten and kindergarten 252 Teachers, elementary school 255 Teachers, secondary-other subjects 256 Teachers, special education-primary and secondary 257 Teachers, other precollegiate area
		Sales/marketing occupations	200 Insurance, securities, real estate, and business services

TABLE B-2. Crosswalk of occupations used in the SDR data tables

Science and engineering classification	Major occupational category	Minor occupational category	Detailed occupational category
Non-science/ non-engineering occupations, continued	Non-science/ non-engineering occupations, continued	Sales/marketing occupations, continued	201 Sales occupations, commodities, except retail
			202 Sales occupations, retail
			203 Other marketing and sales occupations
		Social service-related occupations	040 Clergy and other religious workers
			070 Counselors, educational, vocational, mental health, and substance abuse
			240 Social workers
		Other non-SEH occupations	031 Accounting clerks, and bookkeepers
			032 Secretaries, receptionists, and typists
			033 Other administrative occupations
			110 Farmers, foresters, and fishermen
120 Lawyers and judges			
130 Librarians, archivists, and curators			
221 Food preparation and service occupations			
222 Protective services			
223 Other service occupations, except health			
300 Other teachers and instructors			
401 Construction and extraction occupations			
402 Installation, maintenance, and repair occupations			
403 Precision/production occupations			
405 Transportation and material moving occupations			
500 Other occupations			

SEH = science, engineering, and health; SDR = Survey of Doctorate Recipients.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2008.

## **Appendix C. Survey Questionnaire**

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- 2008 Survey of Doctorate Recipients



2008

# Survey of Doctorate Recipients

Conducted by  
the National Opinion Research Center  
at the University of Chicago for



## National Science Foundation

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended, and the Confidential Information Protection and Statistical Efficiency Act of 2002. The information you provide will be used for statistical purposes only. Your responses will be kept confidential. Your response is voluntary and failure to provide some or all of the requested information will not in any way adversely affect you. The average time to complete this survey is about 25 minutes. Please send any comments on the time required for this survey to National Science Foundation, 4201 Wilson Blvd., Suite 295, Arlington, VA 22230, Attn: NSF Reports Clearance Officer.

**Please make any name/address changes below:**

First Name \_\_\_\_\_ M.I. \_\_\_\_\_

Last Name \_\_\_\_\_

Number and Street \_\_\_\_\_

City/Town \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_

Office Use Only

RC  Edit  CADE  VER  Adj

OMB No.: 3145-0020  
Approval Expires: 7/2011

## Part A - Employment Situation

**A1. Were you working for pay or profit during the week of October 1, 2008?**

*Working includes being self-employed, on a postdoctoral appointment, or on any type of paid or unpaid leave, including vacation.*

Use an X to mark your answer.

1  Yes → **Go to page 2, question A8**

2  No

**A2. (If No) Did you look for work during the four weeks preceding October 1, 2008? This would be between September 3<sup>rd</sup> and October 1<sup>st</sup>.**

1  Yes

2  No

**A3. What were your reasons for not working during the week of October 1, 2008?**

Mark Yes or No for each item.

	Yes ↓	No ↓
1 Retired.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>

If Yes → 

--	--	--	--

  
Year retired

2 On layoff from a job..... 1  2

3 Student..... 1  2

4 Family responsibilities ..... 1  2

5 Chronic illness or permanent disability ..... 1  2

6 Suitable job not available ..... 1  2

7 Did not need or want to work ..... 1  2

8 Other – Specify  ..... 1  2

**A4. Prior to the week of October 1, 2008, when did you last work for pay or profit?**

0  ← **Mark this box if you never worked for pay or profit and then go to page 9, question D1**

Month                      Year

LAST WORKED 

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--	--	--	--

**A5. What was the title of the last job you held prior to the week of October 1, 2008?**

*Example: Physics professor*

**A6. What kind of work were you doing on this last job – that is, what were your duties and responsibilities on your last job? Please be as specific as possible, including any area of specialization.**

*Example: Taught physics and conducted research. Specialized in high energy physics.*

**A7. Using the JOB CATEGORY list on pages 13-14, choose the code that best describes the last job you held prior to the week of October 1, 2008.**

