Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed					
		Total			White		
		Total	Men	Women	Total	Men	Women
All employed persons, 16 years and over		**137,736**	**73,332**	**64,404**	**114,235**	**61,866**	**52,369**
Management, professional, and related occupations	**Old SOC title: managerial and professional specialty occupations**	**47,929**	**23,735**	**24,194**	**40,558**	**20,430**	**20,128**
Management, business, and financial operations occupations	**Old SOC title: executive, administrative, and managerial occupations**	**19,934**	**11,534**	**8,400**	**17,377**	**10,295**	**7,081**
Professional and related occupations	**Old SOC title: professional specialty occupations**	**27,995**	**12,201**	**15,794**	**23,181**	**10,134**	**13,047**
Summary lines:							
All STEM fields combined		**7,528**	**5,570**	**1,959**	**6,108**	**4,580**	**1,525**
All STEM fields except social sciences		**7,114**	**5,383**	**1,733**	**5,750**	**4,420**	**1,329**
All STEM fields except science and engineering technicians		**6,495**	**4,813**	**1,682**	**5,255**	**3,950**	**1,298**
All STEM fields except social scientists and technicians		**6,081**	**4,626**	**1,456**	**4,897**	**3,790**	**1,102**
Life, physical, & social science occupations, including technicians		**1,385**	**789**	**596**	**1,121**	**641**	**479**
Life, physical, and social science occupations	**See note (7) below. BLS data adjusted to add managers. No equivalent in old version of SOC**	**1,071**	**598**	**472**	**880**	**494**	**383**
Natural science mgrs. and nat. scientists ("life & physical sci. occ.")	**See notes (1) and (2) below**	**657**	**411**	**246**	**522**	**334**	**187**
Natural sciences managers	Old SOC title: science managers (seldom used in CPS tabulations)	10	6	4	8	5	3
Life and physical science occupations	**Old SOC title: natural scientists. No equivalent in 2003 BLS data used for this report**	**647**	**405**	**242**	**514**	**329**	**184**
Agricultural and food scientists		41	32	9	36	29	6
Astronomers and physicists	Old SOC title: physicists and astronomers	18	16	1	14	13	1
Atmospheric and space scientists		9	8	2	9	7	2
Biological scientists	Old SOC title: biological and life scientists. See note below on biochemists; the biochemistry subgroup in the biological sciences also includes biophysicists	112	60	52	90	50	40
Chemists and material scientists	See note (3) below. Old SOC title: chemists, except biochemists (both old and new SOC codes group biochemists with biological scientists)	140	89	51	101	64	37
Conservation scientists and foresters	Old SOC title: forestry and conservation scientists	29	25	4	27	24	3
Environmental scientists and geoscientists	See note (4) below. Old SOC title: geologists and geodesists	85	60	25	77	55	23
Medical scientists		101	50	51	75	37	38
Physical scientists, all other	See notes (3) and (4) below. Old SOC title: physical scientists, n.e.c.	112	65	47	85	50	34
Social science occupations	**See note (7) below.**	**414**	**187**	**226**	**358**	**160**	**196**
Economists		34	28	7	25	19	6
Market and survey researchers	No equivalent in old SOC (there is a group of "managers, marketing, advertising, and public relations" in the management section of that system)	124	54	70	102	45	56
Psychologists		185	63	121	171	59	112
Sociologists		4	2	2	3	2	1
Urban and regional planners		22	14	8	20	13	6
Miscellaneous social scientists and related workers	See note (8) below. Old SOC title: social scientists, n.e.c.	45	26	18	37	22	15
Life, physical, and social science technicians		**315**	**191**	**124**	**241**	**148**	**96**