CODE 

--	--	--

 → **Go to page 7, question A43**

**Principal Employer**

**A8. Who was your principal employer during the week of October 1, 2008?**

*If you had more than one job, report the one for which you worked the most hours that week.*

*If your employer had more than one location, report the location that employed you.*

*If you worked for a contracting or consulting company, report the name of that company, not the client organization.*

Employer Name

Department/Division

City/Town

State

ZIP Code

**A9. What was that employer's main business or industry; that is, what did that employer make or do?**

*If your principal employer had more than one type of business, report the type of business primarily performed at the location where you worked.*

*Example: Production of microprocessor chips*

EMPLOYER'S MAIN BUSINESS


**A10. Counting all locations where this employer operates, how many people work for your principal employer? Your best estimate is fine.**

*Mark one answer.*

- 1  10 or fewer employees
- 2  11 - 24 employees
- 3  25 - 99 employees
- 4  100 - 499 employees
- 5  500 - 999 employees
- 6  1,000 - 4,999 employees
- 7  5,000 - 24,999 employees
- 8  25,000+ employees

**A11. Which one of the following best describes your principal employer during the week of October 1, 2008? Were you...**

*Mark one answer.*

SELF-EMPLOYED or a BUSINESS OWNER

- 1  In a non-incorporated business, professional practice, or farm
- 2  In an incorporated business, professional practice, or farm

PRIVATE SECTOR employee

- 3  In a for-profit company or organization
- 4  In a non-profit organization (including tax-exempt and charitable organizations)

GOVERNMENT employee

- 5  In a local government (e.g., city, county, school district)
- 6  In a state government (including state colleges/universities)
- 7  In the U.S. military service, active duty or Commissioned Corps (e.g., USPHS, NOAA)
- 8  In the U.S. government (e.g., civilian employee)

OTHER type of employee

- 9  Other – *Specify type of employer* ↴

--

**A12. Was your principal employer an educational institution?**

- 1  Yes
- 2  No → **Go to page 3, question A17**

**A13. (If Yes) Was the educational institution where you worked a...**

*Mark one answer.*

- 1  Preschool, elementary, middle, } **Go to page 3, question A17**  
or secondary school or system }
- 2  Two-year college, community college, or technical institute
- 3  Four-year college or university, other than a medical school
- 4  Medical school (including university-affiliated hospital or medical center)
- 5  University-affiliated research institute
- 6  Other – *Specify* ↴

--

**A14. During the week of October 1, 2008, what type of academic position(s) did you hold at this institution?**

Mark Yes or No for each item.

- |   | Yes                        | No                         |
|---|----------------------------|----------------------------|
|   | ↓                          | ↓                          |
| 1 President, Provost, or Chancellor (any level) .....     | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2 Dean (any level), department head or chair .....        | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3 Research faculty, scientist, associate, or fellow ..... | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 4 Teaching faculty .....                                  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 5 Adjunct faculty .....                                   | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 6 Postdoc (e.g., postdoctoral fellow or associate) .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 7 Research assistant .....                                | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 8 Teaching assistant .....                                | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 9 Other position – Specify <input type="checkbox"/> ..... | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

**A15. What was your faculty rank?**

Mark one answer.

- 1  Not applicable: no ranks designated at this institution
- 2  Not applicable: no ranks designated for my position
- 3  Professor
- 4  Associate Professor
- 5  Assistant Professor
- 6  Instructor
- 7  Lecturer
- 8  Other – Specify

**A16. What was your tenure status?**

Mark one answer.

- 1  Not applicable: no tenure system at this institution
- 2  Not applicable: no tenure system for my position
- 3  Tenured
- 4  On tenure track but not tenured
- 5  Not on tenure track

**Principal Job**

**A17. What was the title of the principal job you held during the week of October 1, 2008?**

Example: *Physics professor*

**A18. What kind of work were you doing on this job – that is, what were your duties and responsibilities on your principal job? Please be as specific as possible, including any area of specialization.**

Example: *Taught physics and conducted research. Specialized in high energy physics.*

**A19. Using the JOB CATEGORY list on pages 13-14, choose the code that best describes the principal job you held during the week of October 1, 2008.**

CODE 

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**A20. Did your duties on this job require the technical expertise of a bachelor's degree or higher in...**

Mark Yes or No for each item.

- |  | Yes                        | No                         |
|--|----------------------------|----------------------------|
|  | ↓                          | ↓                          |
| 1 Engineering, computer science, math, or the natural sciences .....                               | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2 The social sciences .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3 Some other field (e.g., health, business, or education) – Specify <input type="checkbox"/> ..... | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

**A21. Was this job a “postdoc?”**

A “postdoc” is a temporary position awarded in academe, industry, a non-profit organization, or government primarily for gaining additional education and training in research.

- 1  Yes
- 2  No → **Go to question A24**

**A22. (If Yes) What were your reasons for taking this postdoc?**

Mark Yes or No for each item.

- |   | Yes<br>↓                   | No<br>↓                    |
|---|----------------------------|----------------------------|
| 1 Additional training in PhD field .....                      | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2 Training in an area outside of PhD field.....               | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3 Work with a specific person or place .....                  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 4 Other employment not available.....                         | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 5 Postdoc generally expected for a career in this field ..... | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 6 Some other reason – <i>Specify</i> ∇ .....                  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

**A23. Which two reasons in question A22 were your most important reasons for taking this postdoc?**

Enter number of appropriate reason from question A22 above.

- 1  Most important reason
- 2  Second most important reason  
(Enter “0” if no second reason)

**A24. During what month and year did you start this job (that is, the principal job you held during the week of October 1, 2008)?**

PRINCIPAL JOB STARTED

Month			Year				
-------	--	--	------	--	--	--	--

**A25. To what extent was your work on your principal job related to your first U.S. doctoral degree? Was it...**

Mark one answer.

- 1  Closely related
- 2  Somewhat related
- 3  Not related

Go to page 5, question A28

**A26. (If Not related) Did these factors influence your decision to work in an area outside the field of your first U.S. doctoral degree?**

Mark Yes or No for each item.

- |   | Yes<br>↓                   | No<br>↓                    |
|---|----------------------------|----------------------------|
| 1 Pay, promotion opportunities .....                                    | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2 Working conditions (e.g., hours, equipment, working environment)..... | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3 Job location.....   | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 4 Change in career or professional interests .....                      | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 5 Family-related reasons (e.g., children, spouse’s job moved) .....     | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 6 Job in doctoral degree field not available.....                       | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 7 Some other reason – <i>Specify</i> ∇.....                             | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

**A27. Which two factors in question A26 were your most important reasons for working in an area outside the field of your first U.S. doctoral degree?**

Enter number of appropriate reason from question A26 above.

- 1  Most important reason
- 2  Second most important reason  
(Enter “0” if no second reason)





**A34. Was this salary based on a 52-week year, or less than that?**

*Include paid vacation and sick leave.*

1  52-week year

2  Less than 52 weeks

NUMBER OF WEEKS PER YEAR

**A35. During a typical week on your principal job, how many hours did you work?**

NUMBER OF HOURS WORKED PER WEEK

***If fewer than 35 hours, go to question A36.***

***If 35 or more hours, go to question A38.***

**A36. (If fewer than 35 hours) Did you want to work 35 or more hours per week on your principal job?**

1  Yes

2  No

**A37. For which of the following reasons did you usually work fewer than 35 hours per week on the principal job you held during the week of October 1, 2008?**

*Mark Yes or No for each item.*

Yes No  
↓ ↓  
1 2

1 Previously retired or semi-retired ..... 1  2

Year retired

*If Yes* →

2 Student..... 1  2

3 Family responsibilities ..... 1  2

4 Chronic illness or disability ..... 1  2

5 Full-time job not available ..... 1  2

6 Held more than one job..... 1  2

7 Did not need or want to work more hours ..... 1  2

8 Other – *Specify*  ..... 1  2

**A38. During the week of October 1, 2008, were you working for pay (or profit) at a second job (or business), including part-time, evening, or weekend work?**

1  Yes

2  No → *Go to page 7, question A43*

**A39. (If Yes) What was the title of the second job you held during the week of October 1, 2008?**

*If you had more than two jobs that week, report the job where you worked the second most hours.*