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed					
		Total			White		
		Total	Men	Women	Total	Men	Women
Agricultural and food science technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	28	17	11	22	13	10
Biological technicians		23	12	11	17	7	10
Chemical technicians		86	61	25	61	44	17
Geological and petroleum technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	19	13	6	13	9	5
Nuclear technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	3	2	1	3	2	1
Other life, physical, and social science technicians	See notes (5) and (6) below. Old SOC title: science technicians, n.e.c.	156	86	70	125	73	53
Computer and mathematical occupations	**BLS data adjusted to add managers**	**3,469**	**2,464**	**1,006**	**2,715**	**1,958**	**757**
Computer and information systems managers and occupations	**See notes (1) and (2) below**	**3,327**	**2,381**	**944**	**2,603**	**1,888**	**713**
Computer and information systems managers	Group defined in the old SOC but seldom used in CPS tabulations	347	241	106	297	210	87
Computer occ. (does not include comp. hardware engineers)	**Title present in old SOC, but components have been updated. Also see note (9) below.**	**2,980**	**2,140**	**838**	**2,306**	**1,678**	**626**
Computer scientists and systems analysts	Old SOC title: Computer systems analysts and scientists	722	502	219	564	396	168
Computer software engineers	Group defined in the old SOC but seldom used in CPS tabulations	758	572	185	528	406	122
Computer programmers	Treated as a technician's field in old SOC, but grouped here in new SOC	563	404	158	449	331	118
Computer support specialists	No equivalent in old SOC	330	207	124	262	168	93
Database administrators	No equivalent in old SOC	72	43	29	59	35	23
Network and computer systems administrators	No equivalent in old SOC	176	138	38	148	115	33
Network systems and data communications analysts	No equivalent in old SOC	359	274	85	296	227	69
Mathematical occupations		**143**	**82**	**61**	**112**	**69**	**42**
Actuaries		22	18	4	18	16	2
Mathematicians	No equivalent in old SOC (!)	3	2	1	3	2	0
Operations research analysts	Old SOC title: operations and systems researchers and analysts	95	47	48	75	41	34
Statisticians		22	14	8	15	9	6
Miscellaneous mathematical science occupations	Old SOC title: mathematical scientists, n.e.c.	1	1	–	1	1	–
Engineering occupations, including technicians	**See note (9) below**	**2,674**	**2,317**	**357**	**2,272**	**1,981**	**289**
Engineering managers and occupations	**See notes (1) and (2) below. BLS data adjusted to allow for managers**	**1,956**	**1,751**	**204**	**1,660**	**1,499**	**158**
Engineering managers		77	69	8	69	62	6
Engineering occupations	**BLS data adjusted to allow for sales engineers**	1,879	1,682	196	1,591	1,437	152
Aerospace engineers		82	73	9	71	63	8
Agricultural engineers		3	3	0	3	3	0
Biomedical engineers		8	7	1	8	7	1
Chemical engineers		75	64	11	66	57	9
Civil engineers		278	254	24	228	213	15
Computer hardware engineers	Group defined in the old SOC but seldom used in CPS tabulations	99	89	10	74	67	7
Electrical and electronic engineers		363	337	26	294	273	21
Environmental engineers		47	38	10	41	32	9
Industrial engineers, including health and safety		180	145	35	155	128	27
Marine engineers and naval architects		14	13	1	14	13	1
Materials engineers	Old SOC title: metallurgical and materials engineers	38	34	4	34	31	3
Mechanical engineers		285	269	16	248	235	13

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed					
		Total			White		
		Total	Men	Women	Total	Men	Women
Mining and geological engineers, including mining safety engineers		8	6	2	8	6	2
Nuclear engineers		9	9	–	9	9	–
Petroleum engineers		16	15	1	16	15	1
Surveyors, cartographers, and photogrammetrists	Old SOC title: surveyors and mapping scientists	41	35	5	38	33	5
Other engineers	Old SOC title: engineers, n.e.c. Data have been adjusted to add sales engineers	332	292	40	283	251	30
Engineering and related technologists and technicians		**718**	**566**	**153**	**612**	**482**	**131**
Drafters	Old SOC title: drafting occupations	224	176	49	200	156	45
Surveying and mapping technicians		75	62	13	69	59	10
All other engineering technicians	See note (10) below	419	328	91	343	267	76

Note: Dashes indicate data are not available.
n.e.c. = not elsewhere classified

Source: Current Population Survey, Bureau of Labor Statistics

Notes on differences between 1983-2002 STEM tabulation and these 2003 data:

(1) The source data for 2003 provided by BLS do not include details for postsecondary teachers, so professors in STEM fields cannot be included here. See also note (8).
(2) Data for 2003 include details for science, engineering, and computer systems managers, which have been included in these STEM totals. The BLS time series for 1983-2002 uses the old SOC codes and does not provide these details, so these workers are not included in those STEM tabulations.
(3) The old SOC code grouped material scientists with other physical scientists n.e.c.; the new system groups them with chemists.
(4) The old SOC code grouped environmental scientists with other physical scientists n.e.c.; the new system groups them with geoscientists.
(5) The new SOC adds specific occupational groups for agricultural and food science technicians, geological and petroleum technicians, and nuclear technicians; all were grouped with "science technicians n.e.c." in the old system.
(6) The new SOC includes social science technicians in an "other life, physical, and social science technicians" category. Documentation for the new system specifies the use of a higher-level group for social science research assistants, but such a group is not present in the BLS data for 2003. In our STEM time series data for 1983-2002, natural science technicians were included in natural science aggregates. However, if that practice is used here, social science technicans would also be included in the aggregates. Instead, we have treated all technicians as a separate occupational set within a combined high-level life, physical and social sciences category. See note (7) for further information.
(7) The new SOC also mixes natural and social science fields in a summary aggregate for "life, physical and social science occupations." Accordingly, social sciences have been shifted in their placement for the 2003 data, compared to the ordering used for the 1983-2002 time series, and new aggregates are formed for life, physical, & social science occupations.
(8) The omission of details for postsecondary teachers from the BLS' detailed CPS statistics for 2003 -- see note (1) above -- means that most historians and political scientists are not included in this count of STEM employment.
(9) As noted elsewhere, we have opted to follow federal practices at the National Endowment for the Arts and exclude architects from the STEM fields, on the grounds that this occupation can be treated as one of the fine arts. Note that architectural engineers are counted in the "other engineers" group. Surveyors have been separated from data for engineers in the past, but the distinction is minor and has been ignored here. In our related work on information technology, computer hardware engineers have been included with other computer occupations, but that adjustment should not be made in tracking overall STEM employment.
(10) The BLS data used for these 2003 STEM employment estimates combines data for all engineering technicians other than drafters or surveying and mapping technicians. In the past, electrical and electronic specialists have accounted for roughly half of these combined occupational categories, and the remaining employment has been spread broadly among all other discipline-oriented technologies.