*Example: Clinical psychologist*

**A40. What kind of work were you doing on this job – that is, what were your duties and responsibilities on your second job? Please be as specific as possible, including any area of specialization.**

*Example: Diagnose mental and emotional disorders.*

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**A41. Using the JOB CATEGORY list on pages 13-14, choose the code that best describes the second job you held during the week of October 1, 2008.**

CODE



**Part C - Other Work-Related Experiences**

**C1. Since October 2003, how many...**

Number

- 1 Papers have you (co)authored for presentation at regional, national or international conferences? *(Do not count presentations of the same work more than once.)* .....   
*(If none, enter "0")*
- 2 Articles, (co)authored by you, have been accepted for publication in a refereed professional journal? .....   
*(If none, enter "0")*
- 3 Books or monographs, (co)authored by you, have been published or accepted for publication? .....   
*(If none, enter "0")*

**C2. Since October 2003, have you been named as an inventor on any application for a U.S. patent?**

- 1  Yes
- 2  No → **Go to question C4**

**C3. Since October 2003...**

Number

- 1 How many applications for U.S. patents have named you as an inventor? .....   
*(If none, enter "0")*
- 2 How many U.S. patents have been granted to you as an inventor? .....   
*(If none, enter "0")*
- 3 How many of the patents recorded as granted (in category 2 above) have resulted in commercialized products or processes or have been licensed? .....   
*(If none, enter "0")*

**C4. During the past 12 months, did you take any work-related training, such as workshops or seminars?**

*Include conferences or professional meetings only if you attended a training session at the conference or meeting.*

*Do not include college coursework for which you were enrolled in a degree program.*

- 1  Yes
- 2  No → **Go to page 9, question D1**

**C5. (If Yes) For which of the following reasons did you take training during the past 12 months?**

*Mark Yes or No for each item.*

- |   | Yes<br>↓                   | No<br>↓                    |
|---|----------------------------|----------------------------|
| 1 To improve skills or knowledge in your current occupational field .....                         | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2 To increase opportunities for promotion or advancement in your current occupational field ..... | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3 For licensure or certification in your current occupational field .....                         | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 4 To facilitate a change to a different occupational field .....                                  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 5 Required or expected by employer .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 6 For leisure or personal interest .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 7 Other – Specify <input type="checkbox"/> .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

**C6. What was your most important reason from question C5 for taking training?**

*Enter number of appropriate reason from question C5 above.*

MOST IMPORTANT REASON

**Part D - Recent Educational Experiences**

**D1. Between April 2006 and October 2008, did you complete another degree, such as a master's or another doctorate?**

- 1  Yes  
 2  No → **Go to page 10, question E1**

**D2. (If Yes) What type of degree did you earn?**

*If you completed more than one degree, mark the level for the highest degree awarded.*

*Mark one answer.*

- 1  Bachelor's degree (e.g., BS, BA, AB)  
 2  Master's degree (e.g., MS, MA, MBA)  
 3  Doctorate (e.g., PhD, DSc, EdD, etc.)  
 4  Other professional degree (e.g., JD, LLB, MD, DDS, DVM, etc.) – *Specify*

- 5  Other – *Specify*

**D3. What was the primary field of study for this degree?**

PRIMARY FIELD OF STUDY

  


**D4. In what month and year was this degree awarded?**

	Month		Year			
DEGREE AWARDED	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
			2	0	0	

**D5. From which academic institution did you receive this degree?**

College or University Name
Department
City/Town
State/Foreign Country

**D6. For which of the following reasons did you obtain this degree?**

*Mark Yes or No for each item.*

- |   | Yes                        | No                         |
|---|----------------------------|----------------------------|
|   | ↓                          | ↓                          |
| 1 To gain further education before beginning a career .....                               | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2 To prepare for graduate school or further education.....                                | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3 To change your academic or occupational field .....                                     | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 4 To gain <u>further</u> skills or knowledge in your academic or occupational field ..... | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 5 For licensure or certification.....   | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 6 To increase opportunities for promotion, advancement, or higher salary .....            | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 7 Required or expected by employer .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 8 For leisure or personal interest .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 9 Other – <i>Specify</i> <input type="checkbox"/>   | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

**Part E - Demographic Information**

**E1. On October 1, 2008, were you...**

Mark one answer.

- 1  Married
- 2  Living in a marriage-like relationship
- 3  Widowed
- 4  Separated
- 5  Divorced
- 6  Never married

Go to question E4

**E2. (If Married or Living in a marriage-like relationship) During the week of October 1, 2008, was your spouse or partner working?**

- 1  Yes, full-time
- 2  Yes, part-time
- 3  No → Go to question E4

**E3. Did your spouse's or partner's duties on this job require the technical expertise of a bachelor's degree or higher in...**

Mark Yes or No for each item.

- |  | Yes                        | No                         |
|--|----------------------------|----------------------------|
| 1 Engineering, computer science, math, or the natural sciences .....                         | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 2 The social sciences .....  | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| 3 Some other field (e.g., health, business, or education) – Specify <input type="checkbox"/> | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> |

**E4. As of the week of October 1, 2008, did you have any children living with you as part of your family?**

Only count children who lived with you at least 50 percent of the time.

- 1  Yes
- 2  No → Go to question E6

**E5. (If Yes) How many of these children living with you as part of your family were...**

If no children in a category, enter "0."

	Number of Children
1 Under age 2 .....	<input style="width: 50px; height: 20px;" type="text"/>
2 Aged 2-5.....	<input style="width: 50px; height: 20px;" type="text"/>
3 Aged 6-11.....	<input style="width: 50px; height: 20px;" type="text"/>
4 Aged 12-18.....	<input style="width: 50px; height: 20px;" type="text"/>
5 Aged 19 or older.....	<input style="width: 50px; height: 20px;" type="text"/>

**E6. On October 1, 2008, were you living in the United States, Puerto Rico, or another U.S. territory, or were you living in another country?**

- 1  United States, Puerto Rico, or another U.S. territory
- 2  Another country

**E7. On October 1, 2008, were you a...**

- 1  U.S. citizen
- 2  Non-U.S. citizen → **Go to question E9**

**E8. (If U.S. citizen) Were you a U.S. citizen...**

Mark one answer.

- 1  Born in the United States, Puerto Rico, or another U.S. territory
  - 2  Born abroad of American parent(s)
  - 3  By naturalization
- Go to question E11**

**E9. (If Non-U.S. citizen) Were you a non-U.S. citizen...**

- 1  With a Permanent U.S. Resident Visa (Green Card)
- 2  With a Temporary U.S. Resident Visa

**E10. Of which foreign country are you a citizen?**

FOREIGN COUNTRY

**E11. What is your birthdate?**

Month   Day   Year **19**

**E12. The next several questions are designed to help us better understand the career paths of individuals with different physical abilities.**

**E13. What is the USUAL degree of difficulty you have with...**

Mark one answer for each item.

	None ↓	Slight ↓	Moderate ↓	Severe ↓	Unable to Do ↓
1 SEEING words or letters in ordinary newsprint (with glasses/contact lenses, if you usually wear them) .....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
2 HEARING what is normally said in conversation with another person (with hearing aid, if you usually wear one) .....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
3 WALKING without human or mechanical assistance or using stairs .....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
4 LIFTING or carrying something as heavy as 10 pounds, such as a bag of groceries .....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

**E14.**  ← Mark this box if you answered “None” to all the activities in question E13, and go to question E16.

**E15. What is the earliest age at which you first began experiencing any difficulties in any of these areas?**

AGE   OR  ← SINCE BIRTH

**E16. In case we need to clarify some of the information you have provided, please list phone numbers and an email address where you can be reached.**

Daytime Phone Number    -    -

Area Code                      Number

Evening Phone Number    -    -

Area Code                      Number

Email Address  @

**E17. Because we are interested in how education and employment change over time, we may be recontacting you in 2010. To help us contact you, please provide the name and contact information for two people who are likely to know where you can be reached. Do not include someone who lives in your household.**

*As with all the information provided in this questionnaire, complete confidentiality will be provided. These people will only be contacted if we have difficulty contacting you in 2010.*