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed (continued)					
		Black or African American			Asian		
		Total	Men	Women	Total	Men	Women
All employed persons, 16 years and over		**14,739**	**6,820**	**7,919**	**5,756**	**3,073**	**2,683**
Management, professional, and related occupations	**Old SOC title: managerial and professional specialty occupations**	**3,923**	**1,474**	**2,449**	**2,601**	**1,451**	**1,150**
Management, business, and financial operations occupations	**Old SOC title: executive, administrative, and managerial occupations**	**1,368**	**577**	**792**	**845**	**478**	**367**
Professional and related occupations	**Old SOC title: professional specialty occupations**	**2,555**	**898**	**1,658**	**1,756**	**973**	**783**
Summary lines:							
All STEM fields combined		**474**	**307**	**168**	**806**	**590**	**214**
All STEM fields except social sciences		**450**	**298**	**153**	**784**	**575**	**206**
All STEM fields except science and engineering technicians		**380**	**237**	**147**	**750**	**552**	**195**
All STEM fields except social scientists and technicians		**356**	**228**	**132**	**728**	**537**	**187**
Life, physical, & social science occupations, including technicians		**86**	**51**	**36**	**143**	**79**	**64**
Life, physical, and social science occupations	**See note (7) below. BLS data adjusted to add managers. No equivalent in old version of SOC**	**51**	**27**	**24**	**116**	**68**	**51**
Natural science mgrs. and nat. scientists ("life & physical sci. occ.")	**See notes (1) and (2) below**	**27**	**18**	**9**	**94**	**53**	**43**
Natural sciences managers	Old SOC title: science managers (seldom used in CPS tabulations)	–	–	–	1	1	0
Life and physical science occupations	**Old SOC title: natural scientists. No equivalent in 2003 BLS data used for this report**	**27**	**18**	**9**	**93**	**52**	**43**
Agricultural and food scientists		1	1	–	2	2	1
Astronomers and physicists	Old SOC title: physicists and astronomers	1	1	–	2	2	–
Atmospheric and space scientists		0	0	–	0	–	0
Biological scientists	Old SOC title: biological and life scientists. See note below on biochemists; the biochemistry subgroup in the biological sciences also includes biophysicists	6	3	3	15	8	7
Chemists and material scientists	See note (3) below. Old SOC title: chemists, except biochemists (both old and new SOC codes group biochemists with biological scientists)	8	6	2	28	17	11
Conservation scientists and foresters	Old SOC title: forestry and conservation scientists	–	–	–	1	–	1
Environmental scientists and geoscientists	See note (4) below. Old SOC title: geologists and geodesists	3	2	1	1	–	1
Medical scientists		5	3	2	21	10	11
Physical scientists, all other	See notes (3) and (4) below. Old SOC title: physical scientists, n.e.c.	3	2	1	23	13	11
Social science occupations	**See note (7) below.**	**24**	**9**	**15**	**22**	**15**	**8**
Economists		4	4	0	5	5	1
Market and survey researchers	No equivalent in old SOC (there is a group of "managers, marketing, advertising, and public relations" in the management section of that system)	10	0	9	9	6	3
Psychologists		7	3	4	4	–	4
Sociologists		1	–	1	1	1	–
Urban and regional planners		–	–	–	1	1	0
Miscellaneous social scientists and related workers	See note (8) below. Old SOC title: social scientists, n.e.c.	2	2	1	2	2	–
Life, physical, and social science technicians		**36**	**24**	**10**	**27**	**14**	**14**

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed (continued)					
		Black or African American			Asian		
		Total	Men	Women	Total	Men	Women
Agricultural and food science technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	5	4	1	0	0	–
Biological technicians		4	2	1	1	1	–
Chemical technicians		13	9	3	8	6	2
Geological and petroleum technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	4	3	1	1	1	–
Nuclear technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	–	–	–	–	–	–
Other life, physical, and social science technicians	See notes (5) and (6) below. Old SOC title: science technicians, n.e.c.	10	6	4	17	6	12
Computer and mathematical occupations	**BLS data adjusted to add managers**	**267**	**158**	**109**	**431**	**311**	**119**
Computer and information systems managers and occupations	**See notes (1) and (2) below**	**254**	**153**	**103**	**413**	**302**	**110**
Computer and information systems managers	Group defined in the old SOC but seldom used in CPS tabulations	15	7	9	29	20	8
Computer occ. (does not include comp. hardware engineers)	**Title present in old SOC, but components have been updated. Also see note (9) below.**	**239**	**146**	**94**	**384**	**282**	**102**
Computer scientists and systems analysts	Old SOC title: Computer systems analysts and scientists	70	38	32	78	61	17
Computer software engineers	Group defined in the old SOC but seldom used in CPS tabulations	46	31	16	172	128	43
Computer programmers	Treated as a technician's field in old SOC, but grouped here in new SOC	40	25	15	65	42	23
Computer support specialists	No equivalent in old SOC	39	20	19	19	11	8
Database administrators	No equivalent in old SOC	4	1	3	8	7	2
Network and computer systems administrators	No equivalent in old SOC	14	12	2	10	8	2
Network systems and data communications analysts	No equivalent in old SOC	26	19	7	32	25	7
Mathematical occupations		**12**	**5**	**7**	**16**	**8**	**8**
Actuaries		0	0	–	4	2	2
Mathematicians	No equivalent in old SOC (!)	1	–	1	0	–	0
Operations research analysts	Old SOC title: operations and systems researchers and analysts	7	2	6	10	4	6
Statisticians		4	3	0	2	2	0
Miscellaneous mathematical science occupations	Old SOC title: mathematical scientists, n.e.c.	0	0	–	–	–	–
Engineering occupations, including technicians	**See note (9) below**	**121**	**98**	**23**	**232**	**200**	**31**
Engineering managers and occupations	**See notes (1) and (2) below. BLS data adjusted to allow for managers**	**63**	**52**	**12**	**203**	**176**	**26**
Engineering managers		1	–	1	7	6	1
Engineering occupations	**BLS data adjusted to allow for sales engineers**	62	52	11	196	170	25
Aerospace engineers		1	1	0	8	7	1
Agricultural engineers		–	–	–	–	–	–
Biomedical engineers		–	–	–	0	–	0
Chemical engineers		2	2	1	7	5	2
Civil engineers		13	11	1	33	27	6
Computer hardware engineers	Group defined in the old SOC but seldom used in CPS tabulations	6	5	0	19	16	3
Electrical and electronic engineers		16	14	2	49	47	3
Environmental engineers		1	1	0	4	3	1
Industrial engineers, including health and safety		7	4	3	16	14	2
Marine engineers and naval architects		–	–	–	–	–	–
Materials engineers	Old SOC title: metallurgical and materials engineers	1	1	–	2	2	1
Mechanical engineers		6	6	0	24	22	2

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed (continued)					
		Black or African American			Asian		
		Total	Men	Women	Total	Men	Women
Mining and geological engineers, including mining safety engineers		–	–	–	–	–	–
Nuclear engineers		–	–	–	0	0	–
Petroleum engineers		–	–	–	0	0	–
Surveyors, cartographers, and photogrammetrists	Old SOC title: surveyors and mapping scientists	1	1	0	1	1	0
Other engineers	Old SOC title: engineers, n.e.c. Data have been adjusted to add sales engineers	10	6	3	31	27	5
Engineering and related technologists and technicians		**58**	**46**	**11**	**29**	**24**	**5**
Drafters	Old SOC title: drafting occupations	13	10	2	8	7	1
Surveying and mapping technicians		2	2	–	1	0	0
All other engineering technicians	See note (10) below	43	34	9	20	17	4

Note: Dashes indicate data are not available.
n.e.c. = not elsewhere classified

Source: Current Population Survey, Bureau of Labor Statistics

Notes on differences between 1983-2002 STEM tabulation and these 2003 data:

(1) The source data for 2003 provided by BLS do not include details for postsecondary teachers, so professors in STEM fields cannot be included here. See also note (8).
(2) Data for 2003 include details for science, engineering, and computer systems managers, which have been included in these STEM totals. The BLS time series for 1983-2002 uses the old SOC codes and does not provide these details, so these workers are not included in those STEM tabulations.
(3) The old SOC code grouped material scientists with other physical scientists n.e.c.; the new system groups them with chemists.
(4) The old SOC code grouped environmental scientists with other physical scientists n.e.c.; the new system groups them with geoscientists.
(5) The new SOC adds specific occupational groups for agricultural and food science technicians, geological and petroleum technicians, and nuclear technicians; all were grouped with "science technicians n.e.c." in the old system.
(6) The new SOC includes social science technicians in an "other life, physical, and social science technicians" category. Documentation for the new system specifies the use of a higher-level group for social science research assistants, but such a group is not present in the BLS data for 2003. In our STEM time series data for 1983-2002, natural science technicians were included in natural science aggregates. However, if that practice is used here, social science technicans would also be included in the aggregates. Instead, we have treated all technicians as a separate occupational set within a combined high-level life, physical and social sciences category. See note (7) for further information.
(7) The new SOC also mixes natural and social science fields in a summary aggregate for "life, physical and social science occupations." Accordingly, social sciences have been shifted in their placement for the 2003 data, compared to the ordering used for the 1983-2002 time series, and new aggregates are formed for life, physical, & social science occupations.
(8) The omission of details for postsecondary teachers from the BLS' detailed CPS statistics for 2003 -- see note (1) above -- means that most historians and political scientists are not included in this count of STEM employment.
(9) As noted elsewhere, we have opted to follow federal practices at the National Endowment for the Arts and exclude architects from the STEM fields, on the grounds that this occupation can be treated as one of the fine arts. Note that architectural engineers are counted in the "other engineers" group. Surveyors have been separated from data for engineers in the past, but the distinction is minor and has been ignored here. In our related work on information technology, computer hardware engineers have been included with other computer occupations, but that adjustment should not be made in tracking overall STEM employment.
(10) The BLS data used for these 2003 STEM employment estimates combines data for all engineering technicians other than drafters or surveying and mapping technicians. In the past, electrical and electronic specialists have accounted for roughly half of these combined occupational categories, and the remaining employment has been spread broadly among all other discipline-oriented technologies.