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">First Name</td> <td style="width: 10%;">MI</td> <td style="width: 20%;">Last Name</td> </tr> <tr> <td colspan="3">Number and Street</td> </tr> <tr> <td>City/Town</td> <td>State</td> <td>ZIP Code</td> </tr> <tr> <td colspan="3">Country (if outside of U.S.)</td> </tr> <tr> <td style="text-align: center;"><input style="width: 30px; height: 20px;" type="text"/></td> <td style="text-align: center;">-</td> <td style="text-align: center;"><input style="width: 30px; height: 20px;" type="text"/></td> </tr> <tr> <td style="text-align: center;">Area Code</td> <td></td> <td style="text-align: center;">Number</td> </tr> </table>	First Name	MI	Last Name	Number and Street			City/Town	State	ZIP Code	Country (if outside of U.S.)			<input style="width: 30px; height: 20px;" type="text"/>	-	<input style="width: 30px; height: 20px;" type="text"/>	Area Code		Number	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">First Name</td> <td style="width: 10%;">MI</td> <td style="width: 20%;">Last Name</td> </tr> <tr> <td colspan="3">Number and Street</td> </tr> <tr> <td>City/Town</td> <td>State</td> <td>ZIP Code</td> </tr> <tr> <td colspan="3">Country (if outside of U.S.)</td> </tr> <tr> <td style="text-align: center;"><input style="width: 30px; height: 20px;" type="text"/></td> <td style="text-align: center;">-</td> <td style="text-align: center;"><input style="width: 30px; height: 20px;" type="text"/></td> </tr> <tr> <td style="text-align: center;">Area Code</td> <td></td> <td style="text-align: center;">Number</td> </tr> </table>	First Name	MI	Last Name	Number and Street			City/Town	State	ZIP Code	Country (if outside of U.S.)			<input style="width: 30px; height: 20px;" type="text"/>	-	<input style="width: 30px; height: 20px;" type="text"/>	Area Code		Number
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**E18. PLEASE TURN TO THE BACK COVER FOR THE LAST QUESTION (E19).**



## JOB CATEGORY

If you cannot find the code that best describes your job, use the "OTHER" code under the most appropriate broad category. If none of the codes fit your job, use Code 500.