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed (continued) Hispanic or Latino			Unemployed		
		Total	Men	Women	Total	Men	Women
All employed persons, 16 years and over		**17,372**	**10,479**	**6,894**	**8,133**	**4,586**	**3,547**
Management, professional, and related occupations	**Old SOC title: managerial and professional specialty occupations**	**2,925**	**1,472**	**1,453**	**1,556**	**802**	**754**
Management, business, and financial operations occupations	**Old SOC title: executive, administrative, and managerial occupations**	**1,176**	**689**	**487**	**627**	**339**	**288**
Professional and related occupations	**Old SOC title: professional specialty occupations**	**1,749**	**783**	**966**	**929**	**463**	**466**
Summary lines:							
All STEM fields combined		**398**	**304**	**94**	**370**	**272**	**98**
All STEM fields except social sciences		**373**	**292**	**82**	**359**	**264**	**94**
All STEM fields except science and engineering technicians		**313**	**237**	**74**	**308**	**236**	**73**
All STEM fields except social scientists and technicians		**288**	**225**	**62**	**297**	**228**	**69**
Life, physical, & social science occupations, including technicians		**82**	**48**	**34**	**47**	**27**	**21**
Life, physical, and social science occupations	**See note (7) below. BLS data adjusted to add managers. No equivalent in old version of SOC**	**54**	**27**	**26**	**24**	**16**	**7**
Natural science mgrs. and nat. scientists ("life & physical sci. occ.")	**See notes (1) and (2) below**	**29**	**15**	**14**	**13**	**8**	**3**
Natural sciences managers	Old SOC title: science managers (seldom used in CPS tabulations)	1	–	1	–	–	–
Life and physical science occupations	**Old SOC title: natural scientists. No equivalent in 2003 BLS data used for this report**	**28**	**15**	**13**	**13**	**8**	**3**
Agricultural and food scientists		3	2	2	2	1	0
Astronomers and physicists	Old SOC title: physicists and astronomers	1	1	–	2	2	0
Atmospheric and space scientists		–	–	–	0	–	0
Biological scientists	Old SOC title: biological and life scientists. See note below on biochemists; the biochemistry subgroup in the biological sciences also includes biophysicists	3	1	2	2	1	1
Chemists and material scientists	See note (3) below. Old SOC title: chemists, except biochemists (both old and new SOC codes group biochemists with biological scientists)	9	5	4	1	1	0
Conservation scientists and foresters	Old SOC title: forestry and conservation scientists	1	1	–	0	0	0
Environmental scientists and geoscientists	See note (4) below. Old SOC title: geologists and geodesists	3	2	0	3	2	1
Medical scientists		5	2	3	2	1	1
Physical scientists, all other	See notes (3) and (4) below. Old SOC title: physical scientists, n.e.c.	3	1	2	1	0	0
Social science occupations	**See note (7) below.**	**25**	**12**	**12**	**11**	**8**	**4**
Economists		3	2	1	1	1	0
Market and survey researchers	No equivalent in old SOC (there is a group of "managers, marketing, advertising, and public relations" in the management section of that system)	7	4	3	8	5	3
Psychologists		11	3	7	1	1	1
Sociologists		–	–	–	–	–	–
Urban and regional planners		0	–	0	–	–	–
Miscellaneous social scientists and related workers	See note (8) below. Old SOC title: social scientists, n.e.c.	4	3	1	1	1	0
Life, physical, and social science technicians		**29**	**22**	**8**	**23**	**9**	**13**

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed (continued) Hispanic or Latino			Unemployed		
		Total	Men	Women	Total	Men	Women
Agricultural and food science technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	4	4	1	1	1	–
Biological technicians		3	3	0	2	0	2
Chemical technicians		7	5	2	6	4	3
Geological and petroleum technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	2	2	–	1	0	0
Nuclear technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	–	–	–	0	0	–
Other life, physical, and social science technicians	See notes (5) and (6) below. Old SOC title: science technicians, n.e.c.	13	8	5	13	4	8
Computer and mathematical occupations	**BLS data adjusted to add managers**	**185**	**145**	**40**	**199**	**147**	**51**
Computer and information systems managers and occupations	**See notes (1) and (2) below**	**180**	**143**	**37**	**197**	**147**	**50**
Computer and information systems managers	Group defined in the old SOC but seldom used in CPS tabulations	13	9	4	18	10	8
Computer occ. (does not include comp. hardware engineers)	**Title present in old SOC, but components have been updated. Also see note (9) below.**	**167**	**134**	**33**	**179**	**137**	**42**
Computer scientists and systems analysts	Old SOC title: Computer systems analysts and scientists	39	31	8	39	28	12
Computer software engineers	Group defined in the old SOC but seldom used in CPS tabulations	37	25	12	42	33	8
Computer programmers	Treated as a technician's field in old SOC, but grouped here in new SOC	29	25	4	39	31	8
Computer support specialists	No equivalent in old SOC	22	20	3	19	13	6
Database administrators	No equivalent in old SOC	3	3	0	5	4	1
Network and computer systems administrators	No equivalent in old SOC	16	13	3	10	10	0
Network systems and data communications analysts	No equivalent in old SOC	21	17	3	25	18	7
Mathematical occupations		**6**	**3**	**2**	**2**	**1**	**1**
Actuaries		–	–	–	–	–	–
Mathematicians	No equivalent in old SOC (!)	–	–	–	–	–	–
Operations research analysts	Old SOC title: operations and systems researchers and analysts	6	3	2	2	1	1
Statisticians		0	0	–	0	0	–
Miscellaneous mathematical science occupations	Old SOC title: mathematical scientists, n.e.c.	–	–	–	–	–	–
Engineering occupations, including technicians	**See note (9) below**	**131**	**111**	**20**	**124**	**98**	**26**
Engineering managers and occupations	**See notes (1) and (2) below. BLS data adjusted to allow for managers**	**75**	**66**	**8**	**85**	**71**	**14**
Engineering managers		0	0	–	3	3	–
Engineering occupations	**BLS data adjusted to allow for sales engineers**	75	66	8	82	68	14
Aerospace engineers		3	2	1	4	4	0
Agricultural engineers		–	–	–	–	–	–
Biomedical engineers		1	1	–	0	0	0
Chemical engineers		3	3	1	1	1	–
Civil engineers		15	12	2	8	5	3
Computer hardware engineers	Group defined in the old SOC but seldom used in CPS tabulations	2	2	–	7	5	3
Electrical and electronic engineers		9	8	0	24	22	1
Environmental engineers		–	–	–	–	–	–
Industrial engineers, including health and safety		8	6	1	10	6	4
Marine engineers and naval architects		0	0	–	0	0	–
Materials engineers	Old SOC title: metallurgical and materials engineers	2	2	0	1	1	0
Mechanical engineers		10	10	–	10	9	1

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Employed (continued) Hispanic or Latino			Unemployed		
		Total	Men	Women	Total	Men	Women
Mining and geological engineers, including mining safety engineers		2	2	–	–	–	–
Nuclear engineers		–	–	–	–	–	–
Petroleum engineers		–	–	–	0	0	–
Surveyors, cartographers, and photogrammetrists	Old SOC title: surveyors and mapping scientists	1	1	–	1	1	0
Other engineers	Old SOC title: engineers, n.e.c. Data have been adjusted to add sales engineers	18	16	2	17	15	2
Engineering and related technologists and technicians		**56**	**45**	**12**	**39**	**27**	**12**
Drafters	Old SOC title: drafting occupations	19	17	2	12	7	6
Surveying and mapping technicians		2	2	–	4	3	1
All other engineering technicians	See note (10) below	35	26	10	23	17	5

Note: Dashes indicate data are not available.
n.e.c. = not elsewhere classified

Source: Current Population Survey, Bureau of Labor Statistics

Notes on differences between 1983-2002 STEM tabulation and these 2003 data:

(1) The source data for 2003 provided by BLS do not include details for postsecondary teachers, so professors in STEM fields cannot be included here. See also note (8).
(2) Data for 2003 include details for science, engineering, and computer systems managers, which have been included in these STEM totals. The BLS time series for 1983-2002 uses the old SOC codes and does not provide these details, so these workers are not included in those STEM tabulations.
(3) The old SOC code grouped material scientists with other physical scientists n.e.c.; the new system groups them with chemists.
(4) The old SOC code grouped environmental scientists with other physical scientists n.e.c.; the new system groups them with geoscientists.
(5) The new SOC adds specific occupational groups for agricultural and food science technicians, geological and petroleum technicians, and nuclear technicians; all were grouped with "science technicians n.e.c." in the old system.
(6) The new SOC includes social science technicians in an "other life, physical, and social science technicians" category. Documentation for the new system specifies the use of a higher-level group for social science research assistants, but such a group is not present in the BLS data for 2003. In our STEM time series data for 1983-2002, natural science technicians were included in natural science aggregates. However, if that practice is used here, social science technicans would also be included in the aggregates. Instead, we have treated all technicians as a separate occupational set within a combined high-level life, physical and social sciences category. See note (7) for further information.
(7) The new SOC also mixes natural and social science fields in a summary aggregate for "life, physical and social science occupations." Accordingly, social sciences have been shifted in their placement for the 2003 data, compared to the ordering used for the 1983-2002 time series, and new aggregates are formed for life, physical, & social science occupations.
(8) The omission of details for postsecondary teachers from the BLS' detailed CPS statistics for 2003 -- see note (1) above -- means that most historians and political scientists are not included in this count of STEM employment.
(9) As noted elsewhere, we have opted to follow federal practices at the National Endowment for the Arts and exclude architects from the STEM fields, on the grounds that this occupation can be treated as one of the fine arts. Note that architectural engineers are counted in the "other engineers" group. Surveyors have been separated from data for engineers in the past, but the distinction is minor and has been ignored here. In our related work on information technology, computer hardware engineers have been included with other computer occupations, but that adjustment should not be made in tracking overall STEM employment.
(10) The BLS data used for these 2003 STEM employment estimates combines data for all engineering technicians other than drafters or surveying and mapping technicians. In the past, electrical and electronic specialists have accounted for roughly half of these combined occupational categories, and the remaining employment has been spread broadly among all other discipline-oriented technologies.