<ul style="list-style-type: none"> <li>• <b>Biological/Life Scientists</b></li> </ul>	021 Agricultural and food scientists 022 Biochemists and biophysicists 023 Biological scientists (e.g., botanists, ecologists, zoologists) 024 Forestry and conservation scientists	025 Medical scientists (excluding practitioners) 026 Technologists and technicians in the biological/life sciences 027 OTHER biological and life scientists
<ul style="list-style-type: none"> <li>• <b>Clerical/Administrative Support Occupations</b></li> </ul>	031 Accounting clerks and bookkeepers 032 Secretaries, receptionists, typists	033 OTHER administrative (e.g., record clerks, telephone operators)
<ul style="list-style-type: none"> <li>• <b>Clergy/Other Religious Workers</b></li> </ul>	040 Clergy and other religious workers	
<ul style="list-style-type: none"> <li>• <b>Computer Occupations</b> <i>Also consider 173 Operations research analysts, including modeling</i></li> </ul>	*** Computer engineers – <i>Also consider 087 Computer engineers – hardware and 088 Computer engineers – software</i> 051 Computer & information scientists, research 052 Computer programmers (business, scientific, process control) 053 Computer support specialists 054 Computer system analysts	055 Database administrators 056 Network and computer systems administrators 057 Network systems and data communications analysts 058 OTHER computer and information science occupations
<ul style="list-style-type: none"> <li>• <b>Consultants</b></li> </ul>	<i>Find the category on page 13 or 14 that comes closest to your field of consulting and select the code</i>	
<ul style="list-style-type: none"> <li>• <b>Counselors</b></li> </ul>	070 Counselors (Educational, vocational, mental health and substance abuse) <i>Also consider 236 Psychologists, including clinical</i>	
<ul style="list-style-type: none"> <li>• <b>Engineers/Architects</b> <i>Also consider 100 to 104 under Engineering Technologists, Technicians and Surveyors</i></li> </ul>	081 Architects 082 Aeronautical/aerospace/astronautical engineers 083 Agricultural engineers 084 Bioengineers or biomedical engineers 085 Chemical engineers 086 Civil, including architectural/sanitary engineers 087 Computer engineers – hardware 088 Computer engineers – software 089 Electrical and electronics engineers	090 Environmental engineers 091 Industrial engineers 092 Marine engineers and naval architects 093 Materials and metallurgical engineers 094 Mechanical engineers 095 Mining and geological engineers 096 Nuclear engineers 097 Petroleum engineers 098 Sales engineers 099 OTHER engineers
<ul style="list-style-type: none"> <li>• <b>Engineering Technologists/Technicians/Surveyors</b></li> </ul>	100 Electrical, electronic, industrial, and mechanical technicians 101 Drafting occupations, including computer drafting 102 Surveying and mapping technicians	103 OTHER engineering technologists and technicians 104 Surveyors, cartographers, photogrammetrists
<ul style="list-style-type: none"> <li>• <b>Farmers/Foresters/Fishermen</b></li> </ul>	110 Farmers, foresters and fishermen	
<ul style="list-style-type: none"> <li>• <b>Health Occupations</b></li> </ul>	111 Diagnosing/treating practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians) 112 Registered nurses, pharmacists, dieticians, therapists, physician assistants 236 Psychologists, including clinical – <i>Also consider 070 Counselors</i>	113 Health technologists and technicians (e.g., dental hygienists, health record technologists/technicians, licensed practical nurses, medical or laboratory technicians, radiological technicians) 114 OTHER health occupations
<ul style="list-style-type: none"> <li>• <b>Lawyers/Judges</b></li> </ul>	120 Lawyers, judges	
<ul style="list-style-type: none"> <li>• <b>Librarians/Archivists/Curators</b></li> </ul>	130 Librarians, archivists, curators	
<ul style="list-style-type: none"> <li>• <b>Managers and Supervisors, First-Line</b></li> </ul>	<i>Find the category on page 13 or 14 that best describes the occupation of the people you manage and select the code</i>	
<ul style="list-style-type: none"> <li>• <b>Managers, Top-level Executives/Administrators</b></li> </ul>	141 Top-level managers, executives, administrators (e.g., CEO/COO/CFO, president, district manager, general manager, legislator, chancellor, provost)	
<ul style="list-style-type: none"> <li>• <b>Managers, Other</b> <i>People who manage other managers</i></li> </ul>	142 Computer and information systems managers 143 Engineering managers 144 Medical and health services managers 145 Natural sciences managers 146 Education administrators (e.g., registrar, dean, principal) 147 OTHER mid-level managers	

## JOB CATEGORY (Continued)

<ul style="list-style-type: none"> <li>• <b>Management-Related Occupations</b> <i>Also consider 141 to 147 under Managers, Other</i></li> </ul>	151	Accountants, auditors, and other financial specialists	153	OTHER management related occupations
	152	Personnel, training, and labor relations specialists		
<ul style="list-style-type: none"> <li>• <b>Mathematical Scientists</b></li> </ul>	171	Actuaries	174	Statisticians
	172	Mathematicians	175	Technologists and technicians in the mathematical sciences
	173	Operations research analysts, including modeling	176	OTHER mathematical scientists
<ul style="list-style-type: none"> <li>• <b>Physical Scientists</b></li> </ul>	191	Astronomers	195	Oceanographers
	192	Atmospheric and space scientists	196	Physicists, except biophysicists
	022	Biochemists and biophysicists	197	Technologists and technicians in the physical sciences
	193	Chemists, except biochemists	198	OTHER physical scientists
	194	Geologists, including earth scientists		
<ul style="list-style-type: none"> <li>• <b>Research Associates/ Assistants</b></li> </ul>	<i>Find the category on page 13 or 14 that comes closest to your research field and select the code</i>			
<ul style="list-style-type: none"> <li>• <b>Sales/Marketing Occupations</b></li> </ul>	200	Insurance, securities, real estate, and business services	202	Sales occupations – retail (e.g., furnishings, clothing, motor vehicles, cosmetics)
	201	Sales occupations – commodities except retail (e.g., industrial machinery/equipment/supplies, medical and dental equip./supplies)	203	OTHER marketing and sales occupations
<ul style="list-style-type: none"> <li>• <b>Service Occupations, Except Health</b> <i>Also consider 111 to 114 under Health Occupations</i></li> </ul>	221	Food preparation and service (e.g., cooks, waitresses, bartenders)	223	OTHER service occupations, except health (e.g., probation officers, human services workers)
	222	Protective services (e.g., fire fighters, police, guards, wardens, park rangers)		
<ul style="list-style-type: none"> <li>• <b>Social Scientists</b></li> </ul>	231	Anthropologists	236	Psychologists, including clinical – <i>Also consider 070 Counselors</i>
	232	Economists	237	Sociologists
	233	Historians	238	OTHER social scientists
	235	Political scientists		
<ul style="list-style-type: none"> <li>• <b>Social Workers</b></li> </ul>	240	Social workers		
<ul style="list-style-type: none"> <li>• <b>Teachers—Precollege</b></li> </ul>	251	Pre-kindergarten and kindergarten	255	Secondary – other subjects
	252	Elementary	256	Special education – primary and secondary
	253	Secondary – computer, math, or sciences	257	OTHER precollegiate area
	254	Secondary – social sciences		
<ul style="list-style-type: none"> <li>• <b>Teachers/Professors— Postsecondary</b></li> </ul>	271	Agriculture	283	History
	272	Art, Drama, and Music	286	Mathematics and Statistics
	273	Biological Sciences	287	Health and Related Sciences
	274	Business, Commerce, and Marketing	288	Physical Education
	275	Chemistry	289	Physics
	276	Computer Science	290	Political Science
	277	Earth, Environmental, and Marine Science	291	Psychology
	278	Economics	293	Sociology
	279	Education	297	OTHER Natural Sciences
	280	Engineering	298	OTHER Social Sciences
	281	English	299	OTHER Postsecondary fields
	282	Foreign Language		
<ul style="list-style-type: none"> <li>• <b>Teachers—Other</b></li> </ul>	300	OTHER teachers and instructors (e.g., private tutors, dance or flying instructors, martial arts instructors)		
<ul style="list-style-type: none"> <li>• <b>Writers/Editors/Public Relations Specialists/Artists/Entertainers/Broadcasters</b></li> </ul>	010	Writers, editors, public relations specialists, artists, entertainers, broadcasters		
<ul style="list-style-type: none"> <li>• <b>Other Professions</b></li> </ul>	401	Construction and extraction occupations	403	Precision/production occupations (e.g., metal workers, woodworkers, butchers, bakers, assemblers, printing occupations, tailors, shoemakers, photographic process)
	402	Installation, maintenance, and repair occupations	405	Transportation and material moving occupations
<ul style="list-style-type: none"> <li>• <b>OTHER OCCUPATIONS</b></li> </ul>	500	<b>OTHER OCCUPATIONS (Not Listed)</b>		

**E19. How would you like to complete future rounds of this survey?**

*Mark one answer.*

- 1  A questionnaire sent in the mail
- 2  A questionnaire that you could fill out on the World Wide Web
- 3  A telephone interview
- 4  No preference

**THANK YOU FOR COMPLETING THE QUESTIONNAIRE.**

**Please return the completed form within two weeks in the envelope provided.**

If you have any questions or need assistance, please visit our SDR website at [www.norc.uchicago.edu/sdr](http://www.norc.uchicago.edu/sdr), call us toll-free at 1-800-685-1663, or email us at [SDR@norc.uchicago.edu](mailto:SDR@norc.uchicago.edu). If you cannot find the envelope or would like another, follow the "Request an Envelope" link on the SDR website or call us.

**Our mailing address is:**

**2008 Survey of Doctorate Recipients  
c/o NORC at the University of Chicago  
1 North State Street, 16th Floor  
Chicago, IL 60602-3305**

- Results of the Survey of Doctorate Recipients can be found on the National Science Foundation's Website at <http://www.nsf.gov/statistics/doctoratework>.
- You are not required to respond to any information collection unless it displays a valid approval number from the Office of Management and Budget. The approval number for this survey is 3145-0020.

## Suggested Citation, Acknowledgments

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