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Percent of total employed			
		Women	Black or African	Asian	Hispanic or Latino
All employed persons, 16 years and over		**46.8**	**10.7**	**4.2**	**12.6**
Management, professional, and related occupations	**Old SOC title: managerial and professional specialty occupations**	**50.5**	**8.2**	**5.4**	**6.1**
Management, business, and financial operations occupations	**Old SOC title: executive, administrative, and managerial occupations**	**42.1**	**6.9**	**4.2**	**5.9**
Professional and related occupations	**Old SOC title: professional specialty occupations**	**56.4**	**9.1**	**6.3**	**6.2**
Summary lines:					
All STEM fields combined		**26.1**	**6.3**	**10.7**	**5.3**
All STEM fields except social sciences		**24.4**	**6.3**	**9.6**	**5.2**
All STEM fields except science and engineering technicians		**25.9**	**5.9**	**11.5**	**4.8**
All STEM fields except social scientists and technicians		**23.9**	**5.9**	**12**	**4.7**
Life, physical, & social science occupations, including technicians		**43**	**6.2**	**10.3**	**5.9**
Life, physical, and social science occupations	**See note (7) below. BLS data adjusted to add managers. No equivalent in old version of SOC**	**44.1**	**4.8**	**10.8**	**7.7**
Natural science mgrs. and nat. scientists ("life & physical sci. occ.")	**See notes (1) and (2) below**	**37.4**	**4.1**	**14.3**	**4.4**
Natural sciences managers	Old SOC title: science managers (seldom used in CPS tabulations)	38	–	12.9	6.4
Life and physical science occupations	**Old SOC title: natural scientists. No equivalent in 2003 BLS data used for this report**	**37.4**	**4.2**	**14.4**	**4.3**
Agricultural and food scientists		21.4	2.7	5.2	8.3
Astronomers and physicists	Old SOC title: physicists and astronomers	8	4.9	12.2	6.5
Atmospheric and space scientists		19.7	4.7	0.5	–
Biological scientists	Old SOC title: biological and life scientists. See note below on biochemists; the biochemistry subgroup in the biological sciences also includes biophysicists	46.1	5.1	13.3	2.3
Chemists and material scientists	See note (3) below. Old SOC title: chemists, except biochemists (both old and new SOC codes group biochemists with biological scientists)	36.4	5.9	19.8	6.4
Conservation scientists and foresters	Old SOC title: forestry and conservation scientists	12.7	–	2.4	3.1
Environmental scientists and geoscientists	See note (4) below. Old SOC title: geologists and geodesists	29.8	3.1	1	3.2
Medical scientists		50.5	4.8	21	4.9
Physical scientists, all other	See notes (3) and (4) below. Old SOC title: physical scientists, n.e.c.	41.8	2.7	21	2.5
Social science occupations	**See note (7) below.**	**54.6**	**5.8**	**5.3**	**6**
Economists		19.7	11.4	15.6	8.9
Market and survey researchers	No equivalent in old SOC (there is a group of "managers, marketing, advertising, and public relations" in the management section of that system)	56.6	7.7	7	5.5
Psychologists		65.8	4	2.3	5.9
Sociologists		45.8	20.8	12	–
Urban and regional planners		34.6	–	5	1.6
Miscellaneous social scientists and related workers	See note (8) below. Old SOC title: social scientists, n.e.c.	41	5.2	4.2	8.4
Life, physical, and social science technicians		**39.4**	**11.4**	**8.6**	**9.2**

Employed persons by detailed occupation, sex, and racial/ethnic identity, 2003 annual averages

(Aggregates in **boldface;** all other numbers are source data for specific occupations. Numbers in thousands; components may not sum to exact aggregate values due to rounding errors; all aggregates preserved as far as feasible. See end of table for further notes)

STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Percent of total employed			
		Women	Black or African	Asian	Hispanic or Latino
Agricultural and food science technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	39.8	17.8	0.4	14.8
Biological technicians		47.8	15.5	5.6	14.8
Chemical technicians		28.8	14.8	8.9	7.7
Geological and petroleum technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	33.2	23.5	5.2	9.3
Nuclear technicians	See note (5) below. Part of science technicians n.e.c. in old SOC code	38	–	–	–
Other life, physical, and social science technicians	See notes (5) and (6) below. Old SOC title: science technicians, n.e.c.	44.7	6.2	11	8.3
Computer and mathematical occupations	**BLS data adjusted to add managers**	**29**	**7.7**	**12.4**	**5.3**
Computer and information systems managers and occupations	**See notes (1) and (2) below**	**28.4**	**7.6**	**12.4**	**5.4**
Computer and information systems managers	Group defined in the old SOC but seldom used in CPS tabulations	30.5	4.4	8.3	3.8
Computer occ. (does not include comp. hardware engineers)	**Title present in old SOC, but components have been updated. Also see note (9) below.**	**28.1**	**8**	**12.9**	**5.6**
Computer scientists and systems analysts	Old SOC title: Computer systems analysts and scientists	30.4	9.7	10.8	5.4
Computer software engineers	Group defined in the old SOC but seldom used in CPS tabulations	24.4	6.1	22.7	4.8
Computer programmers	Treated as a technician's field in old SOC, but grouped here in new SOC	28.1	7.1	11.5	5.1
Computer support specialists	No equivalent in old SOC	37.4	11.7	5.9	6.8
Database administrators	No equivalent in old SOC	40.1	5.3	11.7	3.9
Network and computer systems administrators	No equivalent in old SOC	21.7	8.1	5.9	9.2
Network systems and data communications analysts	No equivalent in old SOC	23.6	7.3	9	5.7
Mathematical occupations		**42.7**	**8.4**	**11.2**	**4.2**
Actuaries		20.2	1	17	–
Mathematicians	No equivalent in old SOC (!)	27.6	18.3	8.1	–
Operations research analysts	Old SOC title: operations and systems researchers and analysts	50.6	7.8	11	5.8
Statisticians		35.4	16.8	9.9	1.2
Miscellaneous mathematical science occupations	Old SOC title: mathematical scientists, n.e.c.	–	–	–	–
Engineering occupations, including technicians	**See note (9) below**	**13.4**	**4.5**	**7.5**	**4.5**
Engineering managers and occupations	**See notes (1) and (2) below. BLS data adjusted to allow for managers**	**10.4**	**3.2**	**10.4**	**7.1**
Engineering managers		10.4	1.3	9.1	0.2
Engineering occupations	**BLS data adjusted to allow for sales engineers**	**10.4**	**3.3**	**10.4**	**4**
Aerospace engineers		11	0.8	9.5	4.2
Agricultural engineers		4	–	–	–
Biomedical engineers		15.5	–	0.9	12.5
Chemical engineers		14.9	3.1	8.9	4.5
Civil engineers		8.7	4.6	11.7	5.3
Computer hardware engineers	Group defined in the old SOC but seldom used in CPS tabulations	10.4	5.8	18.9	1.9
Electrical and electronic engineers		7.1	4.4	13.6	2.4
Environmental engineers		20.6	3.1	9.4	–
Industrial engineers, including health and safety		19.2	3.6	8.9	4.3
Marine engineers and naval architects		9.2	–	–	1.9
Materials engineers	Old SOC title: metallurgical and materials engineers	10.8	1.9	6.6	5.3
Mechanical engineers		5.5	2.2	8.3	3.7

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STEM FIELDS (new SOC Occupational Classification)	Comments on changes in SOC codes	Percent of total employed			
		Women	Black or African	Asian	Hispanic or Latino
Mining and geological engineers, including mining safety engineers		27	–	–	25.5
Nuclear engineers		–	–	4	–
Petroleum engineers		7.2	–	3	–
Surveyors, cartographers, and photogrammetrists	Old SOC title: surveyors and mapping scientists	13.3	3.5	3.2	1.7
Other engineers	Old SOC title: engineers, n.e.c. Data have been adjusted to add sales engineers	12.5	2.7	9.3	6.1
Engineering and related technologists and technicians		**21.3**	**8.1**	**4**	**7.8**
Drafters	Old SOC title: drafting occupations	21.7	5.6	3.7	8.6
Surveying and mapping technicians		16.9	2	0.9	2.3
All other engineering technicians	See note (10) below	21.8	10.3	4.9	8.4

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n.e.c. = not elsewhere classified

Source: Current Population Survey, Bureau of Labor Statistics

Notes on differences between 1983-2002 STEM tabulation and these 2003 data:

(1) The source data for 2003 provided by BLS do not include details for postsecondary teachers, so professors in STEM fields cannot be included here. See also note (8).
(2) Data for 2003 include details for science, engineering, and computer systems managers, which have been included in these STEM totals. The BLS time series for 1983-2002 uses the old SOC codes and does not provide these details, so these workers are not included in those STEM tabulations.
(3) The old SOC code grouped material scientists with other physical scientists n.e.c.; the new system groups them with chemists.
(4) The old SOC code grouped environmental scientists with other physical scientists n.e.c.; the new system groups them with geoscientists.
(5) The new SOC adds specific occupational groups for agricultural and food science technicians, geological and petroleum technicians, and nuclear technicians; all were grouped with "science technicians n.e.c." in the old system.
(6) The new SOC includes social science technicians in an "other life, physical, and social science technicians" category. Documentation for the new system specifies the use of a higher-level group for social science research assistants, but such a group is not present in the BLS data for 2003. In our STEM time series data for 1983-2002, natural science technicians were included in natural science aggregates. However, if that practice is used here, social science technicans would also be included in the aggregates. Instead, we have treated all technicians as a separate occupational set within a combined high-level life, physical and social sciences category. See note (7) for further information.
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(8) The omission of details for postsecondary teachers from the BLS' detailed CPS statistics for 2003 -- see note (1) above -- means that most historians and political scientists are not included in this count of STEM employment.
